Psychology of Sexual Orientation and Gender Diversity
2016, Vol. 3, No. 1, 80–92

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2329-0382/16/$12.00 http://dx.doi.org/10.1037/sgd0000147

Conceptualizing the Closet: Differentiating Stigma Concealment and Nondisclosure Processes

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Individuals with concealable stigmatized identities face many options regarding whether, when, how, and to whom to conceal or disclose information about their marginalized social status. Numerous studies have examined the psychosocial health consequences of different stigma concealment and disclosure processes, but research in this area is hindered by a relative lack of attention to potential differences among these stigma management variables. The present research investigated the distinctness of stigma management constructs in a population viewed as holding an indiscernible stigmatized identity: lesbian, gay, and bisexual (LGB) university students. In Study 1, the psychometric properties of a 6-item measure assessing recent effortful concealment of sexual orientation were examined in a sample of 353 LGB university students. Exploratory and confirmatory factor analyses in separate subsamples supported the hypothesized single factor structure, and offered preliminary support for the reliability and validity of scores. In Study 2, 301 LGB university students completed an online survey including 3 measures of stigma management: concealment behavior, concealment motivation, and nondisclosure. Also included were measures of psychological health (depression, life satisfaction), negative social identity (self-stigma, acceptance concerns), and positive social identity (membership esteem, identity strength). Each stigma management variable uniquely predicted a different combination of psychosocial variables, supporting the notion that each is a distinct construct. Concealment behavior uniquely predicted psychological health and negative identity variables, concealment motivation uniquely predicted positive and negative identity variables, and nondisclosure uniquely predicted positive identity variables. Implications of these results are discussed in light of literature on management of indiscernible stigmatized identities.

Keywords: stigma, concealment, disclosure, sexual minority, social identity

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Individuals with concealable stigmatized identities—such as sexual minorities, people diagnosed with a mental disorder, and individuals living with HIV—often face ongoing, potentially stressful decisions about whether to disclose or conceal their marginalized status (Bosson, Weaver, & Prewitt-Freilino, 2012; Chaudoir & Fisher, 2010). Many studies have investigated the consequences of these stigma management strategies for psychological health (Beals, Peplau, & Gable, 2009; Mohr & Kendra, 2011; Quinn, 2006). Together, they demonstrate that having one's stigmatized identity known by others tends to predict well-being in a myriad of marginalized populations (Pachankis, 2007).

Research on stigma management has included varied approaches to conceptualizing and measuring stigma management processes, including those that consider stigma management to be (a) global behavioral tendencies that remain stable across contexts (Cole, Kemeny, Taylor, & Visscher, 1996; Mohr & Kendra, 2011), (b) behavioral strategies used in specific environments or among certain people (e.g., at work, among family; Law, Martinez, Ruggs, Hebl, & Akers, 2011; Mohr & Fassinger, 2000), and (c) behaviors expressed in a specific time period or moment (Smart & Wegner, 1999). Some research assesses stigma management in terms of actions that obscure one's minority status (i.e., concealment behaviors), whereas other scholarship focuses on actions that reveal one's minority status (i.e., disclosure behaviors; Meidlinger & Hope, 2014). Moreover, concealment and disclosure are studied not only as behavioral tendencies but also as motivations to use certain stigma management behaviors (e.g., concealment motivation, fear of discovery; Denton, Rostosky, & Danner, 2014; Frost, Parsons, & Nanín, 2007).

Scholarship on these varied stigma management processes has highlighted the relevance of stigma concealment and disclosure decisions for psychosocial functioning, and has strengthened the case for stigma reduction efforts. However, one barrier to progress in this area of scholarship has been a tendency to treat potentially different stigma management constructs and measures as interchangeable (for reviews, see Meidlinger & Hope, 2014; Schrimshaw, Siegel, Downing, & Parsons, 2013). Because little research has been conducted to identify how concealment and disclosure variables uniquely predict various psychosocial variables, it is difficult to integrate findings across studies.

Is Concealing the Same as a Not Disclosing?

The assumption that concealment and disclosure are opposite ends of a single construct is understandable: High concealment typically results in minimal information being communicated

This article was published Online First December 7, 2015.

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about one's stigmatized identity, and high disclosure results in such information being shared freely. Also, concealment and disclosure often predict similar psychosocial variables (Beals et al., 2009; Pachankis, 2007). However, careful consideration of these constructs suggests that, although related, they are distinct constructs. Disclosure is often defined as the extent to which one has revealed one's stigmatized status to others, whereas concealment is defined as the extent to which one attempts to prevent one's stigmatized identity from being known by others (Meidlinger & Hope, 2014). Thus, concealment "is not just the absence of disclosure, but a desire to prevent disclosure" (Schrimshaw et al., 2013, p. 142)—or, we would add, an actual attempt to prevent disclosure.

Disclosure, by its nature, also differs from concealment (or a lack thereof) in its immediate consequences. Because disclosure to a person cannot be undone through subsequent concealment, the number of people to whom an individual has disclosed tends to build cumulatively over time as his or her stigmatized status is revealed to new people. For this reason, assessing disclosure as an individual difference variable often includes reference to the number and types of people who know about a person's stigmatized characteristic, including people to whom the person may have made the disclosure years ago. In contrast, concealment from a person at one time does not require concealment at another time, and can always be undone through intentional disclosure. It is perhaps for these reasons that concealment scholarship often concerns the general psychological processes that motivate or follow hiding one's identity.

Theory suggests that concealment and disclosure processes have different psychological functions and impact well-being via different mechanisms. For example, disclosure may be driven by a desire for greater trust, authenticity, and closeness in relationships (i.e., approach-focused goals; Bosson et al., 2012; Chaudoir & Fisher, 2010), whereas concealment may be driven by avoidance goals, such as preventing embarrassment or stigma-motivated harassment (Anderson, Croteau, Chung, & DiStefano, 2001; Pachankis, 2007). Further, disclosure is thought to bolster psychological health by increasing perceived levels of social support (Beals et al., 2009) and sense of authenticity (Bosson et al., 2012). Although concealment processes may also be associated to the these mechanisms, concealing has been more commonly theorized to adversely impact well-being through the cognitive stress of managing and suppressing identity-related thoughts (Smart & Wegner, 1999) and the reinforcement of one's sense of difference and inferiority (Hetrick & Martin, 1987; Pachankis, 2007).

Some researchers have examined motivation to conceal a stigmatized identity rather than concealment behavior itself (Denton et al., 2014; Mohr & Kendra, 2011), and, although these variables are related, there are clear conceptual differences. A person may prefer to keep a stigmatized identity hidden without exerting much effort to do so; conversely, a person may exert a great deal of effort to conceal, even if it is not motivated by a preference for privacy (e.g., to avoid discrimination). One study of lesbian, gay, and bisexual (LGB) college students suggested that a global preference for concealing may partly reflect shame regarding one's stigmatized identity. Concealment motivation was moderately and positively related to self-stigma but only weakly related to perceptions of heterosexuals' attitudes toward LGB people (Mohr & Kendra, 2011). Thus, a global preference to conceal may be more indicative of self-acceptance struggles than perceptions of stigma in the environment, at least among U.S. college students.

Empirical Findings on Distinctness of Concealment and Disclosure of LGB Identity

Findings from many studies suggest that concealment and disclosure processes predict certain aspects of psychopathology, well-being, and identity-related variables among LGB people (Beals et al., 2009; Frost et al., 2007; Mohr & Fassinger, 2000). However, few studies have examined the distinctness of potentially distinct stigma management processes among LGB people. Two studies (Anderson et al., 2001; Button, 2004) provided evidence that concealing and disclosing strategies for the workplace are factorially distinct, and that distinctions could even be meaningfully made regarding subtypes of concealment or disclosure. However, these studies are limited in their focus on the workplace context and their lack of attention to the role of stigma management in well-being and social identity.

Two recently published studies advanced knowledge by examining how stigma concealment and disclosure differently predict aspects of well-being (Meidlinger & Hope, 2014; Schrimshaw et al., 2013). Meidlinger and Hope (2014) administered parallel measures of concealment and disclosure behavior to a sample of LGB people, and provided evidence that concealment was a stronger predictor of some aspects of psychological functioning and social identity (e.g., LGB-related rejection sensitivity, social support) but not others (e.g., self-stigma, affect). Schrimshaw and colleagues (2013) asked a community sample of bisexual men to complete measures of disclosure and concealment motivation, and found that only concealment accounted for unique variance in facets of positive and negative psychological functioning.

Both studies offer a substantive contribution to the literature and support our overarching hypothesis that concealment and disclosure are highly related but distinct constructs. However, important questions remain regarding the extent to which facets of stigma management account for unique variance in psychological functioning and social identity. For example, neither of the two studies directly assessed current engagement in effortful concealment, which is a conceptualization of concealment central to many theories of how indiscernible stigmata influence psychological functioning (Pachankis, 2007; Smart & Wegner, 1999). Also, neither study contrasted motivational and behavioral facets of stigma management.

Present Research

The substantial body of work on concealing and disclosing a stigmatized characteristic attests to the perceived importance of stigma management among scholars. However, knowledge regarding the role of stigma management in personal and collective well-being has been hindered by the tendency to conflate conceptually distinct concealment and disclosure processes (Meidlinger & Hope, 2014). The present study aimed to advance research in this area by examining three stigma management constructs in a sample of LGB university students: concealment behavior, concealment motivation, and disclosure behavior (which we refer to in the reverse as *nondisclosure* to offer a ready basis for comparison with the two other stigma management variables). All of these

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individual difference variables concern noncommunication of one's LGB identity, but they differ in important ways. The study investigated the unique associations of these variables with psychological health (depression, life satisfaction) and social identity (self-stigma, acceptance concerns, membership esteem, identity strength).

Given our focus on differentiating stigma management processes, we conceptualized and assessed the three variables in ways that emphasized their distinctiveness. We focused on facets of current concealment behavior that require effort to enact (e.g., lying about one's sexual identity, altering one's mannerisms), which, as discussed above, are believed to be motivated by immediate safety concerns and to adversely impact well-being through unique mechanisms (e.g., preoccupation, depletion of psychological resources). In contrast, we assessed concealment motivation as a global preference for privacy regarding one's sexual minority status. Finally, we examined the continuum of nondisclosure-to-disclosure in terms of integration of one's LGB identity into one's social network, consistent with the view that disclosure may benefit personal and collective well-being by increasing a sense of social support, belonging, and authenticity.

We were most confident in making predictions about concealment behavior, which has been discussed in the context of minority stress theory (Meyer, 2003). This theory posits that the ongoing experience of stigma-related stressors (e.g., stigma management, perceived discrimination) elicited within a hostile social environment undermines health among marginalized individuals. For example, Pachankis (2007) and Meidlinger and Hope (2014) summarized theory and research suggesting that fear of rejection and shame about one's sexual orientation could encourage LGB people to actively hide their sexual minority status; such concealment efforts, in turn, could increase risk factors for psychopathology and poor quality of life (e.g., negative affect, vigilance, social isolation). Less has been written about concealment in relation to positive facets of social identity. However, Pachankis (2007) noted that people who conceal their stigmatized status may feel fraudulent, guilty, or that they are betraying their social group, suggesting that effortful concealment behavior may be negatively associated with self-esteem as a group member (i.e., membership esteem). Based on this discussion, we proposed the following hypothesis:

> *Hypothesis 1:* After controlling for concealment motivation and nondisclosure, recent concealment behavior will be positively associated with (a) depression, (b) self-stigma, and (c) acceptance concerns, and negatively associated with (d) life satisfaction, (e) membership esteem, and (f) identity strength.

Predictions were more difficult to make for concealment motivation, given the lack of research simultaneously examining concealment motivation and behavior. Concealment motivation was found to predict both negative and positive facets of psychological functioning in a sample of bisexual men, even after controlling for nondisclosure (Schrimshaw et al., 2013). However, theory suggests that such effects are likely not direct but instead mediated by the increases in concealment behavior that are likely to follow motivation to conceal (Pachankis, 2007). If this is the case, then concealment motivation should have no direct effect on psychological functioning after accounting for effortful concealment behavior. In contrast, as noted previously, concealment motivation is likely a direct response to stigma-related challenges (e.g., self-acceptance, fear of rejection), suggesting that it may have unique relations with facets of social identity, even after accounting for other stigma management variables. For these reasons, we proposed the following hypothesis:

> *Hypothesis 2:* After controlling for concealment behavior and nondisclosure, concealment motivation will be positively associated with (a) self-stigma and (b) acceptance concerns, and negatively associated with (c) membership esteem and (d) identity strength.

Predictions were perhaps most difficult to make regarding the unique relations of nondisclosure to psychological functioning and social identity. One of the only studies to address this question revealed that nondisclosure did not predict positive and negative psychological functioning after accounting for concealment motivation (Schrimshaw et al., 2013). However, these results may have reflected the fact that participants were behaviorally bisexual men (35% who identified as heterosexual). As noted previously, nondisclosure is believed to influence psychological functioning through mechanisms that differ from those for concealment. This suggests that nondisclosure should have unique relations with psychological well-being. Moreover, nondisclosure is thought to have direct and unique relations with aspects of social identity. For example, sexual minority people may view disclosure as an act that benefits larger LGB communities; thus, nondisclosure may decrease the membership esteem of LGB-identified people (Pachankis, 2007). Disclosure also is thought to offer LGB people a means of working through self-stigma (Meidlinger & Hope, 2014). We viewed these theoretical perspectives as persuasive, despite the findings of Schrimshaw et al. (2013), and thus we proposed the following hypothesis:

> *Hypothesis 3:* After controlling for concealment motivation and concealment behavior, nondisclosure will be negatively associated with (a) depression, (b) self-stigma, and (c) acceptance concerns, and positively associated with (d) life satisfaction, (e) membership esteem, and (f) identity strength.

One challenge in conducting the study was that we were unable to locate a scale that could be used to assess recent use of active concealment behavior to hide one's LGB identity. Thus, our first task was to create and test a measure of recent concealment of sexual orientation identity (Study 1). We then used this scale in a separate study investigating the distinctiveness of concealment behavior, concealment motivation, and nondisclosure (Study 2).

Study 1: Instrument Development

This study aimed to develop and validate the Sexual Orientation Concealment Scale (SOCS), a brief self-report measure assessing effort to conceal one's identity in one's current life. The goal was to create a scale that could be used to assess current effortful concealment behavior across multiple settings and LGB populations, in contrast to existing measures that focus on behavior in work settings (Anderson et al., 2001; Button, 2004), general tendency to conceal within one's social network (Meidlinger & Hope, 2014), or tap cognitive constructs such as concealment motivation rather than behavior (Denton et al., 2014; Mohr & Kendra, 2011).

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We initially planned to use workplace concealment measures as models for the SOCS. However, inspection of items and rating scales for these existing measures suggested that some changes were needed. For example, items often referred to highly specific concealment behaviors that likely had low base rates (e.g., feigning heterosexuality by making negative comments about LGB TV characters), which was counter to our goal of assessing recent engagement in as broad a range of active concealment behaviors as possible. Other items referred to strategies that do not necessarily involve the type of effortful concealment that was the focus of our new measure (e.g., creating the impression that one is a loner to forestall questions about romantic relationships). Finally, the rating scales were phrased in a manner that would not necessarily yield ratings of frequency of effortful concealment in one's current life. For example, Button's (2004) measure includes instructions to rate the degree of agreement with items that include no time referent (e.g., avoiding coworkers who frequently discuss topics related to sex) or a vague time reference (e.g., sometimes mentioning fictional dates occurring with people of a different sex). In short, although existing measures of sexual orientation concealment have provided valuable data, they were not appropriate models for our project given our goal of producing a measure that could assess current engagement in effortful concealment in a manner that was sensitive to variations in behavior across diverse life and cultural contexts.

To achieve this goal, we generated items describing generic and relatively typical situations involving strategies that have been described in the literature on LGB stigma management (Anderson et al., 2001; Button, 2004). We believed characterizing situations in the most general terms would increase the sensitivity of the measure to diverse expressions of active concealment. However, as discussed in greater detail later, this strategy limited the size of the item pool and emphasized distinctions in overall concealment rather than distinctions among types of concealment strategies. Thus, we hypothesized that a single concealment factor would explain much of the common variance in frequency ratings for these generic stigma management situations, consistent with theory and research on general self-concealment (Larson & Chastain, 1990). Also, emerging research suggests that LGB individuals may face different contextual stressors (e.g., homophobic legislation) and protective factors (e.g., concentration of same-sex couples) based on their geography (Hatzenbuehler, Keyes, & McLaughlin, 2011; Hatzenbuehler, McLaughlin, Keyes, & Hasin, 2010). Certain contexts, therefore, may motivate concealment more than others, making a global measure of concealment complex for respondents who change geographic contexts frequently (e.g., university students attending college out of state). To focus the assessment on current concealment behavior, we asked participants to rate the frequency of behaviors occurring in the previous two weeks.

We tested the expected unidimensional factor structure of the measure and provided preliminary reliability and validity evidence of scores in a sample of LGB college students. Regarding convergent validity, we hypothesized that the measure would demonstrate moderate-to-strong positive correlations with established measures of general self-concealment and motivation to conceal one's sexual orientation, and sexual orientation nondisclosure. To demonstrate discriminant validity, we predicted that the measure would not be significantly related to a social desirability scale. Although social desirability processes could lead some LGB people to underreport engagement in concealment behavior (since concealment can involve undesirable behaviors, such as lying) or could increase concealment behavior (since concealment can be used to be seen in a positive light by others), we believed these potential effects would be relatively weak and could counter each other to produce a null total effect.

Method

Participants. The sample consisted of 353 LGB university students, including 114 identifying as lesbian (32.3%), 149 as gay (42.2%), 89 as bisexual (25.2%), and 1 sexual minority respondent who did not report a specific sexual identity label (0.3%). Gender representation was as follows: 175 female (49.6%), 169 male (47.9%), 6 transgender female-to-male (1.7%), 2 transgender male-to-female (0.6%), and 1 of an unspecified gender (0.3%). Participant age ranged from 18 to 50 ($M = 22.8$, $SD = 5.8$). Racial/ethnic representation was as follows (categories not mutually exclusive): 16 African American/Black (4.5%), 18 Asian American/Pacific Islander (5.1%), 40 Latino/Hispanic (11.3%), 17 Native American/American Indian (4.8%), 289 White/Caucasian (81.9%), and 18 selecting "Other" (3.7%). Participants included both graduate students (15.9%) and undergraduate students (84.1%) from 33 states/provinces within the United States and Canada.

Procedure. We contacted leaders of LGB student organizations at universities within the United States, who then posted our announcement on their electronic mailing lists. To identify universities, we first randomly selected 40 states. For each state, we identified the public university with the largest enrollment that also had an LGB-related student organization apparent on the university website. We contacted leaders at the organizations, and 33 agreed to distribute the announcement. The announcement described the study and stated that participants could enter a drawing for a $20 gift card at a national café chain (or donate the funds to one of two nonprofit human rights organizations). Inclusion criteria required that participants were over 18 years old, identified as nonheterosexual, and enrolled in an U.S. university. Individuals who met these requirements could click an Internet link directing them to the informed-consent web page and online survey. This study and the corresponding recruitment protocol was approved by the internal review board (IRB) of University of Maryland, College Park. When required, IRB approval was obtained at the universities from which we recruited. Recruitment occurred from November 2007 through May 2008.

Data were cleaned in four steps. First, we looked for duplicate surveys by examining date, time, and origin of submission. No evidence of duplicate entries was found. Second, we removed data from 37 participants who exited the survey shortly after completing the informed consent process. Third, we removed data from three participants who did not follow instructions on an item asking them to select the second of five colors listed (created to identify inattentive or mischievous respondents). Fourth, we removed data from seven respondents who identified as exclusively heterosexual. The final sample was participants remaining after these four steps.

Measures. The measures listed were a part of a larger survey assessing demographic factors, psychosocial functioning, and so-

cial identity-related variables among LGB participants. The measures listed were not counterbalanced and are listed in the order presented in the survey.

Concealment behavior. First, literature on the management of concealable identities was reviewed and discussed in a research team consisting of one faculty member (Jonathan J. Mohr) and three doctoral students. This process led to the development of 15 items with content reflecting use of avoidance (i.e., evading circumstances that would implicate one as LGB) and counterfeiting strategies (i.e., constructing a false guise of heterosexuality; Lance, Anderson, & Croteau, 2010). We aimed to create items that could apply to a diversity of respondents and settings. Based on feedback from research team members, one item was removed because it did not clearly exemplify active concealment. Considerable overlap in content existed among some of the remaining items (e.g., remaining silent while witnessing anti-LGB remarks vs. anti-LGB activities). In such cases, we grouped highly related behaviors into single items based on our view that we (a) were grouping behaviors that constituted the same core strategy, (b) would not gain knowledge by separating highly related behaviors into distinct items, and (c) could improve the efficiency of the measure by grouping highly related behaviors. Items were then given to seven LGB-identified college students, who were asked to suggest ways to improve item clarity and specify any categories of concealment behavior not represented by items. No additional content was suggested, but some items were slightly reworded to improve clarity.

The resulting list consisted of six behaviors exemplifying three counterfeiting strategies (e.g., ". . . concealed my sexual orientation by telling someone that I was straight or denying that I was LGB") and three avoiding strategies (e.g., ". . . concealed my sexual orientation by avoiding contact with other LGB individuals"). Respondents were asked to "rate each item to complete the following phrase: In the last 2 weeks, I have . . ." using a fully anchored rating scale (1 = *not at all*, 2 = *a little bit*, 3 = *somewhat*, 4 = *very much*, 5 = *all the time*). Psychometric properties of the new scale are described in the Results. The final 6-item scale is presented in the Appendix.

General concealment. The 10-item Self-Concealment Scale measured the degree to which participants have concealed important aspects of themselves (Larson & Chastain, 1990). Participants responded to items (e.g., "I have an important secret that I haven't shared with anyone") on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach's alpha was .83 in the instrument development study and .89 in the present study. The measure has been positively correlated with measures of anxiety and secrecy, and negatively correlated with disclosure (Larson & Chastain, 1990). In an LGB sample, the measure was positively related to social anxiety and negatively related to social support (Potoczniak, Aldea, & DeBlaere, 2007).

Concealment motivation. The 3-item Concealment Motivation subscale of the Lesbian, Gay, and Bisexual Identity Scale (LGBIS; Mohr & Kendra, 2011) was used to assess concern with and drive to protect one's privacy as an LGB person. Participants responded to items (e.g., "My sexual orientation is a very personal and private matter") on a 6-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Cronbach's alpha ranged from .72 to .79 across samples in the instrument development study and was .75 for the present study. Validity of the Concealment Motivation subscale has been supported by positive associations to measures of internalized homonegativity and expectations of rejection (Denton et al., 2014).

Nondisclosure. The 11-item Outness Inventory (OI; Mohr & Fassinger, 2000) was used to measure level of disclosure of sexual minority status in various life domains, including family relations (e.g., mother), religion (e.g., members of one's religious community), and everyday interactions (e.g., coworkers). Participants provide responses on a fully anchored 7-point rating scale ranging from 1 (*does not know*) to 7 (*definitely knows and openly talked about*) to indicate not only who knows about their sexual orientation but also how openly it is discussed (each item included a *not applicable* option). Once data were collected, we reverse scored the original 7-point OI rating scale to reflect our focus on nondisclosure. Exploratory and confirmatory factor analyses indicated the measure can be scored for a higher order Total Outness factor, as well as for three subscales: Out to Family (4 items), Out to Religion (2 items), and Out to World (4 items). Subscales were scored by averaging responses, and Total Outness was scored by averaging the subscales. Cronbach's alpha for Total Outness was .87 in a previous study (Balsam & Mohr, 2007) and .91 in the present study. Validity of the OI has been supported through strong negative association with concealment motivation (Mohr & Fassinger, 2000).

Social desirability. The 13-item Marlowe-Crowne Social Desirability Scale—Form C was used to measure level of social desirability bias (Reynolds, 1982). Participants responded "true" or "false" to items (e.g., "I'm always willing to admit when I make a mistake"). A total score was derived by summing the number of items on which socially desirable responses were made. Cronbach's alpha for the present study was .65. Reynolds (1982) demonstrated that this scale was highly correlated with the original 33-item version of the scale. The form has also been found to be positively associated with measures assessing defensiveness (Robinette, 1991).

Sample size considerations. We evaluated whether our sample size was adequate with respect to the planned exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and validity analyses. Results from MacCallum, Widaman, Zhang, and Hong's (1999) study indicated that a sample size of 100–200 would likely be sufficient for the EFA, given our expectation of a single factor with six indicators and relatively high communalities. Similarly, we determined that a sample size of approximately 200 would likely be adequate for the CFA based on the results of Jackson's (2001) simulation study. Moreover, the sample size provided power of .80 to detect correlations of .15 in magnitude at the .05 level. Based on this information, we concluded that our sample size was sufficiently large for analyses if we created random EFA and CFA subsamples of approximately 153 and 200, respectively. Using a random number generator, we developed an EFA sample of 157 and a CFA sample of 196.

Results and Discussion

Both the EFA and CFA were implemented with Mplus software, version 7.11 (Muthén & Muthén, 2013), using robust estimation to address the positive skewness present for some items. For the EFA, we determined the number of factors to extract using procedures that have been identified as most accurate in identifying

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the factor structure, including use of the scree plot, parallel analysis, indicators of goodness-of-fit, and statistical comparison of nested models (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Worthington & Whittaker, 2006). Both the scree plot and the parallel analysis (conducted with 1,000 random permutations of the original data) clearly supported a 1-factor solution. Next, we extracted the 1-, 2-, and 3-factor solutions using maximum likelihood (ML) factor analysis with robust statistics (i.e., Satorra–Bentler scaled chi-square). Three statistics were examined to assess goodness-of-fit, using the following guidelines for good fit suggested by Hu and Bentler (1999): confirmatory factor index (CFI; $>$ .95), standardized root mean square residual (SRMR; $<$ .08), root-mean-square error of approximation (RMSEA; $<$ .06). Fit was good for both the 1-factor solution (CFI = 1.00; SRMR = .04; RMSEA = .00) and the 2-factor solution (CFI = 1.00; SRMR = .01; RMSEA = .00). Convergence was not achieved for the 3-factor solution. Comparison of nested models indicated that the 1- and 2-factor models did not differ in goodness of fit to the data, $\chi^2(5, N = 157) = 6.68$ ($p = .25$).

Taken together, these results were consistent with the expectation that a 1-factor model would underlie ratings to the six concealment behavior items. For this reason, we selected the 1-factor solution. This solution accounted for 51.68% of the shared variance in the 6 items (eigenvalues for unrotated Factors 1 through 6 were 3.10, 0.82, 0.66, 0.52, 0.51, and 0.29). Factor loadings ranged from .59 to .73 and were all statistically significant ($p < .001$).

We proceeded to a robust CFA on data from the other subsample, testing a model where all six SOCS items loaded on a single factor. The factor structure offered a good fit to data: CFI = .96; SRMR = .05; RMSEA = .06. All factor loadings were statistically significant ($p < .001$), and standardized loadings ranged from .51 to .74. Coefficient alpha was sufficiently high for research purposes in both the EFA sample ($\alpha = .79$) and the CFA sample ($\alpha = .77$).

We next examined validity correlations in the combined EFA and CFA samples, which largely conformed to expectations (see Table 1). In support of convergent validity, concealment behavior was strongly associated with the measures of general concealment ($r = .48$, $p < .01$), concealment motivation ($r = .54$, $p < .01$), and nondisclosure ($r = .51$, $p < .01$) in the hypothesized directions. Evidence of discriminant validity emerged in the weak, nonsignificant relation between the SOCS and the Social Desirability Scale ($r = -.04$, $p = .51$).

The aim of this study was to test a new measure of concealment behavior based on theory regarding the adverse effects of effortful concealment on well-being (Pachankis, 2007). Results of the EFA, CFA, and tests of validity and reliability demonstrate the psychometric soundness of the SOCS as a measure of recent concealment efforts among sexual minority individuals.

Study 2: Main Hypotheses and Research Questions

This study aimed to investigate the distinctness of three stigma management constructs: concealment behavior, concealment motivation, and nondisclosure. We examined their distinctness by investigating whether they uniquely predict aspects of psychological health (depression, life satisfaction) and social identity (self-stigma, acceptance concerns, membership esteem, identity strength) among sexual minority individuals. If concealment and disclosure impact psychosocial functioning through different mechanisms (Schrimshaw et al., 2013), these variables likely account for unique variance in well-being. Similarly, both concealment and nondisclosure have been shown to be associated with facets of social identity (Frost & Meyer, 2009; Mohr & Kendra, 2011), and such links may reflect distinct processes.

Method

Participants. The sample consisted of 301 students who identified as lesbian ($n = 86$, 28.6%), gay ($n = 111$, 36.9%), and bisexual ($n = 104$, 34.6%). Regarding gender, 165 participants identified as female (54.8%), 128 as male (42.5%), 3 as transgender female-to-male (1.0%), 1 transgender male-to-female (0.3%), and 4 as "other" (1.3%). The sample featured participants from 26 colleges/universities, including 93 graduate students (30.9%), 206 undergraduate students (68.4%), and two students of an unspecified level of education (0.7%). Participant age ranged from 18 to 52 ($M = 23.2$, $SD = 5.6$). Racial/ethnic demographics included (not mutually exclusive): 17 African American/Black (5.6%), 20 Asian American/Pacific Islander (6.6%), 26 Latino/Hispanic (8.6%), 6 Native American/American Indian (2.0%), 258 White/Caucasian (85.7%), and 1 "Other" (0.3%).

Procedure. The inclusion criteria and incentive procedure for participating in this online survey were identical to those in Study 1. The recruitment protocol was structured identically to Study 1, except in this study we began with 30 states and found 26 leaders of LGB-related student organizations who were willing to distribute the announcement. Recruitment occurred in 2010 between February and December.

Survey data were cleaned in four steps. First, we looked for and found no evidence of duplicate entries. Second, 31 participants discontinued the survey shortly after completing the informed

Table 1
Descriptive Statistics for Study 1 Variables

Variable	*M*	*SD*	Possible range	Observed range	1	2	3	4	5
1. Concealment behavior	1.48	0.63	1.00–5.00	1.00–4.33	.78				
2. General concealment	2.47	0.96	1.00–5.00	1.00–4.90	.48**	.89			
3. Conceal motivation	3.20	1.25	1.00–6.00	1.00–6.00	.54**	.44**	.75		
4. Nondisclosure	3.89	1.48	1.00–7.00	1.00–7.00	.51**	.38**	.63**	.91	
5. Social desirability	18.75	2.71	13.00–26.00	13.00–26.00	−.04	−.17**	−.05	.05	.65

Note. Scale internal consistency reliability estimates appear in the diagonal.
** $p < .01$.

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consent process. Third, we examined participants' responses to an item asking them to select the second of five colors listed (created to identify inattentive or mischievous respondents), and removed data from two people with incorrect responses. Fourth, we removed data from the five respondents who identified as exclusively heterosexual. The final sample refers to participants remaining after completing these steps.

Measures. The measures listed were a part of a larger survey assessing demographic factors, psychosocial functioning, and social identity-related variables among LGB participants. The measures listed were not counterbalanced.

Stigma management variables. Concealment behavior was assessed with the 6-item SOCS developed in Study 1. Concealment motivation and nondisclosure were assessed using the 3-item Concealment Motivation subscale of the LGBIS (Mohr & Kendra, 2011) and the OI (Mohr & Fassinger, 2000), respectively, both of which were described in Study 1. Once data were collected, we modified the original 7-point OI rating scale to reflect our focus on the level of verbal stigma disclosure. Specifically, response options were merged if they represented the same level of disclosure and were differentiated only by others' awareness of the respondent's sexual identity. For example, response options 4 ("person *probably* knows about your sexual orientation status, but it is *rarely* talked about") and 5 ("person *definitely* knows about your sexual orientation status, but it is *rarely* talked about") were combined because both correspond to rare use of disclosure. In the present study, Cronbach's alpha coefficients for the SOCS, Concealment Motivation subscale, and OI were .78, .81, and .92, respectively.

Depression. The 20-item Center for Epidemiologic Studies Depression Scale (CES–D; Radloff, 1977) was used to measure depressive symptoms over the past week. Statements regarding symptoms (e.g., "My sleep was restless") were rated on a 4-point rating scale ranging from 0 (*rarely or none of the time*) to 3 (*most or all of the time*). The CES–D is one of the most widely used and validated depression measures (Shafer, 2006), achieving Cronbach's alpha coefficients greater than .80 in general and LGB samples (Beals et al., 2009; Frost & Meyer, 2009; Radloff, 1977). Cronbach's alpha was .93 in the present study. Convergent validity has been evidenced through correlations with clinician- and self-report ratings, as well as other self-report measures of depression (Radloff, 1977). In an LGB sample, the CES–D was positively correlated with measures of perceived stigma and avoidant coping (Talley & Bettencourt, 2011).

Life satisfaction. The 5-item Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) was used to evaluate life satisfaction. Respondents rate statements (e.g., "In most ways, my life is close to my ideal") on a fully anchored 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The original investigation of the SWLS suggests adequate psychometric properties (Diener et al., 1985). Studies with LGB populations have reported Cronbach's alpha coefficients above .80 (Balsam & Mohr, 2007; Halpin & Allen, 2004). The coefficient was .89 in the present study. SWLS scores were positively correlated with measures of extraversion and agreeableness, and negatively correlated with neuroticism in an LGB sample (Kurdek, 1997). The SWLS has also been shown to be positively associated with level of LGB identity acceptance (Halpin & Allen, 2004).

Self-stigma. The 3-item Internalized Homonegativity subscale of the LGBIS (Mohr & Kendra, 2011) was used to assess self-stigma. Respondents rate items (e.g., "If it were possible, I would choose to be straight") using a 6-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Cronbach's alpha ranged from .86 to .93 in the measure development study and was .87 in the present study. Validity of the subscale was supported via positive associations with measures of ego-dystonic homosexuality and negative affect (Mohr & Kendra, 2011).

Acceptance concerns. The 3-item Acceptance Concerns subscale of the LGBIS (Mohr & Kendra, 2011) was used to access respondents' levels of concern with being accepted based on their sexual minority status. Respondents rate items (e.g., "I often wonder whether others judge me for my sexual orientation") on a 6-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Cronbach's alpha ranged from .74 to .83 in the measure development study and was .78 in the present study. The validity of the subscale scores has been demonstrated by its positive association with LGB identity variables (e.g., self-stigma) and negative affect, and its negative relation with life satisfaction (Mohr & Kendra, 2011).

Membership esteem. The 4-item Membership Esteem subscale of the Collective Self-Esteem Scale (CSES; Crocker, Luhtanen, Blaine, & Broadnax, 1994) was used to assess self-perceived worth as a member of LGB communities. We used the reworded version of the measure, developed by Zea, Reisen, and Poppen (1999), to reflect our focus on sexual orientation rather than race. Participants responded to items (e.g., "I am a worthy member of the LGB community") using a 7-point rating scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Cronbach's alpha was .75 in the scale development study and .80 in the present study. The validity of the sexual minority version of this subscale was supported by its positive association with social support (Zea et al., 1999).

Identity strength. A slightly modified version of the 14-item Ethnic Identity subscale of the Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992) was used to measure LGB identity strength. The language of the subscale was adapted to inquire about an individual's sexual minority identity (e.g., "I feel a strong attachment towards the LGB community") rather than their ethnic identity, as done in past studies (e.g., Sarno, Mohr, Jackson, & Fassinger, 2015). Item responses are rated on a 6-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Coefficient alpha for the modified scale was .88 in one sexual minority sample (Mohr & Fassinger, 2000) and .92 in the present study. A negative association with an internalized homonegativity scale and positive relations to measures of outness and identity centrality support validity for the LGB version of this measure (Mohr & Fassinger, 2000; Mohr & Kendra, 2011).

Data analysis considerations. The sample size provided power of .80 to test regression slopes of relatively small effect size ($f^2 = .035$) at the .017 level (the most stringent alpha level used in our regression analyses).

Less than 4% of the scores were missing for each of the main analyses. These missing values appeared to be randomly distributed across all measures. Rather than discard cases with missing data, missing values were imputed using the expectation-maximization (EM) algorithm. We chose this missing data strategy because it (a) yields good estimates of the main parameters of

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interest, (b) has negligible impact on Type I error when the missing data rate is low, (c) avoids the loss of power resulting from listwise deletion when missing data are spread uniformly throughout the data set, and (d) offers greater flexibility and ease of data analysis compared with modern missing data methods (Schafer & Graham, 2002).

Participants were nested within university campuses, raising the possibility of violating assumptions of nonindependence of observations in the regression analyses. To investigate this possibility, we calculated intraclass correlation coefficients (ICCs) to estimate the proportion of variance in each of the main variables due to university affiliation. ICCs ranged from .00 to .01 ($ps > .10$), suggesting that campus-level variance was negligible in all variables studied.

Results and Discussion

Descriptive statistics and internal consistencies for variables are presented in Table 2. In general, participants reported low levels of concealment behavior and concealment motivation, whereas the average nondisclosure score was just slightly above the scale midpoint. However, the full range of scores was represented for each of the three stigma management variables.

A series of multiple regression analyses was conducted to test the unique association of each stigma management variable in relation to the two psychological health criterion variables (depression, life satisfaction), two positive identity-related variables (membership esteem, identity strength), and two negative identity-related variables (self-stigma, acceptance concerns). A familywise error rate of .05 was used for each regression, yielding an error rate of .017 for tests of regression coefficients. Self-stigma scores were log transformed to address the strong positive skew found in residuals for the analysis in which self-stigma was the criterion variable.

We summarize results for each predictor separately, starting with concealment behavior (see Table 3). Concealment behavior accounted for unique variance in both of the psychological health variables and, as hypothesized, was positively related to depression and negatively associated with life satisfaction. Also consistent with expectations, concealment behavior was positively related to the negative identity-related variables. However, contrary to expectations, concealment behavior was not uniquely associated with the positive identity variables.

Table 3
Multiple Regression Models Predicting Psychological Health and Identify Adjustment From Stigma Management Processes

Variable	*B*	*SE*	sr^2
Depression ($R^2 = .07$)			
1. Concealment behavior	.23*	.07	.04
2. Concealment motivation	.03	.03	.00
3. Nondisclosure	.00	.06	.00
Life satisfaction ($R^2 = .04$)			
1. Concealment behavior	−.55*	.16	.04
2. Concealment motivation	.02	.08	.00
3. Nondisclosure	.13	.13	.00
Self-stigma ($R^2 = .17$)			
1. Concealment behavior	.18*	.05	.03
2. Concealment motivation	.08*	.03	.03
3. Nondisclosure	.04	.05	.00
Acceptance concerns ($R^2 = .20$)			
1. Concealment behavior	.64*	.13	.07
2. Concealment motivation	.20*	.07	.02
3. Nondisclosure	−.04	.11	.00
Membership esteem ($R^2 = .25$)			
1. Concealment behavior	−.19	.10	.01
2. Concealment motivation	−.20*	.05	.04
3. Nondisclosure	−.25*	.08	.02
Identity strength ($R^2 = .23$)			
1. Concealment behavior	−.20	.09	.01
2. Concealment motivation	−.18*	.05	.04
3. Nondisclosure	−.21*	.08	.02

Note. $N = 301$.
* $p < .017$.

As expected, concealment motivation was not uniquely related to depression or life satisfaction but did account for unique variance in all the identity-related criterion variables. Specifically, concealment motivation was negatively related to membership esteem and identity strength, and positively related to self-stigma and acceptance concerns.

Contrary to expectation, nondisclosure did not predict the psychological health variables or the negative identity variables. However, it was uniquely and inversely associated with both membership esteem and identity strength, as expected.

Findings indicated that, although related, concealment behavior, concealment motivation, and nondisclosure are not interchangeable predictors of psychosocial factors. Indeed, psychological

Table 2
Descriptive Statistics for Study 2 Variables

Variable	*M*	*SD*	Possible range	Observed range	1	2	3	4	5	6	7	8	9
1. Concealment behavior	1.57	.63	1.00–5.00	1.00–5.00	.90								
2. Concealment motivation	3.25	1.34	1.00–6.00	1.00–6.00	.52**	.81							
3. Nondisclosure	2.76	.82	1.00–4.00	1.00–4.00	.51**	.62**	.93						
4. Depression	1.89	.61	1.00–4.00	1.00–3.80	.27**	.18**	.16**	.93					
5. Life satisfaction	4.69	1.41	1.00–7.00	1.00–7.00	−.20**	−.06	−.04	−.56**	.89				
6. Self-stigma	1.97	1.18	1.00–6.00	1.00–6.00	.36**	.36**	.30**	.20**	−.18**	.87			
7. Acceptance concerns	3.30	1.26	1.00–6.00	1.00–6.00	.42**	.36**	.27**	.39**	−.27**	.36**	.78		
8. Membership esteem	4.71	1.02	1.00–6.00	1.00–6.00	−.36**	−.45**	−.42**	−.19**	.09	−.37**	−.21**	.80	
9. Identity strength	4.54	.95	1.00–6.00	1.21–6.00	−.36**	−.44**	−.40**	−.07	.08	−.47**	−.14*	.75**	.92

Note. Means, standard deviations, and ranges are based on untransformed scales. Correlations involving self-stigma are based on the log transformed scores used in the main analyses. Scale internal consistency reliability estimates appear in the diagonal.
* $p < .05$. ** $p < .01$.

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health (depression, life satisfaction) was only uniquely predicted by concealment behavior. Positive identity (membership esteem, identity strength) was uniquely predicted by concealment motivation and nondisclosure, but not concealment behavior. Finally, negative identity (self-stigma, acceptance concerns) was uniquely predicted by concealment behavior and concealment motivation, but not nondisclosure. Similar to recent scholarship investigating the distinctiveness of stigma management variables (Meidlinger & Hope, 2014), the present findings caution researchers to carefully consider conceptual distinctions among stigma management variables and the potential benefits of assessing these constructs separately.

General Discussion

Scholarship on individuals with indiscernible stigmatized identities has illuminated links between stigma management and psychosocial factors (Chaudoir & Fisher, 2010; Pachankis, 2007) but has often relied upon the largely untested assumption that concealment and disclosure variables represent two extremes of the same phenomenon (Meidlinger & Hope, 2014). The present research explored this assumption in a sample of LGB university students by testing a new measure of concealment behavior (Study 1) and investigating three stigma management processes believed to relate to psychosocial factors through distinct pathways (Study 2).

Stigma Management and Psychological Health

Only concealment behavior uniquely predicted depression and life satisfaction, consistent with recent research on links between stigma management and well-being (Meidlinger & Hope, 2014; Schrimshaw et al., 2013). This aligns with existing scholarship suggesting that, as compared with disclosure, concealment more strongly activates certain minority stress processes (Meidlinger & Hope, 2014) and may have greater impacts on psychopathology (Schrimshaw et al., 2013). The unique relationship between concealment behavior and health has numerous theoretical explanations, including the inhibition model, preoccupation model, and self-perception model (for a review, see Uysal, Lin, & Knee, 2010). The proliferation of such theories suggests that concealment behavior and pathology may be linked via multiple pathways, which may explain the robust association of concealment behavior with psychological health.

The present study went beyond previous research by also differentiating recent effortful concealment behavior from concealment motivation in the prediction of psychological health. Past research (Schrimshaw et al., 2013) has demonstrated an association between concealment motivation and aspects of psychological health (e.g., depression) after controlling for nondisclosure. However, as we hypothesized, this association was not significant after controlling concealment behavior. We were surprised, however, that nondisclosure also failed to uniquely predict the psychological health variables. This may indicate that stigma disclosure has no unique relationship to psychological well-being beyond the effects of concealment. For example, several studies have found no relation between level of stigma disclosure and quality of life (e.g., Huffman, Watrous-Rodriguez, & King, 2008; Meidlinger & Hope, 2014; Park, Bharadwaj, & Blank, 2011). One explanation for this is that people disclose strategically so as to maximize support and minimize rejection (Beals et al., 2009; Major & Gramzow, 1999). If both disclosure and nondisclosure can be used to optimize well-being, depending on one's specific life context, it makes sense that level of disclosure would not be a unique predictor of depression or life satisfaction.

A second explanation for the null findings is that stigma disclosure may be related to aspects of well-being not included in this study. For example, self-verification theory suggests that people have an inherent drive to be seen in ways that are consistent with their self-concept (Swann, 1990), and disclosure may be one way stigmatized populations achieve this identity coherence (Bosson et al., 2012). Research is needed to determine whether disclosure and concealment processes account for unique variance in such facets of well-being.

Taken together, these results suggest that concealment behavior is likely a more suitable focus of study for researchers and clinicians interested in the role of stigma management in depression and life satisfaction. This contrasts with a number of LGB identity development models which feature level of outness, not level of engagement in concealment behaviors, as a marker of health (Coleman, 1982; Fox, 2003). Similarly, although counseling guidelines encourage clinicians to explore the benefits and risks of coming out among LGB clients (American Psychological Association, 2012), future guidelines may benefit from a greater emphasis on educating clients about the unique consequences of attempting to "pass" as heterosexual (e.g., lying about one's sexual minority identity) and helping clients identify environments that minimize their need to vigilantly conceal their stigmatized status (e.g., attending a queer-friendly college).

Stigma Management and Social Identity

This study is aligned with past research linking stigma management processes to adjustment to one's marginalized status (Beals et al., 2009; Cole et al., 1996; Smart & Wegner, 1999). Although each of the three stigma management variables predicted at least two social identity variables, only concealment motivation uniquely predicted all four of the constructs related to social identity. If, as discussed previously, a preference to conceal reflects a response to difficulty coping with one's stigmatized identity, then it would make sense that concealment motivation is uniquely associated with a variety of variables related to identity adjustment.

Concealment behavior uniquely predicted the negative identity variables but not the positive ones. One potential explanation for this is that concealment has been theorized to reinforce a negative sense of self, which would understandably increase acceptance concerns and self-stigma. Hetrick and Martin (1987) alluded to this relationship between concealment behavior and one's negative self-concept, declaring that "each successive act of deception, each moment of monitoring which is unconscious and automatic for others, serves to reinforce the belief in one's difference and inferiority" (pp. 35–36). One can imagine these relationships as bidirectional: Acceptance concerns and self-stigma may facilitate stigma concealment, which may then strengthen self-stigma and deepen one's acceptance concerns.

In contrast to concealment behavior, nondisclosure uniquely predicted the positive identity variables, but not the negative ones. There are a number of ways to make sense of this pattern of results.

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First, individuals with high identity strength may feel more drawn to integrate their minority status into their social network through disclosure. Also, this relationship may be reciprocal: Because individuals tend to disclose to people who are likely to respond with support (Beals et al., 2009), disclosure may bolster identity strength by increasing connection to similar others and supportive allies (Frable, Platt, & Hoey, 1998). Second, disclosure may increase the likelihood that an individual with an indiscernible stigmatized identity (e.g., a bisexual person) will engage in identity-supportive behaviors (e.g., participating in a bisexual pride event), which could bolster identity strength and membership esteem (Chaudoir & Fisher, 2010). Specifically regarding membership esteem, individuals likely reflect upon their own levels of visibility to evaluate their worth as a member of their marginalized social group. For example, sexual minority individuals have reported pressure to disclose as an act of solidarity with other LGB people (Cover, 2000) and have faced accusations of cowardice and lack of self-acceptance for not revealing their sexual identity to others (Cain, 1991; Rasmussen, 2004).

Measurement of Concealment

The present research also provided preliminary psychometric data on a new measure of concealment behavior that we named the Sexual Orientation Concealment Scale (SOCS). The few sexual orientation concealment measures that have gone through a rigorous instrument development process assess global strategies and motivations (Anderson et al., 2001; Button, 2004; Mohr & Kendra, 2011), which, although important, do not represent the full range of concealment-related constructs. The SOCS was designed to assess level of recent effortful concealment behavior and is thus based on a conceptualization of concealment that is consistent with theories such as Wegner's preoccupation model of secrecy (Smart & Wegner, 1999) and Pennebaker's inhibition model (Pennebaker & Chew, 1985). Both exploratory and confirmatory analyses supported a 1-factor structure for the SOCS. Correlations with established stigma management scales supported its validity, as well as its distinctness relative to previous scales.

The SOCS may help to advance understanding of stigma management by assessing a concealment related process that is not currently captured by existing measures. For example, results from Study 2 suggest that, compared with concealment motivation, recent effortful concealment behavior may be a more proximal influence on psychological well-being.

Limitations and Future Directions

It is important to highlight several limitations of the study. The reliance on cross-sectional data does not permit inferences about the direction of influence between stigma management processes and psychosocial factors. For instance, the relation between self-stigma and concealment behavior can be interpreted in multiple ways: Self-stigma may cause concealment behavior, concealment may increase self-stigma, or this relationship could be bidirectional. Also, a third unmeasured variable may be influencing both processes. Longitudinal or experimental research is needed to investigate the direction of influence among variables. However, this limitation does not negate conclusions related to our primary aim (i.e., demonstrating unique associations of stigma management processes with the criterion variables).

Although we believe the present results offer a substantive contribution to the literature, the use of a convenience sample (i.e., predominantly White LGB students from colleges within the United States) limits the generalizability of our findings in a number of ways. For example, we relied on a college sample to allow us to recruit sexual minority individuals from across the country with little resources. Although we are unaware of any reason our results should differ in a noncollege sample and there is a precedent of using a convenience sample of sexual minority college students to study stigma concealment processes (e.g., Beals et al., 2009; Bosson et al., 2012; Mohr & Kendra, 2011), further research is needed to establish the generalizability of our study results in noncollege student populations. Additionally, although recruiting via LGB listservs is a common practice in the recruitment of an LGB sample (e.g., Beals et al., 2009; Moradi et al., 2010), it likely resulted in overrepresentation of individuals who were more comfortable with their LGB identity. This highlights the value of developing recruitment methods that reach individuals who are less adjusted to their stigmatized status.

This study also relied on data concerning a single identity type (i.e., sexual minority status) to examine gaps in knowledge about the larger population of individuals with indiscernible stigmatized identities. Although the prevailing perspective among scholars in this area (Pachankis, 2007; Quinn, 2006) is that individuals with different concealable stigmatized identities face similar stigma-related stressors (e.g., disclosure decisions) and psychosocial difficulties (e.g., social isolation), research with other populations is needed to test the generalizability of our results. For example, the link between nondisclosure and membership esteem may have been elevated in our study due to the importance of outness as a marker of pride within the LGB community. Widespread disclosure may not be a key criterion by which individuals measure their worth within other social groups, such as transgender individuals and undocumented immigrant populations.

This study relied on a new instrument to assess current concealment behavior because no suitable existing measure could be identified. Although the scale demonstrated adequate psychometric properties, additional research is needed to explore the validity of scores on this instrument among diverse LGB populations. Future studies may support the development of new measures to assess additional dimensions of stigma management.

Finally, the criterion variables included in this study represent only a fraction of potential aspects of psychological health and social identity that may be uniquely predicted by stigma management processes. Future research could benefit from examining the unique prediction of additional psychosocial constructs. For instance, the future inclusion of health-risk variables (e.g., substance use, sexual risk) could continue to clarify how stigma management acts as a minority stressor and inform public health interventions aimed to reduce such behaviors.

Conclusion

Research has made it increasingly clear that stigma management decisions impact psychological health and social identity among people with indiscernible stigmatized identities. However, to unearth whether, how, and when stigma management intersects with psychosocial factors, more attention must be given to the similarities and differences between various conceptualizations and as-

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sessments of stigma management constructs. This study is one of a handful that has investigated multiple stigma management variables simultaneously, and results question the conventional wisdom that they reflect a singular process. Thinking about stigma management as a set of distinct, interrelated processes raises intriguing possibilities for future scholarship related to the conceptualization, assessment, and study of identity management. Such contributions could help strengthen current clinical interventions, social services, and advocacy work aimed to support the well-being of individuals with concealable identities.

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(*Appendix follows*)

Appendix

Sexual Orientation Concealment Scale

The following six items concern behaviors lesbian, gay, and bisexual (LGB) people sometimes use to hide their sexual orientation. Please rate each item to complete the following phrase:

In the last 2 weeks, I have . . .

Not at all	A little bit	Somewhat	Very much	All the time
☐	☐	☐	☐	☐

1. . . . concealed my sexual orientation by telling someone that I was straight or denying that I was LGB.
2. . . . concealed my sexual orientation by avoiding contact with other LGB individuals.
3. . . . avoided the subjects of sex, love, attraction, or relationships to conceal my sexual orientation.
4. . . . allowed others to assume I am straight without correcting them.
5. . . . altered my appearance, mannerisms, or activities in an attempt to "pass" as straight.
6. . . . remained silent while witnessing anti-gay remarks, jokes, or activities because I did not want to be labeled as LGB by those involved.

Received May 3, 2015
Revision received September 16, 2015
Accepted September 24, 2015 ■

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