ARTICLE

Social Determinants of Social Zapping: Exploring Predictors of Planned Scheduled Social Events with Others

Alyssa T. Altieri1*, Joseph R. Ferrari2

1 Research Psychology Program within Psychology Department, DePaul University, Chicago, IL 60614, US
2 Community Psychology Program within Psychology Department, Professor of Psychology DePaul University, Chicago, IL 60614, US

ABSTRACT

Social zapping has gained popularity as a term that refers to canceling plans or appointments at the last minute to attend other, supposedly more appealing events. This behavior resembles rapidly switching channels on a television, as individuals frequently jump between different social engagements. The present study examined potential behavioral trait predictors of social zapping, such as belongingness, self-esteem, sense of control, and meaningful existence among community residents ranging from 40 to 75 years of age (n = 48). The study utilized simple linear regressions to identify potential predictors of social zapping, exploring how the four fundamental needs (belongingness, self-esteem, sense of control, and meaningful existence) might be linked. Results indicated that belongingness and self-esteem are significant predictors of social zapping tendencies. Additionally, an independent samples t-test was conducted to determine the relationship both older and younger adults have with the four fundamental needs as well as the role age plays in social zapping tendencies. Older adults exhibited a significant and more positive association with self-esteem, sense of control, and meaningful existence compared to individuals aged 39 and younger. Social zapping frequency was nonsignificant for both older adults and younger adults. Furthermore, a separate set of linear regression analyses were completed to determine how social desirability affects social zapping across age groups. Social desirability significantly predicted both self-esteem and meaningful existence. Overall, the present study builds on what is currently a new phenomenon in research and will provide new information on the relationship between age, social zapping, and behavioral traits.

Keywords: Social zapping; Four fundamental needs; Communicating online; Older adult populations; Social desirability
1. Introduction

As Generation Z transitions into adulthood, social media has become their primary method of communication and relationship-building [1]. There is no shortage of electronic use to perform everyday tasks that normally would be carried out in person, and this abundance of technology has only been amplified during the time of the COVID-19 pandemic [2]. Current research has explored the relationship between social media habits and personality traits among Generation Z [3]. However, little is known about social zapping tendencies in middle-aged to older adults, a significant portion of the population using social media [4]. Our study examined the predictors of social media-related behaviors in a community sample of adults aged 40-75.

1.1 Social zapping: Defined, but minimally assessed

Limited research exists on social zapping and its predictive behavioral constructs. Müller et al. [3] defined social zapping as canceling or switching plans with others through instant messaging at the last minute. Their work linked social zapping to personality traits such as narcissism and Machiavellianism in the “Dark Triad” [5]. However, research on social zapping in middle-aged and older adults is nonexistent. Findings from Pew Research Center [4] provide evidence that older adults’ (65+) social media usage jumped from 3% in 2005 to 45% in 2021. This subgroup is not the only set of older adults to experience a significant rise in social media usage; participants aged 50-64 displayed a nearly 70% increase in social media usage in those same years [4]. With social media usage on the rise among populations of older adults, there should be more research dedicated to exploring a larger age range of adults’ social zapping habits. Knowledge on underlying personality factors in the context of a different generation pushes for a more representative and inclusive understanding of social zapping.

1.2 Four core social psychological constructs

Previous research on social zapping focused on negative traits such as the “Dark Triad”, (i.e., narcissism, Machiavellianism, and psychopathy) without considering positive or neutral traits [5]. Belongingness, self-esteem, desire for control, and meaningful existence are all components worth examining to determine the behavioral characteristics held by social zappers, and they provide a new perspective on traits more applicable to the general population. Each of these social behavior concepts will be examined and reflected to a person’s tendency for social zapping.

Belongingness: A root aspect of social zapping

Belongingness, encompassing companionship, affiliation, and connectedness, is crucial for promoting social bonds and reducing feelings of isolation [6]. Individuals who experience exclusion or rejection may feel a lack of belongingness, leading to depressive symptoms and increased social isolation [6]. As social zapping involves canceling plans, it may be associated with low belongingness and depressive symptoms. Older adults, in particular, show an association between low belongingness and depression, which further contributes to feelings of loneliness and social isolation. Thus, this study predicts an inverse correlation between belongingness and social zapping in older adults.

Self-esteem: An emotional connection to social zapping

Research suggests that self-esteem, along with a sense of belonging, may play a significant role in predicting social zapping tendencies. Self-esteem is defined as the satisfaction one feels toward oneself, influenced by the distance between self-image and ideal self [7]. Because the research on social zapping is slim, it may be helpful to view self-esteem regarding Müller and colleagues’ [5] paper connecting “Dark Triad” traits and social zapping. The study revealed that individuals exhibiting Machiavellianism and narcissism were more likely to engage in social zapping, while psychopathy showed a weaker but still significant correlation. Further research into “Dark Triad” traits and self-esteem found that there is a significant, inverse relationship between the two. Based on this foundation, exploring the link between self-esteem and “Dark Triad” traits may help develop hypotheses regarding social zapping.
Pathological narcissism, obstructing personality development, is associated with an inability to regulate self-esteem and self-cohesion \cite{8}. Previous studies have found a negative correlation between narcissism and self-esteem, and since Müller et al. \cite{5} established a correlation between narcissism and social zapping, it can be inferred that low self-esteem, indicating high narcissism, leads to increased social zapping.

Psychopathy, characterized by low empathy and emotional control, has two types: Factor 1 and Factor 2 \cite{9,10}. Factor 2 psychopathy, involving impulsive behaviors and risk-taking, has been linked to low self-esteem and aggression \cite{10}. Considering that impulsive individuals engage in social zapping more frequently, the evidence suggests that low self-esteem, an indicator of Factor 2 psychopathy, leads to higher levels of social zapping.

Machiavellianism, the use of manipulation and cunningness to gain power, is negatively correlated with self-esteem \cite{11}. Given the significant correlation between Machiavellianism and social zapping, along with the negative correlation between self-esteem and Machiavellianism, it can be inferred that low self-esteem is associated with Machiavellianism and, consequently, higher levels of social zapping.

Furthermore, “Dark Triad” traits are more prevalent among adolescents than older adults \cite{12,13}. However, as self-esteem tends to increase throughout adulthood and peaks around age 60, older adults may have higher self-esteem and lower “Dark Triad” traits \cite{14}. Consequently, the current study expected that higher self-esteem among older adults would predict lower levels of social zapping, and vice versa.

**Sense of control: Social zapping as a conscious choice**

Sense of control refers to one’s ability to make choices, take responsibility, and maintain consistency in their actions \cite{15}. It is associated with personal beliefs and decision-making, facilitating the pursuit of desired life events \cite{16}. Sense of control is linked to emotional well-being and perceived social support, both negatively correlated with depression. Considering the connection between depressive symptoms, isolation, and social zapping, it is hypothesized that self-control would also be negatively correlated with social zapping. Older adults, who experience increased isolation and reduced belongingness, may exhibit higher levels of social zapping when they have a lower sense of control \cite{17}. Therefore, in this study, it was anticipated that a diminished sense of control would predict a greater tendency for social zapping among older adults.

**Meaningful existence: An overall worldview related to social zapping**

Meaningful existence, defined as a sense of value and life purpose, plays a crucial role in distinguishing humans from animals by providing a sense of efficacy and purpose \cite{18,19}. Self-esteem acts as a quasi-buffer for achieving meaningful existence by bridging the gap between the perceived self and the ideal self. Research suggests a positive correlation between meaningful existence, well-being, and self-esteem \cite{20,21}. Furthermore, low well-being is associated with an increased risk of depression and isolation, which may contribute to higher levels of social zapping \cite{22}. Considering the link between self-esteem, meaningful existence, and social zapping, it is expected that low meaningful existence would lead to higher levels of social zapping. Older adults tend to experience higher levels of meaningful existence, and thus, meaningful existence may serve as a predictor of lower social zapping among this age group \cite{23}. By considering the relationship between self-esteem and meaningful existence, we can gain insights into the connection between meaningful existence and social zapping.

**1.3 The present study**

The literature regarding social zapping is scarce, with only two known published articles \cite{3,5}. Both of these published studies included university students and young emerging adults. Although there is research to support a link with each of the core social psychological variables discussed, no known study assessed their link connecting to social zapping, especially with older adults from community samples.
It is proposed that understanding the fundamental social factors linked to social zapping will provide important information about the concept of social zapping. Therefore, the present study assessed the interplay between social zapping and the four social constructs (belongingness, control, self-esteem, and meaningful existence) within a community sample. Utilizing existing data on older adults is proposed to assess predictors of social zapping through reliable and valid self-report measures. We used existing (archival) data collected online from a community sample of older adults (through Prolific Academic) including all four behavioral social psychological core variables (i.e., belongingness, control, self-esteem, and meaningful existence), as well as measures on social zapping and social desirability (to control for social appearance tendencies), with each construct measured through reliable and valid Likert-type psychometric scales.

2. Method

2.1 Participants

Data for both proposed studies were collected from a U.S. adult sample of 315 participants (D. Patel, June 2021). To have a complete data set, responses from 18 individuals were removed who did not complete all measures, leaving a final total sample size of 297 participants. The sample was then split into two age groups, older adults (n = 48; aged 40-75) and younger adults (n = 249; aged 18-39). This population consisted of approximately 46% females (n = 138) and 49% males (n = 147). The mean age of participants was 30.9 years old (SD = 10.88). The majority of participants, 68.6%, self-identified as White/Caucasian (n = 216), 13.7% of participants identified as Asian or Pacific Islander (n = 43), 9.8% as Black or African American (n = 31), 8.6% as Hispanic/Latinx (n = 27), 0.9% as American Indian or Alaskan Native, and less than 1% (n = 1) identified as Middle Eastern or Northern African. Most participants held a Bachelor’s Degree (n = 112, 35.6%), while 17.8% held a Master’s Degree (n = 56), and 17.8% attended some college (n = 56). Participants primarily claimed to be single (n = 143, 45.4%) or married (n = 98, 31.1%).

2.2 Psychometric scales

Various psychometric scales were used to measure different constructs in the study. The Need to Belong Scale developed by Leary et al. [24] assessed participants’ integration within their environment, showing strong internal consistency (α = 0.81). The Self-Esteem Scale by Rosenberg [25] measured positive and negative feelings about self-worth, demonstrating strong reliability (α = 0.81). The Desire for Control Scale by Burger and Cooper [26] evaluated the urge to control events, with good internal consistency (α = 0.80). The Meaning in Life Questionnaire by Steger et al. [27] measured identification with life’s purpose, displaying strong internal consistency (α = 0.86). To assess social desirability, Reynolds’s [28] shortened version of the Marlowe-Crowne Social Desirability Scale (α = 0.76) was used. Social zapping tendencies were measured using Müller et al.’s [3] Social Zapping Scale (α = 0.77). Demographic information, including gender, age, relationship status, education level, ethnicity, and state of residence, was also collected.

2.3 Procedure

An adult data sample was collected for 4 days during June of 2021, using an online survey through Prolific Academic, an online crowd source program where participants are paid for their time. Previous research indicated that the use of this source program is reliable and valid [29]. Participants were asked to complete a consent form prior to moving on in the survey. Participants were paid US $3.50 for approximately 30-40 minutes of time. Those individuals who did not meet the eligibility criteria were prompted out. The body of the survey contained four blocks: One block was qualitative, asking for thoughts and actions on clutter behavior; three other blocks contained the psychometric scales discussed above for a set of quantitative measures. All measures were pre-
sented in counterbalanced order, to control fatigue effects, and took most participants 30 minutes or less to complete. The payment was provided online after all survey items were completed. The fifth and last block included demographic questions such as age, gender, relationship status, highest education completed, ethnicity, and residing state.

3. Results

3.1 Preliminary analyses

Table 1 provides descriptive statistics for the measures used in the present study. The zero-order correlation matrix, the mean sum scores, and their standard deviations for all study variables are presented in Table 1. As noted from the table, social desirability was found to be significantly, and positively correlated at the 0.01 level with self-esteem and meaningful existence. Meaningful existence and control were also significantly, positively correlated at the 0.01 level. In contrast with the current literature, self-esteem and belongingness were negatively correlated, significant at the 0.01 level.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Belonging</td>
<td>27.67</td>
<td>0.813</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Self-esteem</td>
<td>30.36</td>
<td>–0.434*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Control</td>
<td>46.46</td>
<td>0.302*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Meaning</td>
<td>47.40</td>
<td>0.639**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Social Desirability</td>
<td>18.90</td>
<td>–0.236</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Social Zapping</td>
<td>12.74</td>
<td>0.329*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Mean sum scores and zero order correlations between all self-reported variables.

To evaluate the first hypothesis, four linear regression analyses were conducted using belongingness, sense of control, self-esteem, and meaningful existence as four separate predictor variables and social zapping as the outcome variable. Simple linear regression was used to test if any one of the four predictor variables significantly predicted social zapping. The results indicated that the regression was significant for belonging, $\beta = 0.329$, $p = 0.029$, while self-esteem approached significance, $\beta = -0.241$, $p = 0.057$. The fitted regression model for sense of belonging was social zapping score = 6.389 + 0.227*(belonging). Self-esteem scores accounted for 8.0% of the variance in social zapping ($R^2 = 0.080$, $F(1, 42) = 3.809, p = 0.029$), and belonging accounted for 10.8% of the variance in social zapping ($R^2 = 0.108$, $F(1, 44) = 5.106, p = 0.057$). Meaningful existence was not significant, $\beta = 0.028$, $p = 0.852$, nor was control, $\beta = -0.135, p = 0.365$.

Results indicated that belongingness and self-esteem were significant predictors for social zapping. Belongingness was found to be the strongest predictor of social zapping. Control and meaningful existence were not found to be significant predictors of
social zapping.

Hypothesis II – Older adults take part in social zapping tendencies less than younger participants (aged 39 and younger) because of their more positive relationship with belongingness, sense of control, self-esteem, and meaningful existence.

To evaluate the second hypothesis, an independent samples t-test was conducted to determine whether older adults had a better relationship with belongingness, sense of control, self-esteem, and meaningful existence than that of younger adults in the sample. The difference in belonging between older adults ($M = 27.67, SD = 7.07$) and younger adults ($M = 30.76, SD = 7.50$) was significant, $t(275) = –2.554; p = 0.011$. Cohen’s $d$ indicated a medium effect size ($d = 0.42$). The difference in self-esteem between older adults ($M = 30.36, SD = 6.30$) and younger adults ($M = 27.48, SD = 6.51$) was significant as well, $t(282) = 2.785; p = 0.003$. Again, Cohen’s $d$ indicated a medium effect size ($d = –0.45$). Further, a sense of control between older adults ($M = 46.46, SD = 5.39$) and younger adults ($M = 42.84, SD = 6.21$) was significantly different, $t(288) = 3.761; p < 0.001$. A medium effect size was found for a sense of control ($d = –0.59$). Finally, meaningful existence between older adults ($M = 23.66, SD = 8.25$) and younger adults ($M = 20.94, SD = 8.03$) was significantly different, $t(292) = 2.122; p = 0.017$. A small effect size was found for meaningful existence ($d = –0.34$).

Results indicated that the older adult sample did have higher levels of self-esteem, sense of control, and meaningful existence than the younger adult sample. However, older adults did display a lower sense of belongingness than participants in the younger adult sample. The same independent samples t-test found that social zapping was nonsignificant ($p = 0.159$) for both older adults and younger adults. Table 2 presents the statistical results.

### Table 2. Mean sum scores between older and younger adult participants with independent samples t-tests.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Older adults (n = 48)</th>
<th>Younger adults (n = 249)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Belonging</td>
<td>27.67</td>
<td>7.07</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>30.36</td>
<td>6.30</td>
</tr>
<tr>
<td>Control</td>
<td>46.46</td>
<td>5.39</td>
</tr>
<tr>
<td>Meaning</td>
<td>23.66</td>
<td>8.25</td>
</tr>
</tbody>
</table>

$n = 297$, *$p < 0.01$, **$p < 0.05$.

1) How does social desirability affect social zapping tendencies in middle- to older-aged adults and what is its relationship with the four fundamental needs?

To evaluate the first research question, five additional simple linear regression analyses were conducted using social desirability as the predictor variable and social zapping, belongingness, self-esteem, sense of control, and meaningful existence as the outcome variables. Simple linear regression was used to determine if social desirability significantly predicted any of the four fundamental needs and/or social zapping tendencies. The results indicated that the regression was significant for self-esteem, $\beta = 0.465$, $p = 0.001$, and for meaningful existence, $\beta = 0.394$, $p = 0.006$. The fitted regression model for social desirability and self-esteem was $\text{self-esteem} = –2.512 + 1.736*(\text{social desirability})$. The fitted regression model for social desirability and meaningful existence was $\text{meaningful existence} = –13.547 + 1.976*(\text{meaningful existence})$. Social desirability scores accounted for 21.6% of the variance in self-esteem ($R^2 = 0.216$, $F(1, 45) = 12.383$, $p = 0.001$), and accounted for 15.5% of the variance in meaningful existence ($R^2 = 0.155$, $F(1, 45) = 8.282$, $p = 0.006$). Belonging was not significant, $\beta = –0.236$, $p = 0.118$, nor was control, $\beta = 0.194$, $p = 0.186$. Social desirability was not found to be a predictor of social zapping, $\beta = –0.741$, $p = 0.114$.

Results indicated that social desirability was a significant predictor of self-esteem and meaningful existence. Participants scoring high in social desir-
ability scored lower for both self-esteem and meaningful existence. Social desirability was not found to be a significant predictor of belonging, control, or social zapping.

2) Is there a perceived difference in social zapping levels between age groups (middle- to older-aged adults and younger adults)?

To evaluate the second research question, a Mann-Whitney U test was performed to evaluate whether perceived difference in social zapping levels differed by age (younger adults and older adults). The results indicated that there was no significant difference between the perceived difference in social zapping levels of younger adults vs older adults, \( z = -1.479, p = 0.139 \).

### 4. Discussion

The first hypothesis predicted that scoring low on any of the four behavioral traits (sense of belonging, self-esteem, sense of control, and meaningful existence) would predict higher social zapping scores. This hypothesis was significant only for belongingness. While self-esteem was approaching significance as a predictor of social zapping, it was negatively correlated, meaning individuals who felt a high sense of self-esteem engaged in less social zapping. Belongingness was found to be the strongest predictor of social zapping among the four characteristics. Participants who scored high in belongingness also displayed higher social zapping scores. These results are in line with the current literature, Müller et al.\([3]\) found low self-esteem to be linked with “maximizing in selecting friends”, a similar process to social zapping. A high sense of belonging promotes the need to seek out relationships and inclusion which provides individuals with multiple sources of activities and plans.\([30]\) It may not be uncommon to agree to a couple of different plans in order to ensure that one has something to do, thus raising the rate of social zapping when they end up cancelling the plans they do not attend. It is important to note that the relationship between self-esteem and belonging was found to be negatively correlated in this study, going against the current literature on the relationship between these two traits.\([31-33]\). Although belonging and self-esteem are almost always seen as having a positive relationship with one another, the distinct difference of using an older adult community sample may have changed the norm. Older adults are commonly known to have self-esteem that peaks around the age 60, the age of most of our sample, but older adults also report lower levels of belongingness.\([34,35]\) This may account for the difference in correlation found at the beginning of the study.

The second hypothesis determines the difference in social zapping tendencies between younger and older adults through their relationship with the four behavioral characteristics (belongingness, self-esteem, sense of control, and meaningful existence). Social zapping tendencies were not found to be statistically significant among older and younger adults, however, the study still found that older adults had a higher level of self-esteem, meaningful existence, and sense of control than younger adults. Younger adults experienced higher belongingness than older adults, contributing further evidence to the current literature.\([36]\).

The first research question examined the relationship between social desirability and the four fundamental needs alongside social zapping. Social desirability was not found to be a predictor of social zapping; however, it was found to be a significant predictor of both meaningful existence and self-esteem. It should be noted that self-esteem had a significant relationship in nearly all of the hypotheses and research questions it was included in. Results indicated that self-esteem is deemed as a primary indicator of social zapping, a significant outcome of social desirability, and was determined to play a significant role in both older and younger adults (older adults had higher self-esteem). These findings support the current literature surrounding self-esteem and the critical role it serves among nearly every demographic group.\([37-40]\).

The second research question examined perceived differences in social zapping levels between young adult participants (aged 39 and younger) and older adult participants (aged 40 to 75). Although the
results did not show a significant difference, future research should take a more thorough look at the relationship between age and social zapping. Given the presence of social media and technology in all age groups, it would be beneficial to compare and contrast predictors of social zapping across age.

5. Conclusions

5.1 Social implications

Because there is little published research focused on social zapping\[3,5\], any new research determining the social implications seems warranted. The results in the current study suggested that there are behavioral traits that might predict social zapping tendencies; however, chronological age does not seem to be such a factor. Müller and colleagues’\[3\] research suggested that there are “negative” behavioral traits, such as the “Dark Triad”, associated with social zapping. The current study explored both “positive” or “neutral” self-reported traits, such as self-esteem and sense of belonging. These variables add to a wider array of behavioral traits to the literature. Consequently, there is now evidence that certain personality traits are linked with social zapping and that these are not necessarily fixed traits.

One may experience more social zapping throughout various points in their lifetime, because of the variation in self-esteem and belongingness. Given that there is minimal research exploring social zapping tendencies, it is difficult to determine implications surrounding relationships, sense of self, perceived isolation, emotion disorders, etc. when an individual is partaking in social zapping. It is challenging to say that programs and treatment plans aimed at raising self-esteem and belongingness should be created to lower social zapping tendencies given the inverse relationship between belonging and social zapping. Further research should target more potential predictors of social zapping to gain a clearer understanding of how to limit social zapping.

5.2 Limitations of the current study

Of course, the current study is not without limitations, especially considering the novelty of research on social zapping. Both the control scale and the social desirability scales had low coefficient alphas, and our sample size used was too low. With only 48 participants, it is difficult to determine if this study is applicable to the general population (of both older adults and younger adults). Social zapping may have been significant for either population, and a larger participant pool was included. In addition, it is difficult to provide context for social zapping given there was little research done prior to this study.

Also, all data were collected during the COVID-19 pandemic and may not be representative of social zapping happening outside of the pandemic. Given how fearful the population was to interact with one another in person, social zapping may have occurred because individuals did not want to contract the virus. High levels of isolation may have also played a role in social zapping as individuals sought community and attempted to maintain relationships but were hesitant to meet up.

5.3 Future directions for research

Despite the limitations from the present exploratory study, there is no limit to the amount of future research that is possible on social zapping. Until the current study, research was only on potential behavioral traits influencing social zapping tendencies\[3,5\]. Future research might explore other predictors of social zapping, including personality factors associated with social zapping behavior not listed in the current literature. Future research also might examine the effects social zapping has on relationships and individuals partaking in it. Additionally, circumstances and environments prompting the use of social zapping tendencies should be studied. For example, it might be interesting to determine the relationship between COVID-19 and social zapping, as well as the relationship between social zapping and online spaces.
Social zapping is an underrepresented and underdeveloped concept that is now impacting people of all ages. The present study details the importance of determining predictors leading to social zapping, including the four fundamental needs (belongingness, self-esteem, sense of control, and meaningful existence). Additionally, the present study offers a look into how age plays a role in social zapping, and how technology is utilized across all age groups. Continuing with this research could potentially lead to a better understanding of behavior and provide insight as to how individuals can better their lives through communication and time spent with loved ones.

Conflict of Interest

There is no conflict of interest.

References


DOI: https://doi.org/10.1111/j.0963-7214.2005.00353.x

DOI: https://doi.org/10.2307/248811

DOI: https://doi.org/10.5465/amr.1986.4282657

DOI: https://doi.org/10.1016/j.healthplace.2011.08.012

DOI: https://doi.org/10.1111/j.1745-6924.2009.01158.x

DOI: https://doi.org/10.1177/147470490700500303

DOI: https://doi.org/10.2466/pr0.2000.87.1.156

DOI: https://doi.org/10.1521/jscp.21.4.345.22598

DOI: https://doi.org/10.1016/j.jad.2009.06.032


DOI: https://doi.org/10.1080/00223891.2013.819511


DOI: https://doi.org/10.1016/j.jesp.2017.01.006

DOI: https://doi.org/10.1016/0883-9417(92)90028-H

DOI: https://doi.org/10.1016/j.jrp.2006.04.003

DOI: https://doi.org/10.2307/1519847

DOI: https://doi.org/10.1371/journal.pone.0124609


DOI: https://doi.org/10.1521/suli.2007.37.1.89


DOI: https://doi.org/10.1111/1467-8721.00008

DOI: https://doi.org/10.1037/0022-3514.65.6.1190