

Interpersonal Mattering in Friendship as a Predictor of Happiness in Japan: The Case of Tokyoites

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Abstract Drawing on data from the Survey of Midlife Development in Japan (MIDJA), this study examines the roles of friendship in happiness among Tokyoites, primarily inspired by a study linking interpersonal mattering and happiness in the US by Demir et al. (J Happiness Stud 12(6):983–1005, 2011). Consistent with their study and related studies by others (e.g., Tiefenbach and Kohlbacher in Happiness from the viewpoint of economics: findings from recent survey data in Japan. Working paper 13/1. Deutsches Institut Für Japan Studien/German Institute for Japanese Studies, Tokyo, 2013; Tokuda and Inoguchi in Soc Indic Res 89(2):349–360, 2008), this study finds that interpersonal mattering is a significant and influential predictor of happiness. Furthermore, for residents in Tokyo, the perception of positive relations with others completely mediates the relationship between friendship and happiness. The study also finds that self-acceptance partially mediates the friendship-happiness relationship. It remains to be seen whether the mediated pathway between interpersonal mattering and happiness can be generalized to broader social contexts such as the country as a whole or to societies in the West.

Keywords Interpersonal mattering · Happiness · Mediation analysis · Japan · MIDJA

1 Introduction

In recent decades, the question of what makes humans happy gained a renewed interest among researchers in various disciplines, including demography, economics, psychology, and sociology. Happiness researchers identified various predictors ranging from demographic characteristics (e.g., marital status, health), socioeconomic status (e.g., income) to social capital (e.g., friends) (Diener and Biswas-Diener 2008; Easterlin 2001; Frey and Stutzer 2000, 2005; Lyubomirsky 2008; Wang and Wong 2013).

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Inspired by growing research on happiness outside the West (Abdel-Khalek 2006; Doğan and Totan 2013; Shimai et al. 2004; Tokuda and Inoguchi 2008), this study focuses on interpersonal mattering in friendship as a predictor of happiness in Japan, and proposes two mediators: perceived positive relations with others and self-acceptance. Looking at the collectivist Japanese society may expand understanding of the association between friendship and happiness that has been largely based in individualist Western societies.

2 Who is Friend?

Friendship is a “voluntary interdependence between two persons over time which is intended to facilitate the socio-emotional goals of the participants, and may involve varying types and degrees of companionship, intimacy, affection, and mutual assistance” (Hayes 1988, cited in Demir et al. 2013: 861). Friendship as a voluntary, intimate and private interpersonal relationship is a contemporary Western notion (Silk 2003), but this notion has long been widespread in Japan. Two types of friendships have been observed among Japanese: *tsukiai-nakama* and *shin-yu*. *Tsukiai-nakama* is often formed and maintained in the workplace, builds on social obligation, and lasts as long as the obligation (Cahn 1984). A famous example of *tsukiai-nakama* activities is after-work drinking for male, and increasingly also for female, coworkers. By comparison, *shin-yu* is a closer relationship based on “mutual liking, attraction, interest and common values” (Cahn 1984: 31). It is common for Japanese persons to make close friends among schoolmates, usually of the same sex, at a young age, and maintain these friends for a long term, often lasting a lifetime. The feelings of obligation may still be part of close friendships, but Japanese tend to define *shin-yu* as friendships “sought for their own sake” that are open, sincere and intimate (Atsumi 1980, cited in Cahn 1984: 31–32).

The distinction between obligatory and close friendships is not always so clear. Roberson (1998) argued that the distinction between the two types of friendships was based on observations of white-collar workers at large corporations, and that these types of friendships greatly overlapped for the male blue-collar factory workers in his field-work. More recently, Lin’s ethnographic study (2012) of friendship formed among Japanese women executives from various corporations shows that career relationship can have the qualities of intimate friendship. It shows that networks based neither on kinship, neighborhood, nor the workplace significantly shape these female executives’ “‘way of thinking,’ specifically about constructing and narrating a coherent self” (Lin 2012: 98) in a fast moving, highly complex and contradictory world. Conversely, individuals’ abilities to present their self-worth are necessary for close friendships. In sum, “understandings of self and friendships are...interdependent” (Lin 2012: 98; see also Maeda and Ritchie 2003).

Questions about friends in large-scale surveys, including the one this study draws on, usually provide their respondents with no instructions as to who should be considered friends. Meanwhile, phrases such as “friends and other acquaintances” widely used in these surveys imply that friendship is not just any relationship outside of kinship and neighborhood networks. Although this study cannot specify the type of friend (e.g., “best friends,” “close friends”), it is more geared towards closer friends given its focus on interpersonal mattering as a predictor of happiness (see Variables).

3 Interpersonal Mattering in Friendship as a Predictor of Happiness in Japan

Happiness is attributed to many aspects of friendship such as “understanding, enjoyment, similarity, respect, authenticity, acceptance, helping behavior, intimacy, and self disclosure,” and these friendship qualities are likely to be shared across cultures (Maeda and Ritchie 2003: 582; see also Demir et al. 2011, 2013). Mutual trust, togetherness and understanding have been shown as desired friendship qualities in both the US and Japan (Takahara 1974, cited in Cahn 1984). The Japanese General Social Survey (ICPSR 2012) indicate that “honest,” “responsible” and “warm-hearted” as more desired attributes in friends, compared to attributes such as “intelligent,” “cultured,” “powerful,” “wealthy” and “loyal.” Moreover, Tokuda and Inoguchi (2008) find that interpersonal trust is significantly associated with happiness among Japanese.

As Demir et al. (2011) point out, despite various perspectives and analyses linking friendship and happiness, there is little research specifying how the two constructs are related. Demir and Özdemir (2010) show that close friendship quality is positively linked to how much basic psychological needs are met by the friendship, which is then positively linked to happiness. In a related study, Demir et al. (2011) posit that friendship quality is positively associated with “the feeling that one counts and makes a difference in another person’s life” (p. 985), or interpersonal mattering, which is in turn positively associated with happiness. They focus on “positive,” or enabling sort of, attention from friends to measure interpersonal mattering, although they admit that one can receive negative attention. Analyzing data from two samples of US college students, they find that the association between friendship quality and happiness is significantly mediated by interpersonal mattering. Their review of the relevant literature informs us about how individuals develop the feeling that they matter to their friends in various ways: comparing the attention individuals receive from their friends and the attention their friends give to anyone (or anything) other than themselves; the attention they receive from their friends relative to the attention they receive from elsewhere; the attention they receive from their friends in the present compared to its past counterpart.

Interpersonal mattering has been positively linked to individuals’ sense of self, which is then positively associated with subjective well-being (Coopersmith 1967; Josselson 1994; Rosenberg 1985; Rosenberg and McCullough 1981; Schlossberg 1989). Marshall (2001) defines interpersonal mattering as “the psychological tendency to evaluate the self as significant to specific other people” (p. 474). Demir et al. (2011), adopting Marshall’s definition of mattering, stress that “mattering to another person is not about the quality of a relationship,” but concerns “the self-perceived relevance to a significant other” (p. 986). Interpersonal mattering is defined simultaneously by the sense of self worth and the sense of relatedness to others. Meanwhile, Hamaguchi (1985) (cited in Markus and Kitayama 1991: 302) posits that in Japan, the sense of identification with others precedes the sense of self which is “confirmed only through interpersonal relationships.” Markus and Kitayama (1991: 302) see the Japanese self as fluid, changing “through time and situations according to interpersonal relationships.” In examining the role of friendship in Japanese happiness, this study adopts Markus and Kitayama’s notion of self-in-relation-to-others, whereby individuals see themselves largely through their connections with others. However, the study does not presume that the concept is useful only for the East. Lindholm (1997) critiques the binary treatment of the sociocentric Eastern self and individualistic Western self presented in Markus and Kitayama (1991). Indeed, a parallel exists between the concept of interpersonal mattering utilized by Demir et al. (2011) based in the US, and the

interdependence between female executives' understandings of self and friendship illuminated by Lin (2012) based in Japan.

Inspired by Demir et al. (2011) (see also Demir et al. 2013), this study considers interpersonal mattering in friendship as a robust predictor of happiness. The concept of mattering is contextualized as individuals' self assessment of their give-and-take relationships with friends, focusing on support in time of need. As the saying goes, "a friend in need is a friend in deed." Individuals may find it easier to evaluate their friendship by how much mutual help they (can) expect between themselves and their friends in time of need, rather than evaluating it in general. Meanwhile, support received from friends in time of need is most likely to increase well-being (Cohen and Wills 1985; Diener and Biswas-Diener 2008; Lyubomirsky 2008; Reis 2001). Moreover, this study examines pathways linking interpersonal mattering and happiness and proposes two mediating variables: perceived positive relations with others and self-acceptance. These variables are intertwined, and interpersonal mattering is likely a robust predictor of both. Also, Ryff (1989) demonstrates that perceived positive relations with others and self-acceptance are related to, but distinct from, the construct of happiness, thus pointing to the possibility of incorporating them in the model of happiness as mediators and specifying the link between interpersonal mattering and happiness established by Demir et al. (2011).

One possibility is that the sense of mattering made available by friendship support elevates individuals' perceptions of harmonious relations with others. Some aspects of friendship and related qualities may be more valued in collectivist societies than individualist societies. Such qualities include attentiveness, sensitivity, and interdependence (Maeda and Ritchie 2003). In Japan, group conformity and cooperation are valued and expected in various social relations. Therefore, Japanese may tend to view others in relation to larger social contexts as opposed to focusing mainly on their individuality. This so-called "high context culture" (Hall 1976) leads to great emphasis on friendship qualities such as mutual sensitivity to each other's circumstances, the sense of forgiveness, and more generally, the sense of harmony (Maeda and Ritchie 2003). This study expects that interpersonal mattering in friendship is positively associated with perceived positive relations with others, which is in turn positively associated with happiness (Hypothesis 1).

Furthermore, interpersonal mattering in friendship may be associated with the sense of self-acceptance or the positive evaluation of self. The feeling that "I matter" or "I am worthy" may result either from the expectation of giving or receiving friendship support. One might argue that the notion of self acceptance is Western in origin, and matters less in East Asia. However, for Japanese, the notion can still be important despite, or precisely because of, their collectivism. Anthropological studies reveal that the notions of self autonomy and acceptance are not at all confined to the West (Course 2010; Lin 2012). The collectivist values noted above are likely to coexist with the individualistic values such as individual choice, self esteem, and self acceptance, in close friendships. For Japanese, deriving their uniqueness and self worth through friendships can be particularly important because merely being cooperative or supportive does not differentiate a friend from other in-group member roles such as a neighbor and co-worker (White 1993, cited in Maeda and Ritchie 2003). This study expects that interpersonal mattering in friendship is positively associated with perceived self-acceptance, which is in turn positively associated with happiness (Hypothesis 2).

4 Measuring Happiness

Although various approaches have been developed to define happiness or subjective well-being, they mostly share the notion that happiness is consisted of both affective and cognitive aspects (Pavot and Diener 2013). The affective aspect concerns the individual's emotions and feelings, while the cognitive aspect (or satisfaction) concerns the gap between aspiration and achievement as perceived by the individual (Pavot and Diener 2013). One issue facing happiness researchers is treatment of these two aspects of subjective well-being (SWB). Some researchers have treated the two aspects interchangeably arguing that they both indicate “the degree to which one judges the quality of one's life favorably” (Veenhoven 1995: 34). The affective aspect tends to be correlated with the cognitive aspect, which makes sense since individuals' emotions are likely to shape their evaluations of life circumstances, which in turn evoke their emotional reactions (Pavot and Diener 2013). Others researchers stress the distinction between the two aspects (Cummins 1995; Raibley 2012). The separate treatment of the affective and cognitive aspects often generates “unique contributions to the overall understanding of the experience of SWB” (Pavot and Diener 2013: 135).

This study focuses on the affective aspect of happiness, following Demir et al. (2011) who argue that as an emotional bond, friendship is more related to the affective aspect of happiness than its cognitive aspect. Although one may measure the affective aspect of happiness as hedonic balance, i.e., the “relative balance of positive and negative feelings” of individuals (Pavot and Diener 2013: 134), positive and negative affect are often experienced somewhat independently of each other (Bradburn 1969; Diener and Emmons 1984). Watson et al. (1988) developed two mood scales, and showed that rather than being the polar opposites of emotion, positive and negative affect represent highly distinctive dimensions.

5 Methods

5.1 Data and Sample

Data come from the main sample of the 2008 Survey of Midlife Development in Japan (MIDJA), which is a probability sample of adults aged 30–79 in the Tokyo region comprised of 23 wards (ICPSR 2011). MIDJA was chosen as a main data source due to the availability of items necessary to measure the variables such as support to and from friends, the sense of harmony, and the sense of self acceptance, along with happiness. MIDJA was designed by a team of researchers some of whom also designed the National Survey of Midlife in the United States (MIDUS I: 1995–1996), and its follow-up (MIDUS II: 2004–2006) (ICPSR 2007a, b). MIDJA and MIDUS share many instruments that facilitate comparisons of Japan and the US, although (to reiterate) the MIDJA data come from a local sample unlike the MIDUS data.

Prospective respondents received a copy of Instruction Manual, along with a cover letter, describing the research in a Q&A format (ICPSR 2011). A self-administered questionnaire was 46 pages long, and 136 questions were asked across 17 topics (e.g., emotion and friends). Interviewers traveled to the homes of those who agreed to participate in the survey to obtain written consent, and returned a week later to collect the completed questionnaires. This deliver-and-pick-up method has been widely used in Japan. Those who completed the survey received 3000 yen (approx. US\$30) (ICPSR 2011). MIDJA had

the response rate of 56 % (1,027 of 1,827), which is lower than MIDUS I (ICPSR 2007a) with 61 %. After cases with missing values were deleted, the final sample size was 996.

5.1.1 Dependent Variable

The level of happiness is measured as the frequency of positive affect. It is an additive index of responses to the question: “During the past 30 days, how much of the time did you feel (a) cheerful, (b) in good spirits, (c) extremely happy, (d) calm and peaceful, (e) satisfied, and (f) full of life?” The scores range from 1 (=none of the time) to 5 (=all the time). Scores are summed across items. To assess the dimensionality of the six indicators of happiness, a factor analysis was performed, with principal axis factoring (PAF). This derived a single factor (eigenvalue = 4.41) on which all items had a factor loading larger than .80. Scale reliability (alpha) coefficient was .93. Alternatively, happiness may be defined as “the predominance of positive affect over negative affect” (Demir et al. 2011: 984) and measured as the frequency of negative affect subtracted from the frequency of positive affect. A preliminary analysis showed that although analyses of the MIDJA data with the respective measures of happiness generate similar results, there are problems such as misspecifications of models and unequal variances of residuals in the analysis with this alternative measure of happiness. The square transformation of the alternative happiness data (given its left-skew) mitigated but did not resolve the problems. Another problem is that a factor analysis of responses across negative and positive affect items combined yield two dimensions, consistent with evidence in Watson et al. (1988).

5.1.2 Independent Variable

The independent variable is interpersonal mattering in friendship. It is measured with an eight-item question on the extent of support that individuals expect to receive from and give to their friends. The first set of four items concerns expected support from friends, and the second set is about expected support to friends. With the first set, each respondent was asked how much his friends (a) really care about him, (b) understand how he feels about things, (c) can be relied on for help if he has a serious problem and (d) are someone he can open up to if he needs to talk about his worries. Response options range from 1 (=not at all) to 4 (=a lot). The second set was asked similarly. A factor analysis with PAF of these eight indicators derived a single factor where all items had a factor loading larger than .70 (eigenvalue = 4.23). Alpha coefficient is .90.

A composite scale was constructed by summing scores across these eight items, with higher sums indicating higher ratings of positive mattering. Although the measure of interpersonal mattering used in this study is somewhat different from the measure used by Demir et al. (2011) based on the 11-item Mattering to Others Questionnaire (MTOQ) (Marshall 2001), these two measures are fairly comparable and focus on “positive” mattering.

5.1.3 Mediating Variables

Two mediators are proposed linking interpersonal mattering in friendship to happiness. Perceived positive relations with others is provided in MIDJA as an index of agreement with the seven statements: “Most people see me as loving and affectionate”; “Maintaining close relationships has been difficult and frustrating for me”; “I often feel lonely because I

have few close friends with whom to share my concerns”; “I enjoy personal and mutual conversations with family members and friends”; “People would describe me as a giving person, willing to share my time with others”; “I have not experienced many warm and trusting relationships with others”; “I know that I can trust my friends, and they know they can trust me” (ICPSR 2011). The response score ranges from 1 (=strongly disagree) to 7 (=strongly agree). Alpha coefficient is .76.

Self-acceptance is provided in MIDJA as an index of agreement with the statements: “When I look at the story of my life, I am pleased with how things have turned out”; “In general, I feel confident and positive about myself; “I feel like many of the people I know have gotten more out of life than I have”; “I like most parts of my personality”; “In many ways I feel disappointed about my achievements in life”; “My attitude about myself is probably not as positive as most people feel about themselves”; “When I compare myself to friends and acquaintances, it makes me feel good about who I am” (ICPSR 2011). The response score ranges from 1 (=strongly disagree) to 7 (=strongly agree). Alpha coefficient is .78.

5.1.4 Demographic Variables

Although this study focuses on the effects of friendship support on happiness, one may suspect that in a collectivist society, friendship matters less in individuals’ happiness, than other types of social relations such as family. This study thus considers marital status. Marital status is an established predictor of happiness in Japan (Kaufman and Taniguchi 2010; Nobe 1999; Tiefenbach and Kohlbacher 2013) and elsewhere (e.g., the US, see Lucas et al. 2003; Lucas 2005). In addition, gender, financial status, and health status are included as controls because they are theoretically and/or empirically associated with happiness and at least one of the key covariates, including the proposed mediators. Some researchers find that women report greater happiness in Japan (Kaufman and Taniguchi 2010; Tiefenbach and Kohlbacher 2013), although others find no association between gender and happiness (Tokuda and Inoguchi 2008). A gender difference in happiness is expected in this study given its focus on positive affect; women tend “to experience emotion, both positive and negative, more intensely than men” (Pavot and Diener 2013: 141). Meanwhile, women may report higher on the affective quality of give-and-take friendships (Liebler and Sandefur 2002). Finally, financial and physical well-being are known as key predictors of happiness (Dolan et al. 2008). At the same time, both forms of well-being are expected to be positively associated with interpersonal mattering because each of these constructs is perceived to make for “a good life” across various countries, including Japan (Tafarodi et al. 2012).

Sex (1 = female; 0 = male) and marital status (1 = married; 0 = single) are binary variables. Financial status is based on respondents’ self-rating of their own “financial situation these days” on a scale from 0 (=the worst possible) to 10 (=the best possible). Similarly, the self-rating of health is gauged on a scale from 0 (=the worst possible health) to 10 (=the best possible health).

5.2 Analytic Strategy

The ordinary least squares (OLSs) regression is used in the primary data analysis for this study. Happiness is regressed on the independent variables (interpersonal mattering and marital status) and the control variables (Model 1). Perceived positive relations with others and self-acceptance are added to Model 1, respectively (Models 2 and 3). Hypothesis 1,

that interpersonal mattering is positively associated with perceived positive relations with others, which is in turn positively associated with happiness is tested by comparing coefficients on interpersonal mattering in Models 1 and 2. A sizable reduction in the coefficient on interpersonal mattering in Model 2 from Model 1, along with a significant and positive effect of interpersonal mattering on perceived positive relations with others, may indicate partial mediation (Baron and Kenny 1986). Hypothesis 2, that interpersonal mattering is positively associated with self-acceptance, which is in turn positively associated with happiness is assessed by comparing the coefficients on interpersonal mattering in Models 1 and 3 in a similar manner.

Once evidence is obtained to tentatively support the mediating roles of the perceptions of positive relations with others and self-acceptance, these proposed mediators are added together to Model 1 to form a full model (Model 4). A mediation analysis is then performed to estimate direct and indirect effects of interpersonal mattering in friendship. For these estimates, bootstrapped as well as normal confidence intervals are obtained. Bootstrapping is increasingly preferred over the classical, “one random sample” approach to test the statistical significance of the estimated indirect effects in mediation analysis mainly because bootstrapping is known to be more robust to the violated OLS normality assumption (Preacher and Hayes 2008). In addition to the model Chi square test, several fit indices are utilized to evaluate how well the proposed model fits with the data. These indices include comparative fit index (CFI), Tucker–Lewis index (TLI), root mean squared error of approximation (RMSEA), with its confidence intervals, and standardized root mean squared residual (SRMR). With either CFI or TLI, a statistic close to 1, e.g., .9 or higher, indicates a good model fit (Bentler 1990). With RMSEA a small statistic indicates a good model fit. The lower bound of its 90 % CI below .05 indicates a close fit, whereas the upper bound of its 90 % CI above .1 indicates a poor fit (Browne and Cudeck 1993). A good fit is also indicated by a small SRMR statistic, e.g., <.08 (Hu and Bentler 1999).

6 Results

6.1 Descriptive Analysis

Table 1 shows summary statistics for the study variables based on data from the 2008 Survey of Midlife Development in Japan (MIDJA). Since the MIDJA data come from a sample of Tokyoites, this table also shows statistics of the same or similar variables based on national data drawn from the 2008 Japanese General Social Survey (JGSS) for a comparison. The mean of happiness is above the mid-point in both surveys. The distribution of happiness data is approximately normal in MIDJA, whereas it is left skewed in JGSS (where about two thirds of the respondents chose the first or second highest rating on the five-point scale). The MIDJA data on interpersonal mattering in friendship are approximately normally distributed, and its mean falls right at the midpoint on the scale. No comparable data on interpersonal mattering in friendship is available in JGSS, but the closest possible are the data on the level of satisfaction with friends that are left skewed with a half of the respondents choosing the first or the second highest rating on the five-point scale. The MIDJA data on the perception of positive relations with others, measured on the scale from 7 to 49, are mildly left-skewed, although the data have the mean of 33.6 which is close to the median of 34. The data on self-acceptance, measured on the scale ranging from 7 to 49, are approximately normal, with the mean of 30.9. No comparable data on perceived positive relations with others or self-acceptance is available in JGSS.

Table 1 Descriptive statistics

	MIDJA Mean (SD)	JGSS Mean (SD)
Happiness	19.49	3.80
MIDJA [6, 30]; JGSS [1, 5] ^a	(4.57)	(.92)
Mattering in friendship	20.086	3.69
MIDJA [8, 32]; JGSS [1, 5] ^b	(4.43)	(.95)
Positive relations with others	33.59	–
[7, 49]	(5.74)	
Self acceptance	30.89	–
[7, 49]	(5.70)	
Married	.69	.73
[0, 1]	(.46)	(.45)
Female	.51	.53
[0, 1]	(.50)	(.50)
Finance	5.24	2.63
MIDJA: [0, 10], JGSS: [1, 5] ^c	(2.35)	(.87)
Health	6.23	3.65
MIDJA: [0, 10], JGSS: [1, 5] ^d	(1.96)	(1.092)
Analysis sample size (after list-wise deletion)	996	4,102
Original sample size	1,027	4,220

Numbers in brackets indicate ranges of possible values

^a In JGSS, happiness is measured with the general question, “Are you happy?” on a scale ranging from 1 (=happy) to 5 (=unhappy). The scale is reversed for the descriptive analysis

^b JGSS asked the question “How much satisfaction do you get from the following areas of life?” with the response option ranging from 1 (=satisfied) to 5 (=dissatisfied). The scale is reversed

^c JGSS asked the question, “Compared with Japanese families in general, what would you say about your family income?” with five response options: 1 = far below average; 2 = below average; 3 = average; 4 = above average; 5 = far above average

^d JGSS asked the question, “How would you rate your health condition?” with the response option ranging from 1 (=good) to 5 (=poor). The scale is reversed for the descriptive analysis

The MIDJA and JGSS data are highly comparable in terms of the demographic variables although there are some differences. A slightly lower proportion of the MIDJA respondents are married and female. For the MIDJA respondents, the mean of financial wellbeing is right above the midpoint, but for the JGSS respondents, it falls below the midpoint.

The Pearson correlation coefficients in Table 2 are mainly for quantitative variables. Each quantitative predictor is significantly and positively associated with the level of happiness at the .001 level, while the coefficient ranges from .26 (interpersonal mattering in friendship) to .51 (perceived self-acceptance). The correlation between the perceptions of positive relations with others and self-acceptance is quite high (at .62), consistent with the intertwined relationship between the two constructs discussed earlier. As for a correlation between the binary variable and happiness, a t-test was performed. On average, married respondents report higher happiness (20.17) than unmarried respondents (17.95), and this difference is significant ($t = -7.24$; $df = 994$; $p = .00$, not tabled). The mean

Table 2 Pearson correlations between the study variables

	1	2	3	4	5	6	7	8
1. Happiness	1.00							
2. Mattering in friendship	.26***	1.00						
3. Positive relations	.46***	.57***	1.00					
4. Self acceptance	.51***	.28***	.62***	1.00				
5. Married	.22***	-.016	.16***	.20***	1.00			
6. Female	.20***	.25***	.18***	.052	-.076*	1.00		
7. Finance	.37***	.10***	.26***	.40***	.18***	.087**	1.00	
8. Health	.39***	.13***	.22***	.28***	.12***	.082**	.32***	1.00

Pearson correlation is for two quantitative variables. A Pearson correlation coefficient computed for the two binary study variables (i.e., “female” by “married”) is a phi coefficient. A Pearson correlation between a binary and a quantitative variable is an equivalent of a beta regression coefficient on the effect of a binary variable on a quantitative variable, and thus it must be interpreted with caution. Because the standard deviation of a binary variable is closely related to its skewness, the beta coefficient is attenuated as the skewness becomes larger

* $p < .05$; ** $p < .01$; *** $p < .001$ two tailed

happiness scores for women and men are 18.57 and 20.39, respectively, and this gender difference is significant ($t = -6.42$; $df = 994$; $p = .00$, not tabled).

6.2 Regression Analysis

Table 3 presents results from the OLS regression models predicting happiness intended to serve as preliminary tools to assess Hypotheses 1 and 2, as described earlier.

Model 1 shows that interpersonal mattering in friendship is significantly and positively associated with happiness ($p < .001$). In Model 2 that adds perceived positive relations with others to Model 1, the effect of interpersonal mattering is virtually zero and insignificant ($p = .92$), whereas perceived positive relations with others significantly and positively predicts happiness ($p < .001$). These results support Hypothesis 1, that the higher level of interpersonal mattering is associated with the elevated perception of positive relations with others, which is then associated with more happiness. In Model 3 that adds self-acceptance to Model 1, the effect of mattering remains significant, but the effect is almost half in size of the original effect. Self-acceptance significantly and positively predicts happiness. These results suggest that self acceptance may partially mediate the positive association between interpersonal mattering and happiness, consistent with Hypothesis 2. [When each of the proposed mediators was regressed on interpersonal mattering, marital status, and the controls included in each of the previous models, interpersonal mattering had a significant and positive effect ($p < .001$) (not tabled)]. Interestingly, the effect of perceived positive relations with others becomes noticeably attenuated in Model 4 that includes both mediators, compared to its counterpart in Model 2. Perceived self-acceptance has a smaller effect in Model 4 than in Model 3, although this difference is not as substantial. The final model shows that both mediators are significant positive predictors of happiness. Yet, the effect of the perception of self-acceptance is nearly twice as the effect of the perception of positive relations with others. It may be that the perception of positive relations with others mediates the relationship between self-

Table 3 Unstandardized coefficients from OLS models of happiness ($n = 996$)

	Model 1 b (SE)	Model 2 b (SE)	Model 3 b (SE)	Model 4 b (SE)
Mattering in friendship	.18*** (.029)	-.0033 (.033)	.093*** (.028)	.018 (.032)
Positive relations with others		.26*** (.026)		.14*** (.030)
Self acceptance			.28*** (.023)	.21*** (.027)
Married	1.61*** (.27)	1.17*** (.26)	1.19*** (.26)	1.058*** (.25)
Female	1.16*** (.25)	1.059*** (.24)	1.28*** (.24)	1.20*** (.24)
Finance	.45*** (.056)	.36*** (.054)	.24*** (.055)	.24*** (.054)
Health	.61*** (.066)	.55*** (.063)	.50*** (.063)	.49*** (.062)
R ²	.30	.36	.39	.40
F statistic	83.08	93.35	103.12	93.31
(<i>df1</i> , <i>df2</i>)	(5, 990)	(6, 989)	(6, 989)	(7, 988)

* $p < .05$; ** $p < .01$; *** $p < .001$ two tailed

acceptance and happiness. Although the study hypotheses do not specify how the proposed mediators are related to each other, the observed pattern is consistent with the argument that in Japan, the sense of positive relations with others precedes the sense of selfness that exists primarily through interpersonal relations (Hamaguchi, cited in Markus and Kitayama 1991).

The analysis so far provides tentative support to both study hypotheses. It also confirms that being married has a significant positive effect on the level of happiness across all models. All of the control variables have the expected effects. In line with earlier research on happiness, being female significantly and positively predicts happiness. Financial and physical well-being are also significantly and positively associated with happiness, consistent with the literature on happiness/subjective well-being. Regression diagnostics (e.g., tests for omitted variables errors, nonlinearity, and the assumptions of normal and homoscedastic distribution of errors) were performed for each model. There was no indication of serious violation of the OLS assumptions.

6.3 Mediation Analysis

Based on the preliminary results reported above, and specifically on Model 4, mediation analysis is performed to closely assess the study hypotheses. Table 4 shows key results from this analysis.

Bias corrected confidence intervals of the indirect and direct effects of interpersonal mattering are obtained with 5,000 samples. However, the preliminary regression analysis reported above meets the OLS normality assumption, and thus, not surprisingly, there is virtually no difference between the normal and bootstrapped confidence intervals.

Table 4 Direct, indirect, total effects of interpersonal mattering (n = 996)

	With direct effect		Without direct effect	
	Coefficient	Confidence interval	Coefficient	Confidence interval
Indirect effect	.16	.12 to .20 (n) .12 to .20 (bc)	.16	.13 to .20 (n) .13 to .20 (bc)
Direct effect	.018	-.046 to .081 (n) -.047 to .082 (bc)		
Total effect	.18	.12 to .23 (n) .12 to .23 (bc)	.16	.13 to .20 (n) .13 to .20 (bc)
Likelihood-ratio χ^2 (df)	1.62(1) ($p = .20$)		1.92 (2) ($p = .38$)	
CFI	1.00		1.00	
TLI	.99		1.00	
RMSEA	.025		.00	
RMSEA, 90 % CI	.00 to .092		.00 to .062	
p value, RMSEA <.05	.62		.87	
SRMR	.006		.006	

n Normal CI; *bc* bias-corrected CI

A parallel mediation analysis is performed to examine whether the proposed variables mediate the relationship between interpersonal mattering and happiness. In the preliminary stage, interpersonal mattering, and other independent variables included in the regression analysis reported above are modeled as correlates of each of the mediating variables as well as happiness. This analysis showed that gender virtually has zero effect on perceived self-acceptance, and thus this link was dropped. The final analysis includes the correlation between the residual terms of the mediators, and is performed with and without the direct effect of interpersonal mattering on happiness. Structural components of both models are reported in “Appendix”.

The mediation analysis lends further support to the hypotheses that the perceptions of positive relations with others and self-acceptance mediate the positive association between interpersonal mattering and happiness. The direct effect of interpersonal mattering on happiness is virtually zero, whereas interpersonal mattering is significantly and positively associated with perceived positive relations with others and self-acceptance, both of which are in turn significantly and positively associated with happiness. As the model fit statistics reported in Table 4 indicate, the estimated mediation models have good fit. (Admittedly, these statistics are of relatively little interest since the present analysis does not fit any measurement model per se). For the mediation model with the direct effect, the likelihood-ratio χ^2 is 1.62 ($df = 1$, $p = .20$), and thus, we fail to reject at the .05 level that the proposed model fits as well as the saturated model. The other fit indices also indicate a good fit (CFI = 1.00, TLI = .99, RMSEA = .03, SRMR = .01). The model without the direct effect fits even better with the data as indicated by the Chi square of 1.92 ($df = 2$, $p = .38$), and the other indices (CFI = 1.00, TLI = 1.00, RMSEA = .00, SRMR = .01).

7 Discussion

Tiefenbach and Kohlbacher (2013), in their analysis of recent Japanese data, find that loneliness is a major negative predictor of happiness in Japan. Loneliness is “a self-perceived state in which a person’s network of relationships is either smaller or less

satisfying than desired” (Jones 1981: 295). Social networks can play important roles in reducing loneliness and promoting happiness. With trends towards delayed or non-marriage and the rising divorce rates in Japan (Ono 2009; Raymo and Iwasawa 2005), friendship support may become more important as a predictor of Japanese happiness relative to family support. However, research on the association between social relationship and happiness has focused more on romantic and marital relationships, and less on friendship (Demir et al. 2013). Furthermore, given the increased association between friendship and happiness in old age (Ishii-Kuntz 1990), specifying processes linking friendship to happiness is likely to remain an important task for happiness researchers focusing on Japan, one of the fastest aging societies.

This study posits and finds support for the hypothesis that interpersonal mattering in friendship is positively associated with the perceptions of harmonious relations with others and of self-acceptance, which are in turn positively associated with happiness. These findings from an analysis of data from a random sample of Tokyoites resonate with Marshall’s (2001) notion of interpersonal mattering whereby relatedness to others is closely intertwined with self-worth. Given this study’s focus on a collectivist society such as Japan, it is interesting that the effect of the perception of self-acceptance is much greater than that of positive relations with others. Indeed, the perception of self-acceptance is the strongest predictor in the final model. Certainly, this does not mean that perceived harmony with others is unimportant, but rather that it may play a more indirect role of putting forth the sense of self-acceptance for Japanese. This interpretation is in line with Markus and Kitayama’s (1991) notion of self-in-relation-to-others noted earlier. This notion is perhaps more pronounced in Eastern societies with strong collectivistic values than in Western societies with strong individualistic values. However, the dichotomous treatment of the socio-centric Eastern self and the ego-centric Western self has been criticized (Lindholm 1997). It remains to be seen whether the proposed hypothesis in this study can be supported with data from the West (e.g., US).

The mediation model of the relationship between interpersonal mattering and happiness may be extended in several ways. Confidence in this model will increase if the findings can be generalized to other indices of happiness. Also, as noted above, the cross-cultural validation of the model is warranted. Meanwhile, researchers engaging in this line of inquiry should measure happiness across cultures by focusing on its relatively universal dimensions, and positive affect and negative affect have been shown to be as such (Watson et al. 1988; Kuppens et al. 2006). Another direction of future research is to examine whether the mediation model is applicable to mattering in the context of family relations. This question is highly relevant to Japanese society that has long been characterized with the trend toward later or no marriage, low birth rate, and decline of extended families and kinship ties. These demographic changes go hand in hand with changes in family values from collectivistic to individualistic (Hashimoto and Traphagan 2008). To the extent to which family interaction resembles interaction with friends, we may be able to generalize the model of the mattering-happiness link in the familial context.

This study has limitations. First, due to its cross-sectional nature, it is unable to illuminate how supportive friendship causally affects happiness, or vice versa. As Demir et al. (2013) note, most of studies of the effect of friendship on happiness have been correlational. It would be useful to analyze longitudinal data on friendship, happiness, and other relevant variables. Second, due to the data limitation, unlike Demir et al. (2011), this study is unable to specify types of friends. Given its focus on the concept of interpersonal mattering, it was assumed that the respondents had best and close friends in mind when responding to the questions regarding their perceptions of supportive friendships. Future research needs to clearly define and measure friendships by their closeness and

differentiation from other relationships in order to increase confidence in the mediation model presented in this study. Third, this study has analyzed data from a sample of Tokyoites, making it impossible to generalize its findings to the population of Japan. Their replications with national data are warranted.

8 Conclusion

This study examines the roles of friendship in Japanese happiness, inspired by growing research on happiness outside the West (Abdel-Khalek 2006; Doğan and Totan 2013; Shimai et al. 2004; Tiefenbach and Kohlbacher 2013; Tokuda and Inoguchi 2008) as well as the type of research whose focus goes beyond demographic and socioeconomic variables as predictors of happiness (e.g., Demir and Özdemir 2010, Demir et al. 2011; Tiefenbach and Kohlbacher 2013). In line with existing research, this study finds that interpersonal mattering in friendship is a significant predictor of happiness. Moreover, the study finds that the perception of positive relations with others completely mediates the association between interpersonal mattering and happiness, and the perception of self-acceptance partially mediates the interpersonal mattering-happiness association.

Appendix

See Table 5.

Table 5 Structural components of the mediation analysis reported in Table 4

	Positive relations b (SE)	Self-acceptance b (SE)	Happiness b (SE)	Happiness b (SE)
Mattering in friendship	.69*** (.033)	.30*** (.036)	.018 (.032)	
Positive relations with others			.14*** (.030)	.15*** (.025)
Self acceptance			.21*** (.027)	.21*** (.027)
Married	1.68*** (.32)	1.56*** (.34)	1.058*** (.25)	1.044*** (.25)
Female	.61* (.25)		1.19 *** (.23)	1.22*** (.23)
Finance	.35*** (.065)	.76*** (.071)	.24*** (.054)	.24*** (.054)
Health	.25** (.077)	.39*** (.085)	.49*** (.062)	.49*** (.062)
Variance of residuals	20.13 (.90)	24.20 (1.084)	12.53 (.56)	12.54 (.56)
Covariance of residuals	11.83 (.79)			

* $p < .05$; ** $p < .01$; *** $p < .001$ two tailed

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