



Mismatch and happiness in marital relationship: Importance of future-planning communication and inquisitiveness

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Abstract

Having a sense of good match with the partner in a married couple shall be important to maintain the relationship and happy life. However, little is known about the possible determinants and influences of having such a good-match relationship. We examine (i) what induces a husband and a wife in the couple to have a sense of good match with the partner, respectively, and (ii) how the husband's and wife's perceptions of (mis)match are related to individual happiness. It is hypothesized that certain characteristics of couples, such as their future-planning communication and inquisitiveness, matter for having a sense of match as well as being happy in marriage. The questionnaire surveys were conducted in Japan and the data are collected from 247 married couples (494 individuals). The statistical analyses reveal the following findings. First, a couple's recognition to the amount of future-planning communication and a husband's inquisitiveness not only enhance a sense of good match but also individual happiness. Second, "both-match" couples that recognize "my partner is in good match with me" each other are much happier than couples who do not, while "both-mismatch" couples are the unhappiest among any other types of (mis)match couples. Overall, sufficient future-planning communication and a husband's attribute of being inquisitive about something new & different are important drivers for couples to maintain good chemistry and happiness directly and indirectly through a mediator of having a sense of good match.

Key Words: Match; mismatch; happiness; future-planning communication; inquisitiveness; married couples

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Nomenclature

SDGs Sustainable development goals

SME Structural equation modeling

1 Introduction

Having a sense of good match with the partner or counterpart in any relationship between two agents is important to maintain a relationship and happy life. In societies, people want to find a suitable and/or stable partner in their lives, such as a worker searching for a good job, an organization looking for an employee, a student searching for a good university and a single person seeking a partner. However, the outcome of these relationships is affected by a two-sided matching between two agents (Burdett and Coles, 1999). A good relationship not only describes the present situation but also predicts the state of the relationship in future (Berscheid, 1985). A growing number of studies in psychology and sociology state an importance of having long-lasting committed and good relationships for happiness and social welfare, which shall be well approximated by whether or not a person has a sense of good match with her partner (Waite and Gallagher, 2001, O'Connell, 2008, Meunier and Baker, 2012). However, there are few researches that document the determinants for having a sense of good match in a partnership. Focusing on married couples, we address what induces a husband and a wife to have a sense of good match with the partner, respectively, and how their perceptions of (mis)match are related to individual happiness.

16 Several previous studies examine the relationship between marriage and subjective happiness
17 (Kaufman and Taniguchi, 2010, Musick and Bumpass, 2012, Vanassche et al., 2013, Qari, 2014,
18 Tiefenbach and Kohlbacher, 2015, Wadsworth, 2016, Perelli-Harris et al., 2019, Chen, 2018, Yoo and
19 Lee, 2019). Chapman and Guven (2016) use census data in the United States, United Kingdom and
20 Germany to examine the relationship between marriage quality and happiness, finding that people in
21 self-assessed poor marriages appear to be less happy than unmarried people. Tao (2019) examines
22 the relationship between marriage and happiness in Taiwan, reporting that a good-quality marriage is
23 important for happiness. Kimbrough and Kuo (2010) mention that taking a two-sided perspective in
24 partnership is important for assessing the relationship in terms of stability, equity and social welfare.
25 Svarer (2005) documents that learning about the partner is crucial for reducing the risk of divorce.
26 Overall, it shall be important to examine the chemistry between the partners in married couples from
27 each other's perspective for good marriage and happiness.

28 Some past studies focus on the quality of couples' communications for marital satisfactions (Reis
29 and Patrick, 1996, Rehman and Holtzworth-Munroe, 2007, Williamson et al., 2013, Lavner et al.,
30 2016). A growing number of studies document that rational communications enhance mental and
31 marital satisfactions (Rogge and Bradbury, 1999, Schilling et al., 2003, Thompson-Hayes and Webb,
32 2004, Litzinger and Gordon, 2005, Yalcin and Karahan, 2007, Tavakolizadeh et al., 2015, Li et al.,
33 2022). Rusman (2019) reports that interpersonal communications improve the quality of relationships
34 between couples. Rehman et al. (2011) examine the association between communication behaviors
35 and marital satisfactions, demonstrating that a positive communication is associated with the marital
36 satisfactions. Tavakol et al. (2020) find that interactive communications facilitate the attainment of
37 relaxation in marital relationships. Specifically, the subject matter, length and way of communica-
38 tions are crucial elements of maintaining a good relationship and the satisfaction (Armenta-Hurtarte
39 et al., 2014, Bravo and Martinez, 2017). Feeney (2004) finds that a person who communicates about
40 her future availability tends to be enthusiastic and supportive of her partner. Thus, an interpersonal
41 communication shall be considered an important factor to understand couples' marital relationships
42 and to enhance their happiness.

43 There is ample evidence that positive emotions and characteristics influence marital satisfaction

44 and stability as well as individual wellbeing (Gottman and Notarius, 2002, Reis and Gable, 2003, Am-
45 ato, 2007, Fincham et al., 2007, Warren and Donaldson, 2017, He et al., 2018). However, sufficient
46 attention has not been given on individual curiosities and/or generosity for having a good relationship
47 and happy life. In literature, they are conceptualized as “inquisitiveness” representing curiosity and
48 acceptance of something new & different that may increase some motivation and interaction with
49 others under unfamiliar environments (Garrison, 1991, Hirayama and Kusumi, 2004, Black, 2005,
50 Blickle et al., 2014, Nakagawa, 2016, Bardone and Secchi, 2017, Watson, 2019). An inquisitive per-
51 son tends to communicate with others and they are perceived as bright, creative and problem solvers
52 who deal with different issues in various fields (Yeh, 2002, Kawashima and Petrini, 2004, Hogan and
53 Hogan, 2007). For example, Nakagawa (2016) finds that inquisitiveness is positively associated with
54 people’s risk perception behaviors and earthquake preparedness. Hirayama and Kusumi (2004) reveal
55 that inquisitiveness is a crucial factor in reaching appropriate conclusions without being constrained
56 by people’s beliefs. Hirose and Kotani (2022) and Hirose et al. (2023) identify that inquisitiveness
57 serves as a powerful engine for individuals to enhance generativity and happiness through communi-
58 cations and interactions. Overall, inquisitiveness shall be a crucial factor for maintaining a relationship
59 and happy life.

60 Although some positive association between good marriage and happiness is generally estab-
61 lished, there is little evidence of determinants and mechanisms for having good relationships and
62 happiness in marriage. Given this state of affairs, we consider that having a sense of good match
63 with the partner in marriage shall be an important determinant for the present and future states of
64 the relationship, building upon some existing theories, such as social penetration theory and broaden-
65 and-build theory (Altman and Taylor, 1973, Fredrickson, 1998, 2001). The current study examines
66 (i) what induces a husband and a wife in the couple to have a sense of good match with the partner,
67 respectively, and (ii) how the husband’s and wife’s perceptions of (mis)match are related to individ-
68 ual happiness. It is hypothesized that certain characteristics of couples, such as their future-planning
69 communication and inquisitiveness, matter for having a sense of match as well as being happy in
70 marriage. The questionnaire surveys are conducted in Japan and data are collected from 247 mar-
71 ried couples (494 individuals). To this end, answering these research questions could be helpful to

72 maintain a long-lasting happy relationship among married couples.

73 **2 Methods and materials**

74 We conducted questionnaire surveys from 21 to 27 December 2020 sourced from the registered
75 web-based survey research organization, Cross Marketing Company Limited, in Japan. Couples with
76 at least one child were selected as subjects in our study. The questionnaire surveys were randomly
77 distributed in Japan through the research organization. Our target was to collect necessary infor-
78 mation from 500 individuals. However, in total, 247 married couples (494 individuals) successfully
79 provided their separate and independent responses. During the surveys, questionnaires were sent
80 to the husband's and wife's personal e-mail addresses separately and they provided their responses
81 by using their personal devices. Husbands and wives were instructed not to share or discuss their
82 responses with each other while completing the questionnaire. Information was collected on subjec-
83 tive happiness, sense of (mis)match, amount of future-planning communication, inquisitiveness and
84 sociodemographic variables through the questionnaire surveys.

85 The subjective happiness scale developed by Lyubomirsky and Lepper is employed to measure
86 individual happiness (Lyubomirsky and Lepper, 1999). This scale uses a four-item measurement,
87 including the following statements. (1) "In general, I consider myself," (2) "Compared to my peers, I
88 consider myself," (3) "Some people are generally very happy. They enjoy life no matter what is going
89 on, getting the most of everything. How much does this sentence describe you?" and (4) "Some people
90 are generally not very happy. Although they are not depressed, they never seem as happy as they might
91 be. How much does this sentence describe you?" The first item addresses individual absolute self-
92 rated happiness, where each individual is asked to choose an option by using a 7-point Likert scale
93 from "not a very happy person" to "a very happy person." The second item reports individual relative
94 happiness compared to that of peers and its evaluations are based on a 7-point Likert scale ranging
95 from "less happy" to "more happy." The other two items give a general description of a happy and
96 unhappy person where individuals are asked to choose an option by using a 7-point Likert scale from
97 "not at all" to "a great deal" for the best description of themselves. To calculate subjective happiness,

98 we estimate the average of four items, while the last item is coded reversely.

99 Quantitative approaches for measuring marital satisfaction and stability include self ratings or rat-
100 ings by the opposite partner or ratings by others (Busby and Holman, 2009, Ward et al., 2009). In
101 this study, sense of (mis)match is measured by combining couple's perceptions about their marriage.
102 We apply a 6-question measurement, where each question is rated on a 5-point Likert scale. Each
103 husband and wife is asked to provide the answer along with reasons to each question. The first and
104 second questions correspond to the family budget and time, stating "Are you satisfied with your part-
105 ner for spending family budget and/or time for the family?" and its evaluations are "very satisfied"
106 and "not very satisfied." The third question is related to a good understanding with each other, by
107 stating "Do you think that your partner has a good understanding of you with respect to your job,
108 personality, preferences, family matters and future planning?" and its evaluations are "very satisfied"
109 and "not very satisfied." The fourth question is "Are you supportive of your partner about parenting
110 and household activities?" and the evaluations are made on a 5-point Likert scale from "very support-
111 ive" to "not very supportive." The fifth question is "Do you respect your partner as a person?" and its
112 evaluations are "very respected" and "not very respected."

113 Questions 1 to 5 are designed to remind couples about the sense of (mis)match with their partner
114 that has been built over time in their marriage. These questions basically help couples to understand
115 the present state of their relationship in depth and then the final question is posed. The final question
116 (sixth question) related to the sense of (mis)match is "Do you think that the relationship with your
117 partner is a good match?" and its evaluations are "good match" and "not good match" on a 5-point
118 Likert scale. The concept of match and mismatch used in this study is defined with the reference
119 of self-self match, which is one of the matching evaluation methods of conflict styles developed by
120 Busby and Holman (Busby and Holman, 2009). When both the husband and wife recognize that
121 "my partner is in good match with me" is defined as a sense of match and all other possibilities are
122 defined as a sense of mismatch. Then again, we divide the sense of mismatch into three categories:
123 (i) both-mismatch (both the husband and wife recognize that they are in a mismatch), (ii) onese-
124 mismatch (either husband or wife recognizes that he/she is in a mismatch) and (iii) other-mismatch
125 (either husband or wife recognizes that he/she is in a neutral position).

126 Each husband and wife is asked about the time spent on future-planning communication by the
127 question “Do you feel that you have enough time and communication about future family planning
128 (parenting policy, work, asset planning, old age) with your partner?” The answer takes the value 1
129 when responded with “ yes” and 0 otherwise. A subscale of the critical thinking disposition scale
130 created by Hirayama and Kusumi with ten items is utilized to measure inquisitiveness (Hirayama and
131 Kusumi, 2004). The items include 10 statements: (1) “I want to interact with people with various
132 ways of thinking and learn a lot from them,” (2) “I want to keep learning new things throughout my
133 life,” (3) “I like to challenge new things,” (4) “I want to learn about various cultures,” (5) “Learning
134 how foreigners think is meaningful to me,” (6) “I am interested in people who have a different way of
135 thinking,” (7) “I want to know more about any topic,” (8) “I want to learn as much as possible, even if
136 I do not know if it is useful,” (9) “It is interesting to discuss with people who have different ideas than
137 me” and (10) “I want to ask someone if I do not know.” The items are rated from “strongly agree”
138 to “strongly disagree” on a 7-point Likert scale. All items are recoded reversely when calculating the
139 sum of this scale. The sociodemographic variables are age, household income, education and family
140 structure. The definitions of the variables used in this study are summarized in table 1.

141 [Table 1 about here.]

142 A conceptual framework is developed for the relationships among future-planning communi-
143 cation, inquisitiveness, sense of (mis)match and happiness by referring to social penetration and
144 broaden-and-build theories (see figure 1). The social penetration theory states that self-disclosure
145 and interpersonal communication for future are the important elements in developing and maintain-
146 ing a good relationship between the partners (Hammer and Gudykunst, 1987, Honeycutt and God-
147 win, 1986, Manning, 2019). In the penetration literature, communication dimensions play a pivotal
148 role in nurturing relationships, providing insights into relational issues in marriage and happiness
149 (Honeycutt and Godwin, 1986). Broaden-and-build theory argues that the positive emotions, such
150 as curiosity/interest, broaden individual cognition and actions, resulting in an upward spiral toward
151 subjective or emotional wellbeing (Gallagher and Lopez, 2007, Nickerson, 2007). This theory can
152 be insightful in explaining a broader range of mechanisms, encompassing relationships and daily be-

153 haviors (Kashdan and Steger, 2007). Based on social penetration and broaden-and-build theories, the
 154 framework in figure 1 contextualizes the predictions and associations for the purpose of clarifying the
 155 determinants and mechanisms of having good marriage, hypothesizing that certain characteristics of
 156 couples, such as their future-planning communication and inquisitiveness, matter for having a sense
 157 of match as well as being happy in marriage.

158 [Figure 1 about here.]

159 With the framework in figure 1, the logit and median regressions are used to characterize the
 160 sense of (mis)match and happiness as dependent variables, respectively, in relation to future-planning
 161 communication, inquisitiveness and the other important explanatory variables, enabling us to answer
 162 our research question and hypotheses. In the logit regression, let y_i denote a variable such that $y_i = 1$
 163 if couple i has a sense of good match with one another, and $y_i = 0$ otherwise, the model is as follows:

$$164 \quad y_i = \alpha_0 + \alpha_1 F_i + \alpha_2 I_i + \alpha_3 Z_i + \varepsilon_i \quad (1)$$

165 where F_i and I_i are the variables associated with future-planning communication and inquisitiveness,
 166 respectively. Z_i is a vector of sociodemographic variables, such as husband's age, wife's age, house-
 167 hold income, husband's education, wife's education and family structure. The parameters α_0 , α_1
 168 and α_2 are associated with the intercept, F_i , I_i , respectively, while α_3 is a vector of the parameter
 169 associated with Z_i and ε_i is an error term.

170 Next, we apply a median regression developed by Koenker and Bassett (1978) and Koenker and
 171 Hallock (2001) to examine how the husband's and wife's perceptions of (mis)match are related to
 172 individual happiness after controlling other important factors. A median regression model can be
 173 mathematically expressed as:

$$174 \quad h_i = \beta_0 + \beta_1 M_i + \beta_2 F_i + \beta_3 I_i + \beta_4 Z_i + \varepsilon_i \quad (2)$$

175 where h_i is the subjective happiness variable for i^{th} individual; F_i and I_i are the variables associated
 176 with future-planning communication and inquisitiveness, respectively. M_i and Z_i are the vectors of

177 the sense of (mis)match dummies and sociodemographic variables, respectively and ε_i is an error
178 term. The β_j s for $j = 0, 1, 2, 3, 4$ are the parameters associated with the intercept, M_i , F_i , I_i and
179 Z_i , while β_1 and β_4 are the vectors of the parameters, respectively. A structural equation modeling
180 (SEM) is also applied to address whether the sense of (mis)match is a mediator, including standardized
181 estimates for the causal paths for the direct and indirect effects of future-planning communication and
182 inquisitiveness on happiness (see, e.g., Weston and Gore, 2006, Gunzler et al., 2013, 2014, Venturini
183 and Mehmetoglu, 2019).

184 Our main focus is on estimating the regression coefficients α_1 , α_2 and α_3 as well as β_1 , β_2 , β_3 and
185 β_4 in figure 1. The coefficients of α_1 and β_2 represent the effects of future-planning communication
186 on the sense of (mis)match and on individual happiness, after the effects of all other variables are
187 netted out. Likewise, the coefficients of α_2 and β_3 represent the effects of inquisitiveness on the
188 sense of (mis)match and on individual happiness, after the effects of all other variables are netted out.
189 Recall our research questions and hypotheses. The research questions are “what induces a husband
190 and a wife in the couple to have a sense of good match with the partner” and “how the husband’s and
191 wife’s perceptions of (mis)match are related to individual happiness.” The hypotheses are “future-
192 planning communication and inquisitiveness matter for characterizing a sense of good match and
193 individual happiness.” In this regard, the estimated coefficients of α_1 , α_2 and β_1 , β_2 and β_3 are
194 the key parameters enabling us to answer not only the research questions but also the hypotheses,
195 respectively. On top of the regression estimations by equations (1) and (2), the SEM is applied to
196 confirm whether or not the same results are obtained as a robustness check (Cameron and Trivedi,
197 2022, Kline, 2023).

198 **3 Results**

199 Table 2 presents summary statistics of the key variables for husbands, wives and the overall sam-
200 ple. The mean scores of subjective happiness for husbands, wives and the overall sample are mostly
201 similar at 4.70, 4.57 and 4.64 points, respectively. Regarding the sense of match and mismatch, 59 %
202 couples perceive that they are in a good match with the partner, while 41 % couples perceive a mis-

203 match in their relationships. The percentages of sufficient future-planning communication with the
204 partner are almost similar between husbands and wives (54 % and 53 %). The scores of inquisitiveness
205 for husbands and wives are 50.33 and 47.61 points, respectively, indicating that husbands are more cu-
206 rious about something new & different environments than wives. There are no significant differences
207 observed in terms of age and education between husbands and wives. Overall, it can be interpreted
208 that most of the sociodemographic variables remain consistent, however, a personal attribute of being
209 inquisitive about something new & different varies between husbands and wives.

210 [Table 2 about here.]

211 Table 3 summarizes basic statistics of the key variables for couples having the sense of match and
212 mismatch and the overall sample. The average happiness scores for couples regarding their sense of
213 match and mismatch are 5.00 and 4.13 points, respectively. This implies that couples who recognize
214 that “my partner is in good match with me” are happier than couples who do not. The percentages of
215 sufficient future-planning communication are 69 % and 32 % for couples perceiving a sense of match
216 and mismatch, respectively, implying that match couples tend to communicate more about future
217 planning compared to mismatch couples. Couples’ mean scores of inquisitiveness for the sense of
218 match and mismatch are 49.94 and 47.57 points, respectively, showing that couples who perceive a
219 good match with the partner have higher curiosity and flexible cognitive ability for something new
220 & different than couples who perceive a mismatch. The overall mean age for couples is almost 43
221 years and they have an average annual income 4.46 million yen. Couples usually receive a college
222 degree and most of them belong to a nuclear family. Overall, sociodemographic variables, such as
223 age, household income, education and family structure do not vary between couples, regardless of
224 whether they perceive their relationships as a match or a mismatch. However, couples with a sense of
225 good match report high levels of happiness, curiosity and communication compared to those with a
226 sense of mismatch.

227 [Table 3 about here.]

228 Figure 2 is a histogram that presents the distribution of subjective happiness for the overall sample.
229 The vertical axis represents frequencies, while the horizontal axis presents subjective happiness. The

230 highest spike is observed at 5 points and the distribution of subjective happiness appears to follow a
231 skewed distribution. A Shapiro-Wilk normality test is applied with the null hypothesis that subjective
232 happiness is normally distributed. We find that the null hypothesis is rejected ($z = 1.81, p = 0.03$),
233 meaning that the distribution of subjective happiness is not normally distributed. Therefore, we em-
234 ploy a median regression to examine the effects of sense of (mis)match, future-planning communica-
235 tion and inquisitiveness on happiness after controlling the effects of all other important sociodemo-
236 graphic variables.

237 [Figure 2 about here.]

238 Figure 3 depicts the boxplots of couples' subjective happiness based on their perceptions of a
239 sense of match and mismatch. The figure clearly indicates that couples who perceive a sense of good
240 match have a high median of subjective happiness compared to those having a sense of mismatch. We
241 apply a Mann-Whitney test to identify the distributional differences of couples' subjective happiness
242 for having a sense of match and mismatch. The null hypothesis is that there is no difference in the
243 distributions of subjective happiness between couples perceiving a sense of match and mismatch. The
244 results of the Mann-Whitney test confirm that couples who perceive a sense of match and mismatch
245 exhibit different levels of happiness ($z = -9.40, p = 0.01$). Overall, it can be concluded that couples
246 who perceive themselves as being good match with the partner are happier than those who perceive a
247 mismatch in their relationships.

248 [Figure 3 about here.]

249 Table 4 reports marginal effects of the independent variables on the sense of match in the logit
250 regression with several model specifications. First, we include the husband and wife sides future-
251 planning communications in Model 1 in the logit regression to examine the effects of future-planning
252 communication on the sense of match. The results demonstrate that future-planning communications
253 from both the husband and wife sides are significant at the 1 % level, meaning that the probability of
254 having a sense of good match increases by 25 % (26 %) when husbands (wives) engage in sufficient

255 future-planning communication with his (her) partner than those who do not. These findings sug-
256 gest that engaging in future-planning communication prompts couples to envision a promising future
257 together and strategize ways to fulfill their shared visions, fostering a sense of good match.

258 [Table 4 about here.]

259 Then, we exclude future-planning communication and include inquisitiveness and sociodemo-
260 graphic variables in Model 2 in the logit regression. The results show that the husband's inquisi-
261 tiveness is significant at the 5 % level, implying that the probability of having a sense of good match
262 increases by 1 % for a one-point increase in husband's inquisitiveness. This result can be interpreted as
263 husbands are curious and have cognitive abilities that help them to understand the nature of problems
264 and motivate them to take necessary actions for solving those problems. From Model 2, we also find
265 that household income is significant at the 10 % level, indicating that the probability of having a sense
266 of good match increases by 8 % for a one-category increase in household income. Cherlin (1979)
267 mentions that household income has a positive effect on marriage quality because it contributes to the
268 overall quality of life and stability, while Brennan et al. (2001) find that only male income increases
269 marital quality. Finally, we include all independent variables in Model 3 in the logit regression to
270 check the robustness of our results. The main results of Model 3 do not differ from those of Models 1
271 and 2 and the economic significance of estimated coefficients for future-planning communication and
272 inquisitiveness variables remain almost the same, indicating more precise results.

273 Table 5 presents estimated coefficients of the independent variables on subjective happiness in
274 the median regression with several model specifications. First, we include the sense of (mis)match
275 and future-planning communication variables with their reference groups in Model 1 in the median
276 regression to examine the effects of these variables on subjective happiness. We find that the sense
277 of (mis)match and future-planning communication are significant at the 1 % levels. The results reveal
278 that "both-match" couples who recognize "my partner is in good match with me" are much happier
279 than couples who do not. However, the negative effect of happiness varies depending on the types
280 mismatch couples. Subjective happiness is likely to decrease by 1.75, 1.00 and 0.75 points for couples
281 who have a sense of mismatch from both sides, either one-side or the other, respectively, compared

282 to those couples who have a sense of good match. The results can be interpreted as “both-mismatch”
283 couples who recognize that “my partner is NOT in good match with me” are the unhappiest among
284 any other type of mismatch couples. Subjective happiness is likely to increase by 0.69 points when
285 couples sufficiently communicate future planning with the partner compared to those who do not,
286 indicating that amount of future-planning communication contributes to individual happiness.

287 [Table 5 about here.]

288 Then, we exclude the sense of (mis)match and future-planning communication and include in-
289 quisitiveness and sociodemographic variables in Model 2 in the median regression. Model 2 in the
290 median regression shows that inquisitiveness, age and age square are significant at the 5 % and 10 %
291 levels, implying that inquisitiveness and age are important determinants of subjective happiness. The
292 estimated coefficient of inquisitiveness indicates that individual happiness increases by 0.02 points
293 with a one-point rise in inquisitiveness. The result suggests that inquisitiveness has a strong influence
294 on subjective happiness. The signs of both age and age square coefficients are positive and signifi-
295 cant, meaning that subjective happiness increases with increasing age. An et al. (2020) find a positive
296 curvilinear relationship between age and happiness. In Model 3, we use all independent variables
297 included in Models 1 and 2, with their baseline specifications to check the robustness of our findings
298 and we confirm that the main results in Model 3 do not vary from those of Models 1 and 2. Model 3
299 shows the effects of sense of (mis)match, future-planning discussion and inquisitiveness on subjective
300 happiness more accurately while controlling for other sociodemographic variables.

301 Figure 4 shows a path diagram for causal relationships among four variables, such as future-
302 planning communication, inquisitiveness, sense of match and happiness. It is clear from the diagram
303 that the sense of match is a mediator between future-planning communication (inquisitiveness) and
304 happiness. In SEM, five direct paths (*A*, *B*, *C*, *D* and *E*) and two indirect paths (*C'* and *D'*) are
305 analyzed. These paths are found to be statistically significant at the 1 % and 10 % levels, meaning that
306 future-planning communication and inquisitiveness affect happiness directly and indirectly, where the
307 sense of match is a mediator between future-planning communication (inquisitiveness) and happiness.
308 These analyses establish that future-planning communication, inquisitiveness and sense of match are

309 important factors for individual happiness through not only their direct but also indirect effects, which
310 is considered another robustness check for our regression analyses.

311 [Figure 4 about here.]

312 **4 Discussion**

313 Future planning is crucial for achieving success at every stage of life (Smith et al., 1990, MacLeod
314 et al., 2008). Visioning is defined as a core aspect of future planning in which people imagine pos-
315 sible future events and think desirable future states that they want to achieve through various strate-
316 gies (Collins and Porras, 1996, McPhearson et al., 2016, Tilburg and Igou, 2019, Timilsina et al.,
317 2020). Future planning, such as backcasting, scenario planning and future design, induces people
318 to think about possible strategies to achieve visions by expanding their way of thinking and behav-
319 iors from the perspectives of different situations (Timilsina et al., 2020). Dickson (1995) reports
320 that highly committed married couples share their visions or plans and take possible actions to reach
321 there. Future-planning communication implies that couples communicate and set their visions and
322 they work together to achieve them, these processes of dealing visions and communications with
323 the partner in relation to their future planning develop their interpersonal relationships, consistenting
324 with the social penetration theory. Based on the above discussion, we can argue that future-planning
325 communication induces couples to take appropriate strategies for achieving their visions and develops
326 strong interpersonal relationships that stimulate a sense of good match as well as happiness.

327 The broaden-and-build theory provides a theoretical and empirical understanding of positive emo-
328 tions for achieving subjective or emotional wellbeing. Literature suggests that individuals with higher
329 level of positive emotions, such as curiosity, are associated with higher level of wellbeing (Kashdan
330 et al., 2004). In order to understand the effects of inquisitiveness on the sense of match or happiness,
331 it is necessary to know the underlying processes of inquisitiveness. Inquisitiveness represents the cu-
332 riosity and acceptance of something new & different and motivates to fully engage with the situations
333 by triggering communications and interactions with others. The acceptance of novel and challenging
334 situations broadens the thought-action repertoires and engagement with the situations builds knowl-

335 edge and wellbeing, which is consistent with the broaden-and-build theory. Several studies document
336 that inquisitiveness improves people's understanding level, evaluation and judgment and assists in
337 increasing their knowledge and experience (Facione et al., 1995, Bailin et al., 1999, Rapps et al.,
338 2001). Inquisitiveness can be considered to be acquired or further enhanced through education, ex-
339 periences and training (Toplak and Stanovich, 2002, Sannomiya and Yamaguchi, 2016, Fusaro and
340 Smith, 2018). If this is true, then the feelings of good match and happiness will increase in societies,
341 as people become inquisitive through education, experiences and training.

342 However, now the key question is "why does only the husband's inquisitiveness contribute to
343 maintaining a sense of good match?" We argue that cultural and lifestyle differences in married
344 couples are responsible for making only the husband curious about new & different environments.
345 Historically, in Japanese society, a woman has a special role in the house and has taken the autonomy.
346 In modern times, even with the advancement of woman education and social empowerment, the role
347 that a woman plays in the house has not been changed. The key role for a woman is still housework
348 and child rearing. In this study, the fact is only that a husband's inquisitiveness positively influences a
349 sense of good match. This means that a husband has a strong curiosity & flexible cognitive ability to
350 accept the wife's way of thinking (housework, child rearing, work-family balance) even though each
351 family has a different division of employment status and household chores.

352 Although the perceived match or mismatch with the partner is strongly associated with defining
353 their relationships, surprisingly there is not much research that empirically addresses such issue. Our
354 study confirms that match couples are happier than mismatch couples and both-mismatch couples are
355 the unhappiest among any other type of mismatch couples. Gottman (1999, 2014) provides a clear
356 explanation that mismatch occurs when couples do not have a good understanding and connection in
357 their marriage. Busby and Holman (2009) document that mismatch couples are more disadvantaged
358 and have lower marital satisfaction & stability than match types. It is established that the feelings of
359 satisfaction and dissatisfaction within relationships are related to overall happiness (Vermunt et al.,
360 1989). If couples realize that they have a good match with the partner that increases their understand-
361 ing as well as the satisfaction, leading to happiness. Therefore, we can argue that a sense of good
362 match contributes to individual happiness.

363 The findings of the study provide implications for academic researchers, policy-makers and people
364 in general regardless of the developing and developed countries. Having a sense of good match with
365 the partner and counterpart in any relation between two agents is important for maintaining a long-
366 lasting relationship and reducing the rate of divorce. These findings would be helpful in analyzing the
367 partnership formation, such as a firm searching for an employee, a single partner finding a marriage
368 partner, a friend searching for a good friend and a student finding a good university/college. This study
369 adds additional evidence in the existing literature by showing that the future-planning communication
370 and inquisitiveness contribute to maintaining a sense of good match and happiness and may be helpful
371 to achieve SDG goal 3, “good health and wellbeing.” It is well documented that subjective wellbeing
372 is positively related to the achievement of SDGs (De Neve and Sachs, 2020, Kim et al., 2021).

373 **5 Conclusion**

374 We have empirically examined (i) what induces a husband and a wife in the couple to have a sense
375 of good match with the partner, respectively, and (ii) how the husband’s and wife’s perceptions of
376 (mis)match are related to individual happiness. The questionnaire surveys were conducted in Japan
377 and data were collected from 247 married couples (494 individuals). The findings reveal that, firstly, a
378 couple’s recognition to the amount of future-planning communication and a husband’s inquisitiveness
379 not only enhance a sense of good match but also individual happiness. Secondly, “both-match” cou-
380 ples that recognize “my partner is in good match with me” each other are much happier than couples
381 who do not, while “both-mismatch” couples are the unhappiest among any other types of (mis)match
382 couples. Overall, sufficient future-planning communication and a husband’s attribute of being inquis-
383 itive about something new & different are important drivers for couples to maintain good chemistry
384 and happiness directly and indirectly through a mediator of having a sense of good match.

385 Some limitations and directions for future research are noted here. The questionnaire surveys did
386 not include data on how couples got married and how much time they spent together before marriage.
387 In this research, we cannot draw any conclusions about maintaining a good relationship in the context
388 where polygamy and sexual diversity are acknowledged. Future research should collect more detailed

389 data on marriage systems, length of time spent together before marriage and include different contexts
390 and cultural factors for a comprehensive understanding of relationship dynamics. For increasing the
391 overall wellbeing in societies, future research will also address the following questions: (i) How
392 much newness and differences do you allow each other and how do you maintain the curiosity? (2)
393 How much do you communicate with your partner about future family planning? These caveats
394 notwithstanding, it is important to have a sense of good match between the partners in married couples
395 from each other's perspective for maintaining a relationship and happy life.

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Figure 1: A conceptual framework describing the relationships among future-planning communication, inquisitiveness, sense of mis(match) and happiness

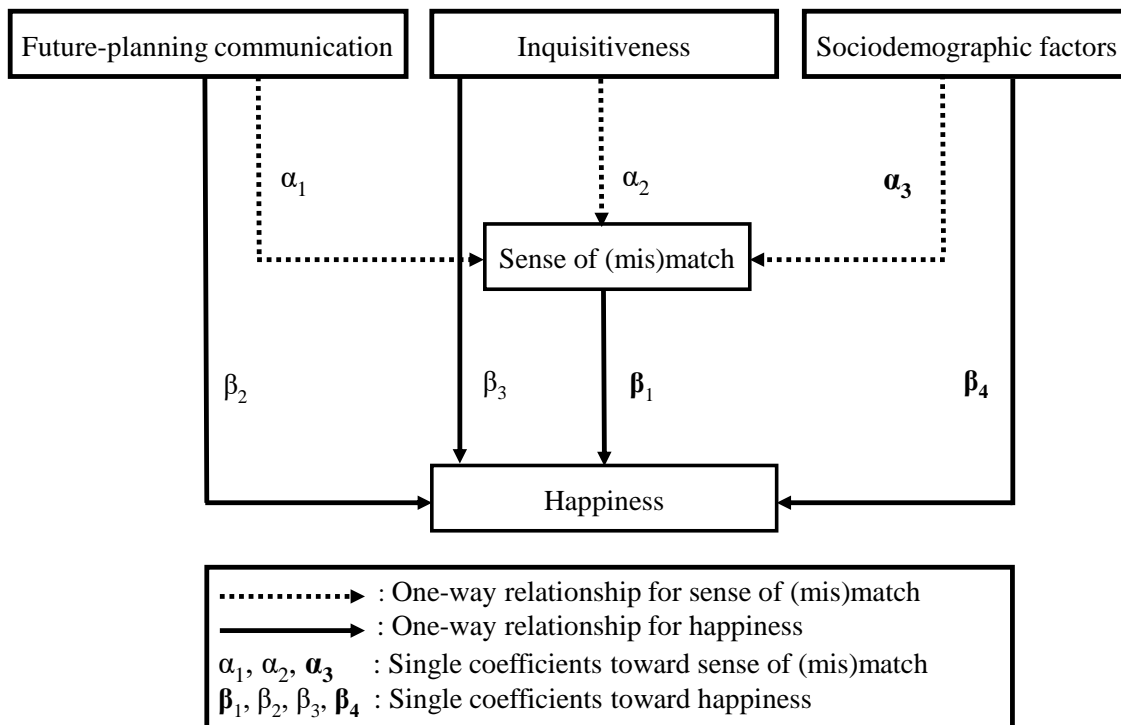


Figure 2: Frequency distribution of subjective happiness

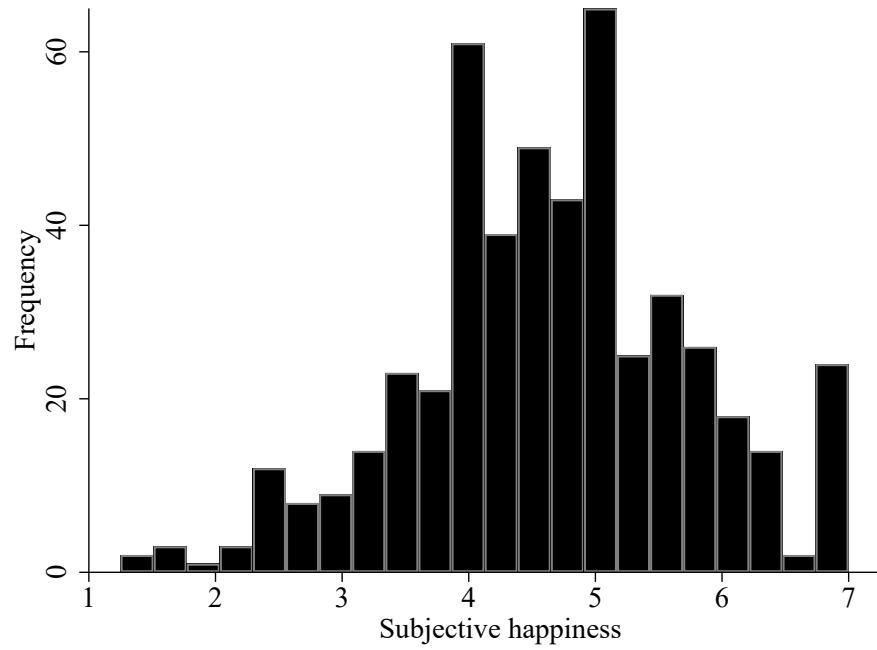


Figure 3: Boxplots between subjective happiness and sense of (mis)match

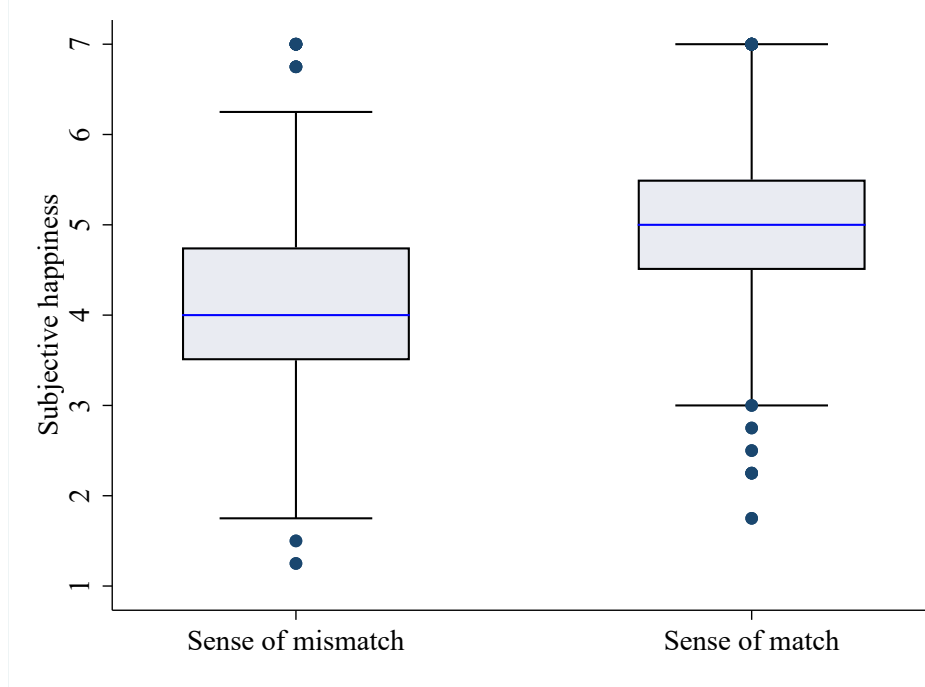
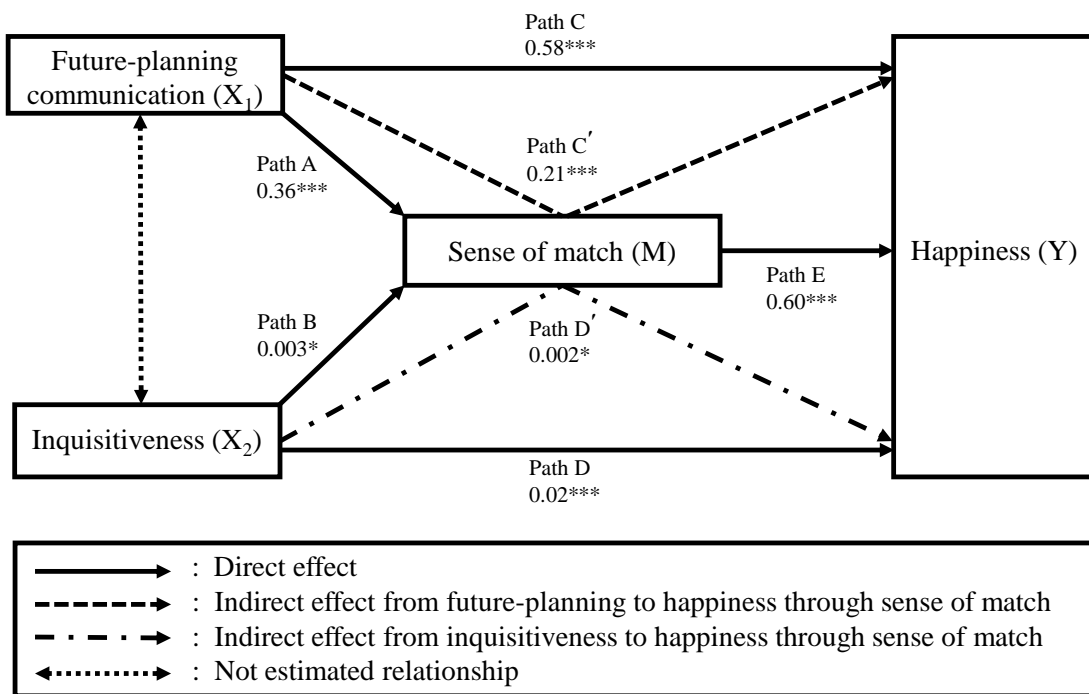


Figure 4: A diagram for the mediation analysis



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Table 1: Definitions of variables

Variables	Description
Dependent variables	
Happiness	Average scores
Sense of match	Takes the value 1 if couples recognize “my partner is in good match with me” one another in the marital relationship, otherwise 0.
Independent variables	
Sense of mis(match) (Base group = Both-match)	
Both-mismatch	Both-mismatch (1) and Both-match (0)
Oneside-mismatch	Oneside-mismatch (1) and Both-match (0)
Other-mismatch	Other-mismatch (1) and Both-match (0)
Future-planning communication	Takes the value 1 when the subjects answered they have enough time and communication about future family planning (parenting policy, work, asset planning, old age) with their partner, otherwise 0.
Inquisitiveness	Values
Gender	Female (0) and Male (1)
Age	Years
Household income	Household annual income categorized from 1 to 7 (1 = less than 1 million yen, 2 = 1 million yen to less than 2.5 million yen, 3 = 2.5 million yen to less than 4 million yen, 4 = 4 million yen to less than 7 million yen, 5 = 7 million yen to less than 10 million yen, 6 = 10 million yen to less than 20 million yen, 7 = 20 million yen or more)
Education	Academic qualification categorized from 1 to 6 (1 = junior high school graduation, 2 = high school graduation, 3 = vocational school, junior college, technical college graduation, 4 = undergraduate graduation, 5 = master's degree graduation, 6 = doctoral degree graduation)
Family structure	Extended family (0) and Nuclear family (1)

Table 2: Summary statistics of the key variables by husbands and wives

	Husbands					Wives					Overall				
	Mean	SD	Max	Min		Mean	SD	Max	Min		Mean	SD	Max	Min	
Happiness	4.70	1.12	7.00	1.25		4.57	1.01	7.00	1.75		4.64	1.06	7.00	1.25	
Sense of match	-	-	-	-	-	-	-	-	-	-	0.59	0.49	1.00	0.00	-
Sense of mismatch	-	-	-	-	-	-	-	-	-	-	0.41	0.49	1.00	0.00	-
Both-mismatch	-	-	-	-	-	-	-	-	-	-	0.04	0.21	1.00	0.00	-
Oneside-mismatch	-	-	-	-	-	-	-	-	-	-	0.06	0.23	1.00	0.00	-
Other-mismatch	-	-	-	-	-	-	-	-	-	-	0.31	0.46	1.00	0.00	-
Future-planning communication	0.54	0.50	1.00	0.00		0.53	0.50	1.00	0.00		0.54	0.50	1.00	0.00	
Inquisitiveness	50.33	11.52	70.00	14.00		47.61	11.58	70.00	18.00		48.96	11.61	70.00	14.00	
Age	43.50	8.63	62.00	26.00		42.10	8.55	59.00	26.00		42.80	8.61	62.00	26.00	
Household income	-	-	-	-	-	-	-	-	-	-	4.46	1.04	7.00	1.00	-
Education	3.27	1.08	6.00	1.00		2.81	1.19	5.00	1.00		3.04	1.16	6.00	1.00	
Family structure	-	-	-	-	-	-	-	-	-	-	0.86	0.35	1.00	0.00	-
Sample size	247					247					494				

Table 3: Summary statistics of the key variables by the sense of match and mismatch

	Sense of match			Sense of mismatch			Overall		
	Mean	SD	Min	Mean	SD	Min	Mean	SD	Min
Happiness	5.00	0.93	1.75	4.13	1.03	1.25	4.64	1.06	1.25
Future-planning communication	0.69	0.46	0.00	0.32	0.47	0.00	0.54	0.50	0.00
Inquisitiveness	49.94	11.93	18.00	47.57	11.01	14.00	48.96	11.61	14.00
Age	42.81	9.01	26.00	42.87	8.03	28.00	42.80	8.61	26.00
Household income	4.56	1.05	2.00	4.31	1.00	1.00	4.46	1.04	1.00
Education	3.07	1.17	1.00	3.00	1.15	1.00	3.04	1.16	1.00
Family structure	0.84	0.37	0.00	0.88	0.32	0.00	0.86	0.35	0.00
Sample size		290			204			494	

Table 4: Marginal effects of the independent variables on the sense of match in the logit regressions

	Sense of match (Base group = Sense of mismatch)		
	Model 1	Model 2	Model 3
Husband side future-planning communication (Base group = Others)	0.25*** (0.08)		0.23*** (0.08)
Wife side future-planning communication (Base group = Others)	0.26*** (0.08)		0.29*** (0.08)
Husband's inquisitiveness		0.01** (0.003)	0.01** (0.003)
Wife's inquisitiveness		-0.001 (0.003)	-0.003 (0.003)
Husband's age		0.001 (0.009)	0.00004 (0.001)
Wife's age		-0.004 (0.01)	-0.01 (0.01)
Household income		0.08* (0.04)	0.07* (0.04)
Husband's education		-0.02 (0.03)	-0.01 (0.04)
Wife's education		0.01 (0.03)	0.01 (0.03)
Family structure (Base group = Extended family)		-0.16 (0.10)	-0.15 (0.11)
Sample size		247	247

***:significant at the 1 percent level, **:at the 5 percent level and *:at the 10 percent level. Numbers in parentheses are standard errors.

Table 5: Estimated coefficients of the independent variables on happiness in the median regressions

	Happiness		
	Model 1	Model 2	Model 3
Sense of (mis)match (Base group = Both-match)			
Both-mismatch	-1.75*** (0.23)		-1.56*** (0.25)
Oneside-mismatch	-1.00*** (0.20)		-0.52*** (0.23)
Other-mismatch	-0.75*** (0.10)		-0.49*** (0.12)
Future-planning communication (Base group = Others)	0.69*** (0.09)		0.41*** (0.11)
Inquisitiveness		0.02** (0.004)	0.02** (0.004)
Gender (Base group = Female)		0.06 (0.10)	0.06 (0.10)
Age		0.01* (0.01)	0.01 (0.01)
Age square		0.001** (0.001)	0.001* (0.001)
Household income		0.05 (0.05)	0.03 (0.05)
Education		0.001 (0.04)	0.01 (0.05)
Family structure (Base group = Extended family)		-0.01 (0.14)	0.11 (0.15)
Sample size	494	494	494

***significant at the 1 percent level, **at the 5 percent level and *at the 10 percent level. Numbers in parentheses are standard errors.