

Establishing Baseline

Before examining the difference between the neutral imagined interaction and the subsequent condition (Out-and-Accepting, Out-and-Rejecting, and Concealing), it was critical to establish that all participants were coming away from the Neutral imagined interaction with approximately equal levels of state anxiety, positive and negative affect, physical symptoms, memory task and emotional recognition performance. Put differently, it was important to ensure that the Neutral imagined interaction was, in fact, neutral in valence, and did not shift participants' psychological or physical state significantly. A one-way ANOVA performed on each of the dependent variables following completion of the neutral task revealed no significant differences: state anxiety, $F(2, 72) = 1.46, ns.$, positive affect, $F(2, 72) = .14, ns.$, negative affect, $F(2, 72) = .08, ns.$, physical symptoms, $F(2, 72) = .03, ns.$, memory, $F(2, 72) = .13, ns.$, emotion recognition accuracy, $F(2, 72) = .53, ns.$, and emotion recognition reaction time, $F(2, 72) = 1.33, ns.$

Preliminary Analysis (Neutral to Out-and-Accepting, Out-and-Rejecting, and Concealing)

Preliminary analyses were conducted using a series of 3 (between subjects variable = imagined interaction condition: Out-and-Accepting, Out-and-Rejecting, Concealing) by 2 (within-subjects variable = change from Neutral to subsequent imagined interaction) repeated measures Analysis of Variance (ANOVA). These analyses were conducted in order to obtain the correct mean square error term needed for the 2 x 2 ANOVA's conducted to test the specific hypotheses put forth by the present research. A within-subjects effect means that collapsed across imagined interaction conditions, there was a significant difference between measures taken after the first imagined interaction task and those taken after the second imagined interaction task. A between-subjects effect means that collapsed across the two post-task

measures there were significant differences between participants in each of the subsequent imagined interaction conditions. The result that is of relevance to the hypotheses advanced in this thesis is represented by a significant interaction between the within-subjects and between-subjects factor. An interaction effect means that the change in the dependent variable from the Neutral imagined interaction to the subsequent imagined interaction differed significantly among the subsequent imagined interactions. For instance, imagining an interaction in which one conceals one's sexual orientation produces a different change in affect (compared to baseline) than imagining an interaction with an audience that is rejecting. The means for each dependent variable following the Neutral imagined interaction and following the subsequent imagined interaction are presented in Table 3.

Table 3.

Means of Dependent Measures after Neutral and Subsequent Imagined Interaction

	State Anxiety	Positive Affect	Negative Affect	Physical Symptoms	Working Memory	Emotional Accuracy	Emotional Accuracy (RT)	Cortisol
<u>After Neutral IMI</u>								
NOA	37.41	29.78	14.41	8.70	1.65	51.77	1884.57	.22
NOR	41.90	29.55	14.61	9.15	1.85	51.90	1928.87	.24
NCO	39.20	28.72	14.00	8.78	1.89	49.89	1657.87	.21
<u>After Subsequent IMI</u>								
NOA	35.38	29.84	12.70	7.35	1.22	53.35	1679.80	.23
NOR	44.15	29.75	14.25	9.25	1.85	54.65	1644.20	.21
NCO	42.00	24.94	16.33	8.39	1.78	53.44	1805.93	.22

Note. IMI = Imagined Interaction, NOA = Neutral to Out-and-Accepting Imagined Interaction, NOR = Neutral to Out-and-Rejecting Imagined Interaction, NCO = Neutral to Concealing Imagined Interaction

State Anxiety. There was no significant within-subjects effect, $F(1, 72) = .520$, *ns.*, but there was a significant between-subjects effect, $F(2, 72) = 3.49$, $p = .035$, $\eta_p^2 = .089$, with participants in the Out-and-Rejecting and Concealing conditions reporting higher levels of state anxiety than participants in the Out-and-Accepting conditions. The interaction effect was not significant, $F(2, 72) = 2.11$, *ns.*

Positive Affect. There was a significant within-subjects effect for positive affect, $F(1, 72) = 4.65$, $p = .039$, $\eta_p^2 = .048$, but no significant between-subjects effect, $F(2, 72) = 1.20$, *ns*. However, there was a significant interaction effect, $F(2, 72) = 4.92$, $p = .010$, $\eta_p^2 = .120$, indicating that the change in positive affect from neutral to subsequent imagined interaction was significantly different between the subsequent imagined interaction conditions.

Negative Affect. There was no significant within-subjects effect for negative affect, $F(1, 72) = .043$, *ns*., nor between-subject effect, $F(2, 72) = .73$, *ns*. However, the interaction was significant, $F(2, 72) = 7.13$, $p < .001$, $\eta_p^2 = .165$, indicating that the change in negative affect between the neutral and subsequent imagined interaction differed significantly between the imagined interaction conditions.

Physical Symptoms. There was no significant within-subjects effect, $F(1, 72) = .621$, *ns*, between-subjects effect, $F(2, 72) = .198$, *ns*., nor interaction, $F(2, 72) = .461$, *ns*.

Cognitive Depletion. There were no significant within-subjects effect, $F(1, 72) = .850$, *ns*., between-subjects effect, $F(2, 72) = .520$, *ns*, nor interaction, $F(2, 72) = .538$, *ns*.

Emotional Depletion (Accuracy). There was a significant within-subjects effect for the accuracy of emotion recognition, $F(1, 72) = 25.27$, $p < .001$, $\eta_p^2 = .260$, such that all participants were more accurate on the emotion recognition task in the second imagined interaction condition. However, there was no significant between-subjects effect, $F(2, 72) = .276$, *ns*., nor a significant interaction, $F(2, 72) = 1.35$, *ns*.

Emotional Depletion (Response Time). There was a significant within-subjects effect for emotion recognition response time, $F(1, 72) = 4.24$, $p = .043$, $\eta_p^2 = .056$, such that participants in all conditions showed a decrease in response time from the first to second

interaction. There was no significant between-subjects effect, $F(2, 72) = .333, ns$. The interaction was significant, $F(2, 72) = 15.69, p < .001, \eta_p^2 = .303$, indicating that the change in response-time on the emotion recognition task from neutral to the subsequent imagined interaction, differed significantly between the imagined interaction conditions.

Salivary Cortisol. All high and low controls fell within the expected ranges provided by the salivary assay supplier, with high control ranges from .747-1.25ug/dL and low control ranges from 0.074-0.124ug/dL. However, there were no significant main effects for levels of salivary cortisol, $F(1, 72) = .841, ns$, nor for condition, $F(2, 72) = .011, ns$, nor for the interaction, $F(2, 72) = 1.86, ns$.

Hypothesis 1: Out-and-Accepting vs. Out-and-Rejecting

I hypothesized that imagining an interaction with a person to whom one has disclosed their sexual orientation and from whom one has received a negative, rejecting response would produce different cognitive, emotional, psychological and physical effects (compared to baseline) than one would experience after an interaction with an accepting audience.

Specifically, I expected that interacting with someone who is not accepting of your sexual orientation would produce more state anxiety, more negative affect, less positive affect, more emotional and cognitive depletion, and increased signs of physical harm compared to interacting with someone by whom you are accepted.

To test this hypothesis, I conducted a series of 2 (between-subjects variable = imagined interaction condition: Out-and-Accepting vs. Out-and-Rejecting) by 2 (within-subjects variable = Neutral to subsequent imagined interaction) repeated measures ANOVA's. A within-subjects effect means that regardless of whether the second imagined interaction was Out-and-Accepting or Out-and-Rejecting, participants reported a significant change in a dependent variable, as

compared to the Neutral imagined interaction. A between-subjects effect means that collapsed across both imagined interactions there was a difference between the two conditions. The hypothesis is tested by the interaction between between-subjects and within-subjects factors. An interaction effect indicates that the change in the dependent variable from the Neutral imagined interaction to the Out-and-Accepting imagined interaction differed significantly from the change in the dependent variable from Neutral to the Out-and-Rejecting imagined interaction.

State Anxiety. There was no significant within-subjects effect, $F(1, 72) = .008, ns$. There was a significant between-subjects effect, $F(1, 72) = 6.25, p = .003, \eta_p^2 = .028$, with participants reporting significantly higher state anxiety following the Out-and-Rejecting imagined interaction than following the Out-and-Accepting imagined interaction. There was a significant interaction effect, $F(1, 72) = 3.01, p = .005, \eta_p^2 = .039$, indicating that there was a significant difference in the change in state anxiety from Neutral to Out-and-Accepting and the change in state anxiety from Neutral to Out-and-Rejecting. A paired-samples t-test comparing state anxiety following the Neutral imagined interaction to state anxiety following the Out-and-Accepting imagined interaction was significant, $t(36) = 1.75, p = .044$. A paired-samples t-test comparing state anxiety following the Neutral imagined interaction to state anxiety following the Out-and-Rejecting imagined interaction was not significant, $t(19) = .376, p = .188$. Thus, while imagining an interaction with an accepting audience produced a significant decrease in state anxiety, imagining an interaction with someone by whom one has been rejected produced no corresponding change in state anxiety.

Positive Affect. There was no significant within-subjects effect, $F(1, 72) = .040, ns$, no significant between-subjects effect, $F(1, 72) = .007, ns$, and no significant interaction, $F(1, 55) = .13, ns$.

Negative Affect. There was a significant within-subjects effect, $F(1, 72) = 3.96, p = .050$, with participants in the Out-and-Rejecting and Out-and-Accepting conditions reporting less negative affect compared to measures taken following the Neutral imagined interaction. However, there was no significant between-subjects effect, $F(1, 72) = .430, ns.$, and no significant interaction, $F(1, 72) = 1.79, ns.$

Physical Symptoms. There was no significant within-subjects effect, $F(1, 72) = .662, ns.$, nor between-subjects effect, $F(1, 72) = .389, ns.$, nor interaction, $F(1, 72) = .837, ns.$

Cognitive Depletion. There was no significant between-subjects effect, $F(1, 72) = .925, ns.$, nor between-subjects effect, $F(1, 72) = .747, ns.$, nor a significant interaction effect, $F(1, 55) = .935, ns.$

Emotional Depletion (Accuracy). There was a significant within-subjects effect, $F(1, 72) = 13.16, p < .001, \eta_p^2 = .211$, indicating that participants overall accuracy in identifying emotional expressions improved in the second imagined interaction, compared to their accuracy following the Neutral imagined interaction. However, there was no significant between-subjects effect, $F(1, 72) = .150, ns.$, nor a significant interaction, $F(1, 72) = .930, ns.$

Emotional Depletion (Response Time). There was a significant within-subjects effect, $F(1, 72) = 30.04, p < .001, \eta_p^2 = .378$, indicating that all participants' response times decreased for the second imagined interaction, as compared to the Neutral imagined interaction. There was no significant between-subjects effect, $F(1, 72) = .001, ns.$, and the interaction was not significant, $F(1, 72) = .79, ns.$

Salivary Cortisol. All high and low controls fell within the expected ranges provided by the salivary assay supplier, with high control ranges from .747-1.25ug/dL and low control ranges

from 0.074-0.124ug/dL. There was no significant within-subjects, $F(1, 72) = 2.02, ns.$, between-subjects, $F(1, 72) = .001, ns.$, nor interaction effects, $F(1, 72) = 3.12, ns.$

Hypothesis 2: Out-and-Rejecting vs. Concealing Imagined Interactions

I hypothesized that imagining an interaction with a person from whom one must conceal one's sexual orientation might produce more negative emotional, cognitive, and physical effects than imagining an interaction with an audience than is aware of your sexual orientation and rejects you because of it. This comparison provided the opportunity to explore whether concealing your sexual orientation is as bad as or worse than being out and rejected based on your sexual orientation.

To test this hypothesis I conducted a series of 2 (between subjects variable = imagined interaction condition: Out-and-Rejecting vs. Concealing) by 2 (within-subjects variable = Neutral to subsequent condition) repeated measures ANOVA's were conducted. A within-subjects effect means that regardless of whether the subsequent imagined interaction was Out-and-Rejecting or Concealing, participants reported a significant change in a dependent variable, as compared to the Neutral imagined interaction. A between-subjects effect means that collapsed across both times of measurement there was a significant difference between the two conditions. The hypothesis is tested by the interaction between the within-subjects and between-subjects factors. An interaction effect indicates that the change in the dependent variable from the Neutral imagined interaction to the Out-and-Rejecting imagined interaction differed significantly from the change in the dependent variable from Neutral to the Concealing imagined interaction.

State Anxiety. There was no significant within-subject effect, $F(1, 72) = 2.28, ns.$, nor between-subjects effect, $F(1, 72) = .450, ns.$, nor interaction effect, $F(1, 72) = .002, ns.$ for state anxiety between the Out-and-Rejecting and Concealing imagined interactions. That is, an

imagined interaction with a rejecting person produced roughly the same increase in state anxiety as an imagined interaction with someone from whom one is concealing one's sexual orientation.

Positive Affect. There was a significant within-subjects effect, $F(1, 72) = 5.78, p = .020, \eta_p^2 = .102$, but no significant between-subjects effect, $F(1, 72) = 1.42, ns$. There was a significant interaction effect, $F(1, 72) = 8.17, p < .001, \eta_p^2 = .125$, indicating that the change in positive affect from the Neutral to Out-and-Rejecting imagined interaction differed significantly from the change in positive affect from the Neutral to Concealing imagined interaction. A paired-samples t-test comparing positive affect following the Neutral imagined interaction to positive affect following the Out-and-Rejecting imagined interaction was not significant, $t(19) = -.167, p = .434$. A paired-samples t-test comparing positive affect following the Neutral imagined interaction to positive affect following the Concealing imagined interaction was significant, $t(17) = 2.95, p = .005$. Thus, imagining an interaction in which one has to conceal their sexual orientation produced a decrease in positive affect while imagining an interaction with a rejecting audience produced no corresponding change in positive affect.

Negative Affect. There was no significant within-subjects effect, $F(1, 72) = 2.69, ns$, nor between-subjects effect, $F(1, 72) = .230, ns$. There was a significant interaction effect, $F(1, 72) = 4.93, p = .010, \eta_p^2 = .084$, indicating that the change in negative affect from the Neutral to the Out-and-Rejecting imagined interaction differed from the change in negative affect from the Neutral to Concealing imagined interaction. A paired-samples t-tests comparing negative affect following the Neutral imagined interaction to negative affect following the Out-and-Rejecting imagined interaction was not significant, $t(19) = .370, p = .358$. A paired-samples t-test comparing negative affect following the Neutral imagined interaction to negative affect following the Concealing imagined interaction was significant, $t(17) = 2.04, p = .028$. Thus,

imagining an interaction with someone from whom one must conceal their sexual orientation produced an increase in negative affect while imagining interacting with someone by whom one has been rejected produced no significant change in negative affect.

Physical Symptoms. There was no significant within-subjects effect, $F(1, 72) = .02, ns.$, nor between-subjects effect, $F(1, 72) = .08, ns.$, nor interaction, $F(1, 72) = .07, ns.$ for physical symptoms.

Cognitive Depletion. There was no significant within-subjects effect, $F(1, 72) = .04, ns.$, nor between-subjects effect, $F(1, 72) = .001, ns.$, nor interaction effect, $F(1, 72) = .05, ns.$ for the digit-span measure of cognitive depletion.

Emotional Depletion (Accuracy). There was a significant within-subjects effect for accuracy of emotion recognition, $F(1, 72) = 20.22, p < .001, \eta_p^2 = .302$, such that participants were more accurate in identifying emotional expressions following both the Out-and-Rejecting and Concealing imagined interactions than they were following the Neutral imagined interaction. There was no significant between-subjects effect, $F(1, 72) = .55, ns.$, nor a significant interaction effect, $F(1, 72) = .33, ns.$

Emotional Depletion (Response Time). There was no significant within-subjects effect, $F(1, 72) = .12, ns.$, nor between-subjects effect, $F(1, 72) = .49, ns.$ There was a significant interaction effect, $F(1, 72) = 25.96, p < .001, \eta_p^2 = .399$, indicating the change in response time on the emotion recognition task from the Neutral to the Out-and-Rejecting imagined interaction differed significantly from the change in response time on the emotion recognition task from the Neutral to Concealing imagined interaction. A paired-samples t-test comparing reaction time following the Neutral imagined interaction to reaction time following the Out-and-Rejecting imagined interaction was significant, $t(19) = 4.25, p < .001$. A paired-sample t-test comparing

reaction time following the Neutral imagined interaction to reaction time following the Concealing imagined interaction was significant, $t(17) = 2.84, p = .005$. Thus, imagining an interaction with an audience from whom one must conceal one's sexual orientation produced increased reaction times on the emotion recognition task compared to an imagined interaction with a rejecting person, which produced a decrease in reaction time.

Salivary Cortisol. There was no significant within-subjects, $F(1, 72) = 1.33, ns.$, nor between-subjects effect, $F(1, 72) = .01, ns.$, nor interaction effect, $F(1, 72) = 1.34, ns.$ for salivary cortisol.

Imagined Interaction Study Discussion

In summary, participants who imagined an interaction with a person who was aware of their sexual orientation and by whom they had been rejected reported increased state anxiety as compared to the Neutral imagined interaction. However, more telling was the fact that participants who imagined an interaction with a person from whom they had to conceal reported negative emotional effects that were equal to, or greater than the effects reported by participants who imagined interacting with someone who does not support them or accept their sexual orientation. These results suggest that concealment may be far from beneficial in these daily interactions, but rather the effort involved with keeping identity-relevant information concealed leaves some gay and lesbian people feeling emotionally drained.

Overview of Study 2: Online Diary Study

Although experimentally testing the acute effects of concealment within a controlled laboratory setting represents an important step forward in determining the direction of the causal relationships between concealment and depletion, it only represents a cross-section or snapshot in time and its artificiality may limit its generalizability. The concealment-disclosure dilemma is

not a one-off experience, rather it represents an ongoing internal struggle faced by many gay and lesbian people on a daily basis. The daily concealment-disclosure dilemmas are not only heavily influenced by experiences with discrimination, but perhaps even more importantly by the heterosexist remarks or assumptions of their interaction partners, by perceived barriers to employment and educational attainment, and by feelings of social exclusion and invisibility. Seemingly mundane daily interactions with a classmate, coworker, or waiter can take on new significance because they frequently represent a disclosure versus concealment dilemma. Should a lesbian couple correct the grocery store clerk who wrongly assumes that they are sisters? When a lesbian woman goes to her doctor and is asked about her sexual activity, use of condoms and oral contraceptives, should she allow the doctor to maintain her false assumption even if it negatively impacts their medical care or should she disclose and worry about receiving discriminatory care? If a same-sex couple wants to rent a one-bedroom apartment outside of the 'gay' village, should only one of them go to see the apartment and put their name on the lease rather than risk losing the apartment because of prejudice? Each of these scenarios is taken for granted by heterosexual people, but each of them represents a source of minority stress for gay men and lesbians (Meyer, 2003). Although some gay and lesbian people conceal their sexual orientation to a greater extent than others, there is good reason to believe that many gay and lesbian experience the concealment-disclosure dilemma to some extent through these kinds of daily incidents. These chronic experiences are not easily captured within a laboratory or in a one-hour study session. Rather, in order to capture the cumulative impact of the concealment, one must examine these experiences over a number of weeks. The online diary study examined daily experiences with concealment over a period of one month and examined how these experiences correlated with measures of psychological, cognitive, emotional, and physical depletion.

Hypotheses

The 30-day diary study was divided into ten diary entries (participants received prompts to complete their diary entries every 3 days). Depletion was assessed by comparing scores on each of the dependent variables during 3-day periods in which participants reported concealing their sexual orientation with 3-day periods in which participants did not report concealing their sexual orientation.

Hypothesis 1: Participants will report more psychological depletion during the diary periods in which they concealed their sexual orientation than during diary periods in which they did not report their sexual orientation.

Hypothesis 2: Participants will report more cognitive depletion during the diary periods in which they concealed their sexual orientation than during diary periods in which they did not report their sexual orientation.

Hypothesis 3: Participants will report more emotional depletion during the diary periods in which they concealed their sexual orientation than during diary periods in which they did not report their sexual orientation.

Hypothesis 4: Participants will report more physical depletion during the diary periods in which they concealed their sexual orientation than during diary periods in which they did not report their sexual orientation.

Method

Respondent-Driven Sampling

The diary study utilized Respondent-Driven Sampling (RDS), a sampling methodology developed by Heckathorn to make statistically-valid inferences using convenience samples in populations that are difficult to reach through conventional sampling methods (Heckathorn,

2002). These populations are often hidden as a result of social stigma and may not be easily discovered except through exploration of their social networks (Heckathorn, 1997). RDS requires that the size of each participant's personal network be known, that participants must be uniquely identified within the overall social network, and the nature of the connection between participants must also be known (Heckathorn, 2002). The respondent-driven sampling process was initiated when I contacted potential seeds or members of the target population who had strong connections to other members of the population. Seeds included employees and volunteers from Rainbow Resource Centre, Rainbow Pride Mosaic, and Outwords magazine. I provided the seeds with more information about the study and asked them for their assistance in recruiting members of the target population who met the inclusion criteria. Seeds received 3 recruitment coupons (see Appendix R) to recruit eligible participants with whom they have relationships (referred to as recruits). These recruits then repeated this process, receiving their own set of recruitment coupons with which to recruit their connections. This process moved quickly at first and then slowed substantially over the course of the first two weeks of recruitment. This prompted the primary researcher to expand the geographical boundaries of the initial recruitment area to include Northern Ontario. This resulted in a total recruitment of 62 participants. Three participants were subsequently removed from analyses due to a large number of incomplete diary entries.

Participants

Fifty-nine participants (38 females and 21 males) took part in a 30-day online diary study. Participants' ages ranged from 18 to 57 years ($M = 22$ years). In order to be eligible to take part in the diary study, participants were pre-screened by the primary researcher. The pre-screening involved a question about whether they had regular access to a computer, and whether

they had disclosed their sexual orientation in all domains of their life, or whether there were people to whom they had not disclosed. The sample was relatively homogenous with respect to ethnicity, with 81.7% of the sample self-identifying as Caucasian/White, and 90% of the sample reporting Canada as their country of birth. Self-identified sexual orientation revealed more diversity, with participants identifying as lesbian (38.3%), gay (31.7%), and queer (30%).

Procedure

Participants were recruited for the study by friends or acquaintances who provided them with an electronic respondent-driven sampling coupon containing a specific participant code. Upon receiving this coupon, interested individuals emailed me and I provided them with a SurveyMonkey web link to an informed consent form (see Appendix S) and the pretest questionnaire. This questionnaire included the same set of measures utilized in the imagined interaction study including measures of "outness" or disclosure of sexual orientation, of identity salience and centrality, perceived and actual discrimination, social support, self-esteem, and paranoid social cognition (see Appendices E-L). Once this pretest questionnaire was completed, participation in the study officially commenced. Every 3 days I sent participants an email prompting them to complete the appropriate diary entry related to their experiences over the previous 3 days. This email contained a SurveyMonkey web link and in order to complete it, participants first had to enter their unique participant code. If a participant failed to complete a diary entry within 24 hours of receiving the original email, I sent a reminder email, encouraging them to complete the diary as soon as possible. Upon completing the 10 diary entries, I sent participants a debriefing email thanking them for their commitment to the study and explaining the general hypotheses behind the research (see Appendix T).

Materials

Pretest Questionnaire

Participants completed the same set of pretest measures of individual differences outlined in the method section of the imagined interaction study (see Appendices E-L).

Experimental Measures

Concealment Questions. Participants were asked the following question; "In the past 3 days, how many times were you in a situation in which you felt that you had to conceal your sexual orientation?" If they had concealed in the previous 3 days, they were then asked to describe the situation. This question was embedded within a set of questions about their exposure to gay and lesbian-related content in the media, so as to reduce the possibility for response bias to the concealment question (see Appendix U). Participants' open-ended responses illustrated their reasons for concealment and the most common strategies utilized (see excerpts of the transcribed open-ended responses in Appendix V).

Psychological well-being. Participants completed the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) and the state anxiety items from the State-Trait Anxiety Inventory (STAI; Spielberger, 1970) (see Appendices M and N).

Depletion. Participants completed the 14-item Shirom-Melamed Burnout Questionnaire (SMBQ, Melamed, Kushnir, & Shirom, 1992), which consists of three subscales: cognitive weariness, emotional exhaustion, and physical fatigue (see Appendix W). The cognitive weariness subscale includes items such as, "My thinking process is slow" and "I have difficulty concentrating." The emotional exhaustion subscale includes items such as "I feel I am unable to be sensitive to the needs of those around me." The physical fatigue subscale includes items such as, "I feel like my batteries are dead." Each item was scored on a 7-point Likert scale from 1

(*Almost never*) to 7 (*Almost always*). The SMBQ has been shown to have reliability coefficients ranging from 0.80 to 0.90 (Soderstrom et al., 2004).

Physical health. Participants' physical health was assessed using two measures; a subset of items from the Cohen-Hoberman Inventory of Physical Symptoms (CHIPS; Cohen & Hoberman, 1983) and a health-related behavior measure developed specifically for this project. The symptom checklist consisted of 11 symptoms divided into subsets of anxiety, indigestion, and pain (see Appendix X). Participants were asked to indicate the extent to which each problem has bothered them during the past 3 days. Items were rated on a 5-point scale from 0 (*Not been bothered by the problem*) to 4 (*The problem has been an extreme bother*). The Cronbach's alpha for the full scale is .88 (Cohen & Hoberman, 1983). Participants were also asked to respond to complete a health behaviours checklist consisting of questions about their eating, exercise, smoking, drinking, and sleep habits (see Appendix Y).

Study 2: Online Diary Study Results

Analysis Plan

Analysis of the online diary study results began with descriptive statistics, focusing on the overall levels of outness reported by participants and the frequency of concealment experiences reported over the 30-day diary period. The latter analysis resulted in the division of participants into two groups: sometimes-concealers and non-concealers. Respondent-driven sampling analyses included a partition analysis which examined the network size and recruitment patterns of diary study participants based on their gender. Analysis of the pretest questionnaire followed, with descriptive statistics provided. Correlations between the pretest measures and the dependent measures were examined. Finally, analysis of the dependent variables was broken down into between-subjects and within-subjects effects. The between-subjects analyses compare

the participants who did not report having concealed even one time over the course the study, referred to as non-concealers, to the remaining participants who did conceal at least once over the course of the study, referred to as sometimes-concealers. Independent-samples t-tests included all participants and compared scores on the dependent measures between the non-concealers and the sometimes-concealers. Paired-samples t-tests included only participants who concealed their sexual orientation at least once over the course of the diary study. These within-subjects analyses involved comparing scores on the dependent measures during concealing and non-concealing periods.

Diary Questions

Diary study questions pertaining to experiences of concealment in the previous days were counterbalanced with the cognitive, psychological, emotional, and physical dependent measures in order to minimize the potential for order of presentation effects (concealment questions at the start of the diary entry versus concealment questions at the end of the diary entry). See Table 4 for means, standard deviations, ranges, and reliability coefficients for the dependent variables.

Table 4

Diary Entry Means, Standard Deviations, Range, and Reliability

	<i>M</i>	<i>SD</i>	<i>Range</i>	<i>α</i>
State Anxiety	39.75	12.56	57.00	.94
Positive Affect	32.53	8.48	35.00	.90
Negative Affect	20.05	6.72	34.00	.84
Physical Symptoms	7.88	6.88	32.00	.82
Burnout Total	48.88	17.91	77.00	.92
Physical Burnout	21.98	9.38	36.00	.93
Cognitive Burnout	16.02	8.58	30.00	.94
Emotional Burnout	10.88	3.47	18.00	.74

Frequency of Concealment Experiences

Overall frequency of concealment was relatively low during the 30-day diary study period ($M = 2.09$). However, there was significantly variability among participants, with the frequency of concealment varying from 0 to 6 instances over the course of one month. Of those participants who reported no instances of concealment, two were male and nine were female. Of those participants who reported concealing at least once during the study period, nineteen were male and twenty-nine were female.

Non-Concealers. In order to be eligible to participate in the diary study, participants had to self-identify as gay/lesbian/queer and they had to be concealing or not "out" in at least one domain of their lives. This was, of course, not something that I could verify, but it was the selection criterion passed along to the original RDS seeds and included in the directions for

recruiting others. Given this selection criterion, and the 30-day duration of the study, the researcher did not anticipate finding participants who never concealed over the course of the study. However, 11 participants (18.7%) did not report having concealed even one time over the course of 30 days. This presented an unexpected analytical opportunity to conduct between-subjects analyses in addition to within-subjects analyses. The between-subjects analyses compare those participants who never concealed with those who concealed anywhere from 1 to 6 times over the course of 30 days. This unexpected opportunity only improved the quality and scope of the analyses, adding much-needed nuance to the results. Potential explanations for why 11 participants reported no concealment during the study period will be examined in detail in the discussion section, but it certainly points to the importance of examining diverse strategies of concealment as a mechanism for avoiding social situations in which one might need to conceal.

"Outness Index"

Participants' level or degree of "outness" was examined in two ways. The number of yes responses they provide to each of 13 items asking about people in their lives who could be aware of their sexual orientation was summed to create an overall "outness" index. The number of yes responses was divided by the number of categories relevant to them, as not all participants have a brother, sister, landlord, and so on. This division produced an overall percentage "outness" figure, which is a crude index of participants overall disclosure of their sexual orientation. Participants' "outness" ranged from a low of 17% to 100%, with a mean percentage "outness" of 73%. This indicates that the sample represents a relatively "out" group of gay and lesbian people. However, all participants reported that they were not "out" to at least one person that they interact with in their daily lives.

Overall concealment did not significantly differ between the non-concealers and the sometimes concealers, $F(1, 52) = .16, ns$. However, the number of people participants indicated that they were "out" to was positively correlated with pretest centrality, $r(54) = .330, p = .014$, actual experiences with discrimination, $r(54) = .346, p = .010$, and social support, $r(54) = .357, p = .008$. In order to potentially tease apart the differences between being "out" to one's immediate family and being "out" to one's coworkers and managers, family "outness" and work "outness" totals are also calculated by simple summing the number of yes response to the relevant items. Once again there were no significant differences between the non-concealers and the sometimes concealers on these subtotals. However, pretest centrality was positive correlated with family "outness" $r(54) = .363, p = .006$, but not with work "outness," $r(54) = .180, ns$. By contrast, social support was positively correlated with "outness" at work, $r(54) = .327, p = .011$, but not with family "outness," $r(54) = .097, ns$. This falls in line with the low levels of social support from family members reported by participants.

Sex of Subject Effects

A multivariate Analysis of Variance (ANOVA) yielded a non-significant effect for sex of subject by C-group (non-concealers versus sometimes concealers), $F(1, 41) = .93, ns$. As such, no further sex of subject analyses will be presented.

Respondent Driven Sampling (RDS) Network Analysis

The diary study sample was comprised of sixty-two participants, thirty-one of whom were recruiters (seeds) and thirty-one of whom were recruits. This is not the ideal composition for an RDS sample and as such, it significantly restricted the benefits of using RDS instead of a traditional snowball sampling approach. The goal of using RDS was to generate or encourage long recruitments chains that penetrated deeper into the gay and lesbian community, so as to

reach participants who were not as well-connected to the community or less "out." Recruitment chain length is measured in waves, with each wave representing one-step or recruitment along the chain. Participants recruited directly by the researcher (seeds) are counted as wave zero and are excluded from RDS analyses. Participants recruited by the seeds are counted as wave one, those individuals whom they recruit are counted as wave two, and this process continues into a hypothetical equilibrium is reached (Heckathorn, 2007). The use of RDS proved more challenging than was expected with half of the sample comprised of seeds and only a small number of long recruitment chains generated. Some participants did not recruit any other gay and lesbian people. Several participants recruited only one other gay or lesbian person. For example, Figure 1 shows that participant 57 recruited participant 4 and that participant 54 recruited participant 60. There were a few longer recruitment chains that demonstrated the promise of RDS as a sampling methodology. For example, Figure 1 shows that participant 14 recruited participants 36 and 16, who subsequently recruited seven other participants between them. However, this was the exception and despite frequent email prompts by the primary researcher, only a small number of participants utilized all three of the recruitment coupons they were given. However, information about the recruitment patterns of participants based on gender provides some insight into the size and composition of the social networks of gay men and lesbians.

Figure 1

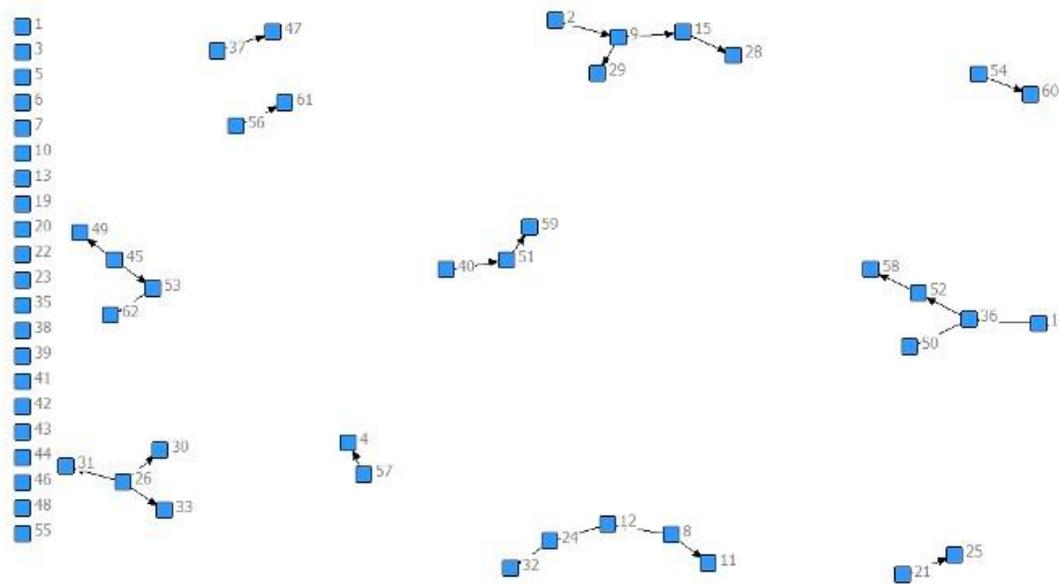
Respondent-driven Sampling Recruitment Chains

Figure 1. Node numbers represent participant codes. Arrows indicate the direction of participant recruitment.

Partition Analysis

Using RDSAT 7.1, a respondent driven sampling analysis tool (Volz, Wejnert, Cameron, Spiller, Barash, Degani, and Heckathorn, 2012), a partition analysis was conducted in order to divide the sample into non-overlapping groups, or partitions, and to provide continuous estimates on those groups. The default settings recommended by Heckathorn (2007) were utilized for this analysis, including the dual component estimate of average network size known to produce the most stable estimates. The number of re-samples (the number of times the data are re-sampled in order to derive bootstrap confidence intervals) was set at 2500 for 95% confidence intervals. The enhanced data smoothing algorithm was utilized, which prevents divide by zero errors by adding

a tiny, non-zero number (0.0001) to all cells in the recruitment matrix (Volz, Wejnert, Cameron, Spiller, Barash, Degani, and Heckathorn, 2012).

Recruitment by Gender. There were 39 females and 23 males in the original sample, and although two participants were excluded from analysis of the dependent measures as a result of a significant portion of missed diary entries, it is important to examine the full recruitment picture. Recruitment patterns by gender are presented in Table 5. Female recruiters recruited significantly more participants than male recruiters and as indicated by the transition probabilities and by the degree of homophily, female recruiters were significantly more likely to recruit other females than they were to recruit males. By contrast, male recruiters were only marginally more likely to have recruited females than to have recruited males. Female recruits reported significantly larger social networks ($M = 16.22$) than did male recruits ($M = 7.28$). Network homophily is a measure of preference for recruiting members of one's own group and provides an indication of the recruitment effectiveness among a social network. Homophily scores range from -1 (heterophily) to + 1 (homophily). Female recruiters showed a strong preference for recruiting other females (homophily = .405) while male recruiters showed a slighter smaller preference for recruiting females rather than other males (homophily = -.228). Importantly, RDSAT estimates of the population proportion of males and females differed significantly from the "naive" sample population portions. That is, adjusting for average network size, over-recruitment, and homophily, the RDSAT estimate of the population proportion of gay males and females is relatively equal. The actual sample proportion is skewed in favour of a greater number of females.

Table 5

Participant Recruitment Pattern by Gender

Recruiters	<u>Recruits</u>		
	Females	Males	Total
Females	13.00	7.00	20
Transition Probability	.65	.35	1
Males	6.00	5.00	11
Transition Probability	.55	.45	1
Total Distribution of Recruits	19.00	12.00	31
Estimated Population Proportion	.41	.59	1
Sample Population Proportion	.63	.37	
Mean Network Size	16.22	7.28	
Homophily	.41	-.23	

Note. n = 31 as only participants recruited by seeds are included in RDS analyses.

Pretest Questionnaire

The pretest questionnaire measures of centrality, salience, perceived and actual discrimination, social support, and paranoid social cognition, were highly correlated (see Table 6). Moreover, several of the pretest measures were significantly correlated with the dependent measures. A significant positive correlation between a pretest measure of salience and a dependent variable such as negative affect indicates that the more salient one's sexual orientation, the more negative affect one reported overall in the study period. A significant negative correlation between a pretest measure of social support and a dependent variable such as emotional burnout, indicates that the more social support an individual perceives they have, the

less emotional burnout they report during the study period. The means, standard deviations, ranges, and reliability coefficients for each of the pretest measures are presented in Table 7.

Table 6

Diary Study Pretest Measure Correlation Matrix

<i>Pretest Measure</i>	1	2	3	4	5	6	7
1. Centrality	-						
2. Salience	.314*	-					
3. Perceived Discrimination	.018	.287*	-				
4. Actual Discrimination	.208	.024	.444**	-			
5. Social Support	-.012	-.237	-.350**	-.036	-		
6. Self-Esteem	-.041	-.204	-.188	-.104	.364**	-	
7. Paranoid Social Cognition	-.045	.502**	.532**	.445**	-.242	-.381**	-

Note. * = Correlation is significant at the 0.05 level (2-tailed), ** = Correlation is significant at the 0.01 level (2-tailed)

Table 7

Diary Study Pretest Measures Means, Standard Deviations, Ranges, and Reliability Coefficients

	<i>M</i>	<i>SD</i>	<i>Range</i>	<i>α</i>
Centrality	18.48	4.38	18.00	.82
Saliency	14.02	3.70	18.00	.70
Perceived Discrimination	31.32	12.22	52.00	.92
Actual Discrimination	19.82	7.55	27.00	.89
Social Support	65.36	12.79	58.00	.88
Self-Esteem	64.96	18.49	72.00	.89
Paranoid Social Cognition	16.59	4.42	22.00	.69

Correlations Between Pretest Measures and Dependent Measures

Perceived discrimination was negatively correlated with positive affect, $r(58) = -.366$, $p = .004$, the number of alcoholic beverages consumed, $r(58) = -.327$, $p = .011$, and the number of times one exercised in 30 days, $r(58) = -.328$, $p = .011$. It was positively correlated with trouble sleeping, $r(58) = .270$, $p < .039$. Interestingly, actual experiences with discrimination were positively correlated with different dependent variables than perceptions of discrimination. Actual experiences of discrimination were positively correlated with the number of physical symptoms reported, $r(58) = .267$, $p = .038$, and with emotional burnout, $r(58) = .533$, $p < .001$. Overall, perceptions and actual experiences with discrimination based on one's sexual orientation appear to be strongly correlated with poorer emotional well-being, physical health, and maladaptive health decisions.

Social support was negatively correlated with amount of maladaptive eating habits, $r(58) = -.343, p = .008$, the number nights one had trouble sleeping, $r(58) = -.266, p = .005$. It was positively correlated with number of alcoholic beverages consumed, $r(58) = .358, p = .006$. Participants who perceive themselves to have greater social support appear better off in terms of healthy eating and sleep habits. Interesting, but perhaps not surprising, is the fact that a greater amount of social support was associated with consuming more alcoholic beverages. Perhaps consumption of alcohol constitutes part of a coping strategy for gay and lesbian people, but only when they have a support network to spend time with.

Self-esteem was positively correlated with positive affect, $r(58) = .528, p < .001$, but negatively correlated with number of physical symptoms reported, $r(58) = -.332, p = .010$, state anxiety, $r(58) = -.592, p < .001$, negative affect, $r(58) = -.536, p < .000$, emotional burnout, $r(58) = -.437, p < .001$, cognitive burnout, $r(58) = -.404, p = .001$, concealment, $r(58) = -.278, p = .002$, maladaptive eating habits, $r(58) = -.400, p = .002$, and number of nights trouble sleeping, $r(58) = -.374, p = .004$. Self-esteem may act as a buffer for participants, positively correlating with better overall emotional and physical well-being, as well as lower likelihood of concealing. Alternatively, it is possible that not concealing as frequently results in higher self-esteem and better overall well-being.

Paranoid social cognition was negatively correlated with positive affect, $r(58) = -.363, p = .005$, but positively correlated with the number of physical symptoms reported, $r(58) = .283, p = .031$, overall burnout, $r(58) = .266, p = .041$, emotional burnout, $r(58) = .359, p = .021$, concealing, $r(58) = .261, p = .005$, and the number of nights with trouble sleeping, $r(58) = .366, p = .005$. Feeling that one's sexual orientation is transparent, and managing intrusive thoughts about one's sexual orientation, was correlated with more poorer emotional and physical well-

being. Moreover, the more paranoid social cognition participants reported at pretest, the more likely they were to have concealed during the study period.

Perceived and Actual Experiences with Discrimination

The Perceived Discrimination Scale (PDS) and Actual Discrimination Scale (ADS) are 9-item scales with parallel wording, measured on a 7-point Likert scale. Mean responses for PDS items ranged from 2.47 to 4.05, while mean responses for the ADS items were considerably lower, ranging from 1.45 to 2.92. Although perceived and actual experiences with discrimination were significantly correlated, $r(59) = .44, p < .001$, the overall means were significantly different. The overall mean of 3.48 for the PDS was significantly higher than the overall mean of 2.20 on the ADS, $t(59) = 7.99, p < .001, d = 1.10$. This difference held for both non-concealers and sometimes concealers with both groups perceiving significantly greater discrimination than they reported having experienced. A 2 (between-subjects: non-concealers vs. sometimes-concealers) by 2 (within-subjects: Perceived discrimination vs. Actual Discrimination) ANOVA revealed that sometimes concealers perceived greater levels of discrimination ($M = 3.67$) than the non-concealers ($M = 2.51$), $F(1, 57) = 7.19, p = .010, \eta_p^2 = .112$ and that the sometimes concealers reported having experienced significantly more discrimination ($M = 2.32$) than the non-concealers ($M = 1.71$), $F(1, 57) = 5.02, p = .029, \eta_p^2 = .081$. Although these differences are meaningful, it is important to qualify these results by emphasizing that both the PDS and ADS are measuring individual's perceptions and may represent under or overestimations of discrimination based on their sexual orientation.

Social Support Subscales

The 12-item Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988) is made up of 12 items, each rated on a scale from 1 (*Very strongly disagree*) to

7 (*Very strongly agree*). The overall level of perceived social support was high for all participants ($M = 5.5$) and a one-way ANOVA revealed no significant difference in perceived social support between non-concealers ($M = 5.58$) and sometimes concealers ($M = 5.40$), $F(1, 58) = .225$, *ns*. However, the MSPSS is comprised of three subscales (family, friends, significant others), each of which is assessed with four items (see Appendix J). Analyses of these subscales revealed significant differences in levels of perceived support between family, friends and significant others. Both the non-concealers and sometimes concealers reported perceiving significantly more support from their friends ($M = 5.81$) than they did from their family ($M = 4.64$), $t(59) = 5.86$, $p = .000$, $d = .78$. Similarly, they reported perceiving significantly more support from their significant others ($M = 5.84$) than they did from their family ($M = 4.64$), $t(59) = 4.12$, $p < .001$, $d = .54$.

Dependent Measures

The results for the dependent measures are broken up into between-subjects and within-subjects effects. The between-subjects analyses compare the 11 participants (18.7%) who did not report having concealed even one time over the course of 30-day diary study, referred to as non-concealers, to the remaining 48 participants who did conceal at least once over the course of 30-day diary study, referred to as sometimes-concealers. Independent-samples t-tests included all participants and compared scores on the dependent measures between the non-concealers and the sometimes-concealers. Paired-samples t-tests included only participants who concealed their sexual orientation at least once over the course of the diary study. Within-subjects analyses compared scores on the dependent measures during concealing and non-concealing periods.

Psychological well-being

State Anxiety. There was a significant between-subjects effect for state anxiety $t(58) = -4.43$, $p < .001$, $d = 1.217$, with non-concealers reporting significantly less state anxiety ($M =$

31.2) than sometimes concealers ($M = 40.1$). Moreover, there was also a significant within-subjects effect $t(43) = 2.15, p = .038, d = .323$, with sometimes concealers reported more state anxiety during periods in which they concealed ($M = 42.0$), compared to ($M = 38.7$) periods in which they did not conceal.

Positive Affect. There was no significant between-subjects effect for positive affect $t(58) = -1.77, ns$. However, there was a significant within-subjects effect $t(43) = 2.65, p = .011, d = .473$, with sometimes concealers reported significantly more positive affect during periods in which they did not conceal ($M = 30.9$) compared to period in which they did conceal ($M = 28.4$).

Negative Affect. There was a significant between-subjects effect for negative affect, $t(58) = 5.10, p < .001, d = -1.396$, with non-concealers reporting significantly less negative affect ($M = 14.1$) than sometimes concealers ($M = 19.0$). However, the within-subjects effect was not significant, $t(43) = 1.77, ns$.

Burnout. There was a significant between-subjects effect for burnout, $t(58) = 4.40, p < .001, d = -1.212$, with non-concealers reporting significantly less burnout ($M = 33.9$) than sometimes concealers ($M = 46.3$). The within-subjects effect for burnout was also significant $t(43) = 2.24, p = .030, d = 0.339$, with a sometimes concealers reported significantly less burnout during periods in which they did not conceal ($M = 45.1$) compared to periods in which they concealed ($M = 49.6$).

Burnout subscales. The burnout questionnaire is comprised of three subscales: physical fatigue, cognitive weariness, and emotional fatigue. There were significant between-subjects effects for each subscale. Sometimes concealers reported significantly more physical fatigue ($M = 20.4$) than non-concealers ($M = 15.2$) $t(58) = 3.60, p < .001, d = .97$. Sometimes concealers reported significantly more cognitive weariness ($M = 15.3$) than non-concealers ($M = 10.3$), t

(58) = 4.10, $p < .001$, $d = 1.36$. Sometimes concealers reported significantly more emotional fatigue ($M = 10.8$) than non-concealers ($M = 8.5$), $t(58) = 3.96$, $p < .001$, $d = 1.29$. However, there were no significant within-subjects effects for each burnout subscale, physical fatigue, $t(43) = -.513$, *ns.*, cognitive weariness, $t(43) = -.128$, *ns.*, and emotional fatigue, $t(1, 43) = -.812$, *ns.*

Physical Health

Physical Symptoms. There was a significant between-subjects effect for physical symptoms, $t(57) = 3.17$, $p = .042$, $d = .751$, with non-concealers reporting significant fewer physical symptoms from the checklist ($M = 2.9$) compared with sometimes concealers ($M = 5.7$). There was also a significant within-subjects effects, $t(43) = 2.98$, $p = .005$, $d = 0.396$, with sometimes concealers reporting significantly fewer physical symptoms during periods in which they did not conceal ($M = 5.4$) compared to period in which they did conceal ($M = 7.5$).

Health Behaviours Checklist (HBC). The HBC was a composite index of both health promoting and maladaptive health behaviours, including 4 items about maladaptive or unhealthy eating habits, 1 item on smoking, 1 item on alcohol consumption, 1 item on frequency of exercise, and 1 item on trouble sleeping. This measure did not hold together well with an average inter-item correlation of .086. This can be explained in large part by the smoking and drinking items. There were only a small number of participants who appeared to regularly smoke cigarettes and consume alcoholic beverages. It is unreasonable to expect that non-smokers and infrequent drinkers would make sudden changes to these habits, even when facing the stresses associated with concealing their sexual orientation. There was no significant main effect for trouble sleeping, $t(43) = .83$, *ns.*, nor for exercise, $t(43) = .596$, *ns.* The 4 food-related items

were combined into an overall food total, and there was no significant within-subjects effect, $t(43) = 1.49, ns$.

Diary Study Discussion

The overall pattern of results for the diary study maps on quite closely to the results of the imagined interaction laboratory study, amplifying the argument for the depleting effects of concealment. One notable exception is the physical health measures, which manifested in the 30-day diary study but not in the acute laboratory study setting. This is perhaps unsurprising, that it is repeated or chronic concealment that is more likely to exert measurable physiological effects. Whether concealment is experienced acutely, through a brief, but vivid imagined interaction task, or whether it is experienced as part of one's everyday life, it appears to have a significant negative impact on the emotional and physical well-being of gay and lesbian people. In the diary study, these significant effects were evidenced in two key ways. By comparing the non-concealers to the sometimes concealers, it became clear that concealing was associated with poorer emotional well-being and physical health. The ability to conceal, and to pass as heterosexual in society, does not come without costs, and those gay and lesbian participants who chose not to conceal during their daily lives, appear better off for it. The sometimes concealers, who concealed their sexual orientation at least once during the course of the diary study, reported more emotional and physical health issues during those periods in which they concealed their sexual orientation, as compared to those periods in which they did not conceal. This suggests that for many gay and lesbian people, concealment is not an all or nothing phenomenon, and that the decision to reveal or disclose their sexual orientation is one that they are constantly making. When they do choose, or feel compelled to conceal, they suffer the consequences in terms of poorer emotional and physical well-being. This study was merely a snapshot of these individuals'

lives, but if these 30 days were an accurate reflection of their everyday life, the cumulative toll of concealment cannot be overstated.

General Discussion

The fact that bearing a stigmatized identity represents a significant burden is well-documented and widely accepted in the field of social psychology (see Inzlicht, McKay, & Aronson, 2006; Link & Phelan, 2001; May, Cochrane, & Barnes, 2007; Pascoe & Richman, 2009). A considerable body of research has documented the ways in which an individual's race, religion, age, and physical disability, for example, can negatively impact their lives. Many of these individuals face discrimination socially and in their places of work and learning. They report higher levels of anxiety, depression, and maladaptive coping in the form of smoking and alcohol consumption (see Clarke & Coughlin, 2012). People with minoritized, stigmatized characteristics often lead stressful lives, punctuated by challenges not faced by individuals who belong to those in the dominant majority. However, a long-standing belief in the field of stigma research was that individuals with invisible or concealable stigmas, such as those who identify as gay or lesbian, could avoid many of these negative consequences by means of passing as normal in society (Goffman, 1963). In essence, the concealability of one's stigmatized identity has long been viewed as advantageous, and it is only in recent years that research has begun to examine the unique challenges and stresses faced by these individuals (see Chaudoir, Earnshaw, and Aniel, 2013; Chaudoir & Fisher, 2010; DeJordy, 2008; Meyer, 2003, Pachankis, 2007). The two studies presented here suggest that concealability offers little in the way of benefits. To the contrary, concealment appears to have a significant negative impact on the lives of gay and lesbian people in terms of their psychological well-being, their emotional regulation, and their physical health.

In Study 1, the acute effects of concealment were examined utilizing an imagined interaction paradigm in which participants were asked to vividly imagine and talk through real life interactions with certain people in their lives. Following each imagined interaction, participants completed a set of cognitive, emotional, psychological, and physical health measures to examine the impact of these imagined interactions. The results showed that imagining an interaction with a person who is aware of one's sexual orientation and from whom one has received a rejecting response produced more state anxiety, than did imagining an interaction with an accepting audience. Additionally—and perhaps more importantly—the results showed that imagining an interaction with a person from whom one must conceal produced some negative emotional effects that were equal to or greater than imagining an interaction with somebody to whom one has disclosed and by whom one has been rejected. Concealment appeared to offer little benefits for participants. Instead, it resulted in negative emotional effects that were, in some cases, significantly stronger than those reported after imagining an interaction with someone who had already rejected them. The potential implications of this cannot be overstated.

A significant aspect of the reticence on the part of gay and lesbian people to disclose their sexual orientation stems from their belief that concealing will help them avoid the negative feelings and negative experiences that accompany rejection. However, participants' responses following completion of the Concealment imagined interaction suggests that concealment offers no such benefit. To the contrary, vividly imagining an interaction in which they had to conceal their sexual orientation resulted in increases in negative affect and decreases in positive affect (as compared to the neutral imagined interaction). Feeling that one has to hide aspects of their daily life and of their identity, even in a brief laboratory task, may bring to the surface feelings of inauthenticity, shame, and anxiety. In turn, these negative feelings appear to be ego-depleting.

The feelings may interfere with gay or lesbian individuals' emotional regulation, as evidenced by the significant increase in time taken to accurately identify the emotions of others following the Concealment imagined interaction. It may be that the efforts expended on suppressing certain information, uses up limited self-regulatory resources, leaving gay and lesbian individuals with less left in the tank, so to speak, for effortful tasks like facial emotion recognition. The potential implications of this are also significant, as a key component of establishing and maintaining healthy relationships with others lies in the ability to accurately (and efficiently) read their emotions. One possibility is that concealment renders gay and lesbian individuals more self-focused than other-focused, such that they are using up more resources being concerned with what they are saying and the cues they might be giving away, and thus they have fewer resources to pick up on their interaction partners' non-verbal communication. Social interactions and relationships involve a sort of dance of reciprocity, and concealment puts up a barrier to such reciprocity, potentially resulting in awkward, aversive interactions with others, leaving one or both parties with a negative impression of the other. Moreover, as DeJordy (2008) argued, some degree of "passing" may suffice in short-term interactions where there is little expectation of reciprocal self-disclosure, but over the longer-term, chronically omitting personal information about oneself may arouse suspicion and engender negative feelings from interaction partners. This scenario differs from interacting with someone who has already rejected a person based on his/her sexual orientation. Although that interaction may be uncomfortable, it may be less likely to be weighed down by uncertainty, hypervigilance, and high levels of self-monitoring. In the Out-and-Rejecting imagined interaction one "knows the score," and perhaps one knows what to expect from their interaction partner, even if that includes disparaging comments or coldness. In social interactions with individuals who are aware of and who do not accept their sexual

orientation, stigmatized individuals may make different attributions and engage in different forms of coping that buffer or offset some of the negative aspects of those interactions. Social interactions in which one conceals offer no such buffers.

No corresponding changes in cognitive efficiency were evidenced in the results from the digit-span working memory task. The non-significant effects on the cognitive depletion measure may be more reflective of the actual task than of the impact of imagined interactions. The digit-span task evidenced a ceiling effect, such that most participants performed exceptionally well, remembering most of the words at the end of each trial. However, it was not a timed task and thus afforded participants a considerable amount of time to enter the words accurately. Future research should consider placing a time limit on this task and measuring the response time, similar to the procedure utilized with the emotion recognition task, so that even if accuracy scores remain high, the effortful nature of the task might be assessed through reaction times. This would better reflect the challenges faced by most people in their workplaces or educational institutions—a situation in which cognitive load is combined with time pressure. It is possible that under such circumstances, the depleting effects of concealment would be evidenced through diminished working memory capacity.

The fact that no significant effects were found on the physical health measures is not surprising given the brevity of the imagined interactions. It is possible that such a brief imagined interaction in the laboratory is not strong enough to evoke a significant increase in salivary cortisol, nor a significant change in physical symptoms. The measure of physical symptoms adapted for use in this study were perhaps unsuitable to detect sudden shifts in physical symptoms. Future research utilizing an imagined interaction paradigm should consider measuring galvanic skin response, blood pressure, or heart rate to accurately assess acute

physiological changes. However, over the long-term, repeated experiences with concealment may exert a measurable impact on physical health, as the diary study results offer some preliminary evidence for.

In Study 2, a 30-day online diary study provided a test of the cumulative impacts of concealment on the cognitive, emotional, psychological, and physical health of gay and lesbian people. Every 3 days, participants were prompted to complete a series of measures, including questions about whether they had concealed their sexual orientation in the previous 3 days. The results of the diary study served to confirm and amplify many of the results of the imagined interaction laboratory experiment. Participants who concealed their sexual orientation at least once over the course of the study reported more state anxiety, more negative affect, less positive affect, more physical, cognitive, and emotional burnout, and a greater number of physical symptoms than participants who did not conceal their sexual orientation during those 30 days. Moreover, among those who sometimes concealed, participants who concealed were worse off emotionally and physically during the periods in which they concealed compared to the periods in which they did not. The fact that a small number of participants in the diary study did not report concealing at all during the 30-day diary study offered a unique opportunity to examine the between-subjects and within-subjects effects of chronic or cumulative concealment on psychological, emotional, and physical health. The pattern of results that emerged suggest that not only was concealing detrimental to participants' psychological well-being, but it also left them more depleted physically, cognitively, and emotionally. Moreover, those participants who did not report concealing were significantly better off than the participants who reported concealing even once during the diary study period. Although overall rates of concealment were fairly low, participants reported more depletion following periods in which they felt compelled to

conceal their sexual orientation than they did during periods in which they did not conceal. Thus, concealment—long thought to be an advantageous identity management strategy—was correlated with more anxiety, burnout, and self-reported physical symptoms over the course of 30 days. Although the diary study data are correlational and cannot definitively speak to cause and effect, the significant results on the psychological and emotional measures mirror the results of the imagined interaction laboratory study. Moreover, the diary study also revealed significant negative effects of concealment on cognition as well as physical symptoms and physical burnout; further suggesting that cumulative or repeated concealment may exert a measurable toll where acute instances may not. When viewed together, these studies create a compelling argument that concealment is a significant contributor to ego-depletion that manifests through multiple channels (psychological, emotional, cognitive, and physical); the effects of both are acute and cumulative, representing a unique and additive form of the minority stress introduced by Meyer (2003). Hiding a part of one's identity constitutes a unique burden faced regularly by those with concealable stigmatized identities. Although "passing" may help gay and lesbian people navigate certain social interactions without being "discredited" or discriminated against, it is not without significant private costs. It requires them to tap into their limited self-regulatory resources in order to suppress certain cognitions and emotions, and whether it be in a brief imagined interaction or on a daily basis, this leaves them with fewer resources left to deal with subsequent challenges. It also leaves them in a more negative emotional state, experiencing more anxiety, negative affect, and feelings of not being true to themselves. None of this fits with the long-standing perception of concealability as an advantageous identity management strategy.

The most common strategy of concealment utilized by participants was omission, with most of the sometimes concealers reporting that they left out personal information during social

interactions rather than directing the conversation or explicitly lying. In their open-ended explanations of their concealment experiences, participants frequently rationalized their behaviour by saying that they were private individuals or by responding that the situation didn't call for their disclosure. Concealment may represent a form of cognitive dissonance for participants who pride themselves on being open and confident about their sexual identity. Thus, concealment represents an aversive psychological state in which their actions do not align with their internal beliefs (Festinger, 1957). Participants who concealed may attempt to reduce this aversive state by justifying and rationalizing their concealment. They may dismiss a situation as inappropriate for personal disclosure, cite concern for the harm their disclosure would have on important others, or cite concern for the negative consequences disclosing would have on their interpersonal relationships or career trajectories. These justifications may or may not be grounded in reality, but regardless, they may serve to ameliorate some of the negative affect associated with the incongruence between beliefs and actions. Although on the surface omission appears to be the least effortful form of concealment, doing so on a daily basis may be depleting. When fabrication was reported it was generally in the form of using shortened or alternative names to refer to their significant others, or masquerading as friends as events perceived to be unwelcoming. Avoidance was another common approach but the avoidance of which participants wrote involved specific people or situations they perceived to be unsupportive or threatening. This is not surprising given the difficulty of avoiding social situations in which heterosexual people are present.

Participants' open-ended responses also offered evidence of Gilovich, Medvec, & Savitsky's (2000) self-as-target bias. Several participants reported feeling that they were being watched and commented on by fellow bus passengers, coworkers, and janitorial staff. These

biased impressions of others led them to alter their behaviour by sitting further apart or refraining from holding hands with their significant others. Although it cannot be ascertained through the data collected, it is possible that this paranoid social cognition (Zimbardo et al., 1981) could actually lead to self-fulfilling prophecies. The participants' distrust, suspicion, and overly personalistic construal of others' actions lead them to behave in ways that elicit negative behaviour from others and thus perpetuate their continued need for vigilance in social interactions (see examples of participant's open-ended responses in Appendix V).

The fact that some participants did not report concealing their sexual orientation at all during the diary study period warrants further discussion. There are several possible explanations for this. It is possible those participants were not being honest about their concealment experiences, or that those who did not conceal during the study were more "out" to begin with. It is also possible that they just engaged in more avoidance, thereby navigating away from social interactions in which they might feel compelled to conceal. Finally, it is possible that the sometimes concealers were faced with more concealment interactions than the non-concealers during the particular 30 days in which the diary study took place. That particular 30 days may not be fully representative of participant's lives. Each of these possibilities will be briefly explored.

As with all self-report inventories there is the possibility that participants are not responding honestly to all of the questions. It is possible that the participants who did not report concealing at all during the 30-day diary study felt pressured to be "out and proud" and failed to disclose instances in which they concealed. There is no definitive way to know whether participants are responding truthfully. However, given the recruitment strategy used to access the participants and the explicit inclusion criteria for the study (e.g., that they were not "out" in at

least one domain of their life), it seems unlikely that participants were being intentionally dishonest about their concealment experiences. These participants agreed to take part in a study for which they received no formal compensation and which required them to complete 10 diary entries over the course of a month. That presents a significant commitment that does not paint a picture of participants with a disregard for the study results.

It is possible that those participants who did not conceal during the 30-day diary study are more "out" than those who reported concealing at least once. The pretest measure of "outness" was merely a crude index of this degree of "outness" and although the degree to which participants were "out" varied significantly from 16% to 100%, overall levels of "outness" were quite high. There was no significant difference between the sometimes concealers and non-concealers in terms of the number of family, friends, or acquaintances they reported being "out" to, thus pretest levels of "outness" cannot account for the differences between non-concealers and sometimes concealers. Future research would be well served by utilizing a more comprehensive index of "outness." The need for the development of better instruments to measure concealment is echoed by Sedlovskaya et al. (2013) and Szymanski et al. (2008). The high levels of "outness" among participants in both studies may not reflect the average level of "outness" in the broader gay and lesbian community. Individuals who are concealing their sexual orientation in all or most domains of their life are unlikely to volunteer to take part in research studies related to their sexual orientation. Moreover, given the recruitment strategies utilized in both studies—snowball sampling and respondent-driven sampling—gay and lesbian individuals who are not "out" or who are not socially connected to other members of the community are unlikely to participate. This is a challenge inherent to the study of concealability and stigmatized populations and limits the generalizability of the results of the study.

A third possibility is that the non-concealers were relying heavily on avoidance as a method of concealment, selectively avoiding interacting with people from whom they feel they must conceal, thereby ameliorating the potential for concealment. They may not spend time with the grandparent or uncle, for example, from whom they are concealing. In essence, those who did not conceal in this study are likely to conceal at some point in their daily life, but this was not captured in the 30-day snapshot of the diary study. The sometimes concealers may either be less selective, or they may not have the luxury of choosing to avoid these interactions. They may work in jobs in which they feel that they must conceal, or they may have more regular interactions with family members to whom they have not disclosed. These are nuances that the study pretest measures are unfortunately unable to elucidate. The participants' open-ended responses offer a glimpse into their strategies of concealment, with the most common strategy being omission, or not correcting the heteronormative assumptions made by others. These open-ended responses will be discussed in more detail below.

A final possibility is that the sometimes concealers were merely faced with more situations in which they had to conceal during this particular 30 day snapshot of their lives. Future research would benefit from a longer-term approach, following gay and lesbian people over a period of a year, for example, to get a more representative sample of their day-to-day experiences with concealment. This is an important point to consider: that the lives of those with concealable stigmatized identities are not necessarily going to consistently involve concealment. Most participants reported being "out" in some domains of their lives and not in others.

It is important to consider the broader point here, and that is that many gay and lesbian people still feel the need to conceal their sexual orientation or to avoid certain people and places around which they feel that they will be forced to conceal. This speaks volumes about the "threat

in the air" (Steele, 1995, p. 617) that remains for many gay and lesbian people, even in a progressive, gay-positive country like Canada. Contrary to common thinking, the present research suggests that concealing one's sexual orientation, both in the short and longer-term, has negative emotional, psychological, and physical health consequences that are equal to or greater than, the negative consequences associated with being "out" and rejected. Feeling like one is unable to disclose a part of one's identity to others results in strained, potentially awkward and aversive social interactions with others. These kinds of social interactions are taxing and may leave gay and lesbian people who are concealing, in a state of depletion.

Footnotes

¹ Participants completed additional imagined interactions that were not directly relevant to the two hypotheses specifically tested in this thesis. These additional imagined interactions were conducted in order to enable later exploratory analyses but they were not discussed in this thesis. For example, some participants completed the Neutral imagined interaction, followed by the Out-and-Rejecting imagined interaction, and then an Out-and-Accepting imagined interaction. Exploratory analyses of the third imagined interactions may be conducted at a later date.

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Appendix A

Imagined Interaction Study Experimenter Script

Thanks so much for coming, please feel free to put your coat and bag anywhere you like.

As I mentioned in my emails, today I am going to ask you to complete a number of different tasks. Most of these tasks will be completed on these two computers here [points to computers]. I'm also going to ask you to vividly imagine yourself in three different social interactions and I will ask you to record yourself talking through that interaction in vivid detail. If you're ready, we can get started now.

Pre-test rinse: The first thing I'm going to ask you to do is take a sip of water, rinse your mouth with it and spit it back into the cup. You can toss the cups into the garbage can. This is just part of the preparation for taking a sample of your saliva in a few minutes.

Imagined Interaction (Neutral): Now let's get started on the first imagined interaction.

I would like you to imagine that you are at a store by yourself shopping for new electronics (maybe an iPod, DVD player) and a salesperson comes over to you. You aren't too sure what model is the best choice for you so you engage in conversation with this salesperson. I want you to describe the scene and the interaction for me as in as much detail as you possibly can, as if you were trying to recreate it for someone who wasn't there. For example, tell me about the store and the salesperson, tell me what you think the salesperson might say and what you might say back. Describe how you would feel during this interaction. Tell me about the things you are might think but might not say out loud.

Do you have any questions about what I am asking you to do?

I'll press the red record button and when I leave the room and close the door you can begin by stating your participant # and then start talking through this interaction, providing as much detail as possible. Please try to talk through it for at least a few minutes, enough that someone who wasn't there could imagine themselves in that situation. When you are done, please press the STOP button and open the door to the room to indicate that you are finished recording.

Saliva sample #1: Now I would like to take a sample of your saliva. Don't worry – I won't watch you while you do it. Please spit into this plastic vial. You don't have to fill the entire thing but try to fill at least the bottom of the vial. When you're done, just open the door and I'll come back in to seal it and place it in the freezer.

Facial affect #1: Now I'm going to ask you to complete a task on the computer. There are instructions on the first screen so please read them carefully before beginning. After the instructions is a practice trial to help you become accustomed to the task. Please note when the practice trial ends you are beginning the experimental trial and your responses will be recorded. When you reach Intermission 1 – please open the door to the room and I will direct you to the next task.

Digit-span #1: Now I'm going to ask you to switch computers and complete a memory task. Again, there are detailed instructions on the first screen so please read them carefully before you

begin. There is a practice trial to help you get accustomed to the task but after that the experiment begins and your responses will be recorded. When you reach the end of the task, please open the door and I will direct you to the next task.

Psychological and physical health measures #1: Now I would like you to complete a short series of questions about your feelings on this computer. When you are done we will move on to the next part of this experiment.

*End of Neutral Imagined Interaction Procedure

Imagined Interaction (OUT & ACCEPTING): Now I'm going to ask you to go through that same set of tasks but starting with a slightly different imagined interaction.

I would like you to imagine that you are talking to someone who knows about your sexual orientation and is accepting and supportive. I want you to describe the scene and the interaction in as much detail as you possibly can - as if you were trying to recreate it for someone who wasn't there. For example, tell me about where you and this person are (home, work, school, restaurant), what you are doing (eating, drinking coffee), what kinds of things would you and this person talk about (work, relationships, plans for the future)? Describe in detail how you imagine the interaction would go. Describe how you would feel during this interaction.

Just like last time I will press the red record button and when I leave the room and close the door you can begin by stating your participant # and then start talking through this interaction, providing as much detail as possible. Please try to talk through it for at least a few minutes, enough that someone who wasn't there could imagine themselves in that situation. When you are done, please press the STOP button and open the door to the room to indicate that you are finished recording.

Saliva sample #2: Now I would like to take a sample of your saliva. Don't worry – I won't watch you while you do it. Please spit into this plastic vial. You don't have to fill the entire thing but try to fill at least the bottom of the vial. When you're done, just open the door and I'll come back in to seal it and place it in the freezer.

Facial affect #2: Now I'm going to ask you to complete a task on the computer. There are instructions on the first screen so please read them carefully before beginning. There is no practice trial so as soon as you begin your responses will be recorded. When you reach Intermission 2 – please open the door to the room and I will direct you to the next task.

Digit-span #2: Now I'm going to ask you to switch computers and complete a memory task. Again, there are detailed instructions on the first screen so please read them carefully before you begin. There is no practice trial this time so once you begin your responses will be recorded. When you reach the end of the task, please open the door and I will direct you to the next task.

Psychological and physical health measures #2: Now I would like you to complete a short series of questions about your feelings on this computer. When you are done we will move on to the next round of this experiment.

*End of Out-and-Accepting Imagined Interaction procedure

Imagined interaction (CONCEALING): Finally, I'm going to ask you to go through that same set of tasks one last time and again starting with a slightly different imagined interaction.

I would like you to imagine that you are talking to someone to whom you have not disclosed your sexual orientation or whom does not know about your sexual orientation. I want you to describe the scene and the interaction in as much detail as you possibly can - as if you were trying to recreate it for someone who wasn't there. For example, tell me about where you and this person are (home, work, school, restaurant), what you are doing (eating, having coffee), what kinds of things would you and this person talk about (work, relationships, plans for the future)? Describe in detail how you imagine the interaction would go. Describe how you would feel during this interaction.

Just like the last time I'll press the red record button and when I leave the room and close the door you can begin by stating your participant # and then start talking through this interaction, providing as much detail as possible. Please try to talk through it for at least a few minutes, enough that someone who wasn't there could imagine themselves in that situation. When you are done, please press the STOP button and open the door to the room to indicate that you are finished recording.

Saliva sample #3: Now I would like to take a sample of your saliva. Don't worry – I won't watch you while you do it. Please spit into this plastic vial. You don't have to fill the entire thing but try to fill at least the bottom of the vial. When you're done, just open the door and I'll come back in to seal it and place it in the freezer.

Facial affect #3: Now I'm going to ask you to complete a task on the computer. There are instructions on the first screen so please read them carefully before beginning. There is no practice trial so as soon as you begin your responses will be recorded. When you reach Intermission 2 – please open the door to the room and I will direct you to the next task.

Digit-span #3: Now I'm going to ask you to switch computers and complete a memory task. Again, there are detailed instructions on the first screen so please read them carefully before you begin. There is no practice trial this time so once you begin your responses will be recorded. When you reach the end of the task, please open the door and I will direct you to the next task.

Psychological and physical health measures #3: Now I would like you to complete a short series of questions about your feelings on this computer. When you are done we will move on to the next round of this experiment.

OR

Imagined Interaction (OUT & REJECTING): Finally, I'm going to ask you to go through that same set of tasks one last time and again starting with a slightly different imagined interaction.

I would like you to imagine that you are talking to someone to whom you have disclosed your sexual orientation and who has responded with negativity or a lack of acceptance. I want you to describe the scene and the interaction in as much detail as you possibly can - as if you were trying to recreate it for someone who wasn't there. For example, tell me about where you and this person are (home, work, school, restaurant), what you are doing (eating, having coffee), what kinds of things would you and this person talk about (work, relationships, plans for the future)?

Describe in detail how you imagine the interaction would go. Describe how you would feel during this interaction.

Just like the last time I'll press the red record button and when I leave the room and close the door you can begin by stating your participant # and then start talking through this interaction, providing as much detail as possible. Please try to talk through it for at least a few minutes, enough that someone who wasn't there could imagine themselves in that situation. When you are done, please press the STOP button and open the door to the room to indicate that you are finished recording.

Saliva sample #3: Now I would like to take a sample of your saliva. Don't worry – I won't watch you while you do it. Please spit into this plastic vial. You don't have to fill the entire thing but try to fill at least the bottom of the vial. When you're done, just open the door and I'll come back in to seal it and place it in the freezer.

Facial affect #3: Now I'm going to ask you to complete a task on the computer. There are instructions on the first screen so please read them carefully before beginning. There is no practice trial so as soon as you begin your responses will be recorded. When you reach Intermission 2 – please open the door to the room and I will direct you to the next task.

Digit-span #3: Now I'm going to ask you to switch computers and complete a memory task. Again, there are detailed instructions on the first screen so please read them carefully before you begin. There is no practice trial this time so once you begin your responses will be recorded. When you reach the end of the task, please open the door and I will direct you to the next task.

Psychological and physical health measures #3: Now I would like you to complete a short series of questions about your feelings on this computer. This is the last set of questions for this study.

Appendix B

Imagined Interaction Audio Recording Transcription Samples**Neutral Imagined Interactions**

"So I walk into Future Shop, it's the first place I'm looking for a cell phone. Go over to the little kiosk, there's a younger guy there. He looks pretty clean-cut. He sort of seems like he doesn't really, I don't know, know his stuff. He's kind of cocky, gel in his hair, preppy, but you know he's got the cheesy sales pitch persona. and so, ah, anyways yeah, I'm looking at all the models and he kind of asks what kind of phone I'm looking for and I explain I'm looking for something with not a lot of uh, I guess I'm not knowledgeable about the cell phones so I pretty much kind of need all of the information. So I guess as I start learning more and more I'll narrow it down as to what I want. And yeah, it goes from there, okay."

"I went to Visions electronics to look at a DVD player. I needed a new one and so I was shopping around and browsing, and the male sales associate came over and asked me if I needed any help with anything and I said, "Yes I would like a new DVD player but I'm not sure what brand I would want or what the features I'm looking for, so what are the difference between these three." And so he explains the differences in each type of DVD player and yeah (laughs)."

"Okay, so I'm walking into Best Buy to look at a new TV screen for the basement. I walk in and I start looking at the TV's. I look at all them, the small ones, the big ones, sort of looking at them and wondering which one I want. I had a Panasonic but I lost it in the divorce. So, do I want another plasma or do I want an LCD. Sorta [sic]deciding. Salesman walks up, it's a guy. Asks if he can help me. I say "Sure, looking for a TV for my basement," what would he suggest. He asks how big and I said I'd like 50, and he says okay, he said...he takes me over to, uh, I don't know, Sanyo - Samsung, plasma. I said well would I want a plasma or an LCD for that space, knowing that a dark room plasma is probably better. Umm, testing sort of his knowledge. He tells me that plasma is a good idea, takes me to the Samsung. I tell him I had a Panasonic and I was really quite happy with it. He says Samsung is just as good -, probably the best on the market, it's on sale, and, uh, we could go with the Panasonic, there's nothing wrong with it, it's good, it's more expensive. Umm, I ask him if he gets commission. He says no, and umm, we look at the TV's. He shows me some of the features of the Samsung. I decide I'm gonna [sic] get it. We go to purchase it. He tries to sell me an extended warranty, which I decline. He tries to sell it for ten minutes. I still decline. I pay for the TV and then I take it home."

"The salesperson would come to me [sic] and says, "Hi, can I help you?," and I would say, "Well, I'm looking for a computer. I don't really want to have to buy it. I'm doing some research. I'm really not interested in purchasing a second computer, but I need it for the program I'm using." They would say, "Alright, well what kind of computer are you looking for?" I'm looking for... it has to be a PC. I want it to be something light, something easy to use. I'm definitely a Mac person. I'm not big on PC. They would start showing me things and then I would interrupt and say, "And as cheap as possible, but not crappy, because it's some important research that I'm doing. And I'm obviously not thrilled about having to buy this. I don't have funding for it. It's out of a student loan so if you could help me find the cheapest, best thing possible, that would be fantastic."

Out-and-Accepting Imagined Interaction

"So the person who I think would be closest to me now would be my roommate and best friend James. A typical interaction would be.. I come home from school. He comes home from work/school. We meet up in the living room. It's pretty relaxed. Usually he'll be sitting in one chair, I'll be sitting in another. We tend to talk about our days really openly. There's like zero tension. We can be incredibly open with one another. So ah...the mood is usually like pretty playful, ah, very little umm, worries. I don't usually worry about anything when I'm talking to him. An average day I come home and talk about what we did during the day. Umm, he tends to talk about boys. I tend to talk about girls [laughter]. He usually sits by the window and smokes and drinks. I'll have a drink too, with him. Umm...we'll maybe discuss anything else that's going on in our lives. There's like, yeah, zero tension. It's probably one of the most laid back..like situations in my life as a whole where I can just go home and not worry about being judged in a conversation with him.""

"Okay, so I'm thinking of my friend _____, who I just hung out with this morning. She's very affirming of everything I am and do. We have a really good friendship. We, common attraction Umm, we often just either wander or sit and talk. We take turns talking about our lives and what's going on. We get really deep, ah, into what's happening. She knows everything that's going on in my life. I often ask her for advice and some wisdom. She asks me for the same for her life. Umm... so we often get together and we spend some time updating each other on what's going on, because we're both so busy that we don't often get to talk very much. Like once a week, maybe. We both hate the phone, so we don't talk on the phone, ever but always get together physically. We always share food. And umm, it's very gentle. It's very loving and supportive friendship. The emotional tone is really supportive, and open, and generous...relaxed. Very attentive to what the other person might need for the day. Listen -- we both listen a lot to each other. So it's a really good space to do that. So, that's what I'm thinking of."

"Okay so someone that knows that I am gay is my best friend _____, who is not gay. He's one of my best friends. I have one best friend that's gay and one that's not. _____ I've known since I was 15 or 16 and he was the first person that I came out to when I was 18. Actually, I think I just talked a lot about gay things and he basically was like, "You're gay, just say it," and I didn't want to say it. He pretty much told me it was okay, in a way that he was like, it's so silly for you to not just be out, there's no reason to hide who you are. So he pretty much basically just forced it out of me. We talk about politics and just school, and sociology type things and of course, gay issues come into that. For a straight guy he knows a lot about being gay because we talk about it a lot and I think he has a clearer picture than most straight people about what it feels like to be gay because we talk about it so much. He's always up for talking about it. He just likes to talk about things and understand people and different people and understand differences. So I think he's fascinated by it. It's really nice to have him to talk to. Although I wouldn't... I guess we do talk about emotional things. It's just like, if we were to talk about something really emotional, it would go from emotion to joke like right after. It just has that up and down. So it's nice, it keeps things light but also you get to vent I get to vent. I would probably be a lot worse off if I didn't have him to talk to, emotionally."

"Okay, umm, normal interaction we talk about everything, TV we like, movies we like, stuff going on in the world, politics, school. We talk what we did in the day, what our plans are for the future, relationships a little bit, not very much. I don't talk about that with many people. We talk

about what we're excited about, funny stories, why I'm having a shitty day. Pretty much everything and anything, honestly. When someone accepts you with no strings attached, you feel like you can be the most honest with that person and you can talk about anything and so I do, I talk about everything with them. I feel comfortable doing it."

"This is a scenario with a good friend of mine who was kind of acting in a listener, counseling kind of role. He's a little bit older than me. He has a wife and kids. Although I talked with him several times, just making small talk at Tim Horton's where we usually ran into each other, which is where I got to know him. We talk about the weather and the news, just normal, everyday small talk topics - nothing very deep or meaningful or personal. Then one day we were chatting, I found out that he does some kind of counseling work and I started telling him about my own issues and problems and, things like struggling with depression over the years and being gay - my sexuality. To my pleasant surprise, his reaction was very warm and supportive and friendly. It didn't change negatively at all, and in fact I think it created... my disclosure created a stronger bond of friendship, because I had taken that risk of disclosing something to him and opening myself up some more, and he reciprocated - he did the same. He told me more things about his life and his past, and I was supportive and not judgmental and didn't run away screaming and neither did he. It was a really nice example of feeling accepted, and respected, and treated no differently than anyone else. Treated with respect and recognition and feeling like an equal. I wasn't any better or any worse than anyone else. It was a very good, positive, teaching moment for me to learn that, you know, taking the risk of opening and disclosing can have very positive results."

Out-and-Rejecting Imagined Interaction

"This interaction would be probably with my grandfather, umm....who I guess in subsequent interactions after coming out to him has been incredibly awkward around any conversation in regards to my sexuality. So a typical conversation might be, I go there, umm, he tends to not address the issue or the person that I'm dating currently....However I know that he's not comfortable with, however it but I tend to bring up my current life situation and the time that I do spend with this person,...it does get incredibly awkward. I know this but I'm willing to do that in hopes that one day he will be comfortable with it. He doesn't tend to ask any questions and [sic] tends to avoid eye contact with me and doesn't ask any further questions even if it's just something that is not really that detailed that I'm telling him. So say he asks me what I'm doing later, I will - if I'm spending time with the person that I'm dating - I will say that I'm going to go grocery shopping. However, he will not go into any further detail in regards to that and then it usually gets really uncomfortable and he will usually change the subject. I usually get really awkward because I know that he's not comfortable with it but hope that is for greater good that I continue to share my life with my grandfather who is really actually quite close to me in the context of my life."

"So the person who doesn't quite respond super favourably toward my sexual orientation is my nana - my mom's mom. She's 86. She comes over to my family's place for family dinners about once a week. I usually bring _____, my partner, and Nana tolerates it but she still makes comments about me finding a boyfriend or asking [sic] about my old boyfriends from over 10 years ago. My mom tries to kind of get her to be on her best behaviour, but once in a while a comment slips up that she's, you know, not really in favour of this. She often calls _____ my friend. She never refers to us as partners. Ah, and she doesn't really want to treat us equally to

like my brother's and their partners or spouses. So I guess the....you know... but then when it's just myself and nana one-on-one, she's pretty good. She doesn't really talk about relationships. We sort of just avoid that topic. Every other topic seems pleasant so she's getting there. She has come a long way since [sic] a couple of years ago from when she thought _____ was feeding me drugs to make me gay [laughter]. Ah, that was pretty hurtful to both of us, especially _____."

"A person who wasn't very crazy about my sexual orientation. A typical conversation doesn't really disclose much, honestly. We don't really talk about anything. Before I told them about my.... about being gay, we talked about a lot of stuff, and then after, nothing really. I would like to talk to them about all kinds of stuff but they aren't crazy about [sic] being gay so they don't want to talk about that, and choose to sort of ignore everything else about me, and so I choose to ignore everything else too. I'm not going to force anyone to talk about anything. So it's really their loss because I find myself talking to other people instead. And so...I feel that being gay is a very big part of my life. It doesn't always have to be at the forefront of everything, but it's always there underlying sort of everything about who I am right now. I kind of feel like if I ignore that then I am ignoring everything else. So it's not fair to only choose certain things to talk about when you used to be able to talk about everything with this person. And so I feel that I'm not going to talk to them about anything. When we do talk it's very basic things, very sort of, small talk, and we just don't really go under the surface. That's probably how it's going to be with this person forever, because they're not going to change their opinion on being gay any time soon. I'm not going to change my opinion on the idea that they don't get to pick and choose what we talk about."

"I'm 20 years old and I'm trying to interact with my mother who was not a very loving or touchy-feely type of person. And I was.... and needed her approval—probably wanted some approval or whatever—and when that wasn't forthcoming, then it was just a write-off. So, typical things that we would talk about like a boyfriend at the time, it would be, "If you have another boyfriend, I'm never going to talk to you again." It was always something negative. It was never a positive thing, like I could never tell my mother that I loved her because she would see that as a weakness; she would say, "If you love me, then you would do this. You would obey me.""

Concealing Imagined Interactions

"There's a little bit of an elephant under the table [sic] when we talk about whether or not I have a girlfriend and ah...like I was talking about ____ earlier and we're going to Europe and my grandma was like, "Are you two going to be sleeping together on this trip? What's the room situation going to be like?" It was kind of awkward because we are going to be sharing a room, right. But it's not like we're going to be *sharing* a room in the sense that she thought we would be sharing a room. It's like, we would be sharing a room in the sense that anyone would share a room. We sleep together as it is now when there are not enough beds. It's not really a big deal at all. That's kind of awkward to maneuver around that. Well yeah, and I don't really want to bring anything up with older people because it's hard enough to convince them to talk to people wearing turbans. It's another thing to try and talk to them about you being different from what they perceive to be the norm."

"So my parents don't know, specifically, my sexual orientation -that I am a lesbian, or gay, or whatever. I don't really care about the label. Sometimes... I think that my mom has been told,

like by my brother. She can just probably can tell based on the way that I dress, or the way that I speak, or the way that I am. Maybe she's seen me looking at girls, I don't know, but umm, she's known me for 22 years, so she's probably picked up on it at different parts of my life. She might try and get it out of me by asking me if I have a boyfriend. She does that a lot. Or [sic] talks about me needing to graduate so that I can get married or just stuff like that that is pretty obviously to annoy me, or to get me to say it. Because she comes off as sounding pretty traditional, and maybe she is, but I think that if she was that traditional she probably would have kicked me out by now, because she must be able to tell. I think that she mostly gets upset and tries to get me to tell her when she hears something homophobic at work or when somebody says something at work. That's when she seems to get most concerned about it. It seems like she's most concerned about me having to have issues when I'm just... being out. I don't think she's personally that bothered by it. So yeah, it makes me feel ashamed a lot of the time, like I'm having a secret. I guess I should be able to talk about people that I like. Like a lot of people that I know growing up like to talk to their parents about people that they like. I've never really had that opportunity. So that makes me feel sort of that our relationship is strained because of that, because we don't talk about a big part of my life. I guess I just don't know what it would feel like to be able to talk about that kind of stuff."

"So one of the people who doesn't know about my sexual orientation are my parents, and I guess I'm going to choose specifically, my mother. Although I feel like she might know deep-down, I have never come out to her, and we never discuss things. It's quite a taboo subject as she is strictly catholic and a firm believer in all the traditional senses of the religion. When we do interact it is extremely short and I am extremely sensitive and irritable from everything she says. She's the same way, so I guess when we do talk it's out of necessity, never for pleasure. She asks me what I want for dinner. She tells me that dinner is ready. She tells me that she is not going to work tomorrow so I can use the car. She tells me that she's going to bed now. I almost never interact with her by my own choice. I usually...she takes initiative and speaks to me first, or asks me a question. Maybe she asks me about school. Whenever she's inquiring about anything about my life it's usually about school or about work. So she asks me how school's going and if my grades are good, and how work is going and if I work too hard, if I'm tired. However, there are highs and lows of our relationship. Sometimes I don't mind having conversations with her but the majority of the time I would rather not. I have had this kind of relationship with her since I was a little kid, so before I even knew I was gay. I don't think it has anything to do with that. So she doesn't know, so, I mean we don't talk about relationships. Even if I were straight we wouldn't be talking me being in a relationship with a boy, or having a boyfriend, or having crushes. My family is extremely prudish and the whole idea of dating and premarital sex and like, falling in love, is extremely foreign to them. They wouldn't accept it, so my interaction with her is really minimal and most of the time non-enjoyable."

"So, the person I chose is my mom. She doesn't know about my sexual orientation. We don't talk about relationships. I never ask her for advice about relationships. Whenever she asks me if there is [sic] any cute boys and stuff I just say I'm not interested and she gets kind of sad. But on a daily basis we talk about... usually when I come back from school she asks me how was my school. I say, "It was good." I might share my marks with her if I get good marks, then I'll tell her what marks I got. She'll ask me after my dance class, "How was my dance class?" And I'll say, "It was good." We don't talk about both—personal stuff I guess. We mostly talk about stuff that we do on a daily basis such as school work, stuff like that."

Appendix C

Imagined Interaction Study Consent Form

Research Project Title: Imagined Interactions Study

Researcher(s): Kathleen Fortune, PhD Student

Sponsor (if applicable): Dr. Gerry Sande, Professor of Psychology

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

The purpose of our research is to learn more about people mentally prepare for or rehearse future social interactions. For example, if you have an upcoming job interview you might anticipate how the interview might go, imagine what the interviewer might say and what you might say in response. Broadly speaking we are interested in how people go about mentally preparing for social interactions with various people in their lives. You will be asked to complete a series of short questions today and then we will schedule an appointment to come back into the laboratory to take part in a mental rehearsal task. At that time you will be asked to complete a series of short measures, some of which are done on paper and some on the computer, and then engage in a verbal rehearsal of two randomly selected imagined social interaction scenarios.

We know that you might worry that your responses will not be entirely confidential. We ensure the confidentiality of your responses in two key ways. First, we do not ask you to provide your name or any other identifying information while completing the questionnaire here today nor will we ask for it when you complete the rest of the study online. Second, you will be assigned a participant code so that each time you login you will be asked to enter that unique code. That code will be kept separate from any identifying information you provided in order to take part in the study and in will not be linked to your responses at any point. This consent form that I will ask you to sign today will be stored separately from the data file. Your responses are entirely anonymous. Once collected from the online survey website, the data will be stored on a computer in a securely locked room (P506H Duff Roblin Building), to which only the experimenter and her supervisor have access.

In exchange for your participation today and in the appointment we schedule for the next few weeks you will be entered into a draw to win one of 5 great prizes (iPod Nano, Silver City movie tickets, Polo Park Gift Cards). A summary report of the findings and a more detailed description of this study will be available to you via e-mail at the address you provide here

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the

study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

This study has been approved by the Psychology/Sociology Research Ethics Board (PSREB), and any concerns and complaints regarding this procedures you may contact PhD Student Kathleen Fortune umfortu1@cc.umanitoba.ca or Dr. Gerry Sande (474-9626) or gsande@cc.umanitoba.ca . Alternatively, you may contact the Human Ethics Secretariat (474-7122), or e-mail margaret_bowman@umanitoba.ca. A copy of this consent form has been given to you to keep for your records and reference.

Participant's Signature Date

Researcher and/or Delegate's Signature Date

Appendix D

Imagined Interaction Study Debriefing Form

Thank you for taking part in this study. I sincerely appreciate your commitment to this study and your willingness to share your experiences with us. Now I want to take the opportunity to tell you a bit more about this research and explain why we think it has important implications for you and other gay and lesbian people.

Despite legal progress with respect to rights for gay and lesbian people in Canada, research continues to show that many gay and lesbian people still conceal their sexual orientation. They conceal out of fear of losing important loved ones, fear of being negatively stereotyped or being discriminated against in the work or educational setting, and even fear of physical violence. Similarly, research has already shown that keeping a secret is hard and is associated with a lot of anxiety, concerns about giving off clues or revealing the secret, and paranoia about what other people know. However, keeping a secret about something fun like a birthday party is a very different experience than keeping a secret about your sexual orientation. The fear and anxiety are likely to be heightened because the consequences of disclosure are so much greater.

I told you that the purpose of this study was to examine how people mentally prepare or rehearse future interactions. This is true; in fact research suggests that vividly imagining and rehearsing future social interactions can elicit the same thoughts and feelings as the actual interaction. What I didn't tell you was that I am specifically interested in how gay and lesbian people mentally rehearse future social interactions with people to whom they have not disclosed their sexual orientation and from whom they anticipate a negative reaction. I apologize for deceiving you but it was important that you did not know the hypotheses behind this research. I did not want this information to influence the way that you engaged in the imagined interaction task, nor your responses on the other tasks.

These tasks were intended to test my hypothesis that an imagined interaction with someone you are not out to would be more cognitively, emotionally, psychologically, and physically depleting than an imagined interaction with someone to whom you have disclosed. If my hypothesis is true then this has important implications for gay and lesbian people who engage in this kind of anticipatory rehearsal on a regular basis in order to conceal their sexual orientation. These people may have less left in the tank, so to speak, to deal with all the other demands in your life.

It is sometimes difficult to answer these types of questions and your willingness to participate in this study is greatly appreciated. Your input will contribute to our understanding of the ongoing burden faced by gay and lesbian people. If answering any of these questions made you feel distressed and you would like to speak to someone, please contact one of the following:

Rainbow Resource Centre: (204)-452-7508 OR Klinik: (204)-784-4090

Once again thank you for taking the time to contribute to this research. I'll be in touch via email with a summary of results.

Appendix E

Awareness of Sexual Orientation Questions

Indicate whether or not the following people in your life are aware of your sexual orientation.

Y = Yes, N = No, NS = Not sure, NA = Not applicable

1. Your mother	Y/ N/ NS/ NA
2. Your father	Y/ N/ NS/ NA
3. Your brother(s)	Y/ N/ NS/ NA
4. Your sister(s)	Y/ N/ NS/ NA
5. Your grandparents	Y/ N/ NS/ NA
6. Your cousins	Y/ N/ NS/ NA
7. Your close friends	Y/ N/ NS/ NA
8. Your classmates or coworkers	Y/ N/ NS/ NA
9. Your boss (manager, teacher)	Y/ N/ NS/ NA
10. Your casual friends or acquaintances	Y/ N/ NS/ NA
11. Your friends or acquaintances on the internet	Y/ N/ NS/ NA
12. Your doctor	Y/ N/ NS/ NA
13. Your landlord	Y/ N/ NS/ NA

Perceived Consequences of Disclosure/Being Outed

Please indicate how important to you it would be if each of the following people in your life were to find out about your sexual orientation. Please choose Not applicable for those people on the list that already know about your sexual orientation.

0	3	7	NA
Not at all important	Neutral	Extremely Important	Not Applicable
1. Your mother			
2. Your father			
3. Your brother(s)			
4. Your sister(s)			
5. Your grandparents			
6. Your cousins			
7. Your close friends			
8. Your classmates or coworkers			
9. Your boss (manager, teacher)			
10. Your casual friends or acquaintances			
11. Your friends or acquaintances on the internet			
12. Your doctor			
13. Your landlord			

Appendix F

Centrality of Sexual Orientation

Please answer the following questions using the scale provided below.

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly agree

1. My sexual orientation is an important part of how I define who I am.
2. I feel strongly about my connection with other people who share my sexual orientation.
3. My sexual orientation has little to do with how I feel about myself as a person.
4. My sexual orientation is very important to my social relationships.
5. If I was asked to describe myself to others, my sexual orientation is not one of the first things that would come to mind.

Appendix G

Salience of Sexual Orientation

Please answer the following questions using the scale provided below.

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly agree

1. On a day-to-day basis I don't give much thought to my sexual orientation.
2. When I spend time with members of my family (parents, siblings), I think about my sexual orientation more.
3. Once I start thinking about my sexual orientation I find that I cannot think about anything else.
4. Thoughts about my sexual orientation often come to mind when I'm trying to focus on something else.
5. When I'm the only gay or lesbian person in a room I find myself thinking about my own sexual orientation more than I usually do.

Appendix H

Perceived Discrimination Scale

(Reprinted from Williams, D., Yu, Y., Jackson, J., & Anderson, N. (1997). Racial differences in physical and mental health. *Journal of Health Psychology*, 2(3), 335-351, used with permission)

If people knew about your sexual orientation, how likely do you think it is that the following would occur?

1 – Not at all likely

2 – Unlikely

3 – Somewhat unlikely

4 – Neutral

5 – Somewhat likely

6 – Likely

7 – Very likely

1. People would act as if you are inferior.

2. People would act as if you are not as smart.

3. People would act as if they are afraid of you.

4. You would be treated with less courtesy than others.

5. You would be treated with less respect than others.

6. You would receive poorer services in stores and restaurants

7. People would act as if you are dishonest

8. You would be called names or insulted

9. You would be threatened or harassed

Appendix I

Everyday Experiences with Discrimination Scale

(Reprinted from, Williams, D., Yu, Y., Jackson, J., & Anderson, N. (1997). Racial differences in physical and mental health. *Journal of Health Psychology*, 2(3), 335-351, used with permission)

Using the scale below, please indicate how often any of the following things have happened to you in your day-to-day life *because of your sexual orientation*.

1 – Not at all likely

2 – Unlikely

3 – Somewhat unlikely

4 – Neutral

5 – Somewhat likely

6 – Likely

7 – Very likely

1. People acted as if you are inferior.
2. People acted as if you are not as smart.
3. People acted as if they are afraid of you.
4. You were treated with less courtesy than others.
5. You were treated with less respect than others.
6. You received poorer services in stores and restaurants
7. People acted as if you are dishonest
8. You were called names or insulted
9. You were threatened or harassed

Appendix J

Multidimensional Scale of Perceived Social Support

(Reprinted from Zimet, G.D., Dahlem, N.W., Zimet, S.G. & Farley, G.K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, 52, 30-41, used with permission)

Read each statement carefully and indicated how you feel about each statement using the scale provided below.

1 = Very strongly disagree

2 = Strongly disagree

3 = Mildly disagree

4 = Neutral

5 = Mildly agree

6 = Strongly agree

7 = Very strongly agree

1. There is a special person who is around when I am in need.
2. There is a special person with whom I can share my joys and sorrows.
3. My family really tries to help me.
4. I get the emotional help and support I need from my family.
5. I have a special person who is a real source of comfort to me.
6. My friends really try to help me.
7. I can count on my friends when things go wrong.
8. I can talk about my problems with my family.
9. I have friends with whom I can share my joys and sorrows.
10. There is a special person in my life who cares about my feelings.
11. My family is willing to help me make decisions.
12. I can talk about my problems with my friends.

*Family subscale = Items 3, 4, 8, 11; Friends subscale = items 6, 7, 9, 12; Significant other subscale = items 1, 2, 5, 10

Appendix K

Rosenberg Self-Esteem Scale

(Reprinted from Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton Press, used with permission)

How do you feel generally?

Think about each statement that follows and rate the degree to which you agree or disagree with it on the following scale.

1	3	5	7	9
very	moderately	neutral	moderately	very
strongly	disagree		agree	strongly
disagree				agree

1. I feel that I am a person of worth, at least on an equal basis with others.
2. I feel that I have a number of good qualities.
3. All in all I am inclined to feel that I am a failure.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I take a positive attitude toward myself.
7. On the whole I am satisfied with myself.
8. I wish I could have more respect for myself.
9. I certainly feel useless at times.
10. At times, I think I am no good at all.

Appendix L

Paranoid Social Cognition

Please read each item and indicate your level of agreement using the following scale.

1 = Strongly disagree to 5 = Strongly agree

1. I do not believe that my sexual orientation is obvious to others.
2. I find myself distracted from other things that I am doing because of thoughts about my sexual orientation.
3. When interacting with some people, I am not worried that I might accidentally reveal some clues as to my sexual orientation.
4. I am watchful for signs that others might hold negative attitudes about my sexual orientation
5. I often find myself trying to push thought about my sexual orientation out of my mind.
6. I sometimes think that I give off signs or cues as to my sexual orientation.

Appendix M

Sample Items from the Positive and Negative Affect Schedule (PANAS)

*The complete PANAS can be obtained using the following citation:

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*(6), 1063-1070. doi:10.1037/0022-3514.54.6.1063

Appendix N

Sample Items from State Trait Anxiety Subscale of the State-Trait Anxiety Inventory

(Sample items reprinted from, Spielberger, C. C., Gorsuch, R. L., & Lushene, R. (1970). *State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press, Copyright (2015), used with permission from MindGarden.com)

A number of statements which people have used to describe themselves are provided below. Read each statement and then using the scale below, select the appropriate number to indicate how you feel right now, that is, in this moment

1	2	3	4
Not at all	Somewhat	Moderately so	Very Much So

3. I am tense.

9. I feel anxious.

10. I feel comfortable.

Appendix O

Examples of the Modified Reading Span Task

(Reprinted from Schmader, T., & Johns, M. (2003). Converging evidence that stereotype threat reduces working memory capacity. *Journal of Personality and Social Psychology*, 85(3), 440-452, used with permission from Dr. Schmader).

Please read the following sentences and then indicate the number of vowels in that sentence as quickly as possible. At the end of each sentence, you will be given a word to remember for later.

Set 1

They celebrated by dancing wildly.

How many vowels are in that sentence?

Please remember the word green.

The meeting was delayed again.

How many vowels are in this sentence?

Please remember the word fact.

Don't give the fish too much blood.

How many vowels are in this sentence?

Please remember the word dress.

She likes to sing in the shower.

How many vowels are in this sentence?

Please remember the word heat.

What were the 4 words you were asked you to remember?

Appendix P

Montreal Set of Facial Displays of Emotion

(Reprinted from Beaupré, M., & Hess, U. (2005). Cross-cultural emotion recognition among canadian ethnic groups. *Journal of Cross-Cultural Psychology*, 36(3), 355-370, used with permission from Dr. Hess)

A sample of four of the emotional expressions included in the Montreal Set of Facial Displays of Emotion.



Appendix Q

Subset of items from the Cohen-Hoberman Inventory of Physical Symptoms

(Reprinted from Cohen, S., & Hoberman, H. (1983). Positive events and social supports as buffers of life change stress. *Journal of Applied Social Psychology*, 13, 99-125. *Journal of Applied Social Psychology*, 13, 99-125, used with permission)

Select the number for each statement that best describes how much that problem is bothering you right now.

At one extreme, 0 means that you are not at all bothered by the problem.

At the other extreme, 7 means that you are very much bothered by the problem.

How much are you bothered by:

1. Faintness
2. Heart pounding or racing
3. Feeling flushed/sweaty.
4. Muscle tension or soreness
5. Upset stomach/indigestion
6. Rapid or shallow breathing
7. Headache

Appendix R

Online Diary Study Respondent-Driven Sampling Recruitment Coupon



EXAMINING THE PERCEPTIONS & EXPERIENCES OF GAY AND LESBIAN MANITOBANS

KATHLEEN FORTUNE, PH.D. CANDIDATE

DR. GERRY SANDE, ASSOCIATE PROFESSOR

DEPARTMENT OF PSYCHOLOGY

UNIVERSITY OF MANITOBA

IN EXCHANGE FOR PARTICIPATING YOU WILL BE ENTERED INTO A PRIZE DRAW WHICH INCLUDES (ONE 16GB IPOD NANO, 2 \$50 POLO PARK GIFT CARDS, 2 \$50 SILVER CITY MOVIE THEATRE GIFT CARDS)!

FOR EACH ADDITIONAL PERSON YOU RECRUIT YOU WILL RECEIVE AN ADDITIONAL ENTRY INTO THE DRAW (MAX OF 4 ENTRIES).

IF YOU WOULD LIKE TO LEARN MORE ABOUT PARTICIPATING, PLEASE EMAIL KATHLEEN FORTUNE AT kathleen.fortune@gmail.com AND INCLUDE THE CODE # BELOW IN THE EMAIL SUBJECT LINE.

CODE #:

Appendix S

Online Diary Study Informed Consent Form

Research Project Title: Media Portrayal of Gay and Lesbian people

Researcher(s): Kathleen Fortune, PhD Student

Sponsor (if applicable): Dr. Gerry Sande, Associate Professor of Psychology

This consent form, a copy of which will be emailed to you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, you should feel free to ask.

The purpose of our research is to learn more about your perceptions of how gay and lesbian people are portrayed in the media. We want to know about the positive and negative depictions you see in the media on a regular basis. You will be asked to complete a brief series of questions today and then you will be asked to provide an e-mail address that you check regularly. I will contact you at that email address every 3 days to ask you to login to an online survey to complete a series of questions on your perceptions and experiences.

I know that you worry that your responses will not be entirely confidential. We ensure the confidentiality of your responses in two key ways. First, we do not ask you to provide any identifying information aside from your signature on this consent form. Instead, you will be assigned a participant code so that each time you login you will be asked to enter that unique code. That code will be kept separate from this consent form. The data collected on the survey website will be stored on a computer in a secure laboratory.

In exchange for your participation you will be entered into a draw to win 1 of 10 great prizes (e.g., iPod nano, gift certificates to Polo Park and Silver City theatres). By the end of August 2011 a summary report of the findings and a more detailed description of this study will be available to you via e-mail at the address you provide here: _____.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so feel free to ask for clarification or new information throughout your participation.

This study has been approved by the Psychology/Sociology Research Ethics Board (PSREB), and any concerns and complaints regarding this procedures you may contact PhD Student Kathleen Fortune umfortu1@cc.umanitoba.ca or Dr. Gerry Sande (474-9626) or gsande@cc.umanitoba.ca. Alternatively, you may contact the Human Ethics Secretariat (474-7122), or e-mail margaret_bowman@umanitoba.ca. A copy of this consent form has been given to you to keep for your records and reference.

Participant's Signature Date

Researcher and/or Delegate's Signature Date

Appendix T

Online Diary Study Debriefing Form

Thank-you for taking part in our study. We sincerely appreciate your commitment to this study and your willingness to share your experiences with us. Now we want to take the opportunity to tell you a bit more about this research and explain why we think it has important implications for you and other gay and lesbian people.

Despite significant legal progress with respect to rights for gay and lesbian people in Canada, research continues to show that many gay and lesbian people conceal their sexual orientation. They conceal for a number of different reasons, including fear of losing important loved ones, fear of being negatively stereotyped or discriminated against in the workplace or educational setting, and even fear of physical violence. A significant amount of research has already shown that keeping a secret, any secret, is hard. It is associated with increased anxiety, concerns about slipping up and revealing the secret, paranoia about what other people know, as well as various interaction strategies aimed at keeping the secret. With that said, we know that keeping a secret about something positive like a birthday party or a Christmas gift is a very different experience from keeping a secret about an aspect of your identity such as your sexual orientation. The fears are heightened because the consequences of disclosure are so much greater. The effort required to maintain this secret from others can be mentally and physically exhausting.

The purpose of this research is to examine exactly how concealing one's sexual orientation might impact other aspects of one's daily life. We asked you to tell us about your relationships with others, your perceived level of social support, to whom you have disclosed and from whom you conceal, your experiences with prejudice and discrimination, as well as some measures of your mood and psychological well-being. Finally, we asked you to tell us a bit about your health in terms of symptoms you experienced and in terms of the kinds of adaptive or maladaptive behaviours you regularly engage in (such as smoking, drinking, your diet, sleep habits). We also asked you to complete a couple of questionnaires that measured emotional burnout and mental and physical fatigue.

All of these questions were designed to help test our hypothesis that greater concealment will be associated with various types of depletion – essentially, concealing your sexual orientation leaves you with less in the tank to deal with all the other aspects of your daily life. For example, you might underperform on cognitive tasks required of you for your job, you might feel less able or interested in dealing with the emotions of your friends, family, or romantic partner. You may feel less equipped to choose the salad over the Big Mac, to resist that cigarette or alcoholic drink, or to get up on a cold winter morning and exercise. These activities are just examples of the many everyday tasks we have to perform that tap into our limited self-control resources. We hypothesize that feeling that one has to conceal their sexual orientation represents an additional layer of stress which may significantly contribute to failures of self-control and in turn, may negatively impact the psychological and physical health of gay and lesbian people.

The reason we had you answer the same set of questions every three days for one month was so that we could track whether days in which you concealed were associated with subsequent depletion. We also wanted to evaluate the cumulative effects of concealing over a longer period

of time because for many gay and lesbian people – concealment is an everyday, long-term challenge.

As stated earlier, your responses to all of the questionnaires will be absolutely confidential. Your name will be converted to a code number, and only people who are associated with this research will see your name or your responses. In return, we want you to honour our confidentiality -- please do not tell anyone about the details of this study. If the other students know about the study before they participate, their data will be biased and thus cannot be included.

Your participation in this study is greatly appreciated. If you are interested in obtaining a copy of the results once the study is complete, you may contact the primary researcher, Kathleen Fortune at fortune@cc.umanitoba.ca.

If you have any complaints, concerns, or questions about this research, please feel free to contact the Human Ethics Secretariat (474-7122), or e-mail margaret_bowman@umanitoba.ca.

Thank you very much for your participation.

Appendix U

Diary Study Media and Concealment Questions

In the past 3 days, how many times were you exposed to information in the media that you think portrayed gay and lesbian people positively or increased public acceptance of gay and lesbian people?

Please enter a whole number _____

Please describe those instances.

In the past 3 days, how many did you observe instances of homophobic attitudes in the media (e.g., Television, movies, music videos, internet) that were insulting to gay and lesbian people?

Please enter a whole number ____

Please describe those instances.

In the past 3 days, how many times did you observe a negative portrayal of gay and lesbian people in the media. This does not have to be blatantly homophobic words or actions - just anything you believed to portray gay and lesbian people in a negative light.

Please enter a whole number ____

Please describe those instances.

In the past 3 days, how many times did you interact with someone who you believe made an inaccurate assumption about your sexual orientation?

Please enter a whole number ____

Please describe those instances.

In the past 3 days, how many times did you observe information in the media that was related to gay and lesbian rights?

Please enter a whole number ____

Please describe those instances.

In the past 3 days, how many times were you in a situation in which you felt that you had to conceal your sexual orientation?

Please enter a whole ____

Please describe those instances.

Appendix V

Diary Study Participants' Open-Ended Responses to Concealment Questions**Reasons for Concealment**

Participants' reasons for concealing were diverse and reflected the following concerns: how they would be perceived by others, upsetting the people they were interacting with, privacy or boundaries between personal and professional life, and negative consequences for disclosure at their places of education or work. Each of these reasons is supported by the words of the participants themselves.

Interpersonal Consequences

"Meeting a new friend. I just didn't want her to judge me right away or anything like that. I wanted her to like me for my personality and not think differently of me for anything. Also at work one employee said something about getting "more vagina" than I could. Didn't want to say anything because I thought it would make things awkward and uncomfortable."

"My friend from my old town is not really capable of thinking on her own, in my opinion. Therefore i [sic] know what her reaction will [sic] be and so when talking to her about when to hang out, she said she's just started dating this guy she fell in love with. When asking me how I was doing, I mentioned nothing about my dating life."

"I went to an Ally Training - even though it was supposed to be a safe space, I felt very pressured to fit into the group and play a straight role. The group mainly consisted of middle-aged straight women with very heterosexist ideations [sic]."

"My partner and I looked at a real estate property that was being sold privately. When we drove up to the house and noted that the selling partners were more elderly, we opted to be "friends" rather than partners. As I spoke in the house to my partner, I referred to "her kids" and such as to conceal our sexual orientation."

"I chose not to hold hands with my partner at Zellers, even though I wanted to because we have seen very little of each other lately, because she had been receiving nasty homophobic/sexist (because she looks androgynous/like a lesbian and people often cannot tell her sex) stares from another shopper. That other shopper was near us for a good portion of the time we were at Zellers so I didn't want to hold hands because I didn't want to encourage any more negativity toward my partner or to us."

"I was visiting my grandma over the weekend a number of times. She is not aware of my sexuality and sometimes asks me random questions about my recent ex-girlfriend. For example [sic] "Why haven't I seen _____ in so long". These are always tricky situations because part of me feels like she might have some sense that my relationship with my ex was more than just a friendship. But I always lie and conceal the reason she is no longer around, because I am afraid of risking my relationship with my grandma. She is 95 years old, and even though I have these inclinations that she is more aware of my sexuality than I think, I am also too afraid to potentially risk dissolving our relationship with the little time we have left together."

"I realize that I am very uncomfortable in the Women's [sic] changing room at my gym at work - [sic] don't want my coworkers to think I am checking them out even though I am...even though I'm trying really hard not to. If they knew I was gay they might be uncomfortable or feel threatened by my presence which I don't want."

"Checking in and out of the hotel this weekend and receiving room service. my partner and i [sic] bought a valentine's package deal: an overnight stay, chocolates, roses, petals, sparkling wine, 2 free martinis, and breakfast. it [sic] was pretty obvious we were a lesbian couple and was probably oversensitive in how i took in interactions around me. i [sic] hid in the bathroom wouldn't make eye contact with staff when we received room service. easier. [sic]"

"My mom and I were our [sic] for lunch and she brought up getting married to a nice girl and having children but I didn't really correct her, I just kind of ignored it. So once again I could've told her about my sexual orientation but didn't."

"With my girlfriends parents - it's so hard because we're always paying close attention to nuances....afraid we'll look at each other in a way that will give us away..."

"I had dinner with my parents (who I am not yet out to) and I had to conceal my sexual orientation because I am not ready to tell them yet. I'm scared of the fallout."

Upsetting Others

"I also deliberately kept my boy friend [sic] from my apartment because I don't want my roommates to be uncomfortable around me."

"My family friend made a homophobic comment about our waiter. When she asked if there were any 'boys' in my life. I just said no to avoid an uncomfortable conversation."

"Even though my parents know I am a lesbian, I omit the details about my sexual orientation (love interests, relationship issues, the orientation of my friends) from my parents. It makes them uncomfortable, and though they "tolerate" homosexuality, they don't exactly accept it in their daughter."

"Had dinner at an old folks home with my GF's grandma. She introduced us as roommates because the other people at the home would gossip about it if she told them the truth. I said nothing different because I know she considers me part of the family and those old ladies can be terrible gossips."

"From my grandmother, who does not know my sexual orientation, nor that I am married. I have wanted to come out to her many times in the past, but my mother has adamantly discouraged me from doing so, because of what she (my mother) would have to "deal" with in terms of my grandmother's presumably negative reaction."

Privacy/Boundaries

"As I'm in a position of authority in my part-time job, I don't feel it's professional to give anyone such personal information."

"I do not conceal my orientation, but I do not usually broadcast it either. There are fine distinctions here. When does being careful or private become concealment?"

"I usually don't tell people I meet in purely business settings - if they become acquaintances outside of business settings then I usually tell them. Generally I'm fairly private about that sort of thing and don't tell people very much unless I know them socially as well as professionally."

"Although I still keep myself private I am less inclined to keep the entire thing taboo. I tell people I am with someone I like very much and when they meet them they will be surprised. The closet for me is a gradual process and my family deserves to know before my acquaintances."

Work/School Environments

"I work in a care home for elderly residents. I believe they have some pretty fast held ideas and do not want to jeopardize how they would see me if they knew I was gay."

"I am a tour guide at _____. In the past I've had negative comments made at the portion of the tour where I point out Pride and/or the _____ Centre. As a result, I make a point to keep my sexuality to myself."

"Speaking to the hiring manager at the _____ where I have applied for a job I felt it very important to not mention my personal life at all in case he finds out I am gay and does not hire me. Typically I am loud and proud BUT [sic] I really need this job for the next couple of months so I am not telling anyone, just leaving my personal life out of it, which is ok in this one instance."

"I'm a _____ therapist and yesterday I had a client who was very much an "alpha male", so as soon as I saw him I felt I had to turn on my "straight voice". The reason I felt I had to conceal my sexual orientation from him is because it was his first ever massage and he was very nervous."

"In my _____ class my teacher is religious and so is the student who sits next to me. We exchange notes when we miss a day and study together for history. She said her religion said being gay or lesbian was a sin. So under these circumstances i always feel I have to hide my sexuality."

"Every day at work, i [sic] have to hide who i am because the boss tells me so. If I wanted to hide myself, I would, but don't make me stay in the closet that I have already opened."

"my new job, i am a bit fearful as i am a _____ worker.. [sic] i talk about my roommate, although she is really my partner, but since I work for so many families, I can't chance it"

"A VERY [sic] strict _____ co-worker who WOULD [sic] most definatly [sic] cause a stink about my gayness is giving me a ride to work in the morning and so when I texted her I said " _____ " will drop me off at your place on the way to drop off our daughter" instead of saying _____ I said ___... not LYING [sic]... but not being outright haha [sic]"

"I do work in a job with vulnerable people so i know i can be accused easily of something ...which would have to be investigated...and though i would find to innocent of what i was accused of ...it would still affect me...even where i might lose my job for a while until i was cleared...so though i think my emediate superior is nice..i do not wish to risk it especialy with some of my more conservative co-workers."

Strategies of Concealment

Like their reasons for concealment, participants' strategies of concealment varied, with the most common strategy being omission, or failure to correct the heteronormative assumptions made by others. However, they also engaged in some fabrication, misrepresenting the truth about their sexual orientation or romantic and sexual relationships through the manipulation of pronouns, or by changing their public behaviour.

Omission

"I work at a local ____ studio. Of the students and parents who attend the studio regularly, I am unaware of who know about my sexuality and who does not. I choose not to bring it up in conversation with anyone."

"I usually tend to avoid talking about personal relationships or similar topics unless someone brings it up. Then I'll usually tell people I'm single (but don't usually say I'm gay unless they ask directly)"

"I work for a _____ board so I don't discuss with colleagues my romantic life. I eat in the teacher's lounge from time to time and feel no need to discuss relationships"

"My partner's mom is in her 80's and although not ideal, it is just easier to go along with it than challenge or correct."

"Again, at work I felt I could not be honest about my sexual orientation. I have no doubt that most people assume I am a gay woman. However, if I feel unsafe (as I have for the past several weeks now) I will not confirm their suspicions by discussing my sexual orientation. Concealment is almost impossible for me but at the same time, there can be the "don't ask, don't tell" philosophy that is utilized in my work."

"The parents of my client asked me if I had a boyfriend. I told them no, but did not tell them that I had a girlfriend."

Pronoun Game

"My grandma does not like women who aren't straight (though she loves gay men) so I referred to my girlfriend just as '____' and not as 'my girlfriend'."

"I was relaying an experience with my partner and her mother and sister. When I speak [sic] of the incident and share my experience, I am very careful not to say "she" or "her". I don't use male pronouns but I speak [sic] in terms of "my partner" and "my partner's family.""

"I was relaying an experience with my partner and her mother and sister. When I speak of the incident and share my experience, I am very careful not to say "she" or "her." I don't use male pronouns but I speak in terms of "my partner" and "my partner's family." I am always afraid that if I reveal my identity, people will stop listening to what I have to say or focus on my sexual orientation rather than on the message I am giving others."

Fabrication

"I also remembered that I set up two separate Facebook accounts - one under my real name, to throw potential employers off the trail, and my private "gay" one under my online alias. Many people in the gay community would recognize my online name. My concern is that a potential employer wouldnt hire me if they knew I was gay."

"I was teaching a grade 2 class and one of the kids asked me if I had a husband and I said yes. I surprised myself in saying yes, as I do not generally lie about my sexuality and it could have been a teachable moment, but I was tired and distracted and did not have the energy to deal with the possible reactions to outing myself."

"I was at a wedding social for a friend. I brought my boyfriend. We acted more like friends as not to offend anyone."

Appendix W

Shirom-Melamed Burnout Questionnaire

(Reprinted from Melamed, S., Kushnir, T., & Shirom, A. (1992). Burnout and risk factors for cardiovascular diseases. *Behavioral Medicine*, 18(2), 53-60.
doi:10.1080/08964289.1992.9935172, used with permission)

Using the scale provided below, please indicate how often, in the past 3 days, you have experienced the following feelings.

1	2	3	4	5	6	7
Never or almost never	Very infrequently	Quite infrequently	Sometimes	Quite frequently	Very frequently	Always or almost always

1. I felt tired.
2. I had no energy for going to work in the morning.
3. I felt physically drained.
4. I felt fed up.
5. I felt like my 'batteries' were dead.
6. I felt burned out.
7. My thinking processes were slow.
8. I had difficulty concentrating.
9. I felt that I wasn't thinking clearly.
10. I felt that I wasn't focused in my thinking.
11. I had difficulty thinking about complex things.
12. I felt that I was able to be sensitive to the needs of the people around me.
13. I felt that I was not capable of investing emotionally in the people around me.
14. I felt that I was not capable of being sympathetic to the people around me.

Note. Physical fatigue = items 1-6, Cognitive weariness = items 7-11, Emotional exhaustion = items 12-14.

Appendix X

Subset of items from the Cohen-Hoberman Inventory of Physical Symptoms

(Reprinted from Cohen, S., & Hoberman, H. (1983). Positive events and social supports as buffers of life change stress. *Journal of Applied Social Psychology*, 13, 99-125. *Journal of Applied Social Psychology*, 13, 99-125, used with permission)

Select the number for each statement that best describes how much that problem has bothered or distressed you during *the past 3 days*, including today.

At one extreme, 0 means that you have not been bothered by the problem.

At the other extreme, 5 means that the problem has been an extreme bother.

How much were you bothered by:

1. Faintness
2. Back pain
3. Nausea
4. Heart pounding or racing
5. Migraine headache
6. Acid stomach or indigestion
7. Pains in the heart or chest
8. Muscle tension or soreness
9. Stomach cramps
10. Numbness or tingling in part of your body
11. Severe aches or pains

Appendix Y

Health Behaviours Checklist

Please answer the following questions by providing your best estimate of the number of times you have engaged in each of these behaviours *over the past 3 days*.

Eating

How many times in the past 3 days have you eaten fast-food (e.g., not home cooked)?

How many times in the past 3 days have you eaten snacks (e.g., chips, cookies, chocolate)?

How many times in the past 3 days have you skipped a meal?

How many times in the past 3 days have you eaten something to make yourself feel better (e.g., to make you feel less sad or to reduce stressful feelings)?

Substance Use

In the past 3 days, how many cigarettes did you smoke?

In the past 3 days, how many alcoholic beverages did you consume?

Sleep and Exercise

In the past 3 days, how many times have you had difficulty sleeping?

In the past 3 days, how many times have you exercised for 30 minutes or more?