

A Study of the Influence of Voluntary Solitude-Seeking on Person Perception

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Abstract

Predicted in this study was that someone who wants to be alone instead of spending time with friends would be perceived more negatively than someone who is simply too busy to spend time with friends. This negative person perception was also predicted to be more prominent among participants who are highly extraverted or have a low preference for solitude. The hypotheses were tested with a sample of 152 participants. However, no supporting evidence was found. This could very well be due to it having been too difficult for participants to imagine the hypothetical scenario that they had to read about a friend declining an invitation. In future research, investigating the relationship between specifically perceived sociability and indications of someone voluntarily seeking solitude might cause some interesting results to be found that were not found in the current study.

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Solitude is often seen as equivalent to loneliness and therefore also often described as something negative, even though solitude objectively refers to the absence of social interaction, while loneliness is a subjective unpleasant feeling that can also be present when interacting with other people. Especially in the fast paced and highly social atmosphere of present-day western society, spending as much time with others as possible seems to be the norm. Often the expectation is that by spending little time alone, one doesn't have to feel lonely. However, it could result in misconceptions about people who voluntarily seek solitude.

Experiencing Negative Solitude

The need to belong, or the need to form and maintain strong, stable interpersonal relationships, is a fundamental human motivation (Baumeister & Leary, 1995). Love and belongingness needs are also placed in the middle of Maslow's motivational hierarchy (Maslow, 1968). An emphasis on this notable importance of spending time with others might have caused the fact that many researchers in the past focused on the negative effects of spending time alone. This causation may also be the other way around, since it has been shown that negative effects are indeed very much present, especially when people are alone because they are being left out and ignored. This is called ostracism and causes people's self-reported levels of belonging, control, self-esteem, and meaningful existence to drop, even when they know that they are being ostracized by a scripted computer (Zadro, Williams, & Richardson, 2004). Furthermore, the results of an fMRI study by Eisenberger, Lieberman, and Williams (2003) suggest that being socially excluded activates the same region of the brain as exposure to physical pain does.

Probably the most well-known possible unpleasant consequence of spending time alone is loneliness. Loneliness seems to correlate with depression and low self-esteem (Brage, Meredith, & Woodward, 1993; Ouellet & Joshi, 1986), and has been associated with elevated blood pressure and impaired sleep (Cacioppo et al., 2002). It would therefore not be surprising if people would avoid loneliness at all cost. Still, participants in a study by Epley and Schroeder (2014) expected to feel better if they didn't connect with strangers when traveling by train or bus than if they did. However, afterwards those who were asked to connect with strangers when commuting reported a more positive experience than those who remained disconnected or commuted as normal. At least sometimes, aloneness seems to be less satisfying for people than social interaction.

From an evolutionary point of view it makes sense that there are negative effects of spending time alone, since when someone is alone too much there is little opportunity for him or her to gain resources from others and to find a partner. One can thus also understand why solitude is often used as a punishment, for example in the instance of prison inmates being put into isolation after behaving badly. The whole idea of grounding children is even based on seeing solitude as a punishment, which might result in children seeing spending time alone as a bad thing too.

Experiencing Positive Solitude

A study by Larson (1990) has shown that people indeed generally see solitude as something negative. Participants in this study reported feeling less happy at times when they were alone than at times when they were not alone. However, this was less true for older participants, which could possibly be due to them having learned how to cope with being alone and how to appreciate it. If this is the case, one might conclude that people who feel good when being alone have found a way to get something out of it and people who feel bad when being alone haven't.

There is some evidence that suggests this might be true. Maslow (1970) found that one of the characteristics of self-actualized people, those who have their self-fulfillment needs met, is that they have a high need for privacy. A certain amount of privacy, or solitude, seems to be necessary to have people become the best version of themselves. Winnicott (1958) even sees it as a sign of emotional maturity when the capacity to satisfyingly be alone is learned.

Apparently, solitude can be seen as something negative or as something positive. Some people feel lonely when alone, others very much appreciate alone time. The results of a study by Long (2000) showed that this difference can be explained by volition. When someone voluntarily seeks solitude, solitude is experienced as something positive. When someone is involuntarily alone, solitude is experienced as something negative. According to Larson (1990), solitude places certain demands on people and it requires the ability to maintain a constant sense of self that can survive even when there is no immediate social reinforcement. Because not everyone is able to do this, it is probably the reason for why some people are better able to handle solitude and see it in a more positive light than others.

The capacity to be happy when alone can have some big benefits and curiosity toward these benefits seems to finally be increasing in recent years. Larson and Lee (1996) have shown that through aloneness, a higher satisfaction with life can be achieved. The incredible freedom of solitude probably plays a big part in this. It seems to be one of the most important benefits of spending time alone, together with an increased ability to concentrate or focus (Long, 2000). Solitude can also help greatly when trying to induce creativity (Amabile, 1983).

Perceiving Solitary Behavior in Others

It seems research hasn't been done yet on if people who voluntarily spend time alone are perceived relatively negatively. There has, however, been conducted research on how lonely and introverted people are perceived by others. Tsai and Reis (2009) have shown that

people who are lonely are rated more negatively than people who aren't lonely. They also seem to be less liked, less preferred as a friend, and are rated as weaker, more passive, less attractive, and less sincere (Lau & Gruen, 1992). In childhood, introverts also seem to be accepted less by peers and they seem to be less popular (Jensen-Campbell et al., 2002).

Introversion and loneliness correlate positively with preference for solitude (Burger, 1995), so it might be the case that the perception of those who are introverted or lonely corresponds in part with the perception of those who seem to have a higher preference for solitude. A possible reason for why these perceptions may show some similarity is that it might be hard for people to differentiate between someone happily spending time alone and someone unhappily spending time alone. The fact that some people are able to make good use of solitude may even get overlooked when forming an opinion of those who seek solitude. This could be due to people feeling like those who enjoy solitude don't like the company of others very much, which can be perceived as weird. Research by Leary, Herbst, and McCrary (2003) shows that this is not the case though. In this study, the frequency and enjoyment of solitary activities were more strongly related to a high desire for solitude than to a weak desire to spend time with others, so people actually sometimes prefer solitude over social interaction without disliking social interaction itself.

There are differences between individuals regarding what they see as a good balance between solitude and social interaction, and a lack of understanding toward each other could be a result of this. People seem to prefer becoming friends with people who are similar in extraversion to themselves (Feiler & Kleinbaum, 2015). Since people might (mistakenly) see someone voluntarily seeking solitude as an indicator that this person is low in extraversion, it could be expected that those high in extraversion perceive someone who voluntarily seeks solitude especially negatively.

More generally, perceived similarity is even a positive predictor of marital well-being (Acitelli, Douvan, & Veroff, 1993) and in research by Byrne (1961), participants evaluated a stranger who had similar attitudes to themselves as more intelligent than a stranger who had dissimilar attitudes. It seems people who are similar to oneself, in whatever way, are evaluated more positively, so it could also be expected that those who have a low preference for solitude themselves evaluate someone who shows an indication of having a high preference for solitude especially negatively.

Current Research

In the current study, investigated will be if a hypothetical friend who seeks solitude voluntarily is perceived relatively negatively. The manipulation will consist of having participants read one of two scenarios. Hypothesized is that a friend who declines an invitation to hang out because he or she would rather be alone, which should be a sign of voluntarily seeking solitude, is evaluated more negatively by participants than a friend who declines the invitation because he or she is too busy (H1). Thus, an indication of a friend having a high preference for solitude is expected to make participants perceive this friend more negatively.

Secondly, participants who are higher in extraversion are hypothesized to evaluate a friend who declines an invitation to hang out because of voluntarily seeking solitude especially negatively (H2). Participants' extraversion may be a potential moderator in the relationship between a friend declining an invitation and the perception of this friend.

Lastly, it is also hypothesized that participants who have a low preference for solitude themselves will evaluate a friend who declines an invitation to hang out because of voluntarily seeking solitude especially negatively (H3). How high participants themselves are in preference for solitude might be a potential second moderator.

Method

Power Analysis

For determining the desired sample size for the study, G*Power 3.1 was used (Faul, Erdfelder, Buchner, & Lang, 2009). First, an a priori power analysis was conducted for when hypothesis 1 would get tested through one-tailed *t*-tests to measure the differences between independent means. While anticipating a medium effect size of $d = 0.5$ (Cohen, 1988), power of 0.80, $p = 0.5$, and allocation ratio $N_2/N_1 = 1$, this power analysis indicated the sample should consist of at least 102 participants.

After this, another a priori power analysis was conducted for when hypotheses 2 and 3 would get tested. Although linear multiple regression analyses would be used for testing these in the actual data analysis, in the G*Power program too much information had to be known beforehand to be able to perform the power analysis. Therefore, the power analysis was conducted for an ANOVA with fixed effects, special effects, main effects, and interactions, by pretending the continuous variables *extraversion* and *preference for solitude* would be categorical variables. While anticipating a medium effect size of $f = 0.25$ (Cohen, 1969), power of 0.80, $p = 0.05$, numerator $df = 1$, and number of groups = 4, this second power analysis showed the sample should consist of at least 128 participants.

Participants

To reach the desired sample size, data collection was done in collaboration with two other students of Tilburg University. The three students asked mostly (Dutch) friends and family to fill in the online survey that was used for the study, which consisted of multiple questionnaires and was made with survey hosting service Qualtrics. A link to the survey was sent to them via WhatsApp and e-mail, and multiple Facebook posts were made. Participation was possible from March 2017 until May 2017.

Because the second power analysis that was conducted indicated the biggest desired sample size, this was the one that was used as a guideline when collecting data. Ultimately, 243 responses were recorded. After deleting participants who indicated that they had filled in the survey multiple times, 231 responses were left ($M_{\text{age}} = 27.30$, $SD = 11.26$, 60.3% female). Unfortunately, a lot of other recorded data was also unusable for the data analysis. Seventy-five participants filled in less than 80% of the survey, three participants had difficulties in understanding the questions, and one participant indicated not being able to make much sense of the hypothetical scenario. After deleting their data too, the sample that would be used for the data analysis consisted of 152 participants ($M_{\text{age}} = 27.26$, $SD = 11.24$, 60.5% female). Participants were randomly assigned to one of two conditions. There were 73 participants in condition 1 (*busy scenario*) and 79 participants in condition 2 (*alone time scenario*).

Procedure and Materials

At the start of the survey, participants read one of two scenarios and were asked to imagine the situation that was described in this scenario. How these scenarios were described is presented below.

“The weekend is finally here and you haven’t seen your friends in a while. You feel like hanging out with them tonight. It doesn’t matter what you’ll do together: going to a club, having a few drinks at a bar, or something completely different like playing some games at someone’s place - anything is fine with you. You’ve asked around who would like to join you and some friends are up for it. However, in response to your invite, one of your friends sent you the following text...”

The text was different in each scenario, which forms the manipulation in this study. In the busy scenario the text was: “Sorry! I can’t make it. I’m really busy tonight.” In the alone time scenario the text was: “Sorry! I can’t make it. I’m having some alone time tonight.”

Person perception. After reading the scenario, participants were asked about their impression of the friend who declined the invitation. Since thinking of a real friend could influence participants' answers, it was explained that they should really try to think of a hypothetical person. By using a 7-point Likert scale (1 = *not at all*; 7 = *extremely*), the friend had to be rated on fifteen characteristics. These characteristics were about morality (sincere, honest, righteous, trustworthy, and respectful), sociability (kind, friendly, warm, likeable, and helpful), and competence (intelligent, competent, efficient, skillful, and capable). Scores on these three dimensions were averaged to provide three indexes of person perception for the data analysis. The characteristics were derived from study 1 in research by Brambilla, Rusconi, Sacchi, and Cherubini (2011) on information gathering about others.

Guilt. One question was about if the participant thought the friend would feel guilty about declining the invite. A 5-point Likert scale was used for this question and scoring ranged from "Definitely not" to "Definitely yes".

Needs and mood. Nineteen items (see Appendix) aimed to measure how the participant would feel upon receiving the text that was described in the scenario. Again, a 5-point Likert scale was used, with a score of 1 indicating that the participant didn't agree at all with a statement and a score of 5 indicating that the participant agreed extremely with a statement. The items were based on the assessment of belonging, self-esteem, mood, and meaningful existence in a study on ostracism by Williams (2009). Nine of the items were negatively valenced.

Preference for solitude. Participants' trait preference for solitude was measured with the Solitude-Seeking Scale, which was derived from research by Ren (2016). It consists of sixteen items (e.g., "I do not like being alone, "The perfect weekend is spent alone") and, in contrast to Burger's (1995) Preferences for Solitude scale, it makes use of a continuous Likert scale. Participants indicated how much a statement applied to them on a scale from 1 (*not at*

all) to 7 (*very much*) and the item “I prefer spending Friday night alone rather than being with others” was changed to “I prefer spending Friday night with others”. Five items had to be reverse-coded and all items were averaged to provide a single index of preference for solitude.

Personality. For measuring the personality traits extraversion, agreeableness, conscientiousness, neuroticism, and openness, the Big Five Inventory was used (John & Srivastava, 1999). Participants had to indicate the degree to which they agreed with forty-four items on a 5-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*). Eight items, of which three had to be reverse-coded, measured extraversion. Nine, of which four had to be reverse-coded, measured agreeableness. Conscientiousness was also measured with nine items and, again, four had to be reverse-coded. Neuroticism was measured with eight items, of which three had to be reverse-coded. Lastly, ten items measured openness, of which two had to be reverse-coded. Scores on all five personality traits were again averaged to provide five indexes.

Results

Analyses were first done with the sample of 152 participants ($N = 152$), by using IBM SPSS Statistics (version 23.0, 2015). Second analyses were done after controlling for a strong enough manipulation. All significance levels were compared with an alpha level of 0.05.

First Comparison of Person Perception Means

One-tailed independent samples t -tests were conducted to compare person perception means in busy scenario and alone time scenario conditions. The reported p -values are adjusted to one-tailed testing. Person perception was measured on three dimensions: morality, sociability, and competence. Hypothesized was that scores on the three dimensions would be lower if the hypothetical friend seeks alone time voluntarily instead of declining an invitation because of just being too busy.

The first *t*-test, with perceived morality as the dependent variable, showed no significant difference in the expected direction in the scores for the participants who read the busy scenario ($M = 4.58, SD = 1.16$) and the participants who read the alone time scenario ($M = 4.89, SD = 1.17$), $t(150) = -1.64, p = 0.95$. The *t*-test with perceived sociability as the dependent variable showed no significant difference in the expected direction in busy scenario ($M = 3.93, SD = 1.10$) and alone time scenario ($M = 3.91, SD = 1.04$) conditions either, $t(150) = 0.10, p = 0.46$. Perceived competence means were also not higher in the busy scenario condition ($M = 4.35, SD = 0.90$) than in the alone time scenario condition ($M = 4.40, SD = 0.98$), $t(150) = -0.29, p = 0.61$. The impression people have of someone who prefers alone time over hanging out seems to not be more negative than the impression of someone who is too busy to hang out, so no supporting evidence for hypothesis one was found.

First Moderator Analyses

Also, hypothesized was that participants' higher extraversion and lower preference for solitude should make the evaluation of the hypothetical friend more negative. Six linear multiple regression analyses were conducted by using version 2.16.3 of the PROCESS macro for SPSS (Hayes, 2013) to test if this was indeed the case.

First, an analysis was done with extraversion as the moderator. The interaction term between scenario condition and extraversion was entered, with perceived morality as the dependent variable. The interaction term was not a significant predictor of perceived morality ($\beta = -0.15, t(148) = -0.54, p = 0.59$) and it didn't explain a significant increase in variance in perceived morality, $\Delta R^2 = 0.00, F(1, 148) = 0.29, p = 0.59$. Entering the interaction term between scenario condition and preference for solitude showed this interaction to not be a significant predictor of perceived morality either ($\beta = 0.33, t(148) = 1.51, p = 0.13$) and it again didn't explain a significant increase in variance in perceived morality, $\Delta R^2 = 0.02, F(1, 148) = 2.28, p = 0.13$.

Regression analyses were also conducted with perceived sociability as the dependent variable. The interaction term between scenario condition and extraversion wasn't a significant predictor ($\beta = 0.14$, $t(148) = 0.57$, $p = 0.57$) and didn't explain a significant increase in variance in perceived sociability, $\Delta R^2 = 0.00$, $F(1, 148) = 0.32$, $p = 0.57$. The interaction term with preference for solitude was also not a significant predictor ($\beta = 0.31$, $t(148) = 1.62$, $p = 0.11$) and didn't explain a significant increase in variance, $\Delta R^2 = 0.02$, $F(1, 148) = 2.63$, $p = 0.11$.

Lastly, the same regression analyses were conducted with perceived competence as the dependent variable. Again, the interaction term between scenario condition and extraversion wasn't a significant predictor ($\beta = 0.04$, $t(148) = 0.17$, $p = 0.87$) and didn't explain a significant increase in variance, $\Delta R^2 = 0.02$, $F(1, 148) = 0.03$, $p = 0.87$. The interaction term with preference for solitude as the moderator was also not a significant predictor for perceived competence ($\beta = 0.24$, $t(148) = 1.59$, $p = 0.11$) and didn't explain a significant increase in variance in perceived competence, $\Delta R^2 = 0.02$, $F(1, 148) = 2.63$, $p = 0.11$. Participants' extraversion and preference for solitude seem to not be moderators in the relationship between scenario condition and person perception, according to the results of these multiple regression analyses. The results of these regression analyses are shown in Table 1.

Table 1

Moderators in the Relationship between Scenario Condition and Person Perception

	β	ΔR^2	F	t	p
Perceived morality ¹					
Extraversion ²	-0.15	0.00	0.29	-0.54	0.59
Preference for solitude ²	0.33	0.02	2.28	1.51	0.13
Perceived sociability ¹					
Extraversion ²	0.14	0.00	0.32	0.57	0.57
Preference for solitude ²	0.31	0.02	2.63	1.62	0.11
Perceived competence ¹					
Extraversion ²	0.04	0.02	0.03	0.17	0.87
Preference for solitude ²	0.24	0.02	2.63	1.59	0.11

Note. Person perception measure¹. Moderator².

Manipulation Checks

There were two manipulation checks in the study, but leaving participants who failed these out of the analyses would cause the sample to be too small. After first including those who failed the manipulation checks, the data analysis was redone without including them. Now, the sample consisted of 104 participants ($M_{\text{age}} = 27.70$, $SD = 11.43$, 61.5% female), which would be enough to reach the desired sample size for hypothesis one, but not for the other two hypotheses. There were now 42 participants in condition 1 and 62 participants in condition 2. In the first manipulation check question, participants had to indicate if the statement “In the scenario, one of your friends declined your invitation to hang out tonight” was true, false, or if they weren’t sure. The second question asked if participants thought the friend was going to be busy tonight, was going to spend time alone, or if they weren’t sure.

Second Comparison of Person Perception Means

Again, *t*-tests were conducted with perceived morality, perceived sociability, and perceived competence as the dependent variables. Yet again, perceived morality showed no significant difference in the expected direction for the participants who read the busy scenario ($M = 4.61$, $SD = 1.24$) and the participants who read the alone time scenario ($M = 5.09$, $SD = 1.16$), $t(102) = -1.98$, $p = 0.98$. The *t*-test with perceived sociability as the dependent variable again showed no significant difference in busy scenario ($M = 3.93$, $SD = 1.27$) and alone time scenario ($M = 4.04$, $SD = 1.04$) conditions either, $t(102) = -0.50$, $p = 0.69$. Lastly, perceived competence means were not higher in condition 1 ($M = 4.36$, $SD = 0.93$) than in condition 2 ($M = 4.45$, $SD = 1.07$), $t(102) = -0.46$, $p = 0.61$. Thus, the conclusion doesn't differ from the conclusion after the first *t*-tests. For an overview of these results, see Table 2.

Table 2

Comparison of Person Perception Means and Standard Deviations in Conditions

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Perceived morality				-1.98	0.98
Busy scenario	42	4.61	1.24		
Alone time scenario	62	5.09	1.16		
Perceived sociability				-0.50	0.69
Busy scenario	42	3.93	1.27		
Alone time scenario	62	4.04	1.04		
Perceived competence				-0.46	0.61
Busy scenario	42	4.36	0.93		
Alone time scenario	62	4.45	1.07		

Note. Person perception items were measured on a 7-point Likert scale.

Second Moderator Analyses

Regression analyses were redone with perceived morality as the dependent variable. The interaction term between scenario condition and extraversion was entered, but the interaction wasn't a significant predictor of perceived morality ($\beta = 0.10$, $t(100) = 0.30$, $p = 0.76$) and it didn't explain a significant increase in variance in perceived morality, $\Delta R^2 = 0.00$, $F(1, 100) = 0.09$, $p = 0.76$. In the analysis with an interaction term between scenario condition and preference for solitude, the interaction also wasn't a significant predictor of perceived morality ($\beta = 0.36$, $t(100) = 1.39$, $p = 0.17$) and it didn't explain a significant increase in variance in the dependent variable perceived morality, $\Delta R^2 = 0.02$, $F(1, 100) = 0.02$, $p = 0.17$.

Regression analyses were then conducted with perceived sociability as the dependent variable. The interaction term between scenario condition and extraversion wasn't a significant predictor ($\beta = 0.20$, $t(100) = 0.66$, $p = 0.51$) and didn't explain a significant increase in variance in perceived sociability, $\Delta R^2 = 0.00$, $F(1, 100) = 0.44$, $p = 0.51$. The interaction term with preference for solitude wasn't a significant predictor either ($\beta = 0.26$, $t(100) = 0.13$, $p = 0.26$) and didn't explain a significant increase in variance, $\Delta R^2 = 0.01$, $F(1, 100) = 1.28$, $p = 0.26$.

The regression analyses were also conducted with perceived competence as the dependent variable again. The interaction term between scenario condition and extraversion wasn't a significant predictor ($\beta = 0.21$, $t(100) = 0.68$, $p = 0.50$) and did not explain a significant increase in variance, $\Delta R^2 = 0.01$, $F(1, 100) = 0.57$, $p = 0.50$. The interaction term with preference for solitude wasn't a significant predictor for perceived competence either ($\beta = 0.30$, $t(100) = 1.40$, $p = 0.16$) and again didn't explain a significant increase in variance in perceived competence, $\Delta R^2 = 0.02$, $F(1, 100) = 1.96$, $p = 0.16$. Thus, extraversion and preference for solitude still don't seem to be moderators in the relationship between scenario condition and person perception.

Discussion

According to the results of this study, someone who voluntarily seeks solitude instead of hanging out with friends is not perceived more negatively than someone who is simply too busy to hang out with friends. Participants' extraversion and preference for solitude also don't seem to be moderators in this relationship. Perceived competence and perceived morality were actually higher in the alone time scenario condition than in the busy scenario condition, which is contradictory to hypothesis one. This might be because of participants being aware that solitude can have some big benefits, which was definitely not expected beforehand. Participants could have seen voluntary solitude-seeking as a sign of maturity, since competence in adolescence may be a measure of maturity, according to Clausen (1991). The sample in the current study indeed consisted of a lot of adolescents and when they thought of a friend, they probably assumed someone of relatively the same age. Assumed age of the imagined friend could even have had a big influence on person perception in general.

Three characteristics that were used to describe perceived morality of the friend who declined hanging out were "sincere", "honest", and "respectful". It's possible that participants don't believe someone who says they are too busy to hang out, but respect someone who is sincere or honest about rather wanting to be alone. This could have easily caused perceived morality to be higher in condition 2 (alone time scenario) than in condition 1 (busy scenario). Possibly, focusing only on perceived sociability in future research would be a good idea.

Future research might then find some significant results that were not found in the current research, because of some big limitations it had. The first being the relatively small sample size. Hypotheses two and three couldn't get tested with the desired sample size without including participants who failed the manipulation checks and, therefore, unreliable data could have influenced the results. There was a lot of unfinished data, so the questions might have been too difficult. This could also have caused the sample to consist mostly of

more than averagely intelligent participants. The survey might also just have been too long, which is what some participants indeed indicated. Only participants with enough time and patience would then be left in the sample.

These two reasons for not finishing the survey could also explain why many participants failed the manipulation checks. By the time the manipulation check questions had to be answered, the scenario that was read might already have been forgotten because of being too focused on making sense of the survey questions or because of too much time between reading the scenario and reading the manipulation check questions. The manipulation checks were indeed presented to participants only after filling in the needs and mood measure. One participant proposed to keep the text reply of the hypothetical friend in the comments above, so it could be read again before answering questions. There is even a possibility that participants didn't actually read the text in the scenario well enough to really understand the goal of the questions which followed after reading it. They might have not understood that the text in the scenario was what the evaluation of the friend had to be based on and instead based the evaluation on other things. The manipulation would then not be strong enough and would need adjusting for potential future research.

A good manipulation check that could have been included would be a control for if the participant thought of an existing friend when they were supposed to be thinking of a hypothetical friend. Imagining a hypothetical friend might have been too hard to do for a lot of people. It could have been better to measure participants' person perception when a friend declines an invitation to hang out in daily life. However, this is probably hard to put into practice and a friend declining an invitation might often not be enough to cause people's impression of him or her to be relatively negative. Therefore, another option would be to measure participants' impression of someone who is not a friend in a controlled environment.

Something that should also probably be controlled for in potential future studies is participants' understanding toward others. Maybe this was generally high for participants in the current research and this caused them to not evaluate a friend more negatively after he or she declines an invitation, whatever the reason for this decline. Differences in empathy could also play a big role. Women are generally more emphatic (Rueckert & Naybar, 2008) and they represented a bigger portion of the sample (around 60%). A more diverse sample in general should actually be strived for, since in the current study the sample consisted of mostly friends and family, and convenience sampling was used.

Maybe people have a better understanding toward those who have a need for alone time than expected. Knowledge about the benefits of solitude might already be very much present in people. However, the current study focused on measures of perceived morality, perceived sociability, and perceived competence, while there might actually only be a relationship between voluntary solitude-seeking and perceived sociability.

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Appendix

Items That Were Used to Measure Needs and Mood of Participants

Below are some statements about your feelings in the hypothetical scenario. Please indicate your agreement with each statement on the provided 5 point scale.

How do you think you would feel upon receiving the text from your friend?

- I would feel rejected (*R*)
- I would feel good about myself
- My self-esteem would be high
- I would feel liked
- I would feel insecure (*R*)
- I would feel satisfied
- I would feel invisible (*R*)
- I would feel meaningless (*R*)
- I would feel nonexistent (*R*)
- I would feel important
- I would feel useful
- I would feel good
- I would feel bad (*R*)
- I would feel friendly
- I would feel unfriendly (*R*)
- I would feel angry (*R*)
- I would feel pleasant
- I would feel happy
- I would feel sad (*R*)