

Abstract

In three studies, we examined the association between people's self-reported ability to initiate and end interpersonal relationships (relational mobility) and their well-being across both ordinary and crisis circumstances. We found that people who perceived greater relational mobility in their environment reported greater well-being, and that this relationship was mediated by higher quality of close relationships (Studies 1A, 1B). First-year college students with greater relational mobility also reported receiving more social support from new friends, explaining those students' better well-being during the COVID-19 pandemic (Study 2). Moreover, differences in national levels of relational mobility accounted for differences in national well-being, again through the quality of relationships (Study 3). These findings persisted after controlling for factors that could contribute to well-being, including extraversion, self-construal, and financial circumstances. Together, this work demonstrates that relational mobility explains enhanced well-being across circumstances (e.g., during a pandemic) and across nations, indicating potential interventions for increasing the well-being of individuals and societies.

Keywords: Relational mobility, Well-being, Interpersonal relationships, COVID-19

The role of relational mobility in relationship quality and well-being

Popular wisdom speaks to the importance of maintaining relationships, especially long-standing relationships: “Be slow in choosing a friend, slower in changing” (Benjamin Franklin); “True friendship is a plant of slow growth” (George Washington); and “Age appears to be best in four things: old wood best to burn, old wine to drink, old friends to trust, and old authors to read” (Francis Bacon).

Relationships play a key role in individuals’ well-being (Argyle, 1987; Demir, 2008; Ilardi et al., 1993; Kasser & Ryan, 1999; Myers, 1999; Patrick et al., 2007). Forming and maintaining satisfying relationships has a positive influence on health and adjustment (Baumeister & Leary, 1995), as well as resilience across the lifespan (Mikulincer & Florian, 1998). The more social activities one experiences in a day, the more positive affect one reports for that day (Beiser, 1974; Clark & Watson, 1988; Costa & McCrae, 1980; Phillips, 1967; Watson, 1988). While feeling cared for by a partner is related to feelings of enhanced security (Collins & Miller, 1994; Patrick et al., 2007), the quality of relationships with friends also contributes to the enhanced well-being of married people (Briditt & Antonucci, 2007) (see Ryan & Deci, 2001 for a review).

How relationships are initiated and maintained differs by society. While entering and exiting relationships is relatively easy in some societies, in other societies, relationships with friends, romantic partners, and family members are largely fixed, and opportunities to change these relationships are limited. This flexibility in the case of interpersonal relationships and networks is known as “relational mobility” (Kito et al., 2017; Yuki & Schug, 2012).

Importantly, relational mobility influences relationship quality, one of the key predictors of well-being (Nezlek, 2000). One study examined the impact of relational mobility on the perceived similarity with friendship partners, also associated with

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3 relationship satisfaction and attraction (Gonzaga et al., 2007; Morry, 2004, 2007). While
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5 people from different societies (i.e., USA and Japan) do not differ in their preference for
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7 similarity between friendship partners, those from a society with high relational mobility
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9 (USA) report greater similarity than those from a society with low relational mobility
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11 (Japan), potentially because high relational mobility provides the freedom to select or to be
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13 selected by similar others (Schug et al., 2009). People in high relational mobility contexts are
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15 also more likely to provide greater social support to their friends (Chen et al., 2012; Kito et
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17 al., 2017); more likely to self-disclose (i.e., share private information) to their close others
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19 (Schug et al., 2010); more likely to express their divergent opinions with others (Li et al.,
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21 2016); less likely to experience anxiety because of expected social rejection (Lou & Li,
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23 2017); report higher intimacy with romantic partners (Yamada et al., 2017); and less
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25 concerned about the possibility that their friends harbor ill feelings toward them (Li et al.,
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27 2015).

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33 Building on this growing body of work, a recent study examined the associations
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35 between the relational mobility and relationship quality among 39 different nations (Thomson
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37 et al., 2018). They found that people in societies with higher relational mobility reported
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39 having higher quality interpersonal relationships with their friends and partners, as measured
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41 by their self-disclosure to social partners and reported levels of intimacy. Thomson and
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43 colleagues (2018) suggest that because one's social partners may have (or may be perceived
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45 as having) more opportunities to look for alternatives in societies characterized by high
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47 relational mobility, people engage in more pro-active behaviors to prevent their partners from
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49 leaving them, ultimately enhancing the quality of those relationships. Thus, contrary to
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51 popular belief, people who perceive their environment as providing frequent opportunities to
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53 change relationships may enjoy higher-quality relationships, which may, ultimately, be
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55 associated with greater well-being.
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3 Indeed, previous research has suggested that relational mobility is associated with
4 well-being. In one study, researchers examined how relational mobility is linked to
5 individuals' mindset and interpersonal goals (i.e., approach versus avoidance). When higher
6 relational mobility was associated with growth mindset and approach goals, it led to higher
7 levels of subjective well-being and fewer depressive symptoms. In contrast, when higher
8 relational mobility was associated with avoidance goals, it was in turn associated with lower
9 subjective well-being (Lee et al., 2019). Another study examined the associations among
10 relational mobility, perceived control over interpersonal relationships, and well-being (Zhang
11 & Zhao, 2021), and found that higher relational mobility led people to believe that they had
12 greater control over their relationships, which led them to report greater well-being.
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26 However, other work has failed to identify an association between relational mobility
27 and subjective well-being (Yuki et al., 2013, Study 3), requiring further examination.
28 Additionally, to our knowledge, the direct associations among relational mobility, quality of
29 relationships, *and* well-being, at the individual as well as the cross-national levels, have been
30 understudied. In the present research, we examined whether the perception of greater
31 relational mobility would be linked to reported well-being, and whether this association
32 would be accounted for by an increase in quality of interpersonal relationships with one's
33 friends, family members, and partners, at the individual level (Studies 1A and 1B) as well as
34 at the national level (Study 3).
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47 Finally, a key question that demands further investigation is the circumstantial
48 dependency of the relationship quality. High-quality relationships provide greater social and
49 emotional support, but there has been conflicting evidence regarding how social support is
50 associated with well-being especially under crisis. While some previous research has found
51 that people tend to feel happier if they perceive social support as available to them in crisis
52 (Chan & Lee, 2006), others reported no moderating effect of social support on the negative
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3 impact of crisis on subjective well-being (Ronen et al., 2016). We suggest and examine two
4 alternatives centered on relational mobility. First, in times of need, people feel obligated to
5 support their family and other relatives compared to strangers (McManus et al., 2020, 2021).
6 Thus, those with low relational mobility, who had maintained their close relationships with
7 kin and old friends rather than new ones, may receive greater social support from them under
8 crisis and report greater well-being. In contrast, given that building new relationships that fit
9 one's new environment and situation is also critical for individuals' well-being (Buote et al.,
10 2007), those with high relational mobility may quickly develop and receive benefit from their
11 new relationships under crisis, enjoying better well-being. Thus, in Study 2, we explored the
12 social support that people reported receiving from old and new relationships during the
13 COVID-19 pandemic. We tracked first-year college students and measured their reported
14 social support from old friends they met before college and from new friends they met after
15 arriving at college. We tested whether first-year college students' relational mobility
16 measured *before* the pandemic was associated with how much support they received from old
17 versus new friends *during* the pandemic, and whether reported support could explain
18 students' reported well-being.
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42 Study 1A

43 Method

44 *Participants*

45 One hundred and ten Mturkers who passed the attention check questions, out of total
46 160, were included in the analyses (44.5% female; age $M = 34.67$, $S.D. = 9.77$). The sample
47 size was determined based on a separate task included in the battery, not analyzed for this
48 study ([Blinded for peer review]). The post-hoc power analysis for the indirect effect model
49 (Schoemann et al., 2017; https://schoemanna.shinyapps.io/mc_power_med/) revealed that we
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3 acquired strong power (power = .89) with this sample size. For all studies, all data and codes
4 are available at [https://osf.io/ducbf/?view_only=dfa7f1be817b4beaa394250af93f4413].

8 **Materials**

10 As part of a large online battery survey, participants completed the relational mobility
11 scale (Thomson et al., 2018) (see Supplementary Section 1A for the attention check
12 questions, instructions and measures). Participants' well-being was measured with the
13 Satisfaction With Life Scale (SWLS; e.g., *"I am satisfied with life"*, ranging from 1: strongly
14 disagree – 7: strongly agree; Diener et al., 1985) and the Positive Relations with Others
15 (PRO) subscale of the Psychological Well-Being scale (e.g., *"I have not experienced many*
16 *warm and trusting relationships with others (R)"*, ranging from 1: strongly disagree – 7:
17 strongly agree; Ryff, 1989; Ryff et al., 2010). Participants' quality of relationships was
18 assessed with questions probing how likely participants would be to share their secrets and
19 worries with their best friend and closest family member (self-disclosure, ranging from 1: not
20 at all likely – 5: extremely likely; Thomson et al., 2018; Yuki & Schug, 2012) and their
21 subjective closeness to their best friend and closest family member (ranging from 1: not at all
22 close – 10: extremely close; Thomson et al., 2018; Yuki & Schug, 2012). Additionally,
23 participants' extraversion, using a Ten-Item Personality Inventory (TIPI; Gosling et al., 2003)
24 and their familial socio-economic status (SES; *"What is your family's socioeconomic level?"*
25 *lower income, lower middle income, middle income, upper middle income, upper income*),
26 were also measured. Extraversion and SES factors have been shown to be relevant to both
27 well-being (Pavot et al., 1990) and the freedom to choose relationships (Carey & Markus,
28 2017; Carey & Zhang-Bencharit, 2018; Palisi & Ransford, 1987), so they were controlled for
29 in further analyses (see Supplementary Section 2 for Cronbach's alpha values). For this study
30 and Studies 1B and 2, all procedures were approved by the Institutional Review Board at
31 [Blinded for peer review].

Analyses and Results

First, we created composite values of participants' well-being by averaging SWLS and PRO scales. An exploratory factor analysis showed that these two variables indeed loaded on the same factor (Supplementary Section 3A). We then generated composite values of participants' relationship quality with their best friend and closest family member by averaging participants' self-disclosure scores to them, and participants' subjective closeness ratings for them¹. An exploratory factor analysis showed that these variables loaded on the same factor (Supplementary Section 3A) (see Supplementary Section 4A for findings without aggregations).

As predicted, a correlation test revealed that relational mobility was positively associated with the relationship quality composite ($r = .42, p < .001$) and the well-being composite ($r = .37, p < .001$). Relationship quality was also positively correlated with well-being ($r = .56, p < .001$). Using the "INDIRECT" macro (bootstrapped $n = 1,000$) (Preacher & Hayes, 2008), we examined the indirect effect of relational mobility on well-being through relationship quality, controlling for extraversion and SES. Relational mobility was significantly associated with relationship quality ($B = .35, S.E. = .08, \beta = .36, t = 4.21, p < .001$), which was in turn associated with well-being ($B = .56, S.E. = .14, \beta = .33, t = 4.15, p < .001$). The significant total effect of relational mobility on well-being ($B = .42, S.E. = .12, \beta = .25, t = 3.40, p = .001$) became marginal after entering relational quality in the model ($B = .23, S.E. = .13, \beta = .14, t = 1.80, p = .075$), Standardized Indirect Effect = .12, S.E. = .04, 95% CI = [.05, .22] (Figure 1).

Study 1A Discussion

¹ Subjective closeness scores were rescaled by multiplying by 1/2 to match the range of the self-disclosure scale before submitting it to the aggregation.

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3 We found evidence for an association between relational mobility and well-being,
4 mediated by relationship quality. This initial finding suggests that an environment that
5 facilitates relationship choice may also support enhanced relationships, which may in turn
6 lead to enhanced well-being.
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12 We note, however, that the well-being measures used in this study did not cover
13 diverse aspects of well-being, such as eudaimonic (meaning of life; Ryff, 1989) and hedonic
14 (pleasant feeling; Diener et al., 2002) well-being. Furthermore, differences in relational
15 mobility often co-occur with differences in cultural concepts such as a culturally shaped view
16 of self (Yuki et al., 2013). Study 1B addresses these limitations.
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27 **Study 1B**

28 Past literature has suggested there are diverse aspects of well-being. While feeling
29 pleasure and feeling satisfied are thought to comprise well-being (Hedonic well-being), living
30 the “good life” (being moral, virtuous, achieving growth) is also critical to well-being
31 (Eudaimonic well-being; Linley et al., 2009; Phillips et al., 2011, 2017; Ryan & Deci, 2001;
32 Tiberius, 2013; Tiberius & Hall, 2010). In Study 1B, we examined the effect of relational
33 mobility on these different aspects of well-being, controlling for a critical factor that
34 influences both relational mobility and well-being—individuals’ view of self.
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45 It has been reported that the antecedents of relational mobility often overlap with
46 antecedents of other cultural concepts, such as a culturally shaped view of self. For instance,
47 herding societies are higher in relational mobility than farming societies (Thomson et al.,
48 2018), while these societies also give rise to high individualism versus high collectivism,
49 respectively (Uskul et al., 2008). Individualism and collectivism are manifested in
50 independent versus interdependent view of self (Markus & Kitayama, 1991), which is also
51 related to well-being; an independent, individualistic view of self is associated with greater
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well-being (Elliott & Coker, 2008). To account for potential overlaps between individualism and relational mobility, and the concurrent effect of these variables on well-being, in Study 1B, we assessed and controlled for participants' view of self (independent versus interdependent). Our hypotheses and research methods are preregistered at [<https://aspredicted.org/blind.php?x=5yt9m4>; H11 and H12].

Methods

Participants

Three hundred and fifty-four Mturkers who passed the attention check questions, out of total 392, were included in the analyses (44.9% female; age $M = 37.12$, $S.D. = 10.99$). Sample size was determined based on the effect size of a separate task included in the battery, not analyzed for this study ([Blinded for peer review]). The post-hoc power analysis for the indirect effect model (Schoemann et al., 2017; https://schoemanna.shinyapps.io/mc_power_med/) revealed that we acquired very strong power (power > .99) with this sample size.

Materials

As in Study 1A, participants completed the relational mobility scale (Thomson et al., 2018) and measurements of relationship quality. To capture various aspects of participants' well-being, we administered the SWLS (Diener et al., 1985), Subjective Happiness Scale (SHS; e.g., "In general, I consider myself: 1: Not a very happy person --- 7: A very happy person", Lyubomirsky & Lepper, 1999), Affect Valuation Index (AVI; e.g., "Over the course of a typical week, I actually feel...", ranging from 1: never – 5: all the time, Tsai et al., 2006; actual high-arousal positive states [*enthusiastic, excited, elated, euphoric*], actual low-arousal positive states [*calm, relaxed, peaceful, serene*]), Positive and Negative Affect Schedule (PANAS; e.g., "Indicate the extent you have felt this way over the past week", ranging from 1: very slightly or not at all – 5: extremely, Watson et al., 1988; positive

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3 experiences [*interested, excited, strong, enthusiastic, proud, alert, inspired, determined,*
4 *attentive, active*], negative experiences [*distressed, upset, guilty, scared, hostile, irritable,*
5 *ashamed, nervous, jittery, afraid*]), and all Psychological Well-Being subscales in addition to
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8 PRO (e.g., Autonomy [*“I am not afraid to voice my opinions”*], Environmental Mastery [*“I*
9 *feel I am in charge of the situation in which I live”*], Personal Growth [*“I am not interested*
10 *in activities that will expand my horizons (R)”*], Purpose in Life [*“I have a sense of direction*
11 *and purpose in life”*], Self-Acceptance [*“When I look at the story of my life, I am pleased*
12 *with how things have turned out”*]), PRO; Ryff, 1989; Ryff et al., 2010).

21 As a control, the Self-Construal Scale (Singelis, 1994) was administered to measure
22 the extent to which participants endorse independent (e.g., *“I enjoy being unique and*
23 *different from others in many respects”*) versus interdependent (e.g., *“I have respect for the*
24 *authority figures with whom I interact”*) self-construal (ranging from 1: strongly disagree – 7:
25 strongly agree). We subtracted participants’ interdependent self-construal scores from their
26 independent self-construal scores, generating “independent minus interdependent self-
27 construal” scores and included them in the further analyses to control for overlap between
28 self-construal and relational mobility. Additionally, participants’ extraversion and SES were
29 measured as in Study 1A (see Supplementary Section 1B for the instructions and measures;
30 see Supplementary Section 2 for Cronbach’s alpha values).

31 **Analyses and Results**

32 The composite relationship quality index was created by averaging the self-disclosure
33 ratings and the subjective closeness ratings as in Study 1A. For hedonic well-being
34 composite, we averaged SWLS, SHS, PANAS positive emotional experiences, reversed
35 PANAS negative experiences, actual high-arousal positive states from AVI, and actual low-
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arousal positive states from AVI². For eudaimonic well-being composite, we averaged all subscales of PWB. Exploratory factor analyses showed a converging pattern (Supplementary Section 3B)³ (See Supplementary Section 4B for findings without the aggregations).

As predicted, relational mobility was positively associated with both types of well-being (eudaimonic: $r = .51, p < .001$; hedonic: $r = .27, p < .001$) as well as with relationship quality ($r = .36, p < .001$). Relationship quality was also correlated with both types of well-being (eudaimonic: $r = .45, p < .001$; hedonic: $r = .45, p < .001$). We ran indirect effect analyses as in Study 1A, for eudaimonic and hedonic well-being scores separately, to examine whether enhanced relationship quality accounted for the impact of relational mobility on well-being. Participants' independent minus interdependent self-construal, extraversion, and SES were controlled for in the analyses. In both models, relational mobility was significantly associated with relationship quality ($B = .38, S.E. = .05, \beta = .36, t = 7.22, p < .001$), which was in turn associated with both eudaimonic well-being ($B = .37, S.E. = .05, \beta = .29, t = 6.87, p < .001$) and hedonic well-being ($B = .30, S.E. = .04, \beta = .31, t = 6.74, p < .001$). The significant total effect of relational mobility on each type of well-being (eudaimonic: $B = .60, S.E. = .06, \beta = .44, t = 10.61, p < .001$; hedonic: $B = .23, S.E. = .05, \beta = .22, t = 4.86, p < .001$) was reduced after entering relational quality scores in the respective models (eudaimonic: $B = .46, S.E. = .06, \beta = .34, t = 8.05, p < .001$; hedonic: $B = .11, S.E. = .05, \beta = .11, t = 2.38, p = .018$), Standardized Indirect Effect for eudaimonic = .10, S.E. = .02, 95% CI = [.06, .16], Standardized Indirect Effect for hedonic = .11, S.E. = .03, 95% CI = [.07, .17].

Study 1B Discussion

² We rescaled SWLS and SHS by multiplying these scores by 5/7 to match the range of other measures before creating the aggregations.

³ Contrary to our prediction that experiencing less negative emotion would be associated with hedonic well-being, PANAS negative emotional experience loaded on eudaimonic well-being (Supplementary Section 3B). However, we found the same results after removing PANAS negative emotional experience from our hedonic well-being composite.

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3 In Study 1B, we expanded on findings from Study 1A and found that the effect of
4 relational mobility on well-being through relationship quality persisted after controlling for
5 individuals' view of self, and with different types of well-being, i.e., eudaimonic and
6 hedonic.
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12 However, our Study 1 did not examine two critical factors. First, do the associations
13 between relational mobility and well-being persist across circumstances, for example, a crisis
14 that directly threatens individuals' physical and mental health? Second, can the link between
15 relational mobility and well-being be accounted for by the quality of relationships with old
16 friends or new friends? Study 2 aimed to address these questions.
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27 **Study 2**

28 In Study 2, we explored whether relational mobility measured before the outbreak of
29 the COVID-19 pandemic could explain the social support people reported receiving during
30 the pandemic, as well as their reported well-being during the pandemic. We measured the
31 social support people received from their old friends versus new friends separately, by
32 focusing on first-year college students, and instructing them to consider both friends they met
33 before coming to college (old friends) and those they met after coming to college (new
34 friends). We focused on first-year college students given their situation of transition, and thus
35 the more salient distinction between old and new friends (Buote et al., 2007).
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47 **Method**

48 *Participants*

49 One hundred and fifty-five first-year students who enrolled in two private colleges in
50 the Boston area (64.9% female; age $M = 18.17$, $S.D. = .50$) participated in the first survey.
51 Among those, 110 participants (68.2% female; age $M = 18.83$, $S.E. = .59$) completed the
52 second survey and were included in further analyses. The sample size was initially
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determined based on an independent task included in the battery of the survey ([Blinded for peer review]). The post-hoc analysis for the indirect effect model (Schoemann et al., 2017; https://schoemanna.shinyapps.io/mc_power_med/) revealed that we acquired moderate power (power = .68) with this sample size.

Materials

Participants completed the first online survey (wave 1) at the beginning of their first semester in October 2019. As part of a large battery, they completed the relational mobility scale (Thomson et al., 2018) as in Study 1.

The second online survey (wave 2) was administered at the end of or after the end of their second semester in May – July 2020, after the start of the worldwide COVID-19 pandemic (marked at March 2020). In the second survey, again as part of a large battery, participants completed the relational mobility scale again (Thomson et al., 2018), SWLS (Diener et al., 1985) and the PRO subscale from PWB (Ryff, 1989; Ryff et al., 2010). As in Study 1A, we averaged SWLS and PRO into participants' well-being composite score (see Supplementary Material Section 1C for other survey questions). Additionally, participants answered exploratory items to measure the social support they received from their old friends that they met before entering the college, and from new friends that they met since coming to college. Participants used a sliding bar, ranging from 0 (“no social and emotional support”) to 100 (“enormous social and emotional support”), to answer questions, “Over the past 2 months, how much emotional and social support have you received from your friends whom you met before coming to college [you met since coming to college]?” There were no significant differences in support from old friends ($M = 67.53$, $S.E. = 2.48$) versus new friends ($M = 68.94$, $S.E. = 2.35$), $t(109) = -.53$, $p = .598$. In both surveys, participants also answered questions about extraversion (TIPI; Gosling et al., 2003) and familial SES.

Analyses and Results

We examined whether participants' relational mobility they reported at the start of their first year in college could predict how much support they received from their old and new friends during the pandemic. We ran a series of multiple regressions, entering participants' wave 1 relational mobility scores as the independent variable and their reported social support from old friends and new friends (wave 2) as dependent variables in separate models.

Participants' wave 1 relational mobility did not significantly predict social support from old friends during pandemic ($B = 2.31$, $S.E. = 3.58$, $\beta = .06$, $t = .65$, $p = .520$). However, wave 1 relational mobility was significantly associated with social support from new friends ($B = 8.67$, $S.E. = 3.30$, $\beta = .25$, $t = 2.63$, $p = .010$); participants who perceived greater relational mobility at wave 1 reported that they received more social and emotional support at wave 2, after the outbreak of the COVID-19 pandemic, from their friends that they met after beginning college. Moreover, participants' wave 1 relational mobility was significantly associated with their wave 2 well-being ($r = .26$, $p = .007$); social support from old friends and new friends at wave 2 were also correlated with wave 2 well-being (old friend: $r = .22$, $p = .020$; new friend: $r = .36$, $p < .001$).

As in Studies 1A and 1B, by running an indirect analysis, we examined whether the social support participants received from their new friends at wave 2 accounted for the influence of wave 1 relational mobility on their wave 2 well-being. First, wave 1 relational mobility was significantly associated with the social support participants received from their new friends at wave 2 ($B = 8.67$, $S.E. = 3.30$, $\beta = .24$, $t = 2.62$, $p = .010$). The social support participants received from their new friends was in turn associated with participants' well-being at wave 2 ($B = .01$, $S.E. = .004$, $\beta = .31$, $t = 3.44$, $p = .001$). The significant effect of wave 1 relational mobility on wave 2 well-being ($B = .37$, $S.E. = .13$, $\beta = .26$, $t = 2.77$, $p = .007$) was reduced after entering the perceived social support from participants' new friends

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3 at wave 2 ($B = .26$, $S.E. = .13$, $\beta = .18$, $t = 1.97$, $p = .051$), Standardized Indirect Effect = .08,
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5 $S.E. = .04$, 95% CI = [.02, .18] (Figure 2). These effects remained the same after controlling
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7 for participants' relational mobility at wave 2, participants' well-being at wave 1,
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9 participants' extraversion and familial SES at waves 1 and 2, and after log-transforming the
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11 social support from new friends scores (Supplementary Section 5). When both support from
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13 new friends and support from old friends were entered in the same model, only the indirect
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15 effect of the support from new friends was significant (new friend: Standardized Indirect
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17 Effect = .07, $S.E. = .04$, 95% CI = [.02, .18]; old friend: Standardized Indirect Effect = .01,
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19 $S.E. = .01$, 95% CI = [-.01, .06]).

23 **Study 2 Discussion**

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26 In Study 2, we explored whether the social and emotional support first-year college
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28 students received from their old friends versus new friends could explain their well-being
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30 during the worldwide COVID-19 pandemic crisis. We found that first-year students who
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32 reported greater relational mobility before the pandemic also reported that they received
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34 greater social support during the pandemic from new friends whom they met after coming to
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36 college, which in turn was associated with greater well-being during the pandemic. These
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38 findings suggest that the associations between relational mobility and well-being, explained
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40 by the quality of new friendships, can be obtained across a range of circumstances that
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42 include a pandemic crisis.
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47 Nevertheless, we note several limitations of the studies presented thus far. First, all
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49 conclusions are restricted to participants residing in the United States, recruited either on an
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51 American online labor platform or through the student research participation system of an
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53 American university. Although some previous studies successfully demonstrated that
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55 relational mobility could be measured and manipulated at the level of individuals (Yamada et
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57 al., 2017; Yuki et al., 2013), the initial conceptualization of relational mobility was aimed at
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3 explaining cultural and national level variance (Thomson et al., 2018). Thus, to test the
4 generalizability of these effects for a different sample, and to explore whether relational
5 mobility can explain differences in well-being across cultures, we analyzed the associations
6 among relational mobility, relationship quality, and well-being on the national level in Study
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17 Study 3

19 In Study 3, we examined whether the associations among relational mobility,
20 relationship quality, and well-being can be replicated using national level data retrieved from
21 the world relationships survey (relationalmobility.org; Thomson et al., 2018) and Gallup
22 world poll survey.
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28 **Methods**

30 *Nations*

32 We focused on nations with available relational mobility data, a complete set of
33 relationship quality indices, and well-being measures. As a result, we were able to include a
34 total of 38 nations⁴ in our final dataset.
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40 *Materials*

42 We extracted the national relational mobility data and measures of relationship quality
43 data from the world relationships survey (relationalmobility.org; Thomson et al., 2018). To
44 assess national levels of relationship quality, we used intimacy with romantic partner
45 (averaged across 10 items, e.g., “I am able to count on [Name of the romantic partner] in
46 times of need”, ranging from 1: strongly disagree – 7: strongly agree), intimacy with closest
47 friend, self-disclosure toward romantic partner (same as in Studies 1A and 1B), and self-
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57 ⁴ Australia, Brazil, Canada, Chile, Colombia, Egypt, Estonia, Hong Kong, France, Germany, Hungary, Israel,
58 Japan, Jordan, Lebanon, Libya, Malaysia, Mauritius, Mexico, Morocco, Netherlands, New Zealand, Philippines,
59 Poland, Portugal, Singapore, South Korea, Spain, Sweden, Tunisia, Turkey, Ukraine, United Kingdom, United
60 States, Venezuela, Taiwan, Puerto Rico, Palestinian Ter.

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3 disclosure toward closest friend, to find variables corresponding to subjective closeness and
4 self-disclosure measures in Studies 1A and 1B and prior work (Schug et al., 2010). In
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6 self-disclosure measures in Studies 1A and 1B and prior work (Schug et al., 2010). In
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8 addition, to assess national levels of well-being, we extracted global well-being index from
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10 the Gallup poll (2014-2015); the percentage of respondents who reported that they were
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12 thriving in three or more of the five elements of well-being (purpose, social, financial,
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14 community and physical)⁵. A separate analysis in which we additionally controlled for each
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16 nation's GDP per capita (International Monetary Fund, 2019) and individualism scores
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18 (Hofstede et al., 2010) revealed the same findings (Supplementary Section 6).
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21 **Analyses and Results**

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23 We created the aggregated relationship quality index by averaging intimacy with
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25 romantic partner, intimacy with closest friend, self-disclosure to romantic partner, and self-
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27 disclosure to closest friend⁶ (see Supplementary Section 4C for findings without
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29 aggregations). Replicating the previous findings, there was a positive correlation between
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31 national level of relational mobility and relationship quality ($r = .63, p < .001$). Nations with
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33 higher relational mobility also reported higher levels of global well-being ($r = .63, p < .001$).
34
35 Moreover, national level of relationship quality was associated with national global well-
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37 being ($r = .61, p < .001$). The indirect analysis revealed that national relational mobility was
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39 positively associated with greater relationship quality ($B = .65, S.E. = .13, \beta = .63, t = 4.81, p$
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41 $< .001$), which in turn was significantly associated with global well-being ($B = .16, S.E.$
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43 $= .07, \beta = .36, t = 2.29, p = .028$). The direct effect of national relational mobility on global
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45 well-being ($B = .29, S.E. = .06, \beta = .63, t = 4.81, p < .001$) reduced after entering relationship
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54 ⁵ To take advantage of the rich dataset from the world relationships survey and the Gallup poll, we explored a
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56 variety of relevant variables measuring relationship quality and well-being, and examined their associations
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58 through exploratory factor analyses and indirect analyses. We found that the relationship quality, especially the
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60 perception that people could count on close others when needed, explained the association between relational
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62 mobility and well-being. However, because of the limited number of nations we could use in factor analyses, we
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64 only provide these findings in supplement (Supplementary Section 3D).

⁶ We rescaled intimacy with romantic partner and intimacy with closest friend by multiplying these scores by 5/7
to match the range of the self-disclosure scores before creating the aggregations.

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3 quality in the model ($B = .18$, $S.E. = .07$, $\beta = .40$, $t = 2.54$, $p = .016$), Standardized Indirect
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5 Effect = $.23$, $S.E. = .12$, $95\% CI = [.06, .57]$ (Figure 3).
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8 **Study 3 Discussion**

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10 In Study 3, we found that national levels of relational mobility were linked to national
11 levels of well-being, which was accounted for by the reported national relationship quality.
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13 These findings demonstrate that the association between these factors on the individual level
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15 is also present at the national level; perceived freedom to start and end relationships might
16
17 promote the perception of intimacy, self-disclosure to close others and contribute to well-
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19 being, above and beyond other traditionally studied national features such as endorsing
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21 individualistic values and financial circumstances.
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28 **General Discussion**

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30 Does the freedom to seek alternative relationships contribute to personal well-being?
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32 The present research investigated this question, providing evidence that perceiving greater
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34 relational mobility in one's social environment is associated with reporting having better
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36 relationships, during a worldwide crisis as well as under more ordinary circumstances. This
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38 perception of enhanced quality of relationships was in turn associated with reporting greater
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40 well-being. As suggested by prior research (Thomson et al., 2018; Yuki & Schug, 2012), the
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42 flexibility to start and end relationships may lead people to invest more in their existing
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44 relationships in order to keep their partners and friends from seeking out attractive
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46 alternatives; this extra investment may ultimately contribute to both improved relationships
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48 and personal well-being. Moreover, because of this relational flexibility, people may be more
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50 selective in their relationship choices and more likely to choose or be chosen by others who
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52 can provide more social and emotional support (Schug et al., 2009).
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3 In Studies 1A and 1B, we found that the more relational mobility participants
4 perceived in their environment, the better the quality of relationships they reported having
5 with their best friend and closest family member, which in turn accounted for their reports of
6 enhanced well-being. These findings were consistent with different types of well-being,
7 eudaimonic and hedonic, and after controlling for individuals' independent and
8 interdependent view of self. In Study 2, we replicated the link between relational mobility
9 and well-being under immediate threat to participants' health and well-being, during the
10 COVID-19 pandemic. Participants who perceived greater relational mobility before the start
11 of the pandemic reported that they received more social support from friends they had
12 recently met, which in turn was associated with their well-being during the pandemic. Lastly,
13 in Study 3, we expanded the scope of the research and examined whether national differences
14 in relational mobility could explain national differences in well-being: the more relational
15 mobility in a nation, the more likely people of that nation were to report greater well-being.
16 This association was explained by the increase in quality of relationships, consistent with the
17 individual level data.

18
19 In establishing these effects, the current work makes important contributions to
20 multiple areas of psychology. First, strengthening the prior research (Yuki & Schug, 2012),
21 the current findings address an important gap in the relationship literature regarding how
22 social contexts shape the functioning of relationships within a society (Clark, 2018). For
23 example, individuals' need to convince others that they would be a good choice in a
24 friendship or romantic relationship (Clark et al., 2019) may be altered as a function of their
25 society's relational mobility level; people in societies characterized by low relational mobility
26 may experience this need to a lesser extent. Second, our findings demonstrate that the
27 associations between relational mobility, relationship quality, and well-being persist across
28 different circumstances, even under a crisis such as the COVID-19 pandemic. While the
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3 degrees of social support people received from their old friends and their new friends during
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5 the pandemic were associated with greater well-being, only support from new friends
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7 explained the link between relational mobility before the pandemic and well-being during the
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9 pandemic. It seems people with higher relational mobility could add another source of social
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11 support (i.e., new friends) on the top of their old relationships, which might contribute to their
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13 enhanced well-being during crisis. Third, these findings inform our understanding of the
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15 possible mechanisms that drive individual and national differences in well-being,
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17 highlighting potential avenues for interventions aimed at enhancing societal well-being.
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21 We note that relational mobility is distinct from residential mobility, which is often
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23 measured as the frequency with which people have moved to a different residential area.
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25 Importantly, previous research showed that people who moved around more while growing
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27 up reported *decreased* well-being (Oishi, 2010; Oishi & Talhelm, 2012) especially when they
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29 are more introverted (Oishi & Schimmack, 2010). However, although relational mobility and
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31 residential mobility often go hand in hand, in this study we found that relational mobility was
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33 associated with *greater* levels of well-being. These findings suggest that, above and beyond
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35 physical residential movement, accompanied by potentially forced changes in relationships,
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37 perceived *freedom* of choosing relationships based on one's own needs and preferences has
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39 an independent influence on well-being. Indeed, in Studies 1A and 1B, even after controlling
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41 for the number of new friendships and acquaintanceships participants in fact formed in the
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43 past month and over the past three months, the associations between relational mobility and
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45 well-being persisted (Supplementary Section 7). These findings indicate that one's subjective
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47 interpretation of one's surrounding society, above and beyond one's actual social
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49 opportunities, was related to one's subjective sense of relationship quality and well-being.
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56 Key questions remain to be addressed in future work. For example, what is the
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58 specific mechanism through which relational mobility influences relationship quality? As
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3 suggested in prior research, the threat of one's close others looking for other options can
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5 motivate people to invest more in their relationships, ultimately enhancing relationship
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7 quality (Thomson et al., 2018). Alternatively, in societies characterized by high relational
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9 mobility, people may be more likely to end unsatisfying relationships and selectively
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11 maintain only high-quality relationships. Similarly, in Study 2, we found that relational
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13 mobility was associated with social support from new friends, rather than old friends. It is
14
15 possible that people with high relational mobility may readily initiate new relationships that
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17 are more suitable and tuned to their current status and situation, with those who can
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19 empathize with and support them under crisis. Further investigation is needed to test these
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21 possibilities.
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26 Relatedly, relational mobility may change the way people seek and leverage social
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28 support from others. Previous research found that people who perceive relationships as
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30 "given" (i.e., Asians) are less likely to seek social support and are less successful in resolving
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32 stressors with social support than those who engage in relationships more voluntarily (i.e.,
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34 Americans; Sherman et al., 2009). When seeking social support, Asians are also more
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36 vigilant to relational constraints than Americans (Taylor et al., 2004). These cultural
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38 differences may be accounted for by differences in relational mobility. For example, people
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40 in a society characterized by low relational mobility may seek support only from others
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42 whom they have known for a sufficient amount of time. They also may feel that social
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44 support from new acquaintances or friends is less helpful in resolving stressors, which may
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46 help account for our findings in Study 2.
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51 In addition, the specific causal direction describing the relationships among relational
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53 mobility, relationship quality, and well-being will be important to explore. Although
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55 enhanced relationship quality in societies with higher relational mobility may in turn increase
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57 well-being, it is also possible that enhanced individual well-being in societies with higher
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3 relational mobility may facilitate having better quality of relationships, i.e., happy people
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5 make good partners. Following up on individuals' approaches to changing or maintaining
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7 relationships over the lifespan and across different societies help to address this question.
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10 Finally, a majority of our data was collected in the United States. An open question
11
12 then is whether the associations between relational mobility and well-being would persist
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14 across other cultures. We note that previous research has demonstrated that relational
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16 mobility reported by participants in the United States, as well as by those in Japan, could
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18 explain attitudes toward romantic partners (Yamada et al., 2017) and associations between
19
20 self-esteem and happiness (Yuki et al., 2013). Nevertheless, because relational mobility has
21
22 been conceived as a socioecological factor, caution should be paid when interpreting data
23
24 acquired at the level of individuals.
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28 Maintaining relationships with close others is critical for well-being. According to
29
30 common wisdom, enduring relationships may be especially important. However, the present
31
32 work suggests taking into consideration another factor: whether one's surroundings force
33
34 people to maintain relationships or not. In short, we found that perceiving the freedom to start
35
36 and end relationships is profoundly associated with well-being through its impact on
37
38 relationship quality. This finding suggests that freely chosen relationships in particular
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40 contribute to greater well-being, during crisis as well as in more ordinary circumstances.
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42 Investigating the underlying causal mechanisms of this effect and applications to clinical and
43
44 additional social settings may uncover avenues both for appreciating the support of
45
46 interpersonal relationships and for increasing societal levels of well-being.
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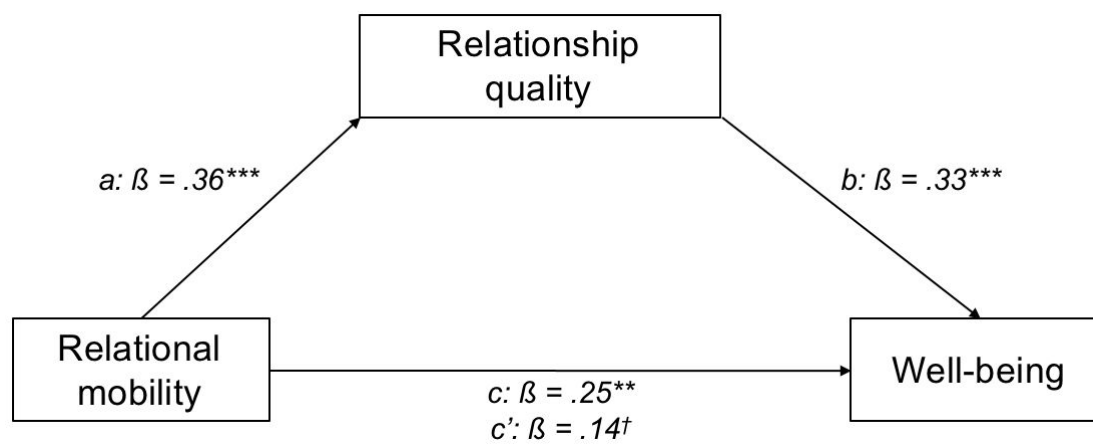
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Figure 1

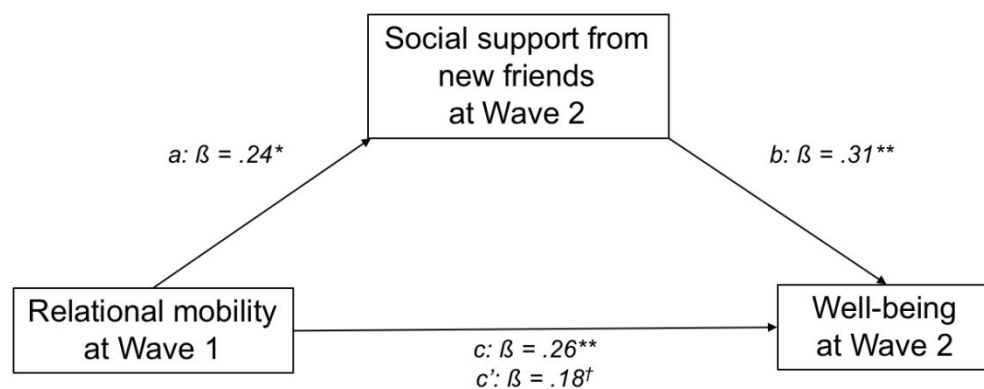
Increased perception of relational mobility was associated with enhanced relationship quality, which was in turn associated with enhanced well-being. Trait extraversion and socio-economic status were controlled for.



Note. $^{\dagger}p < .01$, $^{**}p < .01$, $^{***}p < .001$.

Figure 2

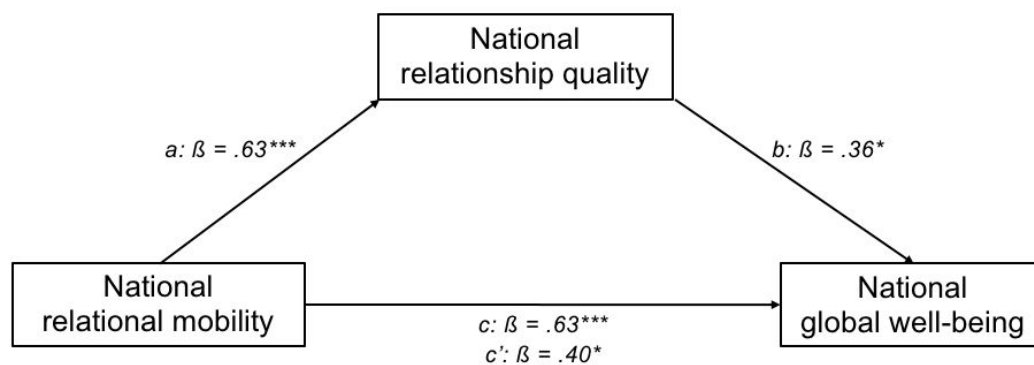
Greater relational mobility before the COVID-19 outbreak (Wave 1) was associated with increased report of social support first-year college students received after the COVID-19 outbreak (Wave 2), from their new friends that they met after entering college, which in turn was associated with their enhanced well-being at wave 2.



Note. † $p < .10$, * $p < .05$, ** $p < .01$.

Figure 3

The association between national relational mobility and national global well-being was explained by the national level relationship quality respondents reported having with their romantic partner and closest friend.



Note. $*p < .05$, $***p < .001$.