The Experience of Secrecy

Supplemental Material

Figure S1a. *Frequency with which Study 1 participants report having each of the categories of secrets.*

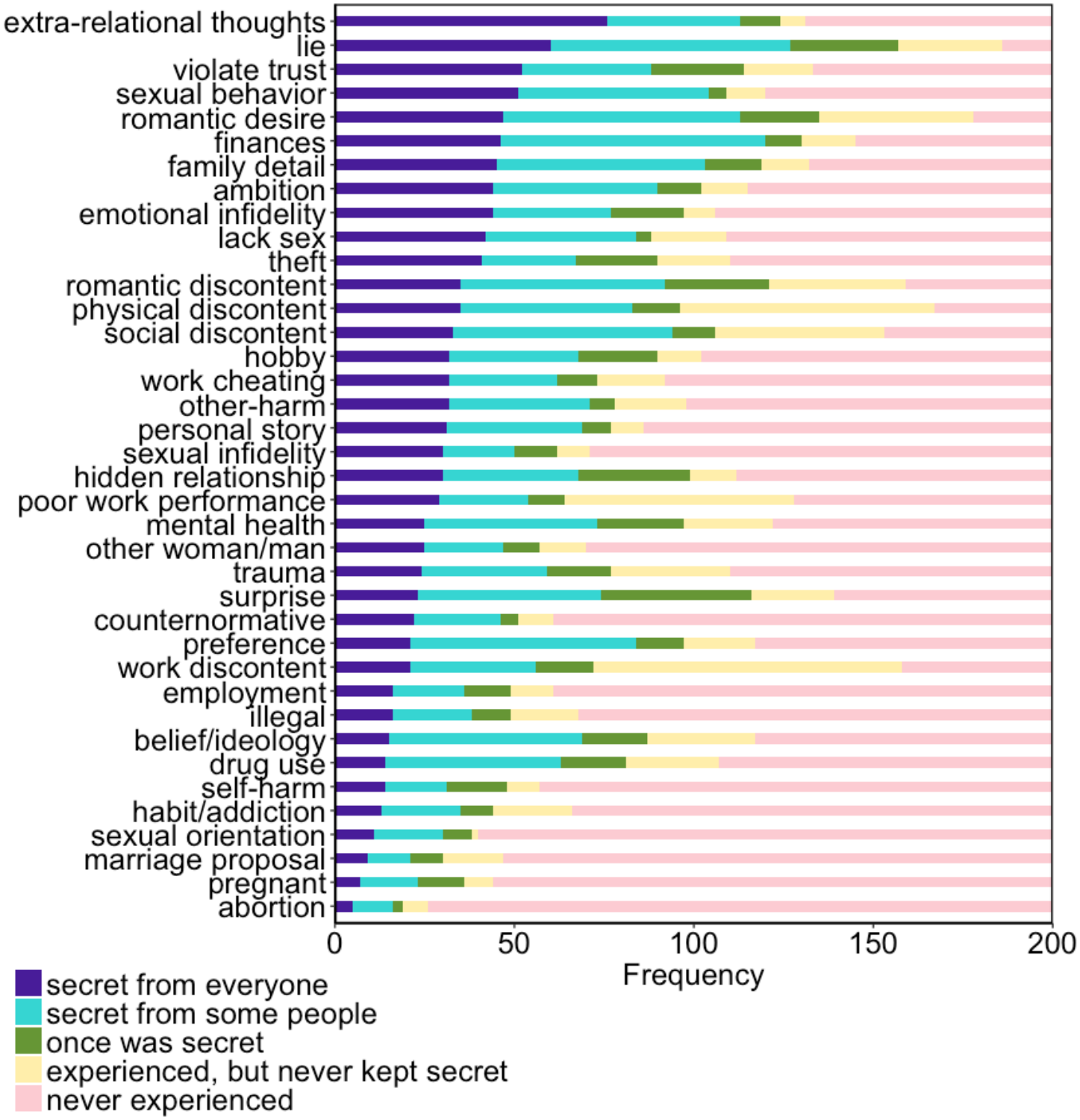


Figure S1b. *Proportion with a secret, relative to others who have had the same experience in Study 1.*

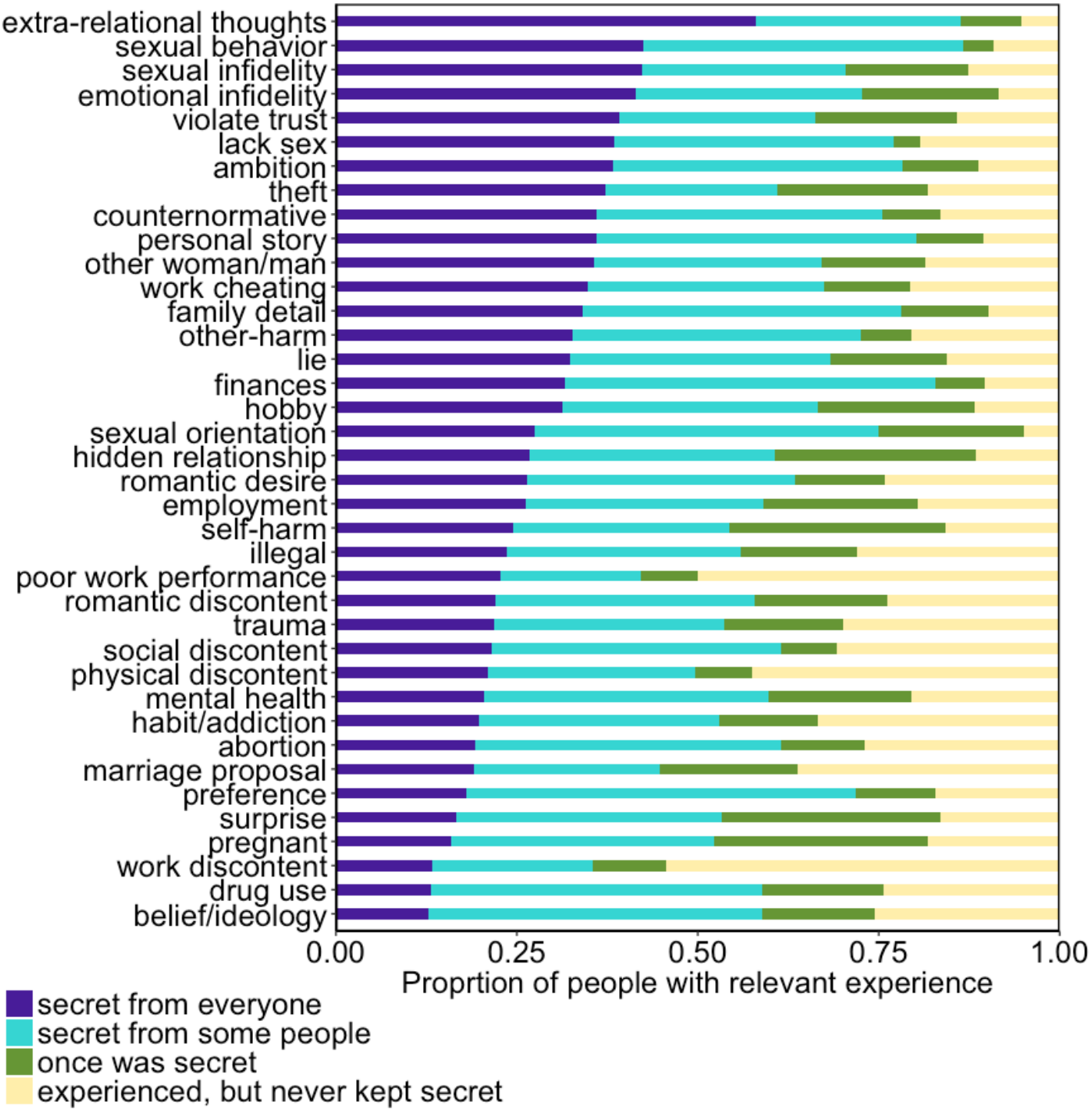


Figure S2a. *Frequency with which Study 2 participants report having each of the categories of secrets.*

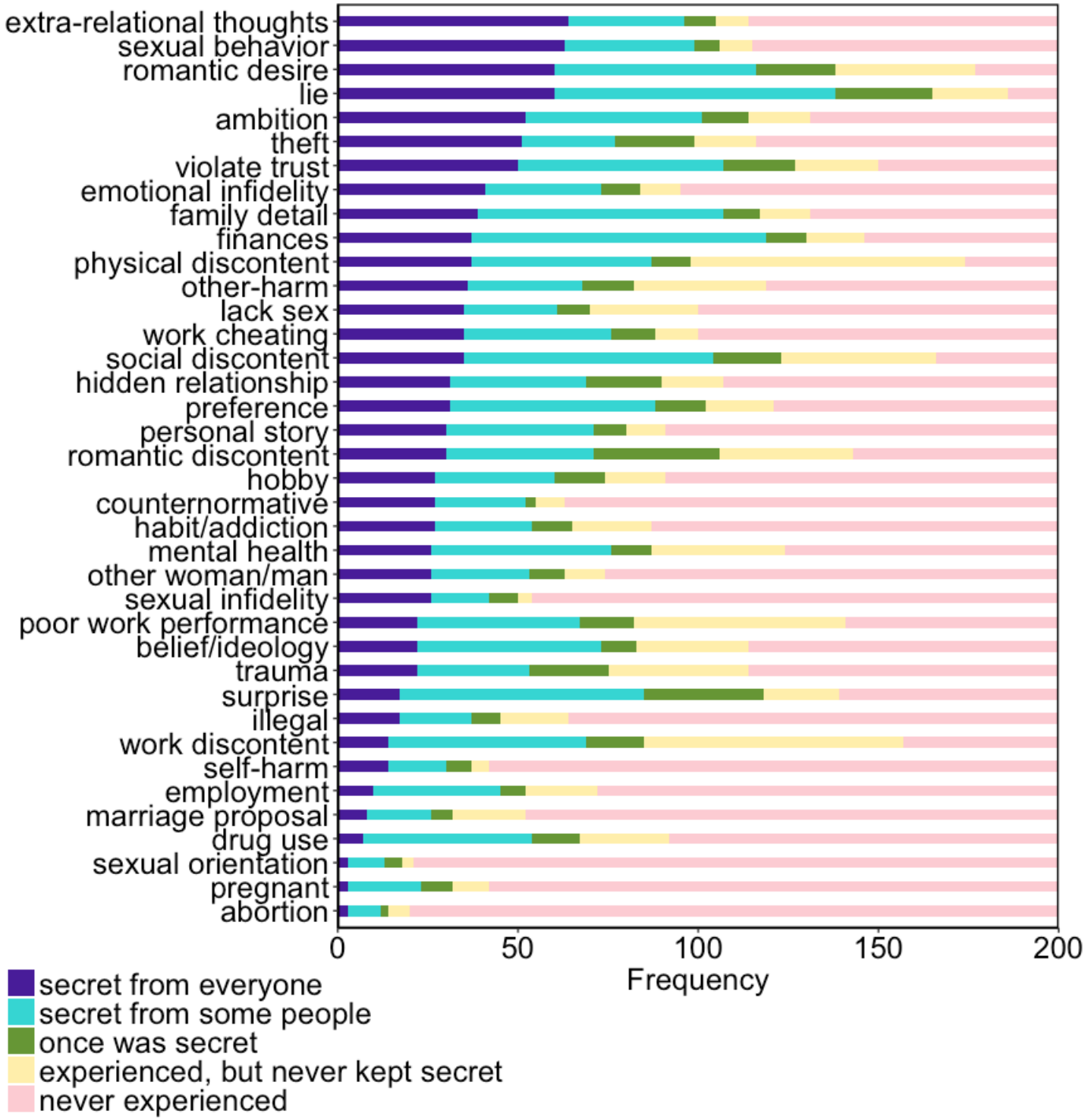


Figure S2b. *Proportion with a secret, relative to others who have had the same experience in Study 2.*

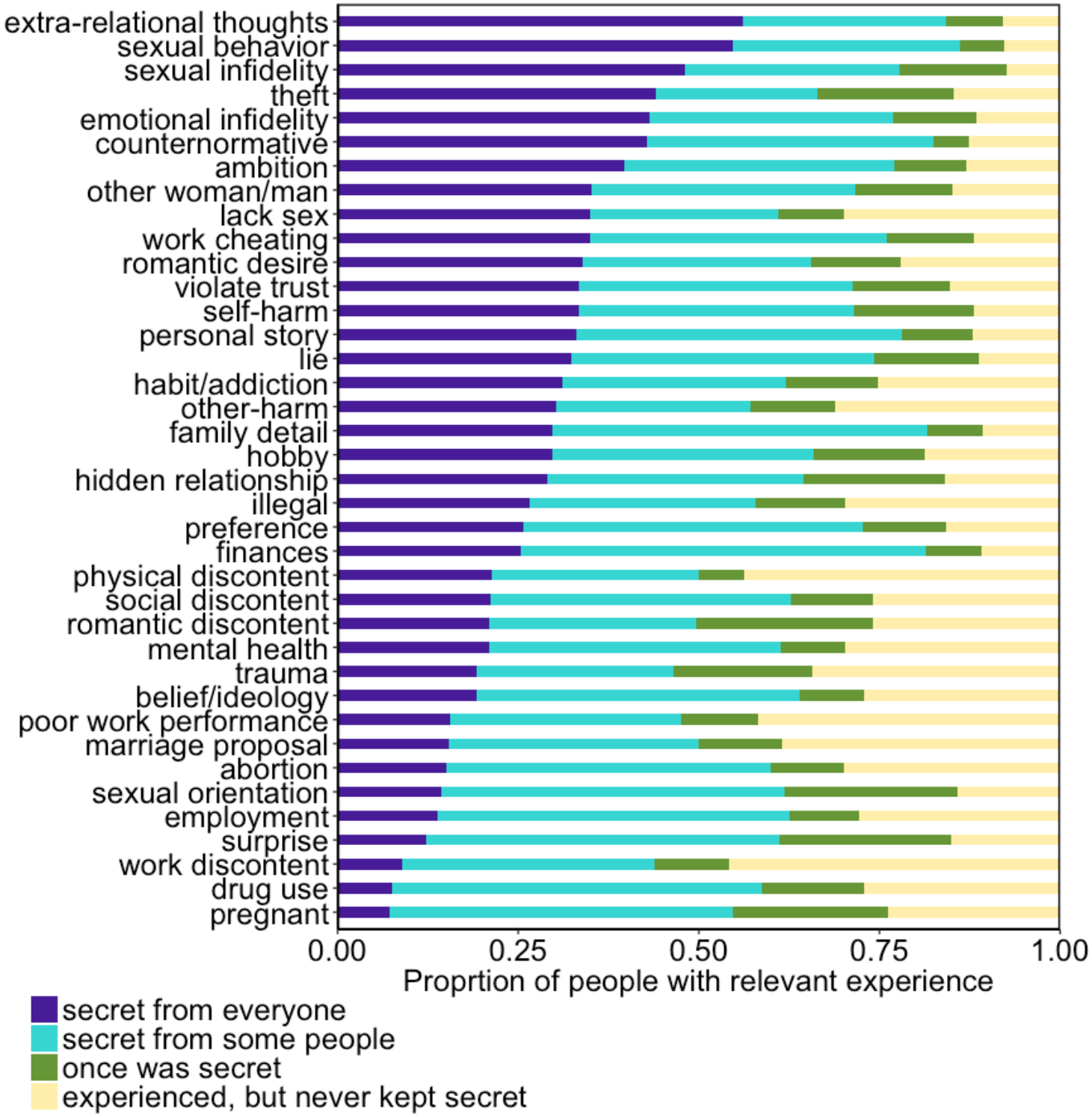


Figure S3a. *Frequency with which Study 3 participants report having each of the categories of secrets.*

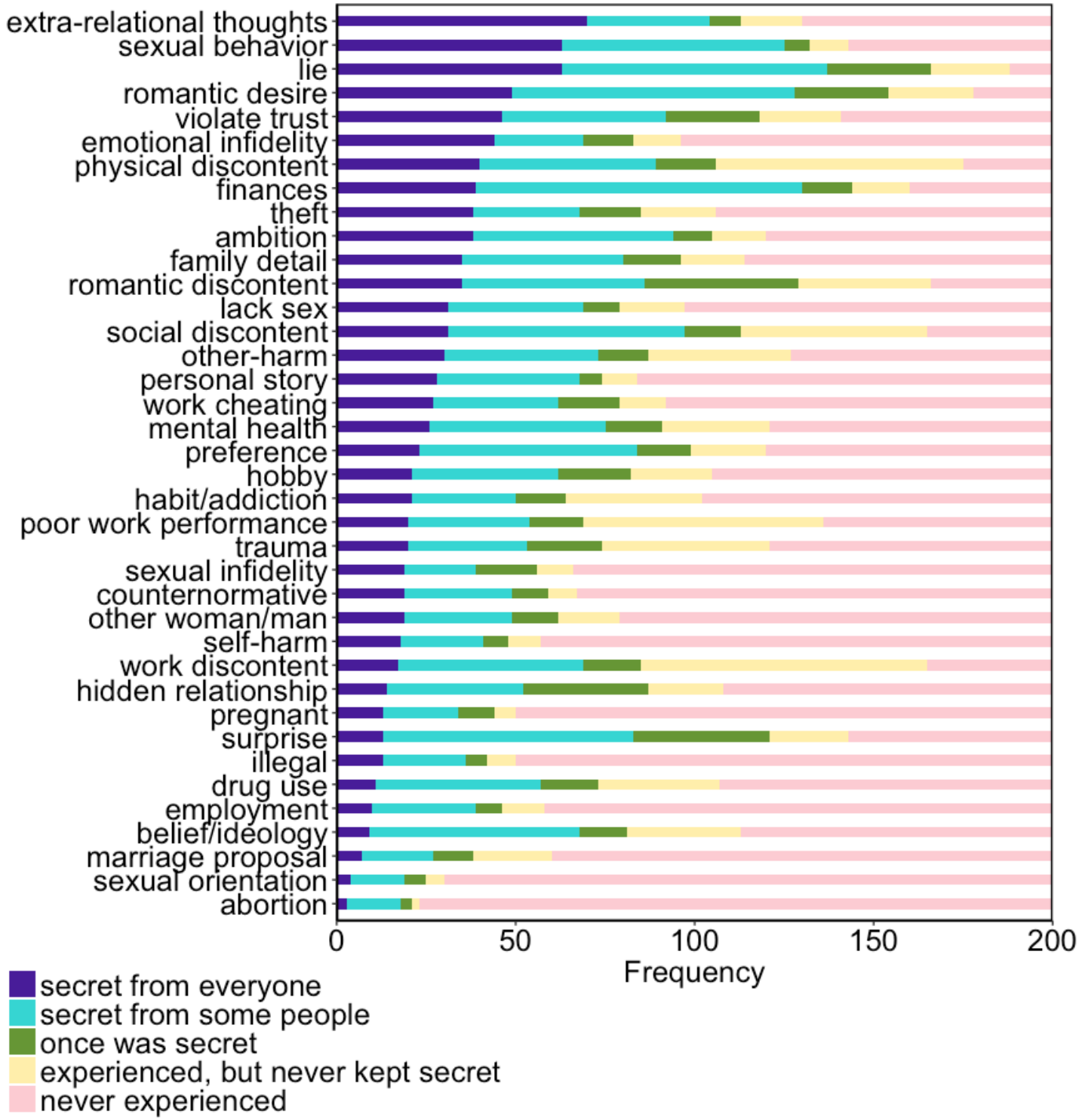


Figure S3b. *Proportion with a secret, relative to others who have had the same experience in Study 3.*

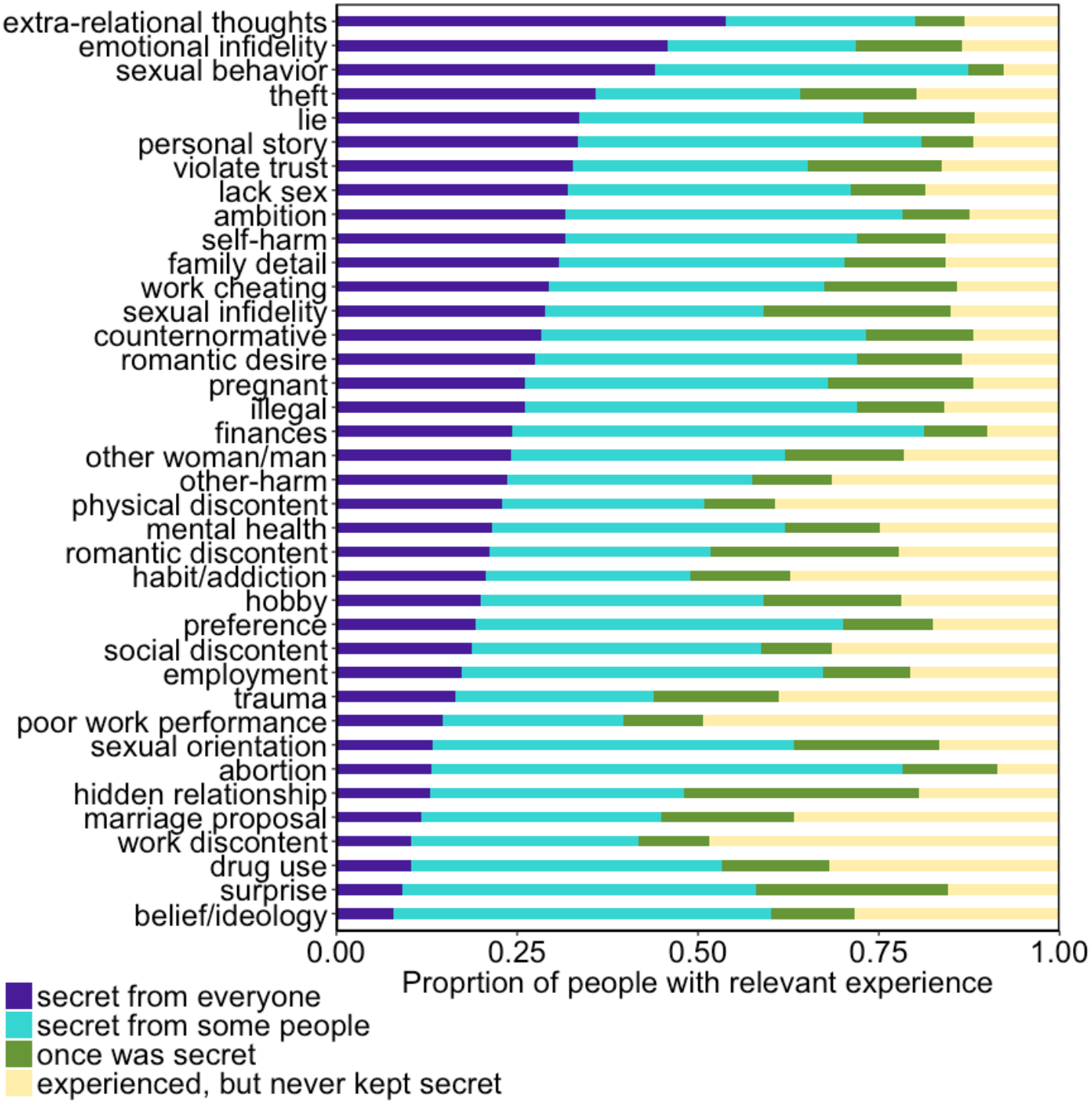


Figure S4a. *Frequency with which Study 10 (combined) participants report having each of the categories of secrets (after excluding participants who indicated not being honest about their reports of their secrecy).*

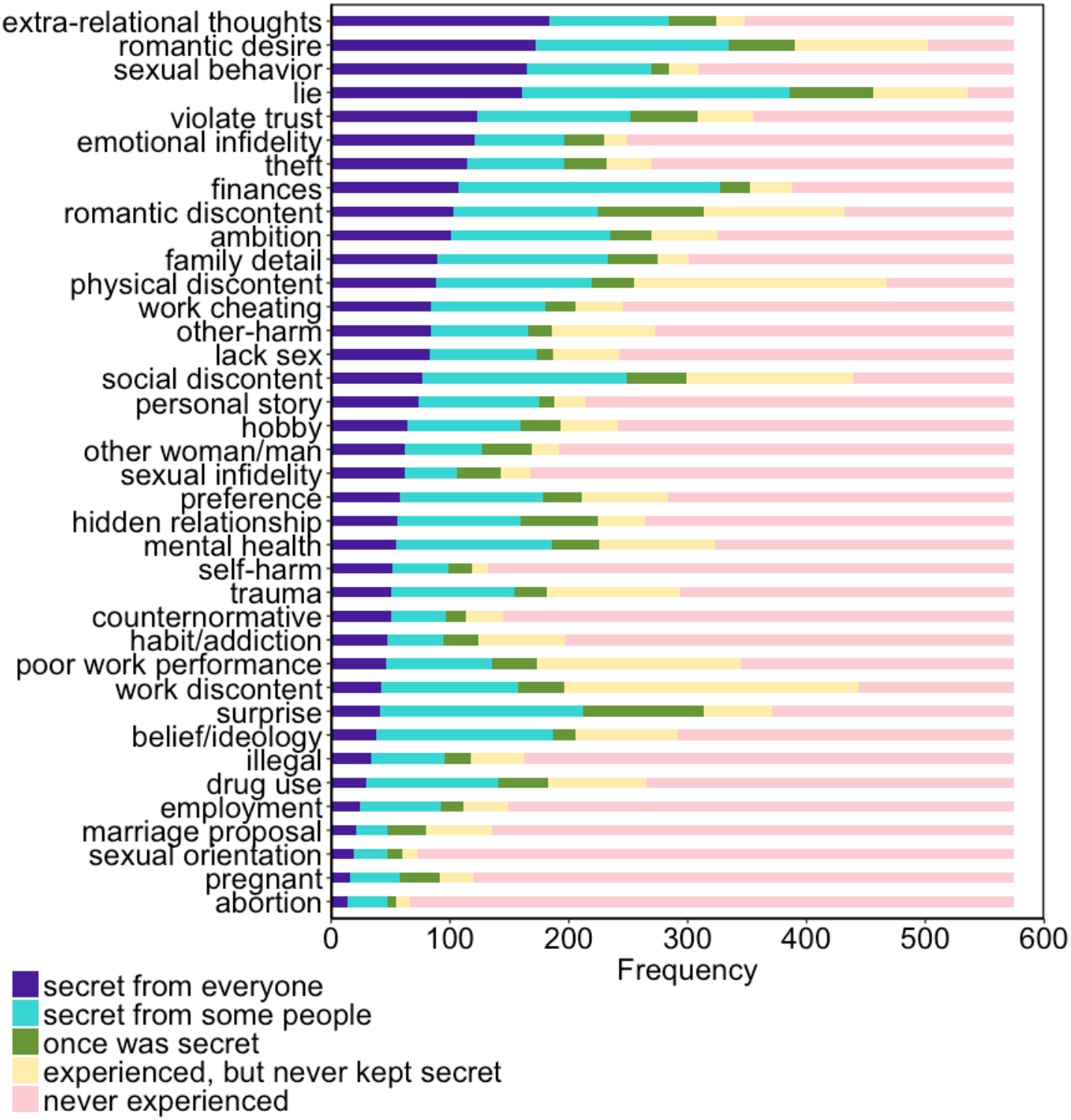
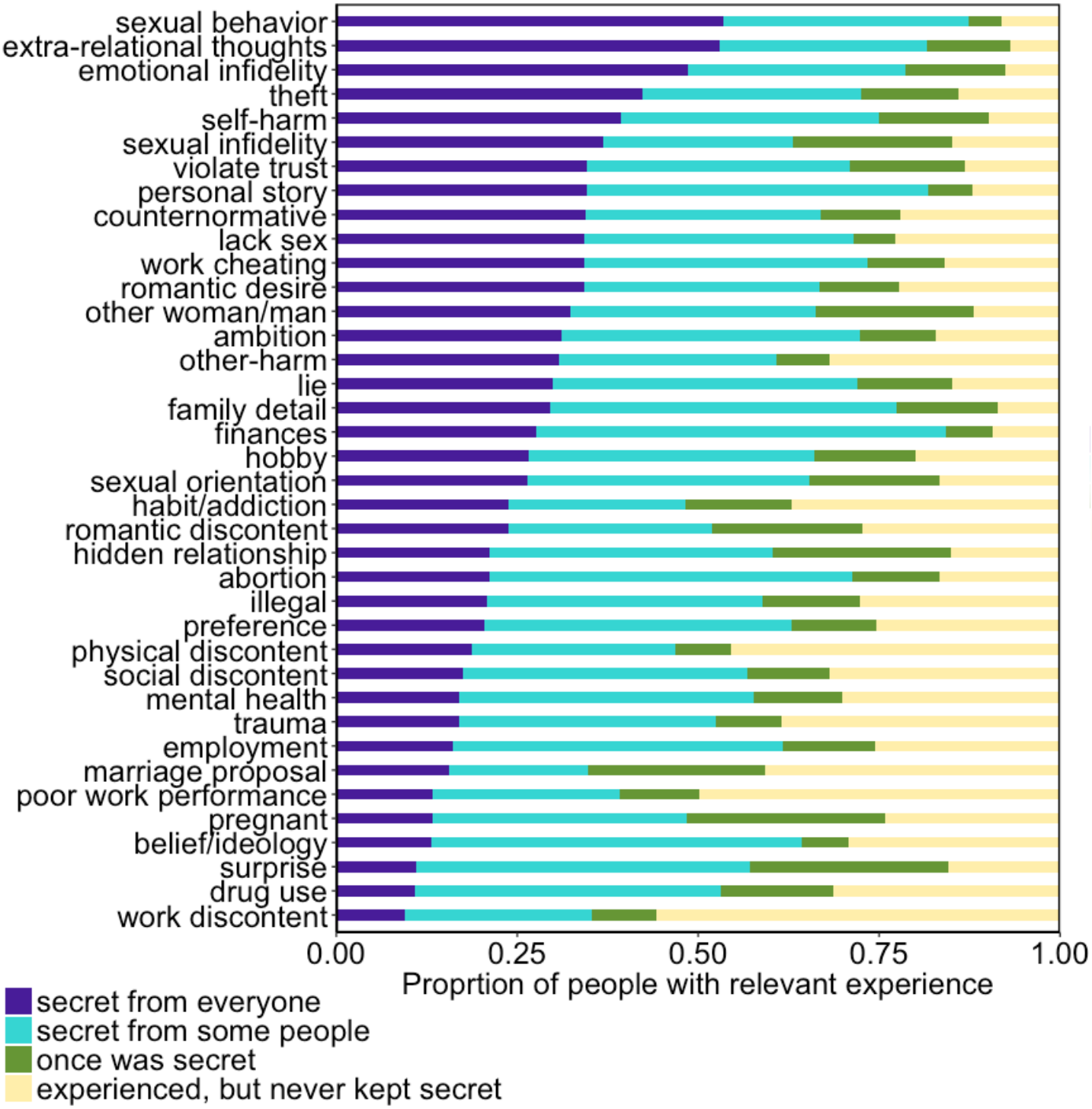


Figure S4b. *Proportion with a secret, relative to others who have had the same experience in Study 10, combined (after excluding participants who indicated not being honest about their reports of their secrecy).*



Prompt Wordings

Wording for frequency judgment prompts Study 10 (note: *mind-wander in absence* and *conceal in presence* prompts are the same as the *mind-wandering* and *concealing* prompts used throughout the other studies in the paper).

Mind-wander in absence.

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.

Mind-wander in presence.

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 find yourself THINKING about the secret while interacting with this person? Only estimate the number of times you were with them and thought about the secret, but you did NOT have to hide it from them at all. How many times in the past 30 days, did you just think about the secret with the person you were hiding it from, but you didn't have to hide it at all?

Take your best guess and ONLY enter a NUMBER.

Conceal in absence.

Think about the PAST MONTH, and all the times when you were: NOT with the person you are hiding this secret from, and were making sure the secret stayed hidden (i.e., somehow covering your tracks, deleting emails, hiding receipts, etc).

How many times in the past 30 days, did you find yourself hiding evidence of your secret?

Take your best guess and ONLY enter a NUMBER.

Conceal in presence.

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.

Study 10 Broken Down by Subsample

As reported in the main text, Study 10 was originally conceived of as a sample of 200, followed by two exact replications (n=200 each), but to save space in the paper, the results were pooled into one analysis. Here we present the results per each original sample of 200 participants (broken down into Studies 10a, 10b, and 10c).

Method

Studies 10a, 10b, and 10c each recruited 200 participants (Study 10a M_{age} = 34.65 years, *SD* = 11.17, 56% female; Study 10b M_{age} = 33.75 years, *SD* = 10.65, 59% female; Study 10c M_{age} = 36.28 years, *SD* = 12.40, 61% female), and each employed the same exact procedure, whereby per each secret participants had (of the 38), we measured its effect on well-being, frequency of *mind-wandering* to the secret in the *absence* of the target person, and in the *presence* of the target person, and frequency of *concealing* the secret when in the *absence* of the target person, and when in the *presence* of the target person (see prompts above).

Results

A total of 9, 9 and 7 participants in Studies 10a, 10b, and 10c, respectively, indicated (at the end of the study) not being honest about the secrets they were keeping, and were thus excluded from analysis (retaining them does not influence the results). Of the remaining participants, 182, 179, and 188 indicated they currently had at least one of the 38 categories of secrets. In total, participants had 2,131 (Study 10a), 2,218 (Study 10b), and 2,305 (Study 10c) secrets (see Table A1 for frequencies).

Table A1. Descriptives for extent of secrecy for 38 categories of secrets in Studies 10a, 10b, and 10c.

Mean response frequencies out of 38 categories of secrets	Study 10a M (SD)	Study 10b M (SD)	Study 10c M (SD)
Currently secret from all people	4.92 (4.73)	4.80 (5.36)	4.98 (4.59)
Currently secret from some people	6.28 (4.73)	7.01 (5.22)	7.09 (4.74)
Former secrets	2.50 (3.14)	2.27 (2.52)	2.48 (3.00)
Experienced, but never secret	4.09 (3.67)	4.79 (3.91)	4.11 (3.56)
Never had the experience	20.21 (7.70)	19.14 (7.72)	19.34 (7.43)

Frequencies. The adjusted boxplot method, as used for the other studies, again identified outliers (42, 29, and 20 responses, from 18, 6, and 6 participants who provided frequency judgments of more than 31, 62, and 93 times in a month were considered outliers, leading to a loss of only 0.50%, 0.33%, and 0.22% of the data in Studies

10a, 10b, and 10c, respectively). We were thus left with 8,481 (Study 10a), 8,871 (Study 10b), and 9,166 (Study 10c) responses across the four frequency judgments for analysis (see Table A2 for descriptives).

Table A2. Descriptives for frequency estimates in Studies 10a, 10b, and 10c. 95% CI presented as [LL, UL].

Frequency in past month	*M* (*SD*) [LL, UL] S10a	*M* (*SD*) [LL, UL] S10b	*M* (*SD*) [LL, UL] S10c
Conceal in absence	1.18 (3.85) [1.01, 1.34]	1.70 (5.00) [1.49, 1.91]	1.93 (5.21) [1.72, 2.15]
Conceal in presence	1.52 (4.28) [1.34, 1.71]	2.19 (5.70) [1.95, 2.43]	2.33 (5.51) [2.10, 2.55]
Mind-wander in absence	3.08 (6.29) [2.81, 3.35]	3.46 (7.02) [3.17, 3.75]	4.05 (8.38) [3.71, 4.40]
Mind-wander in presence	1.71 (4.57) [1.52, 1.91]	2.20 (5.83) [1.92, 2.44]	2.64 (6.49) [2.38, 2.91]

The most frequent form of secrecy in each study was mind-wandering to the secret in the absence of the target person (Table A2). We can also model main effects of these two factors (mind-wander = 1 vs. conceal = 0, and presence = 1 vs. absence = 0), which reveals that *people catch themselves thinking about their secrets more than they hide them* (independent of whether or not they are in the presence of the person from whom the secret is being kept). There was also an independent effect of absence vs. presence on frequencies: *whether thinking about or hiding secrets, secrets are on people's minds more frequently outside of interactions with the person from whom the secret is being kept* (Table A3).

Table A3. Testing independent effect of mind-wander vs. conceal, and in-presence vs. in-absence, Gaussian model intercepts, followed by Poisson model intercepts in parentheses: Study 10a intercept = 1.56 (-0.38), Study 10b intercept = 2.33 (-0.23), and Study 10c intercept = 2.34 (-0.14). For Poisson models, incidence ratios are presented as inc. ratio.

Main effects	Multilevel Gaussian model results (mind-wander = 1 vs. conceal = 0, and presence = 1 vs. absence = 0)
mind-wander > *conceal* (Study 10a)	$b = 1.05$, 95% CI = (0.86, 1.24), $SE = 0.10$, $t = 10.89$, $p < .001 \times 10^{-12}$
mind-wander > *conceal* (Study 10b)	$b = 0.91$, 95% CI = (0.71, 1.11), $SE = 0.10$, $t = 8.82$, $p < .001 \times 10^{-12}$
mind-wander > *conceal* (Study 10c)	$b = 1.22$, 95% CI = (0.99, 1.46), $SE = 0.12$, $t = 10.27$, $p < .001 \times 10^{-12}$
absence > *presence* (Study 10a)	$b = -0.51$, 95% CI = (-0.70, -0.32), $SE = 0.10$, $t = 5.30$, $p = .001 \times 10^{-4}$
absence > *presence* (Study 10b)	$b = -0.39$, 95% CI = (-0.59, -0.18), $SE = 0.10$, $t = 3.75$, $p = .0002$
absence > *presence* (Study 10c)	$b = -0.52$, 95% CI = (-0.75, -0.28), $SE = 0.12$, $t = 4.35$, $p = .001 \times 10^{-3}$
Main effects	Multilevel Poisson model results (mind-wander = 1 vs. conceal = 0, and presence = 1 vs. absence = 0)
mind-wander > *conceal* (Study 10a)	$B = 0.57$, 95% CI = (0.54, 0.61), $SE = 0.02$, inc. ratio = 1.77, $z = 34.81$, $p < .001 \times 10^{-12}$
mind-wander > *conceal* (Study 10b)	$B = 0.39$, 95% CI = (0.36, 0.41), $SE = 0.01$, inc. ratio = 1.47, $z = 27.75$, $p < .001 \times 10^{-12}$
mind-wander > *conceal* (Study 10c)	$B = 0.45$, 95% CI = (0.43, 0.48), $SE = 0.01$, inc. ratio = 1.57, $z = 35.15$, $p < .001 \times 10^{-12}$
absence > *presence* (Study 10a)	$B = -0.27$, 95% CI = (-0.31, -0.24), $SE = 0.02$, inc. ratio = 0.76, $z = -17.18$, $p < .001 \times 10^{-12}$
absence > *presence* (Study 10b)	$B = -0.16$, 95% CI = (-0.19, -0.14), $SE = 0.01$, inc. ratio = 0.85, $z = -11.88$, $p < .001 \times 10^{-12}$
absence > *presence* (Study 10c)	$B = -0.19$, 95% CI = (-0.22, -0.17), $SE = 0.01$, inc. ratio = 0.83, $z = -15.17$, $p < .001 \times 10^{-12}$

There was also an interaction between these two factors for each study, such that people mind-wandered to secrets more than they concealed them more so in the absence of target people than in the presence of target people. Across some of the studies and analyses, participants mind-wandered to secrets more than they concealed them in the *presence* of target people, but this difference was less reliable than the effect found for when in the *absence* of target people. That is, across each study, people mind-wandered to secrets more frequently than they concealed them when in the *absence* of target people (Table A4). As described earlier, and as can also be seen in Table A2 above, the most frequent experience with secrecy across each study was mind-wandering to secrets when in the absence of target people.

Table A4. Interactive effects and simple slopes for mind-wander vs. conceal, in-presence vs. in-absence of target people.

Interactive and simple effects	Multilevel Gaussian model results (mind-wander = 1 vs. conceal = 0, and presence = 1 vs. absence = 0)
interaction (Study 10a)	b = -1.72, 95% CI = (-2.10, -1.35), SE = 0.19, t = -9.00, $p < .001 \times 10^{-12}$
interaction (Study 10b)	b = -1.78, 95% CI = (-2.18, -1.37), SE = 0.20, t = -8.67, $p < .001 \times 10^{-12}$
interaction (Study 10c)	b = -1.82, 95% CI = (-2.29, -1.36), SE = 0.24, t = -7.68, $p < .001 \times 10^{-10}$
m-w vs. conceal @ absence (Study 10a)	b = 1.91, 95% CI = (1.64, 2.17), SE = 0.14, t = 14.10, $p < .001 \times 10^{-12}$
m-w vs. conceal @ absence (Study 10b)	b = 1.80, 95% CI = (1.51, 2.08), SE = 0.14, t = 12.39, $p < .001 \times 10^{-12}$
m-w vs. conceal @ absence (Study 10c)	b = 2.13, 95% CI = (1.80, 2.46), SE = 0.17, t = 12.71, $p < .001 \times 10^{-12}$
m-w vs. conceal @ presence (Study 10a)	b = 0.19, 95% CI = (-0.08, 0.45), SE = 0.14, t = 1.37, p = .17
m-w vs. conceal @ presence (Study 10b)	b = 0.02, 95% CI = (-0.26, 0.30), SE = 0.14, t = 0.13, p = .89
m-w vs. conceal @ presence (Study 10c)	b = 0.31, 95% CI = (-0.02, 0.64), SE = 0.17, t = 1.84, p = .07
Interactive and simple effects	Multilevel Poisson model results (mind-wander = 1 vs. conceal = 0, and presence = 1 vs. absence = 0)
interaction (Study 10a)	B = -0.85, 95% CI = (-0.92, -0.78), SE = 0.034, z = -25.26, $p < .001 \times 10^{-12}$
interaction (Study 10b)	B = -0.72, 95% CI = (-0.77, -0.66), SE = 0.028, z = -25.38, $p < .001 \times 10^{-12}$
interaction (Study 10c)	B = -0.62, 95% CI = (-0.67, -0.57), SE = 0.026, z = -23.72, $p < .001 \times 10^{-12}$
m-w vs. conceal @ absence (Study 10a)	B = 0.96, 95% CI = (0.92, 1.01), SE = 0.023, inc. ratio = 2.62, z = 41.07, $p < .001 \times 10^{-12}$
m-w vs. conceal @ absence (Study 10b)	B = 0.73, 95% CI = (0.69, 0.77), SE = 0.020, inc. ratio = 2.07, z = 36.73, $p < .001 \times 10^{-12}$
m-w vs. conceal @ absence (Study 10c)	B = 0.74, 95% CI = (0.71, 0.78), SE = 0.018, inc. ratio = 2.11 z = 40.92, $p < .001 \times 10^{-12}$
m-w vs. conceal @ presence (Study 10a)	B = 0.11, 95% CI = (0.07, 0.16), SE = 0.024, inc. ratio = 1.12, z = 4.74, $p < .001 \times 10^{-2}$
m-w vs. conceal @ presence (Study 10b)	B = 0.01, 95% CI = (-0.03, 0.05), SE = 0.020, inc. ratio = 1.01, z = 0.51, p = .61
m-w vs. conceal @ presence (Study 10c)	B = 0.12, 95% CI = (0.09, 0.16), SE = 0.019, inc. ratio = 1.13, z = 6.65, $p < .001 \times 10^{-7}$

Well-being. We next entered the frequency scores as simultaneous predictors of well-being. Mind-wandering to secrets in the *absence* of the person from whom the secret is kept predicts lower well-being in *all* studies. Mind-wandering to secrets in the *presence* of the person from whom the secret is kept predicted lower well-being in *two* studies. Concealing secrets in the absence, or presence, of the person from whom the secret is being kept did not significantly predict well-being in any study.

Table A5. Testing independent effects of on well-being.

Study 10a intercept = 0.24, and well-being M = -0.10, SD = 2.33, 95% CI = (-0.20, -0.002)
Study 10b intercept = 0.37, and well-being M = 0.12, SD = 2.43, 95% CI = (0.02, 0.22)
Study 10c intercept = 0.28, and well-being M = 0.05, SD = 2.27, 95% CI = (-0.04, 0.14)

Independent effect on well-being	Multilevel modeling results
Mind-wander in absence (Study 10a)	b = -0.05, 95% CI = (-0.07, -0.03), SE = 0.01, t = 5.18, $p = .002 \times 10^{-4}$
Mind-wander in absence (Study 10b)	b = -0.04, 95% CI = (-0.06, -0.02), SE = 0.01, t = 3.56, p = .0004
Mind-wander in absence (Study 10c)	b = -0.02, 95% CI = (-0.03, -0.004), SE = 0.01, t = 2.46, p = .01
Mind-wander in presence (Study 10a)	b = -0.04, 95% CI = (-0.07, -0.01), SE = 0.02, t = 2.87, p = .004
Mind-wander in presence (Study 10b)	b = -0.01, 95% CI = (-0.03, 0.02), SE = 0.01, t = 0.64, p = .52
Mind-wander in presence (Study 10c)	b = -0.03, 95% CI = (-0.05, -0.01), SE = 0.01, t = 2.91, p = .004
Conceal in absence (Study 10a)	b = 0.03, 95% CI = (0, 0.06), SE = 0.02, t = 1.67, p = .09
Conceal in absence (Study 10b)	b = -0.001, 95% CI = (-0.03, 0.03), SE = 0.01, t = 0.06, p = .95
Conceal in absence (Study 10c)	b = -0.01, 95% CI = (-0.03, 0.01), SE = 0.01, t = 0.92, p = .36
Conceal in presence (Study 10a)	b = 0.02, 95% CI = (-0.02, 0.05), SE = 0.02, t = 0.94, p = .35
Conceal in presence (Study 10b)	b = -0.03, 95% CI = (-0.05, .002), SE = 0.01, t = 1.81, p = .07
Conceal in presence (Study 10c)	b = -0.004, 95% CI = (-0.03, 0.02), SE = 0.01, t = 0.39, p = .70

Note: To see the frequencies of specific secrets both in absolute terms, and relative to people who have had the experience, for Studies 10a, 10b, and 10c, please see the Figures at the end of the present document.

In sum, people catch themselves spontaneously thinking about their secrets more frequently than they encounter situations that require actively concealing them. Mind-wandering episodes involving secrets are especially frequent in the absence of the people from whom the secrets are being kept, which consistently independently predicts lower well-being (unlike the frequency with which participants conceal secrets).

Figure S5a. *Frequency with which Study 10a participants report having each of the categories of secrets (after excluding participants who indicated not being honest about their reports of their secrecy).*

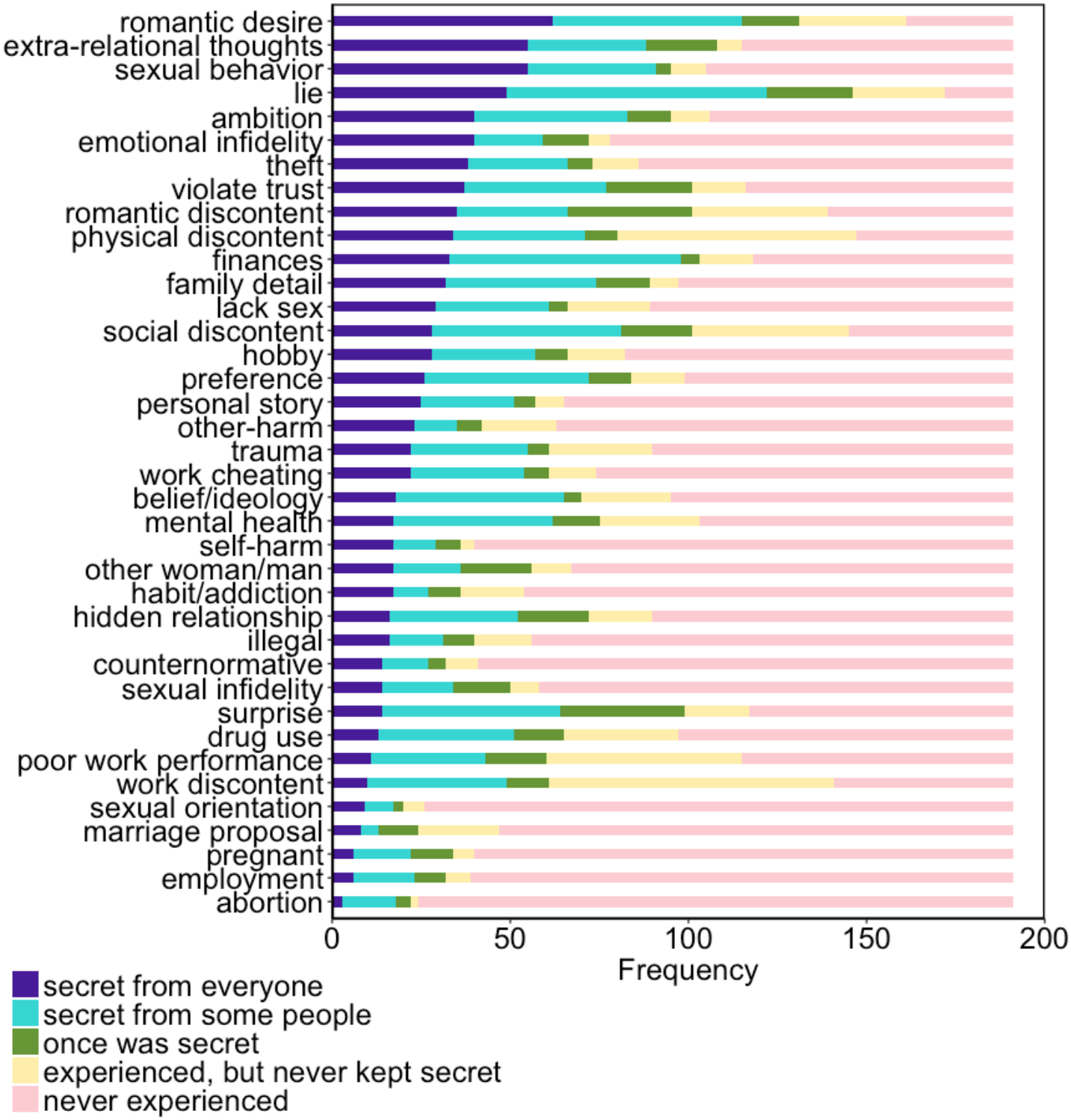


Figure S5b. *Proportion with a secret, relative to others who have had the same experience in Study 10a (after excluding participants who indicated not being honest about their reports of their secrecy).*

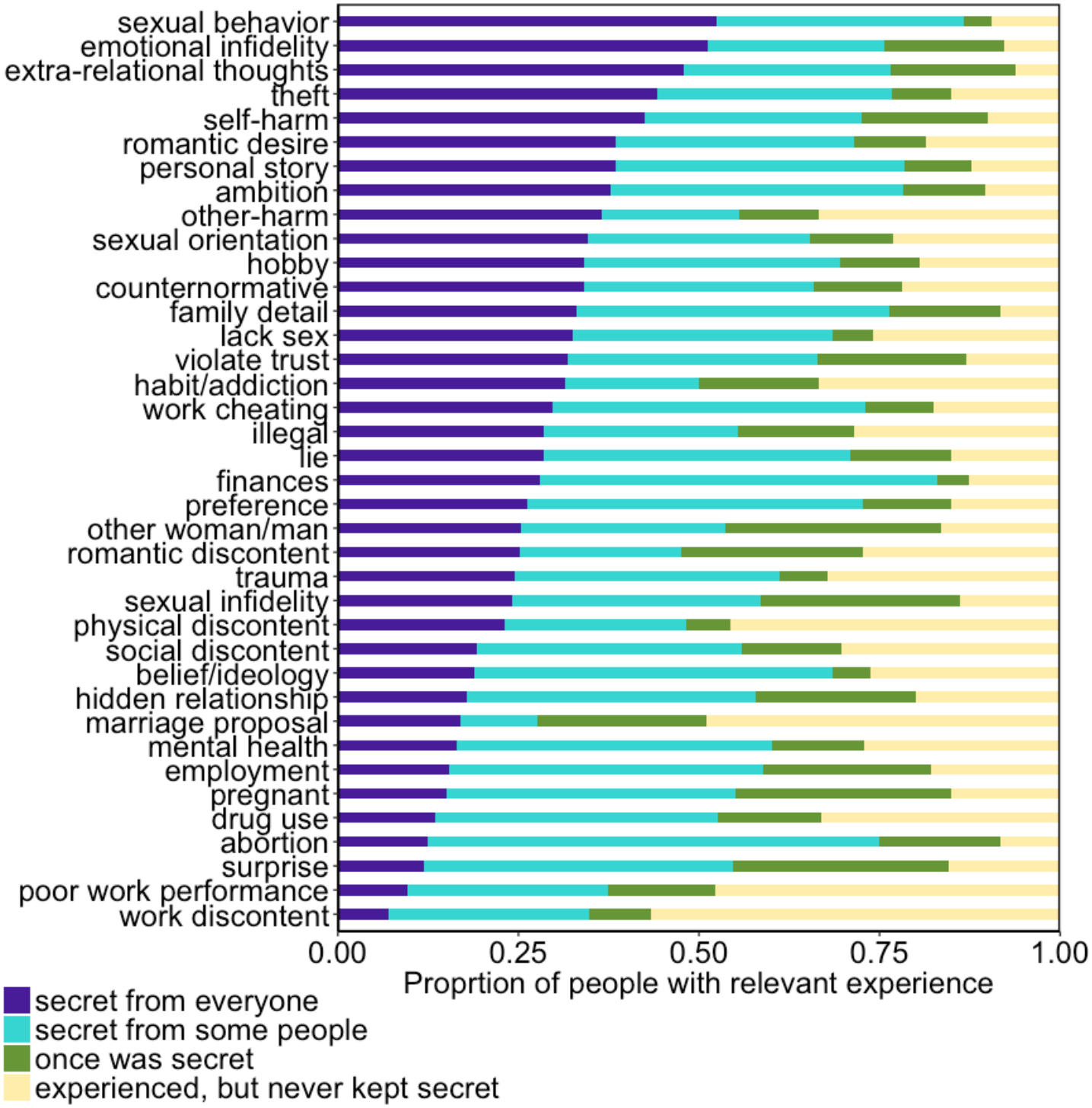


Figure S6a. *Frequency with which Study 10b participants report having each of the categories of secrets (after excluding participants who indicated not being honest about their reports of their secrecy).*

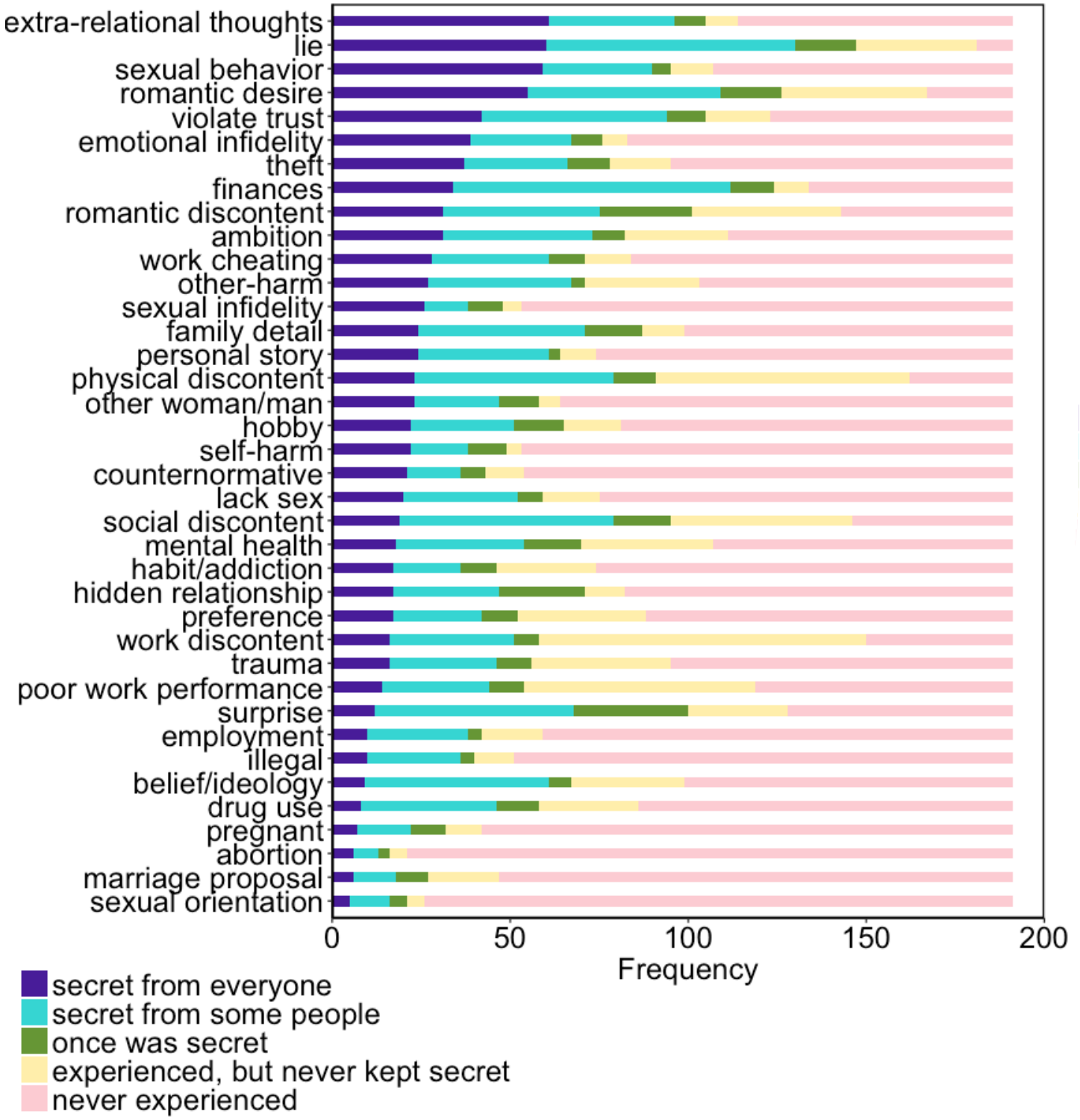


Figure S6b. *Proportion with a secret, relative to others who have had the same experience in Study 10b (after excluding participants who indicated not being honest about their reports of their secrecy).*

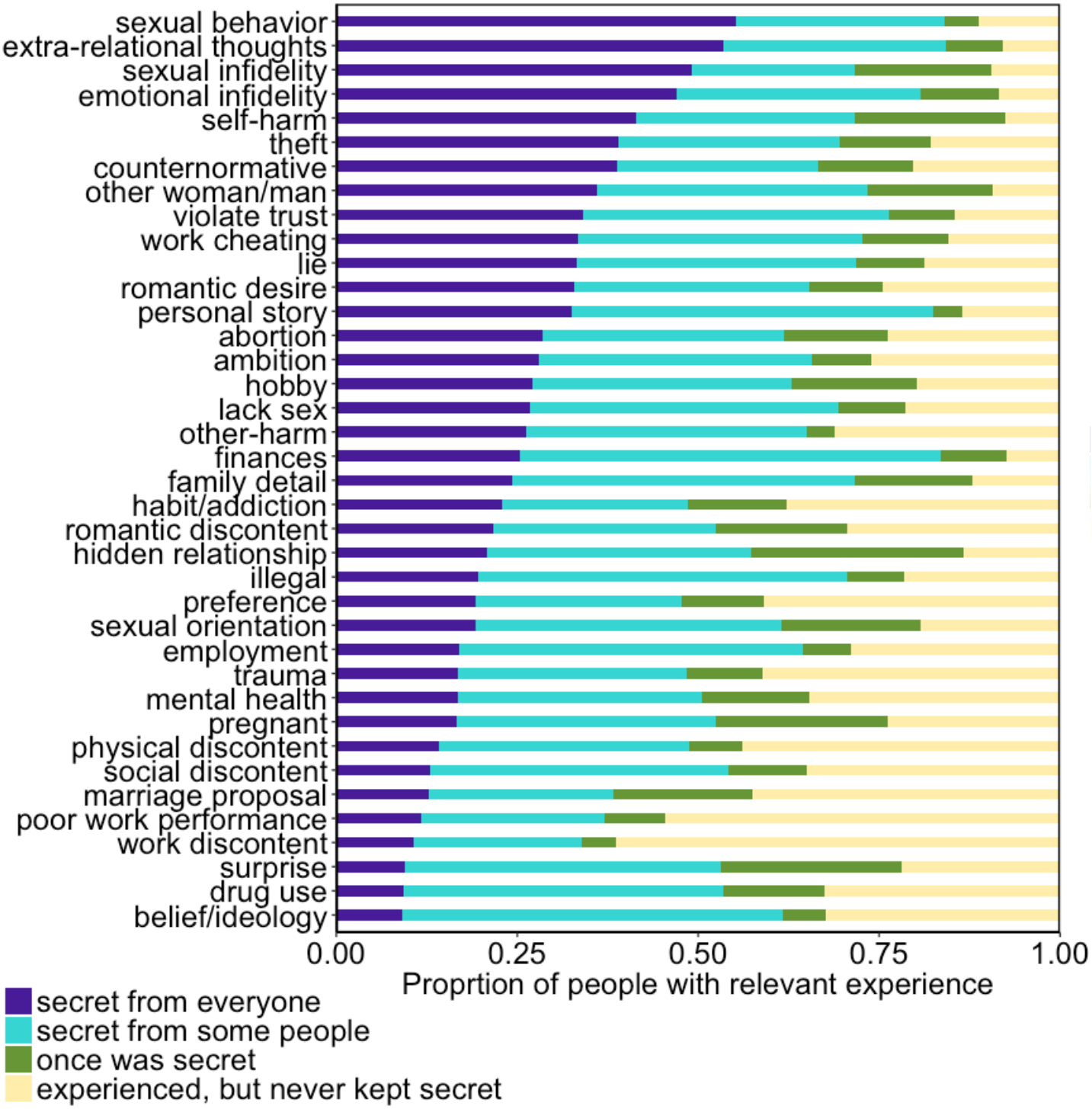


Figure S7a. *Frequency with which Study 10c participants report having each of the categories of secrets (after excluding participants who indicated not being honest about their reports of their secrecy).*

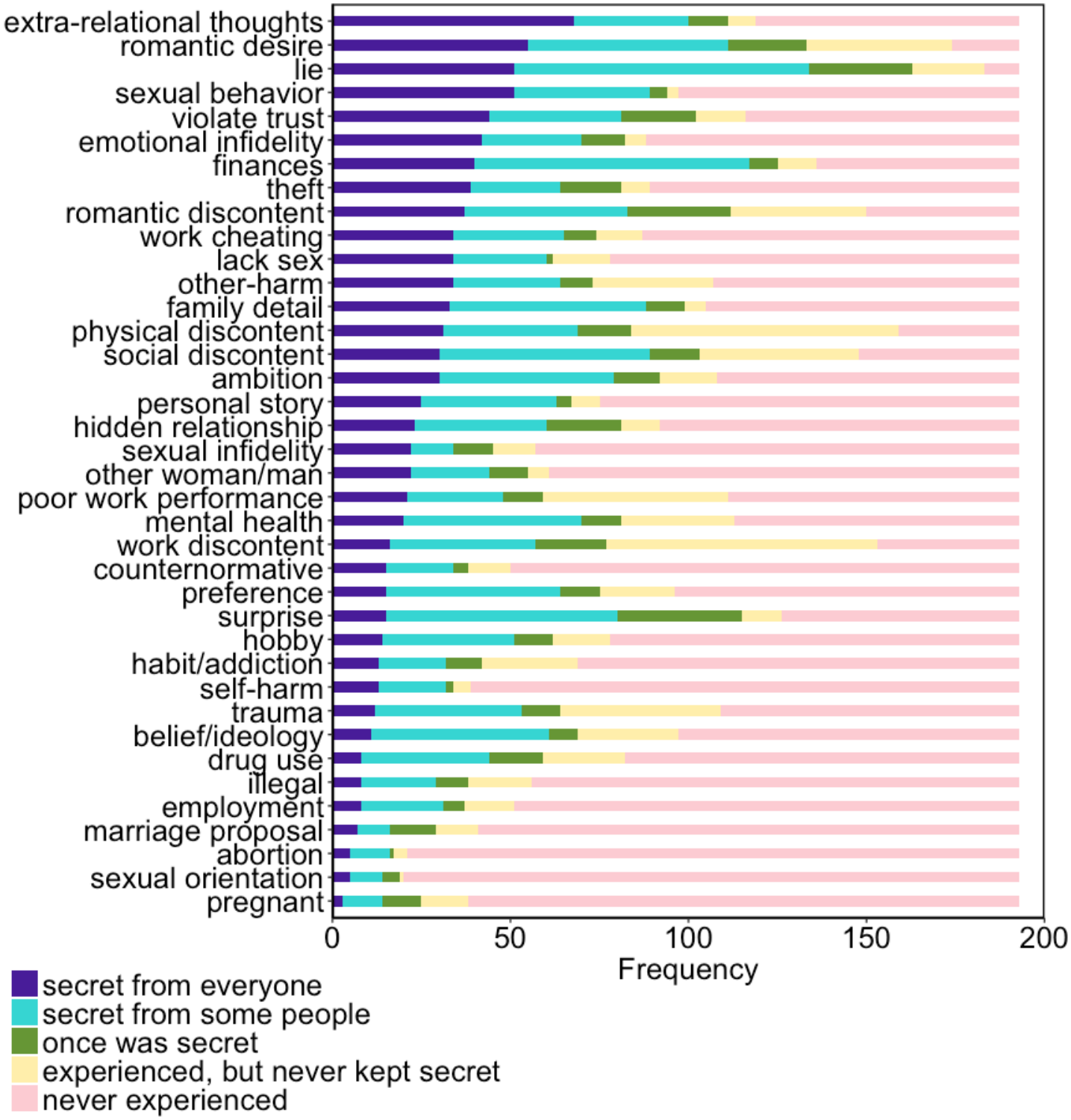


Figure S7b. *Proportion with a secret, relative to others who have had the same experience in Study 10c (after excluding participants who indicated not being honest about their reports of their secrecy).*