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Confiding Secrets and Well-Being

Michael L. Slepian and Edythe Moulton-Tetlock

Columbia University

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Please address correspondence to:

Michael Slepian

Columbia University

3022 Broadway

New York, NY 10025

michael.slepian@columbia.edu

Abstract

How does confiding secrets relate to well-being? The current work presents the first empirical examination of mechanisms by which confiding diverse real-world secrets to known others predicts well-being. We examined over 800 participants with more than 10,000 secrets in total, finding that confiding a secret does not predict reduced instances of concealment. Rather, confiding a secret predicts higher well-being through perceived coping efficacy. Correlational and experimental studies find that through confiding a secret, people feel they obtain social support and are more capable in coping with the secret. Additionally, through perceived coping efficacy, confiding a secret predicts less frequent mind wandering to the secret. Confiding predicts higher well-being through changing the way and how often people think about their secret.

Keywords: secrecy, mind wandering, concealment, well-being

Secrecy is highly common, and is correlated with negative health and well-being, but the precise mechanisms through which secrecy brings its harm are unknown (Larson, Chastain, Hoyt, & Ayzenberg, 2015; Slepian, Chun, & Mason, 2017; Quinn & Chaudoir, 2009). Lack of insight into secrecy's mechanisms stems from a thorny issue. Real-world consequential secrets cannot ethically or realistically be experimentally created (e.g., one cannot assign a participant to secretly cheat on their spouse). Rather, we can look to the experience people have with secrecy and how this relates to well-being. Instead of creating secrets in the laboratory (and thus no longer studying real-world secrecy), experiments could instead test causal mechanisms by manipulating how people experience their real-world secrets. We leverage this approach to provide the first model of the well-being consequences of confiding secrets.

Sharing and Disclosure

Recent work suggests that having a secret all to oneself is harmful to well-being, whereas sharing a secret with another is associated with interpersonal competence (as demonstrated with a sample of adolescents; Frijns, Finkenauer, & Keijsers, 2013). This work suggests that confiding secrets might improve well-being, but the mechanisms by which confiding predicts well-being remain to be explored. Existing literatures on disclosure and emotion expression present related constructs which we can compare to confiding. When someone discloses personal information (e.g., one's hobbies, where one grew up), self-disclosure is reciprocated by the interaction partner, leading to increased mutual liking and intimacy (Collins & Miller, 1994; Derlaga & Berg, 2013; Dindia, 2002; Jourard, 1971; McAdams, 1988; Miller & Kenny, 1986; Laurenceau, Barrett, & Pietromonaco, 1998; Reis & Shaver, 1988; Sprecher, Treger, Wondra, Hilaire, & Wallpe, 2013).

People also disclose to others their struggles, worries, and feelings (Rimé, Mesquita, Philippot, & Boca, 1991). As reviewed by Curci and Rimé (2012), one reason that people might share negative emotions is to facilitate recovery from a difficult emotional experience; yet sharing emotions does not consistently improve well-being. Sharing negative emotions can increase distress, negative thoughts and feelings, and physiological stress (Mendolia & Kleck, 1993; Nils & Rime, 2012; Páez, Velasco, & Gonzales, 1999; Rime, 2007, 2009). Sharing one's negative emotions to a confederate who is merely supportive—but does not challenge the participant to reappraise—is no more helpful than talking alone or not sharing one's emotions at all (Lepore, Fernandez-Berrocal, Ragan, & Ramos, 2004; Lepore, Ragan, & Jones, 2000). Sharing of emotional episodes seems to be helpful only to the extent it leads to reappraisal (Nils & Rimé, 2012).

Confiding

Confiding a secret is a form of social sharing, as are self-disclosure and emotion expression, but there are important differences. Disclosure of personal information can increase interpersonal intimacy, and emotion expression can increase personal well-being when accompanied by reappraisal. But unlike self-disclosure when getting to know someone, and unlike sharing an emotional episode, confiding a secret comes with additional strings attached. Confiding is not only a type of disclosure: It is also a request for help and confidentiality (Slepian & Greenaway, 2018; Slepian & Kirby, 2018).

Confiding also involves different goals than disclosure and emotion expression. An act of self-disclosure is in the service of increasing intimacy, but it is not typically thought of as venting nor as a request for help (Jourard, 1971). Emotion expression of negative emotion is mainly a strategy used for venting and catharsis (Duprez, Christophe, Rimé, Congard, &

Antoine, 2015). In contrast, people confide secrets primarily as a request for help (Slepian & Kirby, 2018).

Finally, confiding must be understood within the context of secrecy. While concealment is the goal of secrecy, people do not often have to conceal their secrets. More frequently, people mind-wander to their secrets. That is, they think about their secrets when irrelevant to the context at hand (Slepian et al., 2017). The mind-wandering literature examines the processes and consequences of task-independent thoughts (Killingsworth & Gilbert, 2010; Klinger, 2013; Mar, Mason, & Litvack, 2012; Poerio, Totterdell, & Miles, 2013; Ruby, Smallwood, Engen, & Singer, 2013; Schooler et al., 2011; Smallwood, 2013; Watkins, 2008). In the context of secrecy, the frequency with which people mind wander to their secrets reliably predicts lower well-being, unlike concealment (Slepian et al., 2017). Why does mind wandering to secrets, but not concealment, reliably predict harm from secrecy? An important piece of this puzzle is that people often confide secrets in others. Examining the consequences of confiding will shed light on the relationship between secrecy and well-being.

A Model of Confiding Secrets

Social Support

Confiding a secret is typically a specific request for help with the secret (Slepian & Kirby, 2018). Thus, we should expect the social support received to be critical in the outcome of confiding. Social support is a valuable resource for coping with stressors, particularly to the extent the other is responsive (Maisel & Gable, 2009; Uchino, Bowen, Carlisle, & Birmingham, 2012). We predict confiding a secret to be helpful to the extent it provides social support.

Coping Efficacy and Mind-Wandering

Feeling supported by others increases feelings of efficacy (Bandura, 1997; Coyne & Downey, 1991; Dunkel-Schetter, Folkman, & Lazurus, 1987; Feeney & Collins, 2015; Thoits, 1986, 1995). Confiding a secret should thus increase perceived coping efficacy to the extent one receives social support.

Repetitive mind wandering often accompanies secrecy (Slepian et al., 2017) and is a consequence of maladaptive coping (Ottaviani, Shapiro, & Couyoumdjian, 2013; Wayment, Collier, Birkett, Traustadottir, & Till, 2015). With increased perceived coping efficacy, people are more motivated to expand effort to improve their coping including through confronting negative affect, regulating one's emotions, and finding healthier ways to think through the stressor for improved well-being (Kneeland, Dovidio, Joormann, & Clark, 2016).

Accordingly, increased perceived coping efficacy should set in motion a set of processes that increase coping efforts (e.g., increased confidence, improved emotion regulation) that reduce repetitive mind wandering to the secret. In contrast, the frequency with which one has to conceal a secret should only depend on how often one encounters conversations related to one's secret, and thus should not vary by coping efficacy.

Well-Being

Consistent with prior work (Slepian et al., 2017), we predict that mind-wandering frequency will more reliably predict lower well-being than will concealment frequency. There are two reasons for this prediction. First, mind-wandering and concealment frequencies should have different antecedents. The frequency with which one conceals should reflect how often one encounters a conversation related to one's secret. In contrast, repetitive mind wandering is a consequence of maladaptive coping (Ottaviani et al., 2013; Wayment et al., 2015).

Second, the inferences one will draw from instances of mind wandering and concealment will differ. While concealment is taxing (Critcher & Ferguson, 2014), each instance of concealment is effective goal pursuit. That is, as long as one does not let the secret slip, one has accomplished the secrecy goal. In contrast, having one's mind continually wander to the secret (outside of concealment contexts) should be interpreted as a signal of a problem in need of solving (Mason & Reinholtz, 2015; Ruby et al., 2013). When a mind continually returns to some outstanding task or stressor, people tend to infer there is a problem at hand. Combined, this leads us to predict that mind wandering to secrets will more reliably predict lower well-being than concealment.

The Current Work

Overview of Studies

If confiding secrets can increase social support, which helps one's coping, then confiding might generally be associated with higher well-being. Specifically, given that repetitive mind wandering is a form of maladaptive coping, we tested in Study 1 whether confiding a secret would predict higher well-being as a function of less frequent mind wandering to the secret. Study 1 found support for this prediction, and Study 2 replicated this finding while also demonstrating it is specific to confiding secrets and not disclosure more generally. Study 3 next examined our full model and found that to the extent confiding leads to social support, it predicts higher well-being as a function of an associated increase in perceived coping efficacy, an effect also predicting less frequent mind wandering to the secret. Study 4 took an experimental approach, specifically examining perceived coping efficacy. We asked participants to focus on the social support obtained from confiding, which enhanced a sense of well-being through increasing perceived coping efficacy with the secret.

Participant Samples and Multilevel Analyses

Participants were recruited on Mechanical Turk to ensure a diverse and fully anonymous sample. This population demonstrates similar patterns of secrecy content and experience as other nationally representative samples (Slepian et al., 2017). Each study recruited 200 participants, implementing a method to help participants recall the multiple secrets they keep. As participants have multiple secrets, this approach yields thousands of secrets per study and enables highly powerful analyses. To ensure that our samples met our recruitment goal, participants who admitted to fabricating answers during a final honesty check were replaced; Study 1 ($n=1$), Study 2 ($n=7$), Study 3 ($n=7$), Study 4 ($n=7$).

Given multiple secrets per participant, we analyzed the data via multilevel modeling. R-packages lme4/lmerTest ran multilevel models through Satterthwaite approximation tests to calculate p -values (estimating degrees of freedom, which are thus non-whole numbers differing by predictor; Kuznetsova, Brockhoff, & Christensen, 2013). We tested fixed effects of interest while including participant and category of secret as crossed random factors. Consequently, the remaining variance explained in each model corresponds to the *general* relationships of our measures that are *not* specific to any particular participant or kind of secret (Judd, Westfall, & Kenny, 2012). Additionally, all results remain when controlling for participants' number of secrets (Supplemental Material).

Study 1

People often mind-wander to their secrets (Slepian et al., 2017), and frequent mind-wandering is a consequence of maladaptive coping (Ottaviani et al., 2013; Wayment et al., 2015). Study 1 tested whether confiding would positively predict well-being through less frequent mind-wandering to the secret.

Figure 1. Number of participants with total secrets, confided secrets, and non-secrets for each category of experience from the CSQ, across all studies. See Supplemental Material for full descriptions of each category of experience, and see the main text for more information.

Method

Study 1 presented 200 participants (83 men, 117 women; $M_{\text{age}}=34.07$, $SD=11.00$) with 38 categories of experience from the Common Secrets Questionnaire (CSQ) which describe 92% of the secrets people report keeping (Slepian et al., 2017; Figure 1).

Per each of the 38 experiences identified by the CSQ, participants indicated whether they had the experience, if it was a secret, and whether any others were aware of the secret. Scale anchors ensured participants understood that an experience should be considered a secret if held from one or more other individuals, even if known to others. We refer to secrets only known by the participant (i.e., not confided in any one) as *total secrets*, and those the participant has confided in at least one person as *confided secrets*. For each secret, participants reported the number of times in the past 30 days they mind-wandered to, and concealed the secret, and the perceived influence of the secret on their well-being (Table 1).

Although our well-being measure was only a single item per secret, prior work has validated that the perceived impact of a secret on well-being relates to physical health outcomes (Slepian et al., 2017). The present work replicated this validation (Supplemental Material). Our measures of mind-wandering and concealment frequencies comprise retrospective self-reports. While the point estimates of such judgments will lack precision, what is critical is the rank-orderings reflect the true rank-orderings (i.e., secrets people mind-wander to more often, are reported as such). Indeed, retrospective accounts of mind-wandering and concealment demonstrate the same pattern of results as longitudinal diary studies that ask the same measures on a nightly basis (Slepian et al., 2017).

Table 1.

Measures used in Studies 1-3 per each secret held by participants from the Common Secrets Questionnaire (CSQ).

Frequency of mind-wandering to a secret

Think about the PAST MONTH, and all the times when you were NOT with the person you are hiding this secret from, BUT found yourself spontaneously thinking about your secret...
How many times in the past 30 days did you find yourself thinking about your secret?
Take your best guess and ONLY enter a NUMBER.

Frequency of concealing a secret

Think about the PAST MONTH, and all the times when you WERE WITH the person you are hiding this secret from.
How many times in the past 30 days did you have to prevent yourself from revealing the secret (i.e., had to hold back the secret, and not reveal it) while interacting with this person?
Take your best guess and ONLY enter a NUMBER.

Impact of secret on well-being

In general, this secret...
-6 (has made my life and well-being worse) to 6 (has made my life and well-being better),
midpoint 0 (has had no effect on my life and well-being).

Note: These measures were validated in Slepian et al., 2017.

Results and Discussion

Mind-wandering and concealment. Replicating prior work (Slepian et al., 2017), people mind-wander to secrets more than they conceal them (Table 2), $b=3.05$, 95% CI=[2.61, 3.50], $SE=0.23$, $t(5934.93)=13.32$, $p<.00001$. Confiding a secret predicted less frequent mind-wandering to the secret outside of concealment contexts, but confiding did not significantly predict the frequency of concealment within social interactions (Table 2).

Table 2.

Predicting mind-wandering and concealment frequencies for participants' secrets, Study 1.

Predicting mind-wandering frequency ($M = 6.37$, $SD = 12.93$, 95% CI = [5.89, 6.85])						
Predictor	b	95% CI on b	SE	df	t	p
Confided (yes vs. no)	-1.34	-2.14, -0.54	0.41	3027.97	-3.28	.001
Concealment frequency	0.87	0.82, 0.93	0.03	3031.16	32.60	< .0001

Predicting concealment frequency ($M = 3.05$, $SD = 7.48$, 95% CI = [2.78, 3.33])						
Predictor	b	95% CI on b	SE	df	t	p
Confided (yes vs. no)	0.35	-0.81, 0.10	0.23	2308.88	-1.53	.13
Mind-wandering frequency	0.29	0.27, 0.31	0.01	2715.23	32.99	< .0001

Note: Outliers identified with the adjusted boxplot method (Hubert & Vandervieren, 2008) for unbounded measures of frequency of mind-wandering and concealing: 52 outlying responses (0.84% of the data) from 2 participants mind-wandering to or concealing secrets more than 124 times in a month.

Well-being. Independent of concealment frequency and whether secrets were confided or not, the frequency of mind-wandering to secrets negatively predicted well-being (Table 3). As can be seen by the t -values, the relationship between mind-wandering and well-being was more reliable than that of concealment and well-being. Indeed, the more that people mind-wandered to than concealed their secret (a difference score), the lower their well-being ($b = -0.024$, 95% CI = [-0.032, -0.016], $SE = 0.004$, $t(3,057.83) = -6.03$, $p < .0001$).

Table 3.

Predicting well-being, Study 1

Predicting well-being ($M = -0.19$, $SD = 2.46$, 95% CI = [-0.26, -0.11])						
Predictor	b	95% CI on b	SE	df	t	p
Mind-wandering freq.	-0.027	-0.035, -0.019	0.004	3,058.03	-6.63	< .0001
Concealment freq.	-0.02	-0.03, -0.01	0.01	3,016.99	-1.87	.06
Confided (yes vs. no)	0.26	0.08, 0.45	0.09	3,037.31	2.70	.007

Indirect effect. Multilevel mediation analysis (1,000 iterations) demonstrated that confiding a secret positively predicted well-being through less frequent mind-wandering to the secret outside of concealment contexts ($M_{IE}=.04$, $SE=.0004$, 95% CI=[.01, .07]), but *not* as a function of less frequent concealment within social interactions ($M_{IE}=.006$, $SE=.0002$, 95% CI=[-.002, .02]). A high-powered replication study replicated these results (Supplemental Material)

Study 2

Study 1 found that confiding a secret is associated with higher well-being through less frequent mind-wandering to secrets. Is this an effect of confiding a secret, or does it reflect general self-disclosure processes unrelated to secrecy?

While each involves sharing personal information, the goals of self-disclosure, emotion expression, and confiding of secrets tend to be different. Self-disclosure aids the formation and maintenance of relationships (Jourard, 1971). Emotional expression communicates feelings and allows for venting (Duprez et al, 2015). Confiding a secret is a request for help (Slepian & Kirby, in press). What further differentiates confiding of secrets from other forms of social sharing is that when a person confides a secret to another, they expect the confidant will not reveal the secret to others.

Social sharing of any kind involves risk (Omarzu, 2000). The kinds of things that people often keep secret can engender negative reactions if disclosed (Slepian et al., 2017). Sharing such information comes with the risk that a person might pass it on to others (Omarzu, 2000). Indeed, the content of what people commonly keep secret is a frequent topic of gossip (Dunbar, 2004; Piazza & Bering, 2010; Paine, 1967). Thus, disclosing sensitive personal information *without* requesting confidentiality could be associated with one contemplating how the information will

spread, which would lead the disclosure to more often be on the mind (i.e., such uncertainty or worry is associated with increased mind-wandering; Stawarczyk, Majerus & D'Argembeau, 2013; Lu et al., 2015; Mrazek et al., 2011). In contrast, when confiding a secret, not only is personal information relayed, but so is a request for discretion. The assurance of confidentiality should offset any increased mind-wandering that might normally result from concern about the spread of the information.

Study 2 replicated Study 1's design, but included a third condition, whereby participants completed the same Study 1 measures but also for experiences (from the CSQ) that they did *not* keep secret. We also measured and controlled for the significance of the experience to ensure any differences between the conditions could not be attributed to significance, but rather whether the experience was a *total secret*, a *confided secret*, or a *non-secret*.

Method

Participants (N=200; 77 men, 123 women; $M_{\text{age}}=37.43$, $SD=13.13$) completed the same procedure as in Study 1, with two changes. Participants again completed follow-up questions for total secrets and confided secrets, but also completed them for each non-secret they had from the 38 categories. In addition to measures of mind-wandering frequency, concealing frequency, and well-being (from Study 1), participants also reported the significance of the experience (from 1-not at all to 7-very much).

Table 4.

Modified measures for non-secrets.

Mind-wandering frequency

Think about the PAST MONTH, and all the times when you were NOT with someone, BUT found yourself spontaneously thinking about this thing...

How many times in the past 30 days, did you find yourself thinking about this thing?

Take your best guess and ONLY enter a NUMBER.

Concealment frequency

Think about the PAST MONTH, and all the times when you WERE WITH someone.

How many times in the past 30 days did you have to prevent yourself from revealing this thing (i.e., had to hold the information back to not reveal it) while interacting with someone?

Take your best guess and ONLY enter a NUMBER.

Results and Discussion

Again, people mind-wandered to these experiences more frequently than they concealed them (Table 5), $b=1.79$, 95% CI=[1.27, 2.31], $SE=0.27$, $t(7548.68)=6.72$, $p<.00001$. We implemented the standard approach to examining a three-level variable within regression-based modeling. We created two dummy-variables, one representing whether the experience was a *confided secret*, and one representing whether the experience was a *non-secret*. We term the first dummy-variable *Confided* (i.e., to share a secret selectively is to confide). We term the second dummy-variable *Disclosed* (i.e., to share a non-secret is to disclose). The effects of these dummy-variables are independent of each other and relative to *total secrets*, representing the three levels of experience. We first examined frequencies of mind-wandering and concealing.

Mind-wandering. People mind-wandered less to confided secrets than total secrets ($b=-0.63$; Table 5), replicating Study 1. In contrast, when it comes to sensitive personal information that people disclose but do not keep secret, people mind-wandered to these *more* than they did to total secrets ($b=0.60$; Table 5): confided secret $M=2.73$ < total secret $M=3.36$ < non-secret $M=3.97$.

When it comes to experiences people typically keep secret—such as those represented by the 38 categories in the CSQ (which describe 92% of the secrets people report keeping; Slepian et al., 2017)—it seems that disclosing such experiences without labeling them as “secret” is actually associated with *more* mind-wandering to these experiences. Why? Imagine disclosing sensitive personal information to a colleague that may spread to other coworkers. A lack of certainty about whether the information will be contained would increase anxiety and worry, both of which are associated with increased mind-wandering (Stawarczyk et al., 2013; Lu et al., 2015; Mrazek et al., 2011).

Table 5.

Predicting mind-wandering and concealment frequencies, Study 2.

Predicting mind-wandering frequency ($M = 3.87$, $SD = 7.99$, 95% CI = [3.61, 4.12])						
Predictor	b	95% CI on b	SE	df	t	p
Confided (Dummy 1)	-0.63	-1.10, -0.16	0.24	3835.41	-2.61	.009
Disclosed (Dummy 2)	0.60	0.05, 1.16	0.28	3770.62	2.12	.03
Significance	1.01	0.90, 1.13	0.06	3773.32	17.64	< .0001
Concealment frequency	0.73	0.69, 0.77	0.02	3741.33	34.94	< .0001
Predicting concealment frequency ($M = 1.99$, $SD = 5.06$, 95% CI = [1.83, 2.15])						
Predictor	b	95% CI on b	SE	df	t	p
Confided (Dummy 1)	0.08	-0.22, 0.38	0.15	3689.49	0.53	.60
Disclosed (Dummy 2)	-0.39	-0.74, -0.03	0.18	3165.27	-2.14	.03
Significance	0.22	0.14, 0.29	0.04	3289.35	5.77	< .0001
Mind-wandering frequency	0.30	0.28, 0.32	0.01	3418.15	33.00	< .0001

Note: Outliers for unbounded measures of frequency of mind-wandering and concealing: 29 outlying responses (0.39% of the data) from 9 participants mind-wandering to or concealing secrets more than 93 times in a month.

Concealment. As in Study 1, relative to total secrets, confiding (to a specific target or targets) was not associated with decreases in concealment more generally (Table 5). In contrast, non-secrets were concealed less than secrets (non-secret $M=1.88$ < total secret $M=2.26$ < confided secret $M=2.34$). As can be seen by the means, people do occasionally conceal non-

secrets. Even when not kept secret, people sometimes bite their tongue in certain contexts to hold the information back (e.g., when anticipating that an interaction partner would respond poorly).

Well-being. Only the frequency of mind-wandering to secrets, not concealing, significantly predicted lower well-being (Table 6).

Table 6.

Study 2, Predicting well-being ($M = -0.18$, $SD = 2.46$, 95% CI = $[-0.26, -0.10]$)

Predictor	b	95% CI on b	SE	df	t	p
Mind-wandering freq.	-0.05	-0.06, -0.04	0.01	3822.93	-8.58	< .0001
Concealing freq.	0.005	-0.01, 0.02	0.01	3790.11	0.52	.69
Confided (Dummy 1)	0.06	-0.11, 0.23	0.09	3824.89	0.69	.49
Disclosed (Dummy 2)	0.05	-0.15, 0.26	0.10	3816.07	0.53	.59
Significance	-0.11	-0.16, -0.07	0.02	3813.16	-5.29	< .0001

Indirect effect. As in Study 1, confiding a secret positively predicted well-being through less frequent mind-wandering to the secret outside of concealment contexts ($M_{IE}=.03$, $SE=.0004$, 95% CI= $[.01, .06]$), but *not* as a function of less frequent concealment within social interactions ($M_{IE}=.0004$, $SE=.0001$, 95% CI= $[-.003, .005]$).

Conversely, disclosing the kinds of things people tend to keep secret but with no request for discretion or confidentiality (non-secrets) negatively predicted well-being through mind-wandering more to the disclosed experience ($M_{IE}=-.03$, $SE=.0005$, 95% CI= $[-.07, -.001]$), but *not* through concealing it ($M_{IE}=-.001$, $SE=.0002$, 95% CI= $[-.01, .01]$).

While these results clarify that confiding secrets is different than disclosing non-secrets (holding constant the content of the information), one might wonder why disclosure of non-secrets was associated with more mind-wandering. When disclosing to another person, there is the question of whether that person might relay the information to third parties, as such sensitive personal information is a frequent topic of gossip (Dunbar, 2004; Piazza & Bering, 2010; Paine,

1967). Uncertainty about whether disclosed information will become gossip may manifest as worry or anxiety, which both increase deleterious mind-wandering (Stawarczyk et al., 2013; Lu et al., 2015; Mrazek et al., 2011).

Study 3

Confiding a secret predicts less frequent mind-wandering to secrets, and thereby predicts higher well-being (Studies 1-2). This was an effect specific to confiding a secret, and not disclosure more generally (Study 2).

Whereas disclosure of sensitive personal information is more an act of intimacy in the formation and maintenance of relationships (Collins & Miller, 1994; Jourard, 1971; Miller & Kenny, 1986; Laurencau et al., 1998; Reis & Shaver, 1988), confiding a secret seems to be more a request for help (Slepian & Kirby, in press). Confiding thus solicits social support. Feeling supported by others increases efficacy (Bandura, 1997; Feeney & Collins, 2014; Coyne & Downey, 1991; Dunkel-Schetter, et al., 1987). We thus predicted that to the extent confiding provides social support, people would feel they have higher coping efficacy.

Increases in effective coping reduce repetitive mind-wandering (Ottaviani et al., 2013; Wayment et al., 2015). Thus, we predicted that perceived coping efficacy would, in turn, positively predict well-being through less frequent mind-wandering to the secret. These hypotheses combine to a predicted moderated mediation (Figure 2).

Method

We presented 200 participants (63 men, 129 women, 1 other; $M_{age}=33.51$, $SD=11.30$) with the Common Secrets Questionnaire, and per each confided and total secret they had (of the 38 categories), they completed a series of measures. First, we asked whether others knew the secret, specifically, whether they had confided the secret in another person (yes or no). Next, participants

completed a measure of social support obtained with respect to the secret, a measure of perceived coping efficacy (Table 7), and finally measures of the frequency of mind-wandering to and concealing the secret, the significance of the secret, and the perceived influence of the secret on well-being (as in Studies 1-2).

Table 7.

Social support measure, Study 3.

Social support measure ($\alpha=.97$), $M=3.39$, $SD=2.20$, 95% CI=[3.31, 3.47]

I have had someone comfort me, when it comes to this secret.

I have obtained useful insights from other people about this secret.

I have received emotional support when it comes to this secret.

I have received helpful advice from people about this secret.

Someone is there for me when it comes to this secret.

I have obtained new perspectives from other people about this secret.

Perceived coping efficacy ($\alpha=.93$), $M=5.52$, $SD=1.71$, 95% CI=[5.46, 5.59]

How capable do you feel in your ability to cope with this secret?

How much do you feel in control over this situation?

How well do you feel like you are handling the secret?

Note: All questions were rated from 1 (not at all) to 7 (very much).

Results and Discussion

Predicting perceived coping efficacy. We examined whether confiding interacted with having received social support, independent of the significance of the secret. Indeed, there was a significant interaction, $b=0.18$, 95% CI=[0.10, 0.26], $SE=0.04$, $t(2781.97)=4.26$, $p=.00002$.

To illustrate the nature of the interaction, Table 8 presents the effect of confiding at each whole-number value of social support (the “floodlight approach,” Spiller et al., 2013), as well as assessed as $+1/-1SD$ of mean social support (Aiken & West, 1991). At the lowest levels of social support (Table 8 darker shading), confiding negatively predicted perceived coping efficacy, whereas at adequate support (lighter shading), the effect is positive.

Thus, there are *two* tipping points, 1) when support received from confiding is too low (whereby confiding predicts lower coping efficacy), and where support received from confiding

is adequate (whereby confiding predicts higher coping efficacy). The Johnson-Neyman (1936) technique pinpointed these two significance thresholds.

Table 8.

The effect of confiding on perceived coping efficacy as a function social support

Social support (1 – 7)	<i>b</i>	95% CI on <i>b</i>		<i>t</i>	<i>p</i>	Effect of confiding on perceived coping efficacy
UL	LL					
7.00	0.78	0.38	0.19	3.77	< .01	Positive effect of confiding at these levels of social support
6.00	0.61	0.27	0.94	3.56	< .01	
5.59 (+1SD)	0.53	0.23	0.84	3.44	< .01	
5.00	0.43	0.17	0.69	3.19	< .01	
4.00	0.25	0.05	0.46	2.43	.02	
3.62 *	0.19	0.001	0.37	1.96	.05	
3.00	0.08	-0.09	0.24	0.91	.36	No effect at these levels
2.00	-0.1	-0.26	0.06	1.26	.21	
1.63 *	-0.17	-0.33	-0.001	-1.96	.05	Negative effect of confiding at these levels
1.19 (-1SD)	-0.24	-0.43	-0.06	-2.62	.01	
1.00	-0.28	-0.47	-0.09	-2.85	< .01	

Note: Significance thresholds are in bold and marked with *, which indicate the level of social support at which the effect of confiding on coping efficacy becomes significant. The effects of confiding on coping efficacy assessed at +1SD and -1SD social support are also noted and in bold.

Predicting mind-wandering and concealment frequency. Repetitive mind-wandering is one consequence of maladaptive coping (Ottaviani et al., 2013; Wayment et al., 2015). When one can more effectively cope with a secret, this should be related to reduced unhealthy repetitive mind-wandering to the secret. Indeed, independent of the prior variables, perceived coping efficacy predicted less frequent mind-wandering to the secret (but not concealment; Table 9).

Table 9.

*Predicting frequencies of mind-wandering to and concealing secrets, Study 3.*Predicting mind-wandering frequency ($M = 5.65$, $SD = 11.88$, 95% CI = [5.21, 6.09])

Predictor	b	95% CI on b	SE	df	t	p
Coping efficacy	-0.79	-1.02, -0.57	0.12	2478.79	-6.86	< .0001
Social support	0.12	-0.12, 0.36	0.12	2512.92	0.99	.32
Confided (yes vs. no)	0.05	-0.90, 1.01	0.49	2724.76	0.11	.91
Significance	0.70	0.52, 0.88	0.09	2747.04	7.53	< .0001
Concealment frequency	0.82	0.78, 0.87	0.02	2722.88	35.60	< .0001

Predicting concealment frequency ($M = 2.74$, $SD = 7.94$, 95% CI = [2.45, 3.03])

Predictor	b	95% CI on b	SE	df	t	p
Coping efficacy	-0.04	-0.20, 0.11	0.08	2412.73	-0.52	.61
Social support	0.02	-0.14, 0.18	0.08	2519.40	0.25	.80
Confided (yes vs. no)	0.17	-0.48, 0.81	0.33	2694.87	0.50	.62
Significance	0.06	-0.06, 0.18	0.06	2360.03	0.96	.34
Mind-wandering freq.	0.38	0.35, 0.40	0.01	2498.27	35.78	< .0001

Note: Focal predictor, perceived coping efficacy, in bold.

Predicting well-being. We predicted that independent of the prior variables, this effect of less frequent mind-wandering to the secret would predict higher well-being with respect to that secret; indeed, this was the case (Table 10).

Table 10.

*Predicting well-being, Study 3*Predicting well-being ($M = -0.16$, $SD = 2.58$, 95% CI = [-0.25, -0.06])

Predictor	b	95% CI on b	SE	df	t	p
Mind-wandering freq.	-0.02	-0.03, -0.01	0.005	2744.45	-4.54	< .0001
Concealment freq.	-0.02	-0.03, -0.01	0.01	2739.20	-2.98	.003
Coping efficacy	0.44	0.38, 0.49	0.03	2673.55	15.21	< .0001
Social support	0.13	0.07, 0.19	0.03	2706.03	4.33	< .0001
Confided (yes vs. no)	-0.21	-0.45, 0.02	0.12	2757.00	-1.81	.07
Significance	-0.17	-0.21, -0.12	0.02	2757.00	-7.38	< .0001

Note: An effect on well-being that operates through perceived coping efficacy must begin with a focal variable (in bold) that predicts coping efficacy.

Paralleling Study 1, as can be seen by the t -values, the relationship between mind-wandering and well-being was more reliable than that of concealment and well-being. Indeed, the more that people mind-wandered to than concealed their secret (a difference score), the lower their well-being ($b=-0.02$, 95% CI=[-0.03, -0.01], $SE=0.005$, $t(2742.32)=-3.53$, $p=.0004$).

Unexpectedly, aside from mind-wandering and concealing, coping efficacy was an even stronger predictor of well-being. We add this unexpected pathway as a gray line in Figure 2, along with corresponding statistics that do not control for mind-wandering and concealment.

Moderated indirect effect. Recall that mind-wandering (but not concealment) frequency was predicted by perceived coping efficacy (Table 9). Correspondingly, multilevel moderated mediation analysis (1,000 iterations) found that when receiving a high level (+1SD) of social support, confiding *positively* predicted well-being, through higher perceived coping efficacy, and thereby less mind-wandering to the secret. At low (-1SD) social support, confiding *negatively* predicted well-being, through lower perceived coping efficacy, and thereby more mind-wandering to the secret (Figure 2). There were no parallel pathways through concealing frequency (Table 11).

Figure 2. The model of confiding secrets. This figure shows paths for the moderated mediation model tested in Study 3. The first set of statistics (from the left) represent the interaction between confiding and social support. An indirect effect operating only via perceived coping efficacy was significant as well as through subsequent mind wandering frequency, whereas there was no corresponding indirect effect through concealment (Table 11).

Table 11.

Indirect effects of confiding on well-being, through perceived coping efficacy and experience with secrecy.

Assessed at “low” social support (-1SD)	<i>IE</i>	<i>SE</i>	<i>95% CI</i>
Confide → Perceived coping efficacy → Mind-wandering → Well-being	-.0044	.0001	-.0101, -.0006
Confide → Perceived coping efficacy → Concealing → Well-being	-.0002	.0001	-.0021, .0011
Confide → Perceived coping efficacy → Well-being	-.1230	.0016	-.2229, -.02707
Assessed at “high” social support (+1SD)	<i>IE</i>	<i>SE</i>	<i>95% CI</i>
Confide → Coping efficacy → Mind-wandering → Well-being	.0092	.0002	.0023, .0210
Confide → Coping efficacy → Concealing → Well-being	.0005	.0001	-.0021, .0044
Confide → Perceived coping efficacy → Well-being	.2573	.0025	.1057, .4319

Note. Significant effects in bold.

Given the strong pathway from perceived coping efficacy to well-being, we next examined another mediational model, one operating through only perceived coping efficacy to well-being (i.e., the gray line in Figure 2). This was also significant (Table 11). Mind-wandering frequency thus represents an important correlate of coping efforts, but mind-wandering frequency is not as strong a predictor to well-being as perceived coping efficacy itself. Thus, the predictive value of perceived coping efficacy may also operate through other forms of efficacious coping that can be explored in future work.

Perhaps when people generally have high levels of social support or global well-being, they generally perceive confiding as more helpful. Or perhaps these effects are some function of how much time participants spend in social interaction or imprecision in estimates of mind-wandering and concealment over 30 days. A replication of the present study (but with recollections from the past 7 days) replicated the present results, and additional Study 3 measures and analyses (of global social support, life satisfaction, and time spent in social interactions) cast doubt on these alternative explanations (Supplemental Material).

Study 4

Study 3 found support for our model of confiding secrets. It also suggested a strong and direct route from perceived coping efficacy to well-being; yet its correlational data preclude casual claims. Studies 4 thus sought experimental evidence. Study 4 experimentally asked participants to focus on the social support obtained from confiding, predicting this would enhance a sense of well-being with respect to the secret through increasing perceived coping efficacy.

Method

We presented 200 participants ($N=200$: 82 men, 118 women; $M_{\text{age}}=32.73$, $SD=10.32$) with the Common Secrets Questionnaire (Slepian et al., 2017), and per each secret they had and confided (of the 38 categories), they completed the measures of *coping efficacy* ($\alpha=.92$), and the perceived impact of the secret on *well-being* from the prior studies.

For every participant, we divided their current secrets into two blocks. For an initial first block, participants completed measures of perceived coping efficacy and well-being (from Study 3). For a second block, preceding these measures, we introduced a manipulation that framed confiding as a source of social support. This experimental prompt was manipulated within subjects, but only for a second block of their secrets.

The framing manipulation provided participants with a choice. The prompt read, “You said that at some point, you [description of secret from CSQ] and you have shared this secret with some people. Which of these descriptions fits your situation more?” With the options, “By sharing this secret with someone... I got some advice or guidance on how to handle it.” or “By sharing this secret with someone... I could feel like there was someone there for me to support me.” This framing endorsement paradigm was used because it is important to allow participants to endorse the provided framing. That is, when asking participants to frame an experience in

some manner (e.g., “think about how confiding this secret gave you social support”), the risk is that participants may feel their situation falls short of the request (e.g., “but I did not get the support I wanted”), which leads participants to contrast away from the intended direction of the framing (e.g., “and so, this secret hurts my well-being”) rather than the intended direction of influence (see Slepian, Masicampo, & Galinsky, 2016).

When primes feel externally generated, they promote contrast, whereas primes that feel internally generated promote assimilation (Mussweiler & Neumann, 2000). Thus, the simple methodological tweak that allows the participant to choose which fits best thereby leads the accessible content to feel internally generated (minimizing potential contrast effects from framing interventions).

Results and Discussion

An extensive literature demonstrates that when people feel supported by others, this increases feelings of efficacy, and that feelings of efficacy meaningfully enhance well-being (Bandura, 1986, 1989, 1997). Indeed, confided secrets that were randomly framed as yielding social support (vs. no framing manipulation) led participants to feel more capable in coping with the secret, $b=0.12$, 95% CI=[0.02, 0.23], $SE=0.05$, $t(1628.00)=2.28$, $p=.02$, which was associated with an enhanced sense of well-being, $b=1.07$, 95% CI=[0.99, 1.15], $SE=0.04$, $t(1744.37)=25.36$, $p<.00001$. Consequently, a multilevel mediation analysis (1,000 iterations) demonstrated that the framing manipulation increased perceived well-being through increasing perceived coping efficacy, $M_{IE}=0.13$, $SE=0.002$, 95% CI=[0.01, 0.26].

While this framing intervention only enhanced subjective well-being in the moment (through increased perceived coping efficacy), the implication is that real-world experiences of

obtaining social support would be more chronically associated with increased perceived coping efficacy and thereby higher well-being. Indeed, Study 3 found support for this prediction.

General Discussion

People disclose personal information to others to get to know each other (Jourard, 1971), and likewise, share their emotional experiences (Rimé, Finkenauer, Luminet, Zech, & Philippot, 1998). People also confide secrets in others, and unlike the other two forms of social sharing, the recipient is specifically identified as a confidant to guard the secret (see Frijns et al., 2013; Slepian & Greenaway, 2018; Slepian & Kirby, 2018). Whereas prior work on disclosure finds it is an act of intimacy (Laurenceau, Barrett, & Pietromonaco, 1998; Reis & Shaver, 1988) and the sharing of emotional experiences is often an act of venting (Duprez et al., 2015), people confide secrets mainly as a request for help (Slepian & Kirby, 2018).

Prior models of secrecy and disclosure (Lane & Wegner, 1995; Pennebaker, 1989) proposed secrets are harmful because active inhibition is hard and stressful work; thus, confiding helps by decreasing concealment. Yet drawing from the mind-wandering literature, recent work finds that repetitive mind wandering to secrets more strongly predicts lower well-being than does concealment (Slepian et al., 2017). The current work proposed and tested a model by which confiding might provide an opportunity for social support and thereby reduce this unhealthy repetitive mind wandering to the secret through increased coping efficacy.

We examined over 800 participants with more than 10,000 secrets in total. Rather than reducing the harmful effects of concealment, confiding a secret was associated with less frequent mind wandering to the secret (Studies 1 and 2). Specifically, to the extent confiding led to social support, confiding predicted increased perceived coping efficacy and thereby higher well-being. This effect on well-being also operated through less frequent mind wandering to the secret

(Study 3). An effect of confiding secrets on well-being that does not operate through concealment but instead through perceived coping efficacy and mind wandering suggests that confiding secrets must change the way people think about their secret, an effect confirmed experimentally in Study 4.

Beyond suggesting that the goals of general disclosure and emotion expression differ from the goal of confiding a secret, the current studies make clear that confiding secrets also evokes a set of processes that differ from self-disclosure and emotion expression. For instance, having a negative emotional experience (e.g., watching an upsetting movie) does not deprive one of social support, whereas keeping a secret does. This could explain why mere social support does not improve well-being for emotion expression (Lepore, Ragan, & Jones, 2000), but why it is critical for improved well-being when it comes to confiding secrets (Studies 3 and 4).

Confiding a secret had a different relationship with mind wandering than did disclosure of non-secrets. Confiding a secret was associated with less frequent mind wandering to that secret (Studies 1–3), an effect that can be explained by an associated increase in perceived coping efficacy (Study 3). Yet disclosure of the same kinds of things people keep secret (with no mention that the information is or should be kept secret) was associated with more frequent mind wandering (Study 2). Why? Given that the kinds of things people keep secret are done so for fear of rejection (Slepian & Bastian, 2017), disclosure of such things might be associated with worry or at least uncertainty as one contemplates how the information will spread. Indeed, daily worry about being stigmatized increases distress through daily rumination (Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009). In contrast, when one confides a secret, the request for discretion is paired with a request for help (Slepian & Kirby, 2018). Indeed, confiding can help. By confiding a secret in another, people can receive social support, feel more capable in coping with the secret, and cope more effectively.

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