Journal of Counseling Psychology
2003, Vol. 50, No. 2, 235–251

0022-0167/03/$12.00 DOI: 10.1037/0022-0167.50.2.235

The Lesbian, Gay, and Bisexual Affirmative Counseling Self-Efficacy Inventory (LGB-CSI): Development, Validation, and Training Implications

Frank R. Dillon
University of Miami School of Medicine

Roger L. Worthington
University of Missouri—Columbia

Five studies on the development of the Lesbian, Gay, and Bisexual Affirmative Counseling Inventory (LGB-CSI) were conducted. Exploratory and confirmatory factor analyses of an initial pool of 64 items yielded 5 factors that assess counselor self-efficacy to perform lesbian, gay, and bisexual (LGB) affirmative counseling behaviors (Application of Knowledge, Advocacy Skills, Self-Awareness, Relationship, and Assessment Skills). The LGB-CSI evidenced high internal consistency; however, low test–retest reliability was found over a 2-week period. Convergent validity was supported by correlations with measures of general counseling self-efficacy and attitudes toward LGB individuals. Discriminant validity was evidenced by an absence of relations between the LGB-CSI and measures of social desirability, self-deceptive positivity, and impression management. Construct validity was supported by findings indicating varying levels of self-efficacy commensurate with status in the field. Recommendations for training interventions are discussed.

Several burgeoning areas of counseling psychology have gained greater theoretical understanding from the application of social–cognitive theory (SCT; e.g., self-efficacy). Recently, counselor self-efficacy has been examined in the areas of social–emotional counseling (Larson et al., 1992) and career counseling (M. J. Heppner, Multon, Gysbers, Ellis, & Zook, 1998; Lent, Brown, & Hackett, 1994; O'Brien, Heppner, Flores, & Bikos, 1997). Within these contexts, self-efficacy has been hypothesized to influence the initiation and performance of counseling behaviors as well as the levels of interest and persistence in performing specific counseling-related tasks (Larson et al., 1992; O'Brien et al., 1997).

As the 20th century came to a close, counseling psychologists increasingly advocated for greater attention to multicultural counseling education and competencies (e.g., Ponterotto, Casas, Suzuki, & Alexander, 1995; Sue, Arredondo, & McDavis, 1992). Within the general multicultural counseling zeitgeist, there have been specific efforts to describe and evaluate counselor competencies or affirmative practices with lesbian, gay, and bisexual (LGB) clients (e.g., Buhrke & Douce, 1991; Fassinger & Sperber Ritchie, 1997; Garnets, Hancock, Cochran, Goodchilds, & Peplau, 1991; Mohr, 2002; Perez, DeBord, & Bieschke, 2000; Worthington, Savoy, & Vernaglia, 2001). Bieschke, Eberz, Bard, and Croteau (1998) highlighted sources of self-efficacy that can foster general LGB-affirmative (or competent) counselor training. The purpose of this investigation was to construct an instrument to measure LGB-affirmative counseling self-efficacy and to collect evidence of the reliability and validity of the instrument's scores.

Measurement of Counselor Self-Efficacy

SCT (Bandura, 1986) provides a general framework for understanding the relationships between an individual's interests, goals, and performance. A core component of SCT is an individual's degree of self-efficacy. *Self-efficacy* has been defined as "people's judgments in their capabilities to organize and execute courses of action required to attain designated types of performance" (Bandura, 1986, p. 391). These beliefs have been found to influence the selection of behaviors and environments, in addition to influence the effort and persistence that an individual expends on a task, especially when he or she is confronted with an obstacle (Bandura, 1986). Bandura (1991) suggested that successful performance of a behavior is dependent on the acquisition of required skills as well as high self-efficacy beliefs.

Many of Bandura's (1977, 1986, 1991) hypotheses about the role of self-efficacy in effective behavioral performance have been adapted to counselor self-efficacy (Larson & Daniels, 1998).

Frank R. Dillon, Department of Psychiatry and Behavioral Sciences, University of Miami School of Medicine; Roger L. Worthington, Department of Educational, School, and Counseling Psychology, University of Missouri—Columbia.

This article is based in part on the doctoral dissertation by Frank R. Dillon at the University of Missouri—Columbia, under the direction of Roger L. Worthington. An earlier version of this article was presented in February 2002 at the 19th Annual Teachers College Winter Roundtable on Cross Cultural Psychology and Education at Columbia University, New York.

This work was funded in part by a dissertation award from the Multicultural Center for Research, Training, and Consultation at the University of Missouri—Columbia. We express our appreciation to Paul Puncky Heppner, Michael Mobley, Helen Neville, Sharon Welch, Mary Heppner, and Lisa Spanierman for their helpful comments on drafts of this article. We also express thanks to those who assisted with the development of the Lesbian, Gay, and Bisexual Affirmative Counseling Self-Efficacy Inventory, including Madelyn Nikki Coleman, John Mahalik, and Raeona Nichols, and Kendra Smith.

Correspondence concerning this article should be addressed to Frank R. Dillon, who is now at the University of Miami School of Medicine, Department of Psychiatry and Behavioral Sciences, 1695 NW 9th Avenue, Suite 3208 (D-21), Miami, Florida 33136. E-mail: fdillon@med.miami.edu

Counselor self-efficacy has been defined as a counselor's "beliefs, or judgments, about her or his capabilities to effectively counsel a client in the near future" (Larson & Daniels, 1998, p. 180). Counselor self-efficacy in social–emotional counseling has been examined by a host of studies (Friedlander, Keller, Peca-Baker, & Olk, 1986; Friedlander & Snyder, 1983; Larson et al., 1992; Munson, Zoernick, & Stadulis, 1986; Sharply & Ridgway, 1993; Sipps, Sugden, & Faiver, 1988). Counselor self-efficacy has been shown to relate to counselor performance, counselor anxiety, and the supervision environment (Friedlander et al., 1986; Larson et al., 1992). In addition, studies have reported moderate to strong positive relations between counselor self-efficacy and self-evaluations of counseling performance (Beverage, 1991; Larson & Daniels, 1998; Larson et al., 1992).

Conceptualizing LGB-Affirmative Counseling

Around the same time self-efficacy was being conceptualized in SCT (Bandura, 1977), a paradigm shift occurred in the treatment of issues faced by lesbian women and gay men. After several decades of discriminatory treatment by mental health professionals, treatment began moving away from oppressive counseling toward affirmative counseling for lesbian women and gay men. The significant growth that occurred in the self-efficacy research was somewhat mirrored in the psychological literature exploring gay and lesbian sexual orientations from affirmative perspectives. However, the latter area has been hindered by negative societal attitudes (i.e., homophobia and heterosexism) and by a lack of LGB-related awareness, knowledge, and skills on the part of some researchers and mental health professionals (Fassinger, 1991). For example, heterosexist biases have been documented in counseling practice (Garnets et al., 1991). Existing research has reported that graduate counselor students and mental health practitioners believe that they have not been trained well enough to work effectively with lesbian and gay clients (Allison, Crawford, Echemendia, Robinson, & Knepp, 1994; Philips & Fischer, 1998). Students within clinical and counseling training programs have reported that LGB issues are integrated into a small number of their courses (Phillips & Fischer, 1998). Students also believe that their supervisors and faculty lack knowledge of LGB issues and that they often need to initiate the discussion in order for LGB issues to be addressed (Phillips & Fischer, 1998). In addition, heterosexism and homophobia have been indicated to exist in training programs; that is, in comments made by supervisors or instructors, in textbooks, and/or in psychological theory that still maintains notions that homosexuality and bisexuality are pathological states (Pilkington & Cantor, 1996). Students also indicated underlying heterosexism in their struggles with attempting to conduct LGB research interests in the form of overt discouragement or in the lack of support from faculty (Pilkington & Cantor, 1996).

Within the recent literature, *LGB-affirmative counseling* has been defined as "therapy that celebrates and advocates the authenticity and integrity of lesbian, gay and bisexual persons and their relationships" (Bieschke, McClanahan, Tozer, Grzegorek, & Park, 2000, p. 328). An *LGB-affirmative counselor* has been described as one who views sexual minorities and LGB issues as central and identity-defining as opposed to marginal and perceived in terms of the heterosexual norms society holds (Morrow, 2000). Worthington et al. (2001) offered a definition of general LGB-affirmativeness that is consistent with the existing literature on affirmative counseling. This definition includes a more general emphasis on heterosexual attitudes toward LGB individuals, emphasizing an understanding and acknowledgement of heterosexual hegemony and privilege on macro (cultural) and micro (individual) levels of society. These recent developments have established LGB-affirmative counseling theory and practice.

LGB-Affirmative Counselor Self-Efficacy: Applying the Social–Cognitive Model

Previous studies of social–emotional counseling that used adequate instrumentation have suggested that counselor self-efficacy may be a critical factor in counseling outcome and counselor performance (Larson et al., 1992). Flores, O'Brien, and McDermott (1995) provided an initial examination of counseling psychology graduate counselor trainees' levels of self-efficacy in counseling lesbian and gay clients by using an altered form of the Counseling Self-Estimate Inventory (COSE; Larson et al., 1992). The adapted version of the COSE indicated that the client was gay or lesbian in each item. Results suggested that counselor trainees who scored higher on positive, personal experiences with lesbian women and gay men and lower on homophobic attitudes felt more efficacious counseling lesbian women and gay men than did counselor trainees scoring lower on positive personal experiences and higher on homophobic attitudes. These findings suggest that counselors should be encouraged to explore past experiences with lesbian women and gay men and to gain awareness of their own attitudes toward lesbian women and gay men in an effort to enhance self-efficacy. Noteworthy limitations to this preliminary investigation include that the researchers used an adapted version of the COSE, which was not originally developed to assess self-efficacy beliefs in counseling lesbian and gay clients. In addition, the items of the revised COSE did not assess levels of self-efficacy in counseling bisexual clients. However, this study established the importance of studying the factors that influence self-efficacy beliefs in counseling lesbian and gay clients and in preparing trainees to work with this population. The new measure described in this article was developed to address these shortcomings and to develop an instrument of LGB-affirmative counseling self-efficacy that reflects the complexity and current conceptualization of LGB-affirmative counseling.

The development and validation of the Lesbian, Gay, and Bisexual Affirmative Counseling Self-Efficacy Inventory (LGB-CSI) included five studies. In Study 1, we included scale development procedures and an exploratory factor analysis (EFA) of LGB-CSI items. In Study 2, we investigated the factor stability of the initial EFA solution. Study 3 provided initial evidence of convergent and discriminant validity of the instrument, as well as internal consistency. In Study 4, we assessed the test–retest reliability of the instrument, and in Study 5, we investigated the sensitivity of the LGB-CSI to change across professionals and counselor trainees.

Study 1: Scale Development, EFA, and Initial Reliability Estimates

Standard scale development procedures, described further below, were used to produce a set of items believed to reflect modern

conceptualizations of LGB-affirmative counseling self-efficacy. EFA was used to assess the factor structure of the scale items. Additional analyses were conducted to address reliability and validity.

Method

Participants

A national sample of participants was obtained by Internet data collection. The 336 participants were 207 (61.6%) graduate counselor trainees in psychology and 129 (38.4%) mental health practitioners, who were between the ages of 21 and 75 years (M = 34.74, SD = 10.36). Most participants were women (n = 240), and 96 were men. The majority (79.8%) of the sample was White/European American (n = 268); 19.6% were racial or ethnic minorities: African American or Black (n = 30), Hispanic/Latino(a) (n = 15), Asian American/Pacific Islander (n = 14), biracial/multiethnic (n = 5), and Native American Indian (n = 2). Two participants (0.6%) did not identify their racial or ethnic background. The majority of participants (83.2%) self-identified as heterosexual; 16.2 % of the sample was composed of individuals who self-identified as a gay male (n = 13), lesbian (n = 21), bisexual male (n = 3), and bisexual female (n = 17). Two participants (0.6%) did not indicate their sexual orientation identity. Participants reported an average of 7.67 years of therapy experience (SD = 8.11). Approximately 73.5% of the participants reported counseling at least one self-identified lesbian client, 69.6% reported counseling at least one self-identified gay male client, and 60.1% reported counseling one self-identified bisexual client. Approximately 87.8% of the participants reported knowing at least one self-identified lesbian friend or relative, 91.3% reported knowing at least one self-identified gay male friend or relative, and 61.9% reported knowing at least one self-identified bisexual friend or relative. Approximately 84% of participants reported receiving at least 1 hr of instruction/training concerning LGB issues in psychology, and 51.5% of the sample reported more than 5 hr of training/instruction.

Measures

No single theory or model of LGB-affirmative counseling exclusively addresses the complexity of the current conceptualizations of LGB-affirmative counseling that have been articulated in the existing literature (e.g., Fassinger, 1991, Fassinger & Sperber Ritchie, 1997). Therefore, item development involved carefully investigating the competencies related to LGB-affirmative counseling underscored by related theory, research, and clinical experience. First, the existing literature was reviewed to determine the central competencies presented in LGB-affirmative counseling. Specific attention was focused on recent conceptualizations of LGB-affirmativeness (Bieschke et al., 2000; Worthington et al., 2001), LGB-affirmative counseling (Perez et al., 2000), LGB counseling competencies (Fassinger & Sperber Ritchie, 1997), and the American Psychological Association's (APA's) *Guidelines for Psychotherapy With Lesbian, Gay, and Bisexual Clients* (APA, 2000) to ensure coverage of the content domains. Thus, the following five broad categories were hypothesized to represent the current conceptualization of effective LGB-affirmative counseling: (a) application of knowledge of LGB issues and the counseling behaviors reliant on a priori understanding of LGB issues (e.g., LGB sexual identity development; LGB identity management [i.e., coming-out process (Cass, 1979)]; impact of race, ethnicity, gender, religion, locale, and other cultural variables on sexual identity development; internalized homophobia/heterosexism and biphobia; anti-LGB violence; causality questions; career issues; interpersonal isolation/marginality; relationship issues; LGB family issues impacts of aging; AIDS; substance abuse; domestic violence; and sexual abuse, using sexual identity theory in case conceptualization [e.g., McCarn & Fassinger, 1996], working with LGB clients to assist in further exploration of sexual identity and management); (b) LGB-affirmative-counseling-related advocacy skills; (c) awareness of one's own and others' sexual identity development; (d) development of a working relationship with an LGB client; (e) assessment of the relevant underlying issues and problems of an LGB client.

Items were generated for each critical issue after a thorough review the literature. The following number of items were written to reflect each hypothesized domain: knowledge = 30 items, awareness = 22 items, advocacy skills = 16 items, assessment = 16 items, relationship = 17 items. The counseling behaviors ranged from general to specific across all five domains. An initial pool of 101 items was developed on the basis of the preliminary framework. The item pool included a number of counseling behaviors that go beyond simple microskills to reflect the complexity of behaviors needed for effective LGB-affirmative counseling (e.g., address erotic transference/countertransference with a same-sex client).

Three counseling psychologists and two doctoral-level graduate students (one self-identified gay male, one self-identified bisexual male, two self-identified lesbian women, and one self-identified heterosexual woman), each of whom had extensive experience in the practice of LGB-affirmative and/or multicultural counseling and research, assessed the content validity of the 101 items. The experts were asked to examine the items to (a) determine whether they are reflective of the critical issues that were gleaned from the literature, (b) ensure coverage of the content domains, (c) eliminate unnecessary items, (d) revise any confusing items, and (e) provide general feedback that would assist us in developing items representative of LGB-affirmative counseling. The experts rated each item on content appropriateness and clarity by using a 5-point scale that ranged from 1 (*not at all appropriate or clear*) to 5 (*very appropriate or clear*). Items receiving a mean rating between 1 and 3 were reworded or deleted. Revisions to the LGB-CSI were made on the basis of the feedback from the experts, resulting in 67 items.

The remaining 67 LGB-CSI items were posted to a Web page on the Internet and pilot tested with a sample of 10 graduate students in counseling psychology. The graduate students were asked to provide feedback about the clarity and comprehensiveness of the items and of the Internet survey procedure by using the identical procedures described in obtaining feedback from the five experts. Six items were determined to represent identical content areas with existing items. Three of the 6 items representing identical content areas were retained on the basis of feedback received from pilot study participants. Twenty-four items targeted the application of knowledge domain, 11 items targeted the awareness domain, 9 items targeted the advocacy skills domain, 10 targeted the assessment domain, and 10 items targeted the relationship domain.

The initial version of the LGB-CSI contained a pool of 64 items. Items were rated on a 6-point Likert scale. Participants indicated their current level of confidence in performing activities related to LGB-affirmative counseling on a scale ranging from 1 to 6 (1 = *not at all confident*, 3 = *moderately confident*, 6 = *highly confident*). Higher scores indicate considerable confidence in one's ability to perform LGB-affirmative counseling.

Procedure

The study was announced in an e-mail message that was sent to the following organization electronic mailing list addresses (i.e., an e-mail address that an organization uses to communicate to all students and colleagues) and members of practice-oriented divisions of the APA: the Student Affiliate Group of Division 17 (SAG), the American Psychological Association of Graduate Students (APAGS), the Intern Network of the Association of Psychology Postdoctoral and Internship Centers (APPIC), Division 12—Society of Clinical Psychology, Division 17—Counseling Psychology, Division 29—Psychotherapy, Division 35—Society for the Psychology of Women, Division 39—Psychoanalysis, Division 42—Psychologists in Independent Practice, and Division 51—Society for the Psychological Study of Men and Masculinity. The announcement message

requested voluntary participation from a national sample of mental health practitioners and graduate psychology students to complete the LGB-CSI, a consent form, and a demographic information form at their convenience. The message described the study as an investigation of counselors' confidence in counseling lesbian women, gay men, and bisexual women and men. Individuals interested in participating were directed to an address on the World Wide Web (WWW) where they could access the online survey. Participants were directed to a Web page containing an informed consent form that explained that transmission of survey data via the Internet is not completely secure and that although all standard precautions were taken, complete security of the data could therefore not be guaranteed. Participants were also told, however, that security was guaranteed once the researcher had received the data. Participants who agreed with the informed consent statement (agreement was indicated by clicking on text reading "I have read this page, and I would like to take the survey") were directed to the survey page, which included the original pool of 64 LGB-CSI items and a demographic information form. No identifying information was collected, but participants were given the option of including their e-mail address if they wished to receive a summary of the research findings and be entered into a lottery to win $100. After completing the survey, participants were given a debriefing sheet that explained the hypotheses of the study. They also were given the researcher's contact information.

A total of 431 completed surveys were received. Three of these completed surveys were submitted twice by the same person. A caveat of Internet-based data collection is the possibility that participants can submit their completed surveys more than once. As recommended by Schmidt (1997), Smith and Leigh (1997), and Mohr and Rochlen, (1999), duplicate surveys were identified by using the date, time, and origin of submission. One survey from each pair of duplicate surveys was eliminated from the data set. Schmidt (1997) noted that WWW-based survey methodologies are particularly susceptible to respondents who intentionally supply incorrect survey data to undermine the research. This danger may be especially great when conducting LGB-related research because of the pervasive societal intolerance about LGB issues. Furthermore, because the survey-taking environments of Internet users are highly variable, respondents may supply incorrect data because of inattentiveness and distractions. Three strategies were used to reduce the chances of including incorrect data in the analyses. First, the announcement of the study was distributed only to known professional psychology venues, reducing the likelihood of random malicious responding from persons outside the target sample. Second, the online-survey Web page could not be accessed except from the informed consent page, further reducing the likelihood of random individuals gaining access to the survey while surfing the Internet. Third, two validity check items were included in the online surveys. These items were designed to identify individuals who were either inattentive or randomly responding to survey items. The validity check items stated, "Please do not respond to this item." Data from 95 participants who incorrectly responded to one or both of these two items were not analyzed.

Existing research has highlighted the potential strengths and areas of improvement associated with the uses of the Internet in recruiting and collecting data, given the relative early stages of Internet-based research methods (Mohr & Rochlen, 1999; Schmidt, 1997). The Internet provides researchers an opportunity to recruit a demographically diverse, national sample (Mohr & Rochlen, 1999; Schmidt, 1997; Smith & Leigh, 1997), yet this method of sampling does not yet allow researchers to obtain accurate response rates. Therefore, a caveat of Internet-based methodologies is self-selection bias, but two recent studies suggest that research findings for Internet samples and laboratory samples may often be comparable (Krantz, Ballard, & Scher, 1997; Smith & Leigh, 1997, as cited in Mohr & Rochlen, 1999). In the LGB-CSI studies, the Internet samples represented the full range of possible scores, and the distribution of scores was appropriately normally distributed. Therefore, the samples can be assumed to not have been strongly influenced by self-selection based on self-efficacy to perform LGB-affirmative counseling behaviors. An additional caveat of Internet-based research is intentional and accidental error in completing and submitting online surveys (Krantz, Ballard, & Scher, 1997; Mohr & Rochlen, 1999; Schmidt, 1997). Proactive strategies such as those used in the cited and present studies can reduce the likelihood of including incorrect data in analyses.

Results

An item–total-score correlation procedure was used to identify items that correlated well with the hypothesized subscales (based on the five theoretically derived domains). The standard criteria of .30 served as the lower limit for all respective subscale items by using a Cronbach's alpha procedure (Nunnally & Bernstein, 1994). The following three items were removed from the analysis because of poor item–total-score correlations: (a) "respect and value sexual diversity among all clients," (b) "recognize when the limits of my range of knowledge and skills may suggest the need to refer an LGB client to someone more appropriate," and (c) "determine how heterosexism has shaped my own attitudes, values, beliefs, and behaviors." The condition of the data matrix was evaluated through Bartlett's (1954) test of sphericity and the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy (Kaiser, 1974). Bartlett's test of sphericity was significant ($p < .0001$), indicating that the data matrix approximates an identity matrix and that the factor model was appropriate for analysis. The KMO yielded a value of .97, indicating that the sample size was large enough to evaluate the factor structure.

A principal-axis factor extraction analysis was performed on the 61 items of the preliminary LGB-CSI. We interpreted a principal-axis factor extraction rather than a principal-components extraction because the latter method can yield inflated factor loadings because of the inclusion of error variance (Tabachnick & Fidell, 1996). Seven factors met the Kaiser retention criterion of eigenvalues greater than 1.00 (Kaiser, 1958); also, an examination of the scree plot (Catell, 1966) suggested as many as seven components were interpretable (Tabachnick & Fidell, 1996). The data were then reanalyzed specifying a seven-, six-, five-, four-, three-, two-, and one-factor solution. An oblique rotation was used because the factors are hypothesized to be correlated because of (a) the common underlying construct, (b) shared method variance, and (c) similarity of counseling skills assessed across items. Examination of the data suggested that a five-factor solution using a promax rotation yielded the most interpretable solution. The factor structure was chosen over the other solutions for the following reasons: (a) It resulted in the most robust factor structure, that is, it yielded items with stronger factor loadings and fewer cross-loadings than other solutions; (b) in the two-, three-, and four-factor solutions, there were no clear conceptual difference between the factors; and (c) there were very few and relatively weak item structures in the sixth and seventh factors of the latter two solutions. Thirty-two items loading greater than .50 on only one of the five factors were retained to meet the criterion of a minimum factor coefficient of .50 for each item (Comrey & Lee, 1992), and because a relatively brief instrument was desired. In addition, we used the criterion of a minimum loading of three items on each factor (Floyd & Widman, 1995) in considering factor retention. The revised version of the LGB-CSI and the item loadings are presented in Table 1.

The first factor accounted for 47.89% of the variance and consisted of 13 items (eigenvalue = 16.14). This factor was named *Application of Knowledge* because the items loading highest on this factor referred to a counselor's confidence in his or her ability to perform counseling behaviors reliant on a priori knowledge of an LGB issue in psychology. The second factor, which accounted for an additional 6.40% of the variance (eigenvalue = 4.09) was named *Advocacy Skills* because the 7 items appeared to represent a counselor's confidence in his or her ability to perform counseling behaviors characterized by applying community resources that are supportive of LGB clients' concerns as part of the counseling process. The third factor accounted for another 5.51% of the variance (eigen-

Table 1
Factor Loadings, Item Means, and Standard Deviations for the Lesbian, Gay, Bisexual Affirmative Counseling Self-Efficacy Inventory (LGB-CSI)

Item	Factor loadings					*M*	*SD*
	I	II	III	IV	V		
Directly apply my knowledge of the coming out process with LGB clients.	**.89**	.08	.09	.04	.03	3.98	1.43
Directly apply sexual orientation/identity development theory in my clinical practice with lesbian, gay, and bisexual (LGB) clients.	**.86**	.02	.07	.04	.23	3.35	1.47
Identify specific mental health issues associated with the coming out process.	**.79**	.02	.01	.01	.08	3.97	1.42
Explain the impact of gender role socialization on a client's sexual orientation/identity development.	**.71**	.12	.07	.02	.13	3.44	1.44
Apply existing American Psychological Association guidelines regarding LGB-affirmative counseling practices.	**.70**	.04	.08	.12	.14	4.15	1.43
Facilitate a LGB-affirmative counseling/support group.	**.68**	.14	.15	.22	.17	3.46	1.69
Help a client identify sources of internalized homophobia and/or biphobia.	**.67**	.01	.03	.16	.09	3.72	1.66
Evaluate counseling theories for appropriateness in working with a LGB client's presenting concerns.	**.66**	.02	.05	−.31	.05	3.46	1.69
Assist LGB clients to develop effective strategies to deal with heterosexism and homophobia.	**.64**	.02	.03	.15	.02	4.05	1.40
Use current research findings about LGB clients' critical issues in the counseling process.	**.64**	.01	.22	.15	.02	3.97	1.45
Understand the socially constructed nature of categories and identities such as lesbian, bisexual, gay, and heterosexual.	**.63**	.05	.01	.13	.05	3.91	1.38
Select affirmative counseling techniques and interventions when working with LGB clients.	**.63**	.02	.09	.20	.12	3.44	1.55
Assist in the development of coping strategies to help same sex couples who experience different stages in their individual coming out processes.	**.60**	.02	.09	.14	.05	4.39	1.40
Refer LGB clients to affirmative legal and social supports.	.10	**.91**	.13	.07	.12	4.27	1.48
Help a same-sex couple access local LGB-affirmative resources and support.	.05	**.90**	.03	.03	.04	3.94	1.58
Refer a LGB client to affirmative social services in cases of estrangement from their families of origin.	.04	**.89**	.04	.02	.03	4.19	1.52
Provide a list of LGB-affirmative community resources, support groups, and social networks to a client.	.01	**.87**	.04	.01	.07	3.95	1.66
Provide a client with city, state, federal, and institutional ordinances and laws concerning civil rights of LGB individuals.	.08	**.80**	.06	.11	.22	3.23	1.61
Refer a LGB elderly client to LGB-affirmative living accommodations and other social services.	.05	**.78**	.01	.04	.02	3.08	1.63
Refer a LGB client with religious concerns to a LGB-affirmative clergy member.	.18	**.64**	.01	.01	.09	3.64	1.73
Identify my own feelings about my own sexual orientation and how it may influence a client.	.06	.04	**.86**	.10	.05	5.24	0.85
Examine my own sexual orientation/identity development process.	.07	.15	**.81**	.03	.12	5.31	0.87
Identify the specific areas in which I may need continuing education and supervision regarding LGB issues.	.07	.22	**.80**	.04	.15	5.17	0.99
Recognize my real feelings versus idealized feelings in an effort to be more genuine and empathic with LGB clients.	.04	.05	**.72**	.09	.05	4.95	0.94
Recognize when my own potential heterosexist biases may suggest the need to refer a LGB client to another counselor.	.17	.05	**.70**	.10	.03	5.21	0.83
Assess for post-traumatic stress felt by LGB victims of hate crimes based on their sexual orientations/identities.	.11	.12	.05	**.77**	.06	4.47	1.38
Integrate clinical data (e.g., mental status exam, intake assessments, presenting concern) of a LGB client.	.11	.02	.09	**.74**	.13	4.80	1.21
Assess the role of alcohol and drugs on LGB clients social, interpersonal, and intrapersonal functioning.	.19	.06	.04	**.73**	.12	4.69	1.28
Complete an assessment for a potentially abusive same sex relationship in a LGB-affirmative manner.	.06	.07	.02	**.70**	.14	4.47	1.38
Establish a safe space for LGB couples to explore parenting.	.05	.08	.10	.13	**.71**	4.75	1.44
Normalize a LGB client's feelings during different points of the coming out process.	.02	.20	.09	.02	**.68**	4.89	1.23
Establish an atmosphere of mutual trust and affirmation when working with LGB clients.	.02	.20	.09	.02	**.63**	5.47	0.88

Note. There are 32 items. I = Knowledge (*M* = 4.90, *SD* = 0.90, eigenvalue = 16.14, variance = 47.89%); II = Advocacy Skills (*M* = 3.76, *SD* = 1.36, eigenvalue = 4.09, variance = 6.40%); III = Awareness (*M* = 5.57, *SD* = 0.42, eigenvalues = 3.52, variance = 5.51%); IV = Assessment (*M* = 4.54, *SD* = 1.13, eigenvalue = 1.39, variance = 2.18%); V = Relationship (*M* = 5.06, *SD* = 0.90, eigenvalue = 1.91, variance = 2.99%); Total (*M* = 151.21, *SD* = 36.45, total variance = 64.97%). Unique factor loadings greater than .50 are in bold. Analysis is based on 336 observations. LGB-CSI items and subscale scores range from 1 to 6. LGB-CSI Total scores range from 32 to 192.

value = 3.52); this factor was named *Awareness* because the 5 items appeared to indicate a counselors' confidence in his or her ability to maintain awareness of attitudes toward his or her own and others' sexual identity development. The fourth factor, which accounted for 2.99% of the variance (eigenvalue = 1.91), was named *Assessment* because the 4 items appeared to indicate a counselor's confidence in his or her ability to perform a counseling behavior reliant on assessing the relevant underlying issues and problems of an LGB client. The final, fifth factor accounted for 2.18% of the variance (eigenvalue = 1.39) and was named *Relationship* because the 3 items seemed to represent a counselor's confidence in his or her ability to perform counseling behaviors characterized by attention toward building a working alliance with LGB clients. Communalities for the 32-item inventory ranged from .41 to .80 after rotation. The internal consistency estimates of the 5 subscales were found to be very high. High internal consistency estimates were obtained for subscales of the LGB-CSI: .93 (Advocacy), .88 (Assessment), .87 (Awareness), .86 (Relationship), .96 (Knowledge), and .97 (Total). Intercorrelations among the five factors, although significant, were moderate enough to indicate that the factors measured separate but related constructs (r = .28 −.57; see Table 2). Examination of the means of the LGB-CSI subscales provided preliminary information about levels of LGB-affirmative self-efficacy (see Table 3 for descriptive statistics).

The final version of the LGB-CSI included 32 items across five subscales. The following number of items corresponded with each subscale: Application of Knowledge (13 items), Advocacy Skills (7 items), Awareness (5 items), Assessment (4 items), and Relationship (3 items). Items for each subscale were rated on a 6-point Likert scale ranging from 1 to 6 (1 = *not at all confident*, 3 = *moderately confident*, 6 = *highly confident*). Subscale scores were obtained by summing the ratings on items for each subscale and dividing by the number of items on the subscale. LGB-CSI total scores were obtained by summing all items.

Study 2: Factor Structure Reliability

A confirmatory factor analysis (CFA) was used to investigate the factor stability of the five-factor solution of the LGB-CSI from Study 1. Competing models of the LGB-CSI factor structure were tested as a means of investigating the construct validity of the measure. In addition, first-order and second-order models were compared as a means of ascertaining the best possible fit for the data. Additional evidence of reliability and validity for this sample also were investigated. In terms of validity estimates, LGB-CSI scores were expected to demonstrate positive associations with professional status, years of therapy experience, amount of instruction in LGB issues, number of LGB clients, and number of family or friends who self-identify as lesbian, gay, or bisexual. The LGB-CSI also was expected to demonstrate adequate internal consistency.

Method

Participants

The 310 participants for this study included 245 women and 64 men (1 case was unspecified), of which 8 were African American or Black (2.6%), 12 were Asian American/Pacific Islander (3.9%), 9 were Hispanic/Latino(a) (2.9%), 2 were Native American Indian (0.6%), 8 were biracial/multiethnic (2.6%), and 268 were White/European American (86.5%) (3 cases were unspecified). Participants were between the ages of 22 and 62 years (M = 33.72, SD = 8.42). In terms of sexual orientation identity, 30 participants identified as bisexual (9.7%), 19 identified as lesbian (6.1%), 11 identified as gay men (3.5%), 3 identified as unsure/questioning (1.0%), and 244 identified as heterosexual (78.7%) (3 cases were unspecified). The breakdown of professional status for the sample included 87 participants with a PhD or PsyD, 44 pre- or postdoctoral interns, 174 PhD or PsyD students, and 5 MA students.

Measure

The original pool of 61 LGB-CSI items described in Study 1 was used to assess LGB-affirmative counselor self-efficacy.

Procedure

A new sample of participants was recruited for Study 2, all of whom were recruited for volunteer participation via the same methods as Study 1, with the exception that data collection occurred 1 year later. The study was announced in an electronic mail (E-mail) message that was sent to the following organization electronic mailing list addresses and members of practice-oriented divisions of the APA: SAG, APAGS, and the Massachusetts Psychological Association. The message described the study as a validation study of a scale used to measure counselors' confidence in counseling lesbian women, gay men, and bisexual women and men. The message instructed those participants from Study 1 who had coincidentally received the second e-mail announcement message to not participate in Study 2, in an effort to control for potential sample overlap among studies. Participants' origin of submission and e-mail addresses were used to screen for potential overlap between studies. No duplicates were found. However, 2 participants each completed two Study 2 surveys. One survey from each pair of duplicate surveys was eliminated from the data set. Three participants who responded to one or both of the validity check items were removed from the sample prior to data analysis.

Results

CFA

A CFA was conducted on the LGB-CSI by using the AMOS 4.01 computer program (Arbuckle, 1999). Comparisons

Table 2
Intercorrelations Among Lesbian, Gay, and Bisexual Affirmative Counseling Self-Efficacy Inventory Subscale Scores for Studies 1 and 2

	Study 1					Study 2				
Subscale	1	2	3	4	5	1	2	3	4	5
1. Application of Knowledge	—					—				
2. Advocacy Skill	.44	—				.36	—			
3. Awareness	.38	.28	—			.38	.23	—		
4. Relationship	.54	.37	.44	—		.45	.31	.36	—	
5. Assessment	.57	.34	.50	.57	—	.42	.16	.31	.32	—

Table 3
LGB-CSI Factor Means, Standard Deviations, and Alpha Coefficients for Samples 1–4

	Sample 1 (n = 336)			Sample 2 (n = 310)			Sample 3 (n = 80)			Sample 4 (n = 36)					
										M		*SD*		α	
Subscale and total	*M*	*SD*	α	*M*	*SD*	α	*M*	*SD*	α	T_1	T_2	T_1	T_2	T_1	T_2
Application of Knowledge	4.90	0.90	.96	4.97	0.89	.96	4.48	1.48	.96	3.01	4.27	0.91	0.89	.92	.88
Advocacy Skill	3.76	1.36	.93	3.68	1.27	.93	3.85	2.02	.93	3.62	3.61	1.20	1.38	.88	.75
Awareness	5.57	0.42	.87	5.14	0.80	.87	5.03	0.96	.86	4.85	5.20	0.79	0.63	.80	.96
Relationship	5.06	0.90	.86	5.26	0.71	.87	5.30	0.63	.87	4.04	4.97	1.14	0.99	.70	.88
Assessment	4.54	1.13	.88	4.66	1.05	.87	3.97	1.98	.89	3.20	3.72	1.26	0.97	.81	.70
Total	151.21	36.45	.97	150.49	35.54	.96	144.12	33.14	.96	113.79	122.83	23.81	21.92	.86	.91

Note. LGB-CSI = Lesbian, Gay, Bisexual Affirmative Counseling Self-Efficacy Inventory. LGB-CSI subscale scores range from 1 to 6. LGB-CSI Total scores range from 32 to 192.

were made between the identified five-factor oblique model, a four-factor oblique model, a three-factor oblique model, a second-order five-factor model, and an independence model. Several indexes assessing the degree to which the model fits the data were computed for all of the competing models. As has been noted extensively in the literature, the chi-square statistic tends to be affected by large sample sizes and is almost always significant despite reasonable fit to the data (Bentler & Bonett, 1980; Byrne, 2001), which also often occurs in models with numerous variables and high degrees of freedom (Bryant & Yarnold, 1995). Therefore, as suggested by Byrne (2001), several alternative indexes of fit were used as adjuncts to the chi-square statistic, including the χ^2/df ratio, the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI), the root-mean-square residual (RMR), incremental fit index (IFI), parsimony comparative fit index (PCFI), and the root-mean-square error of approximation (RMSEA).

Goodness of fit indicators for the competing hypothetical models for the LGB-CSI are shown in Table 4. As expected, the chi-square statistics for all five competing models were significant. However, an evaluation of our adjunct fit indexes suggested that a reasonable degree of fit was obtained for the five-factor oblique model and the second-order five-factor model, but the second-order model did not provide an improvement of fit over the first-order oblique model. The GFI and AGFI did not reach recommended values (.90–.95), but the IFI, PCFI, and RMSEA reached values that indicate reasonable fit. In particular, the values associated with the IFI indicate the highest values for both five-factor models, the PCFI falls within the expected range of values, and the RMSEA values below .08 represent reasonable errors of approximation in the population (Byrne, 2001). Although none of these values reached ideal levels of fit, they indicate that the five-factor oblique model provides the best fit to the data, and that the second-order model does not improve on the first-order model.

To evaluate the model misspecification, we analyzed the standardized residual covariances and the modification indexes provided by the AMOS 4.01 program. According to Byrne (2001), standardized residuals are analogous to *Z* scores and are therefore preferable to unstandardized residuals in the interpretation of model misspecification. Values greater than 2.58 are considered to be statistically discrepant from the zero residuals that would exist if the model were perfect. We found only two standardized residual covariances that fell outside the expected range among the 465 covariances in the output. The second type of information related to misspecification reflects the extent to which the hypothesized model is appropriately described, which is captured by the modification indexes (MIs). For each fixed parameter specified, AMOS provides an MI, the value of which represents the expected drop in overall chi-square value if the parameter were to be freely estimated in a subsequent run. Associated with each MI is an expected parameter change (EPC) value, which represents the predicted estimated change for each fixed parameter in the model, yielding important information regarding the sensitivity of the evaluation of fit to any reparameterization of the model (Byrne, 2001). The few parameters that produced substantive MIs and EPCs were error covariances, which should be considered of little concern (Byrne,

Table 4
Goodness-of-Fit Indicators for the Competing Hypothetical Models for the 32-Item LGB-CSI

Model	χ^2	*df*	χ^2/df	GFI	AGFI	RMR	IFI	PCFI	RMSEA
Independence model	7482.61	465	16.09	.16	.10	.75	.00	.00	.22
Three-factor model	1498.04	431	3.48	.73	.68	.11	.85	.79	.09
Four-factor model	1212.85	428	2.83	.79	.76	.10	.89	.82	.08
Five-factor model	1018.11	424	2.40	.82	.79	.09	.92	.84	.07
Second-order model	1027.14	429	2.39	.82	.79	.10	.92	.84	.07

Note. N = 310. LGB-CSI = Lesbian, Gay, Bisexual Counseling Self-Efficacy Inventory; GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; RMR = root mean square residual; IFI = incremental fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation.

2001). Therefore, post hoc respecification of the model was not attempted.

Reliability

To further examine evidence of reliability of the LGB-CSI, Cronbach's alphas were computed for each subscale. The internal consistency estimates for this sample were high for the Knowledge ($\alpha = .95$), Relationship ($\alpha = .83$), Assessment ($\alpha = .87$), Advocacy ($\alpha = .93$), and Awareness ($\alpha = .86$) subscales.

Validity

To further examine evidence of validity for the scale scores, a correlation matrix was produced for the five subscales of the LGB-CSI and several training, professional experience, and demographic variables, including years of therapy experience, amount of instruction in LGB issues, number of LGB clients, and number of family or friends who are LGB. The correlation matrix appears in Table 5. Amount of instruction in LGB issues was significantly and positively correlated with all five of the LGB-CSI subscales ($r = .21–.45$, $p < .01$). The number of family or friends who are LGB was significantly and positively correlated with all five subscales of the LGB-CSI ($r = .19–.37$, $p < .01$).

A one-way multivariate analysis of variance (MANOVA) was conducted with the four levels of professional status (MA students, PhD/PsyD students, predoctoral interns/postdoctoral fellows, licensed PhD and PsyD professionals) as the independent variable and the five subscales of the LGB-CSI as the dependent variables. The multivariate analysis was significant, Wilks's $\Lambda = .832$, $F(15, 834) = 3.844$, $p < .001$, $\eta^2 = .16$. Subsequent analyses of variance (ANOVAs) revealed significant F values for the Knowledge, Relationship, Assessment, and Advocacy subscales (see Table 6). Tukey's honestly significant difference (HSD) tests revealed that there were two significant contrasts for the Knowledge subscale, and one significant contrast each for the Relationship, Assessment, and Advocacy subscales. All of the contrasts indicated that the PhD/PsyD group expressed greater LGB-affirmative counseling self-efficacy than one of the other groups. Effect-size estimates (η^2; Cohen, 1988) ranged from .05 to .13.

Study 3: Reliability and Validity Tests of the LGB-CSI

The purpose of the third study was to obtain evidence of reliability and validity for the LGB-CSI. We predicted that the LGB-CSI would positively relate to the COSE (Larson et al., 1992). Because of the theorized relationship between levels of self-efficacy and degree of interest in a given area (Lent et al., 1994) and previous research suggesting that attitudes toward lesbian and gay clients influence counselor self-efficacy beliefs (Flores et al., 1995), it was hypothesized that LGB-CSI would relate to attitudes regarding lesbians and gay men (ATLG–S; Herek, 1988), and bisexual men and women (ARBS; Mohr & Rochlen, 1999). This hypothesis was based on the assumption that the type of attitudes a counselor holds toward LGB individuals (e.g., condemnation versus tolerance) will be a reflection of his or her interest in LGB-affirmative counseling, and his or her related self-efficacy to conduct LGB-affirmative counseling. On the basis of the existing LGB attitude literature, we predicted that attitudes toward LGB individuals and self-efficacy scores would be more positive (a) for women than for men, (b) for self-identified LGB individuals than for self-identified heterosexuals, (c) for counselors who had prior contact with LGB people than for those without prior contact, and (d) for counselors who reported receiving training or instruction concerning LGB issues in psychology than for counselors who reported not receiving this type of instruction. Discriminant validity was expected to be supported by the absence of, or minimal correlations between, LGB-CSI scores and social desirability as measured by the Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1991).

Participants

The 80 participants were 67 (83.7%) graduate students in psychology and 13 (16.3%) mental health practitioners from around the nation, who were between the ages of 22 and 64 years ($M = 30.54$, $SD = 9.02$). Most participants were women ($n = 64$), 12 were men, and 4 participants did not indicate their gender. The majority (63.8%) of the sample were White/European American ($n = 51$); 24.9% were racial or ethnic minorities: African American or Black ($n = 8$), Hispanic/Latino(a) ($n = 2$), Asian American/Pacific Islander ($n = 3$), biracial/multiethnic ($n = 3$), Native

Table 5
Correlations Between LGB-CSI Subscales and Training, Professional Experience, and Demographic Variables in Study 2

Subscale and demographic	1	2	3	4	5
1. Application of Knowledge	—				
2. Advocacy Skills	.44**	—			
3. Awareness	.47**	.28**	—		
4. Relationship	.64**	.32**	.49**	—	
5. Assessment	.64**	.42**	.46**	.61**	—
Years of therapy experience	.30**	.12**	.10	.15**	.20**
Instruction in LGB issues	.45**	.21**	.29**	.24**	.28**
No. of LGB clients	.28**	.19**	.15**	.16**	.20**
No. of LGB family or friends	.37**	.31**	.19**	.22**	.19**
Gender	.08	.08	.02	.04	.12*
Age	.24**	.18**	.07	.05	.16**

Note. $N = 310$.
* $p < .05$. ** $p < .01$.

Table 6
Breakdown of Mean Scores on the LGB-CSI Subscales Within Four Levels of Professional Status in Study 2

Levels of professional status	*n*	I	II	III	IV	V
Master's-level student	5	3.83	4.11	5.20	4.66	4.85
PhD/PsyD student	174	3.68	3.60	5.05	4.68	4.49
PhD/PsyD interns & postdoctoral fellows	44	3.44	3.23	5.16	5.03	4.66
Received PhD/PsyD	87	4.45	4.02	5.27	5.21	4.96
F(3, 306)		12.34*	4.47*	2.11	5.79*	4.06*

Note. $N = 310$. LGB-CSI = Lesbian, Gay, Bisexual Affirmative Counseling Self-Efficacy Inventory, I = Application of Knowledge, II = Advocacy Skills, III = Awareness, IV = Relationship, V = Assessment.
* $p < .05$.

American Indian ($n = 1$), and international (i.e., non-U.S. citizen) ($n = 3$). Nine participants (11.3%) did not identify their racial or ethnic background. The majority of participants (78.8%) self-identified as heterosexual; 10.1 % of the sample was composed of individuals who self-identified as lesbian ($n = 5$) or as a bisexual female ($n = 3$). Nine participants (11.1%) did not indicate their sexual orientation identity. Participants reported an average of 4.84 years of therapy experience ($SD = 6.39$). Approximately 43.7% of the participants reported counseling at least one self-identified lesbian client, 41.2% reported counseling at least one self-identified gay male client, and 43.7% reported counseling one self-identified bisexual client. Approximately 80% of the participants reported knowing at least one self-identified lesbian friend or relative, 86.2% reported knowing at least one self-identified gay male friend or relative, 61.2% reported knowing at least one self-identified bisexual friend or relative. Approximately 69.9% of participants reported receiving at least 1 hr of instruction or training concerning LGB issues in psychology, and 36.1% of the sample reported more than 5 hr of training or instruction.

Measures

LGB-CSI. Thirty-two items, previously determined to make up the five-factor structure on the basis of results from Studies 1 and 2, were included on the LGB-CSI used in Study 3. The scale items were rated on the identical 6-point Likert scale used in Studies 1 and 2. Participants were given the same instructions to complete the revised LGB-CSI as were used in Studies 1 and 2. The interpretation of scores was identical to those reported in Studies 1 and 2.

BIDR. The BIDR (Paulhus, 1991) is a 40-item scale that measures two constructs associated with socially desirable responding. The two constructs are self-deceptive positivity (SDE; i.e., the tendency to give self-reports that are honest but exaggerated claims of positive cognitive attributes) and impression management (IM; i.e., deliberate self-presentation of desirable behaviors to an audience). Items 1–20 assess self-deceptive positivity and items 21–40 assess impression management. Respondents rate their agreement with each statement on a 7-point Likert scale (1 = *not true*, 4 = *somewhat true*, 7= *very true*), with a total test range of 0 to 20. High scores indicate exaggeratedly desirable responses on both subscales. The scoring key is balanced, with 20 items negatively scored and 1 point added for each extreme response (i.e., a 6 or a 7). A Cronbach's alpha reliability of .83 was reported for the total BIDR score and ranged from .68 to .80 for the SDE and from .75 to .86 for the IM scale. Test–retest correlations over a 5-week period have been reported at .69 and .65 for the SDE and IM scale, respectively. The 40 BIDR items show convergent validity as a measure of socially desirable responding by correlating .71 with the Marlowe–Crowne Social Desirability Scale (Crowne & Marlowe, 1960) and .80 with the Multidimensional Social Desirability Inventory (Jacobson, Kellogg, Cauce, & Slavin 1977). The internal consistency in the present study for the total BIDR score was .85, and .79 and .87 for the SDE and IM scales, respectively. Examples of the items are "I don't care to know what other people really think of me" and "When I hear people talking privately, I avoid listening."

COSE. The COSE (Larson et al., 1992) is a 37-item scale consisting of items that measure one's self-efficacy estimates for counseling activities. Higher scores on the COSE reflect stronger perceptions of counselor self-efficacy. Participants rate the items on a Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*) according to the extent to which they agree that the items reflects their actual estimate of how they would perform in a counseling situation at the present time. The COSE consists of five factors: (a) Microskills, (b) Process, (c) Difficult Client Behaviors, (d) Cultural Competence, and (e) Awareness of Values. Internal consistencies for the COSE total score and the five factors have been reported to range from .62 to .93 (Larson et al., 1992). Test–retest reliabilities have demonstrated adequate 3-week reliability estimates, ranging from .68 to .83 (Larson et al., 1992). The COSE has demonstrated convergent validity with students who reported higher total COSE scores also reporting moderately higher self-concepts as measured by the Tennessee Self-Concept Scale (TSCS; Fitts, 1965). Discriminant validity has been demonstrated by COSE total and factor scores correlating minimally with measures of defensiveness and faking as measured by the Social Desirability Scale (Crowne & Marlowe, 1960) and the TSCS Self-Criticism scale score, respectively. The internal consistencies in the present study include .94 (total COSE), and .89 (Microskills), .84 (Process), .89 (Awareness of Values), .83 (Difficult Client Behaviors), .88 (Cultural Competence). Examples of the items are "I feel confident that I will appear competent and earn respect of my clients" and "When I initiate the end of a session I am positive it will be in a manner that is not abrupt or brusque and that I will end the session on time."

Attitudes Regarding Bisexuality Scale (ARBS). The ARBS is an 18-item scale that was used to investigate the relationship between attitudes toward bisexuality and levels of LGB-affirmative counseling self-efficacy beliefs (Mohr & Rochlen, 1999). The ARBS measures two constructs, termed *stability* and *tolerance*. *Stability* refers to attitudes toward the stability and legitimacy of bisexuality as a sexual orientation identity as well as the stability of bisexual men and women in their relationships. *Tolerance* refers to the degree to which bisexuality is viewed as a moral, tolerable sexual orientation identity and not harmful to society. These attitudes reflect acceptance rather than disdain for bisexual people. Nine items consist of bisexual women as the target, and 9 items consist of bisexual men as the target. Respondents rate their agreement with each statement on a 5-point rating scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, and 5= *strongly agree*), with a total test range of 18 to 90. Higher scores indicate positive attitudes toward bisexuality. The scoring key is balanced with 13 items negatively scored. Internal consistency estimates were .89 for the stability scale and .77 for the tolerance scale in the initial test development samples. The following

test–retest estimates were calculated for the ARBS subscales: stability, .84; tolerance, .91. These estimates suggest that the ARBS can reliably assess attitudes over a 3-week time period. Convergent validity analyses indicated that stability scores were positively correlated with personal contact with a bisexual person, willingness to have a bisexual best friend, willingness to date a bisexual person, and level of contact with heterosexual people. Stability scores were negatively correlated with having had a bad dating experience with a bisexual person and with identifying as exclusively lesbian or gay. Discriminant validity analyses indicated that neither stability nor tolerance scale scores were related to self-monitoring, need to evaluate, or age. Examples of items are "Male bisexuality is not usually a phase, but rather a stable sexual orientation" and "The only true sexual orientations for women are homosexuality and heterosexuality" (reversed scored).

Attitudes Toward Lesbians and Gay Men Scale—Short Form (ATLG–S). The ATLG–A is a 10-item measure designed to assess attitudes toward lesbian women and gay men along a cognitive continuum of condemnation to tolerance (Herek, 1988). The ATLG–S measure consists of 5 items involving a lesbian target (ATL–S) and 5 items involving a gay male target (ATG–S). Items are rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). A coefficient alpha of .87 has been reported for this scale (Herek, 1988). The subscales for gay and lesbian targets had a coefficient alpha of .92 (ATG–S) and .85 (ATL–S). Each shortened version has correlated highly with its longer version (ATG, $r = .96$; ATL, $r = .95$; ATLG, $r = .97$; Herek, 1988). The construct validity of the ATLG–S was supported by correlating with measures of religious conservatism–fundamentalism, contact with lesbians and gay men, traditional sex role attitudes, and levels of authoritarianism (Herek, 1988). Four of the items are reversed scored. The ATLG–S is usually scored so that higher scores indicate negative attitudes. In an effort to simplify the interpretation of the results in the current study, the items were reverse scored from their usual scoring procedure to make the scoring parallel to that of the ARBS and LGB-CSI. Examples of items include "Lesbians just can't fit into our society" and "Male homosexuality is a perversion."

Procedure

Participants for the third study were recruited via Internet-based data collection ($n = 44$) and paper-and-pencil data collection ($n = 36$) within four small graduate-level counseling psychology classes at a large university in the Midwest. The Internet-based data collection was announced in an e-mail message that was sent to APA-accredited internship programs for training in psychology and APA-accredited doctoral programs in professional psychology (i.e., clinical, counseling, and school psychology programs). Study 3 followed similar electronic mailing list data collection procedures as in Studies 1 and 2. Participants who consented to participate were given the LGB-CSI items, a demographic information form, the BIDR, the COSE, the ATLG–S, and the ARBS. The measures were periodically counterbalanced on the Web page during the data collection period. The participants who participated in the paper-and-pencil administration were given an informed consent form, and those who consented to participate completed the counterbalanced test packet containing the previously noted measures.

A total of 60 individuals completed the online surveys. No participants submitted duplicate surveys. Data from 16 participants who incorrectly responded to one or both of the validity check items were not analyzed. Nine of the 16 cases submitted incompleted surveys, that is, they only completed the first part of a two-part survey composed of all four validity measures. A total of 36 students (98% of students attending the four classes) completed the test packet on the day of administration.

Results

Descriptive Statistics

The means for the subscales indicate that the participants generally reported moderate levels of self-efficacy to perform LGB-affirmative counseling (see Table 3). Each of the five subscale scores significantly correlated with total LGB-CSI score and ranged from .27 to .94.

Reliability Estimates

High internal consistency estimates were obtained for subscales of the LGB-CSI: .93 (Advocacy Skills), .89 (Assessment), .86 (Awareness), .87 (Relationship), .96 (Knowledge), and .96 (Total).

Convergent Validity

Bivariate multiple correlations were computed among LGB-CSI, ATLG–S, and ARBS scores to test the relationship between level of self-efficacy and attitudes toward LGB individuals. Correlations between the LGB-CSI and the validity measures are reported in Table 7. Results indicated significant correlations among the ARBS-Stability, ARBS-Tolerance, ATL–S, ATG–S, the five LGB-CSI subscales, and the LGB-CSI total scores. Bivariate multiple correlation analyses were also conducted between LGB-CSI and COSE total and subscale scores to further test convergent validity hypotheses. Results indicated significant correlations among COSE total and subscale scores and LGB-CSI total scores. Significant correlations ranged from .28 (between COSE-Cultural Competence and LGB-CSI total scores) to .56 (between COSE-Difficult Client Behaviors and LGB-CSI total scores). Significant correlations also were found between the COSE subscale and scores and LGB-CSI - *Knowledge*, Awareness, Relationship, and Assessment factor scores, ranging from .23 (between COSE-Microskills and LGB-CSI-Awareness scores) to .66 (between COSE-Difficult Client Behaviors and LGB-CSI-Assessment).

Discriminant Validity

Bivariate multiple correlations were performed with the LGB-CSI and the BIDR total and subscale scores to test the discriminant validity hypotheses. Results suggest that generally there is no strong association among LGB-CSI and the BIDR total and subscale scores. There were two statistically significant relations: the LGB-CSI-*Awareness* factor was associated with BIDR total Social Desirable Responding (SDR; $r = .37$) and SDE ($r = .43$).

Relationship of LGB-CSI Scores to Demographic Characteristics

To determine whether significant differences in Study 3 participants' self-efficacy to perform LGB-affirmative counseling across gender, sexual orientation identity, contact with self-identified LGB clients, contact with self-identified LGB family and/or friends, and participation in instruction or training in LGB issues in psychology, we performed one-way ANOVAs. To control for Type I errors, given the high number of comparisons, the Bonferroni adjustment procedure was used in these analyses (i.e., an

Table 7
Correlations Between LGB-CSI, ATLG-S, ARBS, COSE, and BIDR Scores

Scale and subscale	1	2	3	4	5	6
1. ATL-S	.37*	.23*	.37*	.59*	.39*	.45*
2. ATG-S	.34*	.29*	.36*	.56*	.29*	.43*
3. ATLG-S	.36*	.28*	.38*	.33*	.38*	.44*
4. ARBS-Stability	.40*	.26*	.38*	.33*	.38*	.44*
5. ARBS-Tolerance	.46*	.39*	.41*	.57*	.43*	.55*
6. ARBS-Total	.46*	.34*	.43*	.47*	.43*	.53*
7. COSE-Awareness of Values	.25*	.15	.46*	.38*	.19*	.32*
8. COSE-Cultural Competence	.22*	.09	.35*	.37*	.28*	.28*
9. COSE-Difficult Client Behaviors	.54*	.13	.40*	.54*	.66*	.56*
10. COSE-Process	.38*	.08	.39*	.37*	.43*	.40*
11. COSE-Microskills	.38*	.09	.23*	.41*	.42*	.38*
12. COSE-Total	.47*	.13	.43*	.51*	.54*	.50*
13. BIDR-Impression Management	−.10	−.05	.18	−.09	−.13	−.08
14. BIDR-Self-Deception	.02	.14	.43*	.22	.20	.16
13. BIDR-Total	−.04	.06	.37*	.09	.05	.05

Note. 1 = Application of Knowledge; 2 = Advocacy Skill; 3 = Awareness; 4 = Relationship; 5 = Assessment; 6 = Total. ATLG = Attitudes Toward Lesbians and Gay Men; ARBS = Attitudes Regarding Bisexuality Scale; COSE = Counseling Self-Estimate Inventory; BIDR = Balanced Inventory of Desirable Responding.
* $p < .05$.

individual probability rate of .008). Heterogeneity of variance was found across LGB-CSI Relationship and Advocacy Skills scores across sexual orientation identity groups. ANOVAs were not performed with these factors because of the violation of one of the assumptions underlying the ANOVA statistic. Results indicated significant differences across the mean LGB-CSI Knowledge and Total scores for participants who self-identified as heterosexual and participants who self-identified as LGB on LGB-CSI Knowledge factor, $F(1, 69) = 8.61$, $p < .001$, $\eta^2 = .09$; and Total scores, $F(1, 69) = 7.56$, $p < .001$, $\eta^2 = .06$. Participants who self-identified as LGB scored higher than participants who self-identified as heterosexual on LGB-CSI Total and Knowledge subscale scores. Results indicated significant differences across the mean LGB-CSI Knowledge, Assessment, and Total scores for previous contact with LGB friends or family on LGB-CSI Knowledge, $F(1, 71) = 13.18$, $p < .001$, $\eta^2 = .08$; Assessment, $F(1, 71) = 1.16$, $p < .001$, $\eta^2 = .05$; and Total scores, $F(1, 71) = 16.30$, $p < .001$, $\eta^2 = .10$. Participants who reported that they have had contact with one or more LGB friends or relatives scored higher than participants who reported that they have had no contact with LGB friends or relatives on all LGB-CSI Total, Knowledge, and Assessment subscales. Results also indicated significant differences for previous contact with LGB clients on LGB-CSI Knowledge, $F(1, 70) = 2.41$, $p < .001$, $\eta^2 = .06$; Awareness, $F(1, 70) = 7.64$, $p < .001$, $\eta^2 = .06$; Relationship, $F(1, 70) = 11.99$, $p < .001$, $\eta^2 = .08$; Assessment, $F(1, 70) = 22.42$, $p < .001$, $\eta^2 = 15$; and Total scores, $F(1, 70) = 27.55$, $p < .001$, $\eta^2 = .16$. Participants who reported that they have had contact with one or more self-identified LGB clients scored higher than participants who reported having contact with no self-identified LGB clients on all LGB-CSI Total and subscales. Results also indicated significant differences for participants who reported no training or instruction and participants who reported that they have had training or instruction on the LGB-CSI Knowledge subscale, $F(1, 73) = 16.78$, $p < .001$, $\eta^2 = .10$. Results indicated no significant differences across the mean LGB-CSI scores for gender.

Study 4: Test–Retest Reliability Estimates

The purpose of Study 4 was to provide additional evidence of reliability, specifically stability estimates, for the LGB-CSI.

Method

Participants

The 36 counseling psychology graduate students (28 master's level and 8 doctoral level) enrolled in four graduate counseling psychology courses at a large Midwestern university, who participated in Study 3, also participated in Study 4. Participants were between the ages of 22 and 38 years ($M = 25.61$, $SD = 4.36$). Most participants were women ($n = 28$), 6 were men, and 2 did not indicate their gender. A majority (52.8%) of the sample was White/European American ($n = 19$); 27.8% were racial or ethnic minorities: African American or Black ($n = 5$), Asian American/Pacific Islander ($n = 1$), biracial/multiethnic ($n = 1$), and international (i.e., non-U.S. citizen) ($n = 3$). Seven participants (19.4%) did not identify their racial or ethnic background. The majority of participants (80.6%) self-identified as heterosexual; 1 individual (2.8%) self-identified as bisexual female. Six participants (16.6%) did not indicate their sexual orientation identity. Participants reported an average of 1.53 years of therapy experience ($SD = 0.86$). Approximately 8.3% of the participants reported counseling at least one self-identified lesbian client, 5.6% reported counseling at least one self-identified gay male client, and 8.4% reported counseling one self-identified bisexual client. Approximately 58.4 % of the participants reported knowing at least one self-identified lesbian friend or relative, 72.3% reported knowing at least one self-identified gay male friend or relative, and 47.3% reported knowing at least one self-identified bisexual friend or relative. Approximately 47.2% of participants reported receiving at least 1 hr of instruction/training concerning LGB issues in psychology.

Measure

LGB-CSI. The same LGB-CSI and instructions described in Study 3 were given to participants.

Procedure

Participants were recruited from four small graduate-level counseling psychology classes at a large university in the Midwest. Ninety-eight percent of the students attended class on both the first day of administration and second day of administration. Retest administration occurred 2 weeks after the first administration of the LGB-CSI. Participants signed a consent form during the first administration and completed the LGB-CSI and a demographic questionnaire during two separate class periods. Participants were given a debriefing form describing the hypotheses of the study after the second administration.

Results

Descriptive Statistics

The means and standard deviation values for the LGB-CSI subscales for both test and retest administrations are reported in Table 3.

Reliability Estimates

The 2-week test–retest reliability estimates for the following LGB-CSI total and subscales: .45 (LGB-CSI-Awareness), .37 (LGB-CSI-Relationship), .57 (LGB-CSI-Knowledge), .48 (LGB-CSI-Advocacy Skills), .38 (LGB-CSI-Assessment), and .51 (LGB-CSI-Total). High internal consistency estimates were obtained for subscales of the LGB-CSI (see Table 3).

Study 5: Sensitivity to Change Across Professionals and Counselor Trainees

The purpose of Study 5 was to further examine evidence of validity for the LGB-CSI scores, specifically construct validity. We hypothesized that support for the validity of the LGB-CSI would be evidenced by higher LGB-CSI scores among the mental health professionals than counselor trainees because they would be more likely to have experienced more performance accomplishments (e.g., successful counseling interviews with LGB clients), vicarious learning (e.g., more opportunities to observe others counsel LGB clients successfully), verbal persuasion (e.g., more supervision), and less anxiety or physiological arousal than beginning counselor trainees. Comparisons were also sought to investigate between-groups differences across counselor trainees sampled in Studies 1–4 (i.e., the Internet samples in Studies 1, 2, and 3 vs. the classroom sample in Studies 3 and 4).

Method

Participants

Participants (N = 726) included the same participants described in Studies 1–4. Two groups (professionals and counselor trainees) were formed from existing data to analyze group differences across studies.

Professional group. Participants were 229 professionals, who indicated having an MA, PhD, or PsyD degree in professional psychology and were between the ages of 29 and 75 years (M = 39.74, SD = 10.63). Most participants were women (n=139), and 90 were men. The majority (83.5%) of the sample was White/European American (n = 187); 16.5% were racial or ethnic minorities: African American or Black (n = 15), Hispanic/Latino(a) (n = 14), Asian American/Pacific Islander (n = 4), biracial/multiethnic (n = 2), and Native American Indian (n = 2). Five professionals did not identify their racial or ethnic background. The majority of participants (78.6%) self-identified as heterosexual (n = 176); 21.4% of the sample was composed of individuals who self-identified as a gay male (n = 17), lesbian (n = 26), bisexual male (n = 1), and bisexual female (n = 4). Five professionals did not indicate their sexual orientation identity.

Counselor trainees. Participants were 497 counselor trainees enrolled in graduate programs in psychology, who were between the ages of 21 and 62 years (M = 28.07, SD = 6.69). Most participants were women (n = 420), and 71 were men. Six counselor trainees did not indicate their gender. The majority (78.9%) of the sample was White/European American (n = 390); 21.1% were racial or ethnic minorities: African American or Black (n = 36), Hispanic/Latino(a) (n = 24), Asian American/Pacific Islander (n = 26), biracial/multiethnic (n = 15), international (i.e., non-U.S. citizen) (n = 3), and Native American Indian (n = 1). Two counselor trainees did not identify their racial or ethnic background. The majority of participants (86.1%) self-identified as heterosexual (n = 420); 13.9% of the sample was composed of individuals who self-identified as a gay male (n = 7), lesbian (n = 19), bisexual male (n = 15), bisexual female (n = 24), and unsure/questioning (n = 3). Nine counselor trainees did not indicate their sexual orientation identity.

Measure

LGB-CSI. The 32-item LGB-CSI, as described in Study 3, and instructions described in Studies 1–4 were given to participants.

Procedure

Data collection methods were described in Studies 1–4. Data from all four studies were coded to represent one of four career status and sample groups (Study 1 professionals, Study 2 professionals, Study 3 professionals, Study 1 counselor trainees, Study 2 counselor trainees, Study 3 Internet counselor trainees, Study 3 classroom counselor trainees [Time 1], Study 4 classroom counselor trainees [Time 2]).

Results

A one-way MANOVA was conducted with participant career statuses and sample (Study 1 professionals, Study 2 professionals, Study 3 professionals, Study 1 counselor trainees, Study 2 counselor trainees, Study 3 Internet counselor trainees, Study 3 classroom counselor trainees [Time 1], Study 4 classroom counselor trainees [Time 2]) across all four studies as the independent variables and the five subscales and total scale scores across all four samples of the LGB-CSI as the dependent variables. The multivariate analysis was significant, Wilks's Λ = .830, F(35, 3001) = 3.890, $p < .001$, η^2 = .16. Subsequent ANOVAs revealed significant F values for the Knowledge, F(7, 755) = 5.73, $p < .001$, η^2 = .06; Relationship, F(7, 755) = 6.87, $p < .001$, η^2 = .07; and Assessment, F(7, 755) = 10.75, $p < .001$, η^2 = .11, subscales, and LGB-CSI Total, F(7, 755) = 5.21, $p < .001$, η^2 = .09. Tukey's HSD tests revealed six significant contrasts for the Knowledge subscale, seven significant contrasts for the Relationship subscale, nine significant contrasts for the Assessment subscales, and seven significant contrasts for the LGB-CSI Total scale. All of the contrasts across samples indicated that the professional group expressed greater LGB-affirmative counseling self-efficacy than counselor trainees. Effect-size estimates (η^2; Cohen, 1988) ranged from .09 to .14. Additional contrasts indicated significant differences across counselor trainees sampled in Studies 1–3. Participants from the Study 3 (Time 1) session re-

ported moderate, but markedly lower, levels of self-efficacy to perform LGB-affirmative counseling in comparison to others measured in Study 1 and on the Knowledge, Assessment, and LGB-CSI Total. Specifically, Study 1 counselor trainees ($M = 4.70$, $SD = 0.71$) expressed greater self-efficacy than Study 3 classroom counselor trainees (Time 1; $M = 3.01$, $SD = 0.91$) on the Knowledge subscale ($p < .05$, $\eta^2 = .07$). Study 1 counselor trainees ($M = 4.61$, $SD = 0.30$) expressed greater self-efficacy than Study 3 classroom counselor trainees (Time 1; $M = 4.04$, $SD = 1.14$) on the Relationship subscale ($p < .05$, $\eta^2 = .09$). Study 2 counselor trainees ($M = 4.57$, $SD = 0.29$) also expressed greater self-efficacy than Study 3 classroom counselor trainees (Time 1; $M = 4.04$, $SD = 1.14$) on the Relationship subscale ($p < .05$, $\eta^2 = .07$). Study 1 counselor trainees ($M = 4.33$, $SD = 0.32$) expressed greater self-efficacy than Study 3 classroom counselor trainees (Time 1; $M = 3.20$, $SD = 1.26$) on the Assessment subscale ($p < .05$, $\eta^2 = .09$). Study 2 counselor trainees ($M = 4.51$, $SD = 0.32$) also expressed greater self-efficacy than Study 3 classroom counselor trainees (Time 1; $M = 3.20$, $SD = 1.26$) on the Assessment subscale ($p < .05$, $\eta^2 = .04$). Study 1 counselor trainees ($M = 155.15$, $SD = 34.65$) expressed greater self-efficacy than Study 3 classroom counselor trainees (Time 1; $M = 113.79$, $SD = 23.81$) on the LGB-CSI Total ($p < .05$, $\eta^2 = .06$). Study 2 counselor trainees ($M = 154.23$, $SD = 32.54$) also expressed greater self-efficacy than Study 3 classroom counselor trainees (Time 1; $M = 113.79$, $SD = 23.81$) on the LGB-CSI Total ($p < .05$, $\eta^2 = .07$).

Discussion

The results of the five studies offer initial evidence of the reliability and validity of the LGB-CSI. Results of the EFA and CFA indicated that the hypothesized covariance among LGB-CSI items is explained by five separate, but interrelated, underlying dimensions of LGB-affirmative counseling self-efficacy. They include confidence in (a) applying knowledge of LGB issues, (b) performing advocacy skills, (c) maintaining awareness of one's own attitudes toward one's own and others' sexual identity development, (d) developing a working relationship with an LGB client, and (e) assessing relevant underlying issues and problems of an LGB client. Reliability estimates indicate that these constructs are internally consistent. Low test–retest reliability estimates raised questions concerning the stability of the LGB-CSI over a 2-week period. Evidence for the convergent and discriminant validity of the LGB-CSI was found. In addition, construct validity was supported by findings indicating varying levels of efficacy commensurate with status in the field (i.e., practicing psychologists held higher self-efficacy beliefs than trainees). The LGB-CSI appears to be an adequate measure of self-efficacy concerning a specific form of counseling; LGB-affirmative counseling. The LGB-CSI total score reflects counselors' perceived self-efficacy to perform LGB-affirmative counseling behaviors. LGB-CSI scores provide a valuable estimate that can be applied to future research and training that advances LGB-affirmative counseling.

Stronger percepts of LGB-affirmative counseling self-efficacy related to higher percepts of general counseling self-efficacy. Notable exceptions include the lack of significant associations between the LGB-CSI Advocacy Skills subscale and COSE total and subscales, the COSE-Cultural Competence subscale and LGB-CSI Knowledge subscale, and the COSE-Awareness of Values subscale and LGB-CSI Assessment subscale. These differences seemed to be due to conceptual differences between the subscales. LGB-CSI Advocacy Skills items reflect a counselor's confidence in his or her use of systemic resources that may help an LGB client struggling with the impacts of homophobia/heterosexism in society. Although the COSE Cultural Competence and Awareness of Values subscales seem to address salient aspects of multicultural counseling, none of the COSE items reflect the advocacy role that counselors are often asked to adopt in multicultural and LGB-affirmative counseling. It is also important to note the relations between LGB-CSI and COSE scores in context with ATLG–S and ARBS scores. It appears as if LGB-CSI Advocacy Skills was more strongly associated with homophobia/heterosexism (as measured by the ARBS and ATLG–S) than general counseling self-efficacy, as measured by the COSE. It is possible that the LGB-CSI Advocacy Skills scores reflected the influence of homophobia/heterosexism more strongly than general aspects of counseling self-efficacy. Future research is needed to investigate the possible mediation of homophobia/heterosexism in the association of LGB-affirmative self-efficacy and general counseling self-efficacy. Similarly, the COSE-Cultural Competence subscale and LGB-CSI Knowledge subscale seem to conceptually differ. LGB-CSI Knowledge items reflect a counselor's confidence in his or her ability to perform counseling behaviors reliant on a priori understanding of LGB issues in psychology, whereas the four COSE-Cultural Competence items reflect a counselor's confidence in his or her ability to perform counseling behaviors in a culturally competent way with clients varying only by social class, ethnicity, and socioeconomic status. The absence of attention to LGB clients in the COSE-Cultural Competence items may have contributed to the lack of an association between these two subscales. A lack of an empirical association between the COSE-Awareness of Values subscale and LGB-CSI Assessment subscale also appears due to conceptual differences between the subscales. The COSE-Awareness of Values subscale items reflect a counselors' self-estimates of his or her ability to be aware of his or her values, whereas the LGB-CSI Assessment items specifically address assessment issues that are unique to LGB clients without specific attention to a counselors' awareness of values.

The moderate correlations found between the LGB-CSI and ATLG–S and ARBS support LGB-affirmative counseling self-efficacy as a separate, but related, construct to homophobia/ heterosexism. As hypothesized, more positive attitudes toward gay men, lesbian women, and bisexual individuals were related to greater self-efficacy in performing LGB-affirmative counseling. This finding appears to support the theorized relationship between levels of self-efficacy and degree of interest in a given area (Lent et al., 1994) and previous research suggesting that attitudes toward lesbian and gay clients influence counselor self-efficacy beliefs (Flores et al., 1995). That is, it appears that the type of attitudes a counselor holds toward LGB individuals (e.g., condemnation vs. tolerant) relates to his or her self-efficacy to conduct LGB-affirmative counseling.

It also is noteworthy that significant relations were found between the LGB-CSI Awareness subscale and the total social desirability scale and subscale measuring self-deceptive positivity (i.e., the tendency to give self-reports that are honest but exaggerate claims of positive cognitive attributes). Mean scores on the

LGB-CSI Awareness subscale are higher than other LGB-CSI subscales across all three studies. LGB-CSI Awareness items also appear to be most vulnerable to self-deceptive positivity because of their emphasis on respondents' internal cognitive and affective processes rather than explicit, observable behaviors in the counseling session. The Awareness component has been described as a critical component of the LGB-affirmative counselor's behavioral repertoire (Fassinger & Sperber Ritchie, 1997; Garnets, et al., 1991), as well as a skill of general multicultural competent counselors (Sue, Arredondo, & McDavis, 1992). Given the importance of this subset of items and the relatively large proportion of the variance explained by it in the EFA and CFA, the Awareness subscale is recommended for use in training purposes with a caveat of potential social desirability influencing responses. Supervisors and instructors, as well as respondents themselves, should be aware and control for this potential confound while interpreting their results.

As hypothesized, self-identified LGB individuals were more efficacious than heterosexual individuals. Self-identified LGB counselors also may hold higher levels of interest in LGB-affirmative counseling and more optimistic outcome expectations regarding LGB-affirmative counseling, thereby influencing their self-efficacy in this area. Individual, institutional, and societal homophobia/heterosexism may limit heterosexual counselors from engaging in similar activities and holding positive outcome expectations and interest in LGB-affirmative counseling, thus limiting their potential self-efficacy. It is also likely that self-identified LGB individuals on average are more efficacious in providing LGB-affirmative counseling because of membership in the target group, as well as because of their participation in activities that foster self-efficacy in this area (e.g., Emotional Arousal: potentially personally invested in the advancement and understanding of LGB-affirmative counseling and scholarship and possessing knowledge regarding LGB issues; Performance Accomplishment: potentially engaged in LGB-affirmative class assignments, practica, and social action projects; Vicarious Learning: potentially exposed to LGB-affirmative faculty and supervisors who have expertise in the area). Mental health professionals also indicated more self-efficacy than students. It is likely that mental health professionals' similar exposure to more sources of self-efficacy contributed to their reported levels of self-efficacy.

Findings were consistent with a body of literature suggesting that counselors reporting contact with LGB friends or relatives hold more affirmative attitudes and are more efficacious concerning LGB-affirmative counseling behaviors (Flores et al., 1995; Herek, 1994; Mohr & Rochlen, 1999). The underlying reason for this finding may be similar to the rationale that LGB individuals and mental health professionals have higher self-efficacy. That is, these counselors also are exposed to more sources of self-efficacy and hold more interest and outcome expectations regarding LGB-affirmative counseling. In addition, the finding indicating differences in self-efficacy associated with contact with self-identified LGB clients is consistent with the existing literature suggesting that individuals on average reporting contact with LGB friends or relatives hold more affirmative attitudes and are more efficacious concerning LGB-affirmative counseling behaviors (Flores et al., 1995; Herek, 1994; Mohr & Rochlen, 1999).

Limitations

Several limitations concerning these studies should be noted. First, results from Study 2 indicated that the five-factor oblique model provides the best fit to the data when compared with the first- and second-order models. However, the Application of Knowledge subscale accounted for a large proportion of variance, and the Assessment and Relationship subscales explained a comparatively low proportion of the variance. These findings raise questions about the usefulness, stability, and meaning of the Assessment and Relationship subscales, in terms of variance explained. The Application of Knowledge subscale, yielding the vast majority of the variance, initially seemed to suggest a single-factor scale. Conversely, the stability of five-factor structure demonstrated in Study 2, along with the importance of the content of the items of the subscales that assess relevant competency areas (Fassinger & Sperber Ritchie, 1997; Garnets et al., 1991) in terms of LGB-affirmative counseling self-efficacy (e.g., the importance of assessment skills and ability to establish a working alliance with LGB clients), seemed to adequately address concerns about the LGB-CSI overall factor structure. A caveat is that future studies are required to further demonstrate the differential predictive power of the LGB-CSI subscales before each subscale can be used in confidence in LGB-affirmative counseling process/outcome research. Nonetheless, the LGB-CSI subscales, as well as the total score, can be considered important assessment tools that can be included in future LGB-affirmative counselor training and supervision.

Second, the validity estimates in Study 3 were vulnerable to inflation because of the common method variance resulting from concurrent self-report data across the measures. Future studies on the construct validity of the LGB-CSI would benefit from analyzing latent variables by using multitrait-multimethod data (P. P. Heppner, Kivlighan, & Wampold, 1999).

Third, in Study 4, the test–retest sample was small, and the test–retest reliability estimates obtained for the LGB-CSI and subscales raised questions concerning the stability of LGB-affirmative counseling self-efficacy. Adequate test–retest reliability has been reported for measures of self-efficacy across six different measures with similar time periods between administrations (Larson & Daniels, 1998). Because internal consistency estimates were high and test–retest reliability estimates were relatively low, the scores may reflect transient effects (P. P. Heppner et al., 1999). A potential history effect may have influenced responses on the LGB-CSI in Study 4. Participants were all graduate counselor trainees in counseling psychology. Given the increased integration of multicultural and LGB issues in psychology into graduate counseling psychology curriculum, participants may have learned, and practiced, knowledge and behaviors that may have increased their levels of self-efficacy between administrations. A testing effect also may have been present. Participants may have increased their knowledge and awareness of LGB issues in counseling through exposure to the first scale administration. Both of these possibilities seem likely due to the markedly lower scores obtained at Time 1 in comparison to other counselor trainee samples and the average increase of participant mean scores over the testing sessions. Future studies need to address the test–retest reliability of the LGB-CSI over different, larger samples, and time periods to clarify this finding. One method for determining

whether the low test–retest stability coefficients are a function of error and unreliability or actual change would be to administer parallel forms of the LGB-CSI at two different times. Future researchers also may want to control for potential sources of self-efficacy by screening participants for exposure to sources prior to, and between, administrations. Stability coefficients also could be obtained in a prospective study of the sensitivity of the LGB-CSI to an intervention, in which intervention group participants would be hypothesized to increase in self-efficacy and a control group would remain the same level of self-efficacy after implementing methods described above.

The fourth limitation is the gender imbalance in all of the samples; it is important to note because attitudes toward sexual minorities have been found to be more positive among women (Herek, 1994). The gender imbalance may have resulted in inflated ATLG–S and LGB-CSI scores in comparison to the general population. Self-selection bias may have contributed to the possibility that men holding negative attitudes toward sexual minorities did not participate in the studies.

A fifth limitation includes asking about lesbian, gay, and/or bisexual clients within the same item. Respondents were asked to rate their general self-efficacy beliefs concerning LGB clients without specifying between-groups and within-group differences (e.g., counseling lesbian women vs. gay men, bisexual women vs. bisexual men, bisexual clients vs. gay and/or lesbian clients). Many between-groups and within-group differences have been suggested to exist (Dworkin, 2000; Fukuyama & Ferguson, 2000; Greene, 1994; Loiacano, 1993; Philips & Fischer, 1998) and may have influenced item ratings of self-efficacy. Future studies may require specific versions of the LGB-CSI to address issues specific and unique to issues faced by lesbian, gay, and bisexual individuals, respectively.

Implications for Research and Training

Replications and extensions of the current studies will provide further evidence of the psychometric strengths and weaknesses of the LGB-CSI. In addition to those previously mentioned, additional suggestions for future research include investigating the role of counselor self-efficacy in LGB-affirmative counseling process and outcome research, as well as in training and intervention efforts. It should be noted that the relation between counseling self-efficacy and counseling performance and outcomes has been hypothesized to be curvilinear, that is, both overestimation and underestimation of efficacy are detrimental to the counseling process (O'Brien et al., 1997). Bandura (1986) postulated that for successful individuals, efficacy should remain constant because additional information related to one's performance of a behavior would be superfluous once a critical level of confidence and achieved outcome was obtained. Given these theoretical considerations, it has been hypothesized that the curvilinear relation between self-efficacy and performance would manifest itself in the beginning of counselor training and would level off as trainees' skills increase and the sources of self-efficacy have sent sufficient feedback about performance (O'Brien et al., 1997). Future research concerning the role of self-efficacy in the LGB-affirmative counseling process could test these hypotheses by adopting a longitudinal analysis of the development and influence of LGB-affirmative self-efficacy and counseling skills among counselors in training. Future studies also are needed to examine the degree to which an increase of self-efficacy leads to improved competence to work with LGB clients. It is also necessary to investigate the actual influence of LGB-affirmative counseling self-efficacy on therapeutic outcomes. Such a study also can assess client ratings of counselor efficacy as a means for extending the validation of the LGB-CSI. This type of research would benefit from ascertaining the role of other social–cognitive variables, such as counselor interest in LGB counseling issues, outcome expectations, and persistence when counseling LGB clients.

In addition to future studies, a critical use of this instrument would be in the supervision and training of counselors to develop appropriate levels of efficacy in working with LGB clients. This instrument could enable supervisors and training programs to implement and assess a social–cognitive model of LGB-affirmative counselor training (Bieschke et al., 1998) aimed at developing appropriate levels of self-efficacy among counseling trainees, stimulating interest in LGB-affirmative interventions, and promoting LGB-affirmative counseling competency. As previously introduced, the LGB-CSI could be used to assess the strengths and needs in training programs and as a self-assessment tool in multicultural courses and practica. For example, the LGB-CSI may be useful for supervisors and counselor trainees in facilitating discussion regarding the progress of counselor trainees in practica. Future studies also need to investigate the potential use of the LGB-CSI as an outcome measure to help evaluate the effectiveness of multicultural training and intervention efforts. Finally, subsequent research is needed to investigate how the different sources of self-efficacy found within a training intervention based on SCT relate and how they affect LGB-affirmative counseling self-efficacy (e.g., the influence of behavioral practice, vicarious learning, or verbal persuasion).

A critical balance between the necessary challenge and support of LGB-affirmative counseling training can be achieved by addressing counselor self-efficacy beliefs. This approach may not only facilitate the development of counselor self-efficacy when working with LGB clients but may also enhance counselor performance and counseling outcomes as experienced by LGB clients. The development of the LGB-CSI is a theory-driven study that provides a foundation on which to build a research base aimed at enhancing LGB-affirmative counselor training, performance, and therapeutic outcomes.

References

Allison, K. W., Crawford, I., Echemendia, R., Robinson, L., & Knepp, D. (1994). Human diversity and professional competence: Training in clinical and counseling psychology revised. *American Psychologist, 69*, 792–796.

American Psychological Association. (2000). Guidelines for psychotherapy with lesbian, gay, and bisexual clients. *American Psychologist, 55*, 1440–1452.

Arbuckle, J. (1999). *AMOS users' guide, Version 4. 01*. Chicago: Small Waters.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavior change. *Psychological Review, 84*, 191–215.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1991). Human agency: The rhetoric and the reality. *American Psychologist, 46*, 157–162.

Bartlett, M. S. (1954). A note on the multiplying factors for various chi square approximations. *Journal of the Royal Statistical Society, 16,* 296–298.

Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin, 88,* 588–606.

Beverage, P. L. (1991, March). The relationship of evaluation in counseling supervision and counselor self-efficacy. *Dissertation Abstracts International, 51(9-A),* 2982–2983.

Bieschke, K. J., Eberz, A. B., Bard, C. C., & Croteau, J. M. (1998). Using social cognitive career theory to create affirmative lesbian, gay, and bisexual research training environments. *The Counseling Psychologist, 26,* 735–753.

Bieschke, K. J., McClanahan, M., Tozer, E., Grzegorek, J. L., & Park, J. (2000). Programmatic research on the treatment of lesbian, gay, and bisexual, clients: The past, the present, and the course for the future. In R. M. Perez, K. A. DeBord, & K. J. Bieschke (Eds.), *Handbook of counseling and psychotherapy with lesbian, gay, and bisexual clients* (pp. 309–336). Washington, DC: American Psychological Association.

Bryant, F. B., & Yarnold, P. R. (1995). Principal-components analysis and exploratory and confirmatory factor analysis. In L. G. Grimm & P. R. Yarnold (Eds.), *Reading and understanding multivariate statistics* (pp. 99–136). Washington, DC: American Psychological Association.

Buhrke R. A., & Douce, L. A. (1991). Training issues for counseling psychologists in working with lesbian women and gay men. *The Counseling Psychologist, 19,* 216–234.

Byrne, B. M. (2001). *Structural equation modeling with AMOS: Basic concepts, applications, and programming.* Mahwah, NJ: Erlbaum.

Cass, V. C. (1979). Homosexual identity formation: A theoretical model. *Journal of Homosexuality, 4,* 219–236.

Catell, R. B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research, 1,* 245–276.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Comrey, A. L., & Lee, H. B. (1992). *A first course in factor analysis* (2nd ed.). Hillsdale, NJ: Erlbaum.

Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24,* 349–354.

Dworkin, S. H. (2000). Individual therapy with lesbians, gay, and bisexual clients. In R. M. Perez, K. A. DeBord, & K. J. Bieschke (Eds.), *Handbook of counseling and psychotherapy with lesbian, gay, and bisexual clients* (pp. 157–182). Washington, DC: American Psychological Association.

Fassinger, R. E. (1991). The hidden minority: Issues and challenges in working with lesbian women and gay men. *The Counseling Psychologist, 19,* 157–176.

Fassinger, R. E., & Sperber Ritchie, B. (1997). Sex matters: Gender and sexual orientation in training for multicultural counseling competency. In D. B. Pope-Davis & H. L. K. Coleman (Eds.), *Multicultural counseling competencies: Assessment, education, training, and supervision* (pp. 83–110). Thousand Oaks, CA: Sage.

Flores, L. Y., O'Brien, K. M., & McDermott, D. (1995, August). *Counseling psychology trainees' perceived efficacy in counseling lesbian and gay clients*. Paper presented at the 103rd Annual Convention of the American Psychological Association, New York.

Floyd, F. J., & Widman, K. F. (1995). Factor analysis in the development and refinement of clinical assessment instruments. *Psychological Assessment, 7,* 286–299.

Friedlander, M. L., Keller, K. E., Peca-Baker, T. A., & Olk, M. E. (1986). Effects of role conflict on counselor-trainees' self-statements, anxiety level, and performance. *Journal of Counseling Psychology, 33,* 73–77.

Friedlander, M. L., & Snyder, J. (1983). Trainees' expectations for the supervisory process: Testing a developmental model. *Counselor Education and Supervision, 16,* 107–116.

Fukuyama, M. A., & Ferguson, A. D. (2000). Lesbian, gay, and bisexual people of color: Understanding cultural complexity and managing multiple oppressions. In R. M. Perez, K. A. DeBord, & K. J. Bieschke (Eds.), *Handbook of counseling and psychotherapy with lesbian, gay, and bisexual clients* (pp. 81–106). Washington, DC: American Psychological Association.

Garnets, L., Hancock, K. A., Cochran, S. D., Goodchilds, J., & Peplau, L. A. (1991). Issues in psychotherapy with lesbians and gay men: A survey of psychologists. *American Psychologist, 46,* 964–972.

Greene, B. (1994). Ethnic-minority lesbians and gay men: Mental health and treatment issues. *Journal of Consulting and Clinical Psychology, 62,* 243–251.

Heppner, M. J., Multon, K. D., Gysbers, N. C., Ellis, C. A., & Zook, C. E. (1998). The relationship of trainee self-efficacy to the process and outcome of career counseling. *Journal of Counseling Psychology, 45,* 393–402.

Heppner, P. P., Kivlighan, D. M., & Wampold, B. E. (1999). *Research design in counseling* (2nd ed.). Belmont, CA: Brooks/Cole.

Herek, G. M. (1988). Heterosexuals attitudes toward lesbians and gay men: Correlates and gender differences. *Journal of Sex Research, 25,* 451–477.

Herek, G. M. (1994). Assessing heterosexuals' attitudes toward lesbians and gay men: A review of empirical research with the ATLG Scale. In B. Greene & G. M. Herek (Eds.), *Lesbian and gay psychology: Theory, research, and clinical applications* (pp. 206–228). Thousand Oaks, CA: Sage.

Jacobson, L. I., Kellogg, R. W., Cauce, A., & Slavin, R. S. (1977). A multidimensional social desirability inventory. *Bulletin of the Psychonomic Society, 9,* 109–110.

Kaiser, H. F. (1958). The varimax criterion for analytic rotation in factor analysis. *Psychometrika, 23,* 187–200.

Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika, 39,* 31–36.

Krantz, J. H., Ballard, J., & Scher, J. (1997). Comparing the results of laboratory and World Wide Web samples on the determinants of female attractiveness. *Behavior Research Methods, Instruments, and Computers, 29,* 264–269.

Larson, L. M., & Daniels, J. A. (1998). Review of the counseling self-efficacy literature. *The Counseling Psychologist, 26,* 179–218.

Larson, L. M., Suzuki, L. A., Gillespie, K. N., Potenza, M. T., Bechtel, M. A., & Toulouse, A. L. (1992). Development and validation of the counseling self-estimate inventory. *Journal of Counseling Psychology, 1,* 105–120.

Lent, R. W., Brown, S. D., & Hackett, G. (1994). Social cognitive approach to career development: An overview. *Career Development Quarterly, 44,* 310–321.

Loiacano, D. K. (1993). Gay identity issues among Black Americans: Racism, homophobia, and the need for validation. In L. D. Garnets & D. C. Kimmel (Eds.), *Psychological perspectives on lesbian and gay male experiences* (pp. 364–375). New York: Columbia University Press.

McCarn, S. R., & Fassinger, R. E. (1996). Revisioning sexual minority identity formation: A new model of lesbian identity and its implications for counseling and research. *The Counseling Psychologist, 24,* 508–534.

Mohr, J. J. (2002). Heterosexual identity and the heterosexual therapist: An identity perspective on sexual orientation dynamics in psychotherapy. *The Counseling Psychologist, 30,* 532–566.

Mohr, J. J., & Rochlen, A. B. (1999). Measuring attitudes regarding bisexuality in lesbians, gay male, and heterosexual populations. *Journal of Counseling Psychology, 46,* 353–369.

Morrow, S. L. (2000). First do no harm: Therapist issues in psychotherapy with lesbians, gay, and bisexual clients. In R. M. Perez, K. A. DeBord, & K. J. Bieschke (Eds.), *Handbook of counseling and psychotherapy*

with lesbian, gay, and bisexual clients (pp. 137–156). Washington, DC: American Psychological Association.

Munson, W. W., Zoernick, D. A., & Stadulis, R. E. (1986). Training potential therapeutic recreators for self-efficacy and competence in interpersonal skills. *Therapeutic Recreation Journal, 20,* 53–62.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.

O'Brien, K. M., Heppner, M. J., Flores, L. Y., & Bikos, L. H. (1997). The Career Counseling Self-Efficacy Scale: Instrument development and training applications. *Journal of Counseling Psychology, 44,* 20–31.

Paulhus, D. L. (1991). Measurement and control of response bias. In *Measures of personality and social psychological attitudes* (pp. 17–41). New York: Academic Press.

Perez, R. M., DeBord, K. A., & Bieschke, K. J. (Eds.). (2000). *Handbook of counseling and psychotherapy with lesbian, gay, and bisexual clients*. Washington, DC: American Psychological Association.

Phillips, J. C., & Fischer, A. R. (1998). Graduate counselor trainees' training experiences with lesbian, gay, and bisexual issues. *The Counseling Psychologist, 26,* 712–734.

Pilkington, N. W., & Cantor, J. M. (1996). Perceptions of heterosexual bias in professional psychology programs: A survey of graduate counselor trainees. *Professional Psychology: Research and Practice, 27,* 604–612.

Ponterotto, J. G., Casas, J. M., Suzuki, L. A., & Alexander, C. M. (Eds.), (1995). *Handbook of multicultural counseling*. Thousand Oaks, CA: Sage.

Schmidt, W. C. (1997). World-Wide Web survey research: Benefits, potential problems, and solutions. *Behavior Research Methods, Instruments, and Computers, 29,* 274–279.

Sharply, C. F., & Ridgway, I. R. (1993). An evaluation of the effectiveness of self-efficacy as a predictor of trainees' counseling skills performance. *British Journal of Guidance and Counseling, 21,* 73–81.

Sipps, G. J., Sugden, G. J., & Faiver, C. M. (1988). Counselor training level and verbal response type: Their relationship to efficacy and outcome expectation. *Journal of Counseling Psychology, 35,* 397–401.

Smith, M. A., & Leigh, B. (1997). Virtual subjects: Using the Internet as an alternative source of subjects and research environment. *Behavior Research Methods, Instruments, and Computers, 29,* 496–505.

Sue, D. W., Arredondo, P., & McDavis, R. J. (1992). Multicultural competencies/standards: A call to the profession. *Journal of Counseling & Development, 70,* 477–486.

Tabachnick, B. G., & Fidell, L. S. (1996). *Using multivariate statistics* (3rd ed.). New York: Harper Collins.

Worthington, R. L., Savoy, H., & Vernaglia, E. R. (2001). *Beyond tolerance: Issues in LGB-affirmativeness: Theory, research, and measurement.* Unpublished manuscript, University of Missouri, Columbia.

Received June 11, 2002
Revision received November 1, 2002
Accepted November 4, 2002 ■