Chapter 3
Happiness and Social Capital in India

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Abstract Numerous studies have examined happiness in Europe, America, and East Asia, but few studies have focused on developing countries. Furthermore, it was found that social capital is an important determinant of happiness in happiness studies. Therefore, this study aims to examine happiness and how it relates to social capital in India. Most studies about India were small-scale and used data limited to demographic conditions (e.g., women, rural, urban, the elderly). The present chapter examines nationwide data and broad demographic conditions as well as social capital, which is important but has not yet been considered in an Indian happiness study. The analysis confirms that our results fit the usual patterns that are found in the happiness literature. However, there are some specific findings in the case of India. For example, there is no significant education–happiness relationship in the estimation. Happiness had a positive and statistically significant correlation with top-level managers, executives, and the self-employed. Social capital had a strong positive correlation with happiness. Our results clearly confirmed the presence of a positive relationship between social capital and happiness. In that sense, social capital was a big predictor of happiness. Finally, we estimated the determinants of social capital.

3.1 Introduction

In its 2013 book *Guidelines on Measuring Subjective Well-being*, the Organization for Economic Co-operation and Development (OECD) defined "Subjective Well-Being" (SWB) as "good mental states, including all of the various evaluations, positive and negative, that people make of their lives and the affective reactions of people to their experiences" (OECD, 2013, p. 8). This report also stated that "subjective well-being covers a wider range of concepts than just happiness."

According to the OECD guidelines, there are four reasons to pay attention to SWB:

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1. To complement other outcomes: SWB can provide information on social outcomes and affairs that other conventional indicators such as unemployment rate do not provide.
2. To better understand the drivers of SWB: Analysis of SWB can provide information on the relative importance of different factors that affect a person's well-being.
3. To support policy evaluation and cost–benefit analysis, particularly when they involve nonmarket outcomes: SWB can complement other social and economic indicators as a measure of policy outcomes. SWB has advantages over cost–benefit analyses such as the contingent valuation method.
4. To help identify potential policy problems: Analysis of SWB can provide information about human behavior and decision-making that leads to an appropriate policy.

Other terms similar to SWB are "satisfaction with life" or "quality of life". To date, these terms appear to have been used interchangeably. In this chapter, the term "happiness" is mainly used.

Numerous studies have examined happiness in Europe, America, and East Asia, but few studies have focused on developing countries. Therefore, this study aims to examine happiness and how it relates to social capital in India. The main studies pertaining to SWB in India.

Agrawal et al. (2011) explored determinants of life satisfaction in an urban sample ($n = 1,099$) of Bangalore in South India. Life satisfaction, as developed by Diener et al. (1985), is not a single-scale measure that is usually used in the literature but is instead predicted by income, age, and education. Important predictors of life satisfaction differ between men and women.

Ghosh, Millet, Subramanian and Pramanik (2017), examined the extent of contextual variation between neighborhoods across multiple dimensions of elderly health. Their data included a nationally representative sample of 6,560 Indian adults aged 50 years and older.

Linsen et al. (2011) focused on the effects of relative income and conspicuous consumption on SWB, using data on 697 individuals from 375 rural low-income households in India.

White et al. (2014) focused on a new approach of "Inner Wellbeing" which aimed to capture what people think and feel they can be and do, using data on individuals in rural communities in the global South. Their sample size was small.

White et al. (2012) explored the relationship between religion and well-being. The extent to which religions provide welfare depends upon communities and organizations. Respondents were 1,200 heads of household.

Polit (2005) focused on the effects of perceived marginality (e.g., social inequality in connection with caste status) on people's well-being in three villages in the Central Himalayas in North India between 2002 and 2005. The research instrument was an interview.

Hafen et al. (2011) examined relationships among the big five personality traits, emotional intelligence, and happiness. Participants included 205 university students in India. The results were nearly the same as those in their previous work.

Ghosh, Lahiri and Datta (2017) investigated the happiness of young women in rural Bengal with an emphasis on their marital life. Total sample size was 654 married women.

Lakshmanasamy (2010) empirically analyzed the relationship between income and happiness in India using primary sample data of 315 respondents. Respondents were mostly middle and upper-middle income households. They reported that the correlates of happiness were both absolute income and relative income.

Most studies were small-scale and used data limited to demographic conditions (e.g., women, rural, urban, the elderly). The present chapter examines nationwide data and broad demographic conditions as well as social capital, which is important but has not yet been considered in an Indian happiness study.

This chapter is constructed as follows. Section 3.1 describes the data and examines the relationship between happiness and related variables. Section 3.2 estimates the relationship between happiness and economic–demographic variables using an ordered logit model, from which several interesting results were derived. In particular, it was found that social capital is an important determinant of happiness in India. Section 3.3 focuses on the determinants of social capital, and the conclusions are presented in the final section.

3.2 Data Description

The present analysis utilized data compiled in the research project "Research on India", funded by Kakenhi (No. 16KT0089; Chief Researcher, Prof. Kazuo Mino). Some of the items in the present survey were used in my previous survey described in Itaba (2016).

3.2.1 Survey Outline

The following is the outline of the survey conducted in the project:

A. Survey title: "Research on India"
B. Survey period: October 2017
C. Survey method: Online survey (Goo Research)
D. Sample number: 4,046.

3.2.2   Descriptive Statistics of Survey Results

Table 3.1 shows the descriptive statistics of the variables. The descriptive statistics for social capital will be given in Sect. 2.1 These variables are used in the following happiness analysis, with short remarks provided for some of them.

SWB can be defined as the positive evaluation of one's life that is associated with good feelings (Pinquart & Sörensen, 2000, p. 187). Two aspects of SWB were investigated in this chapter: *happiness* and *life satisfaction.*

3.2.3   Happiness

Happiness was measured by the following question: "On a scale from 0 to 10, please rate your overall level of happiness." Possible responses ranged from 0 (extremely unhappy) to 10 (extremely happy). Figure 3.1 shows the overall distribution of happiness, which had an average score of 7.6. Reported happiness decreased in India from 2006 to 2016, with an average happiness level of 4.2 in 2016.[1] Therefore, reported happiness in this chapter was rather higher compared to its usual value.

The question concerning life satisfaction was "How satisfied are you on the whole?" Responses were coded on a five-point rating scale from 1 to 5. Figure 3.2 shows the overall distribution of life satisfaction, where the average score of 4.14 is a little higher compared to the average level of happiness after doubling responses of life satisfaction. There was a significant correlation between happiness and life satisfaction (0.51). However, this coefficient was not so high compared to the 0.69 reported in Lakshmanasamy (2010), which used a three-point rating scale from 1 to 3. Furthermore, the life satisfaction distribution was highly positively skewed opposed to the happiness distribution. These two terms, *happiness* and *life satisfaction*, are usually used interchangeably. Strictly speaking, there is a slight difference in some cases. According to Veenhoven (2012, p. 6), "the term 'life-satisfaction' is mostly used for 'overall happiness', but refers in some cases particularly to its cognitive component and is than synonymous with 'contentment'". *Happiness* and *life satisfaction* questions would not have the same connotation in the questionnaire. Hence, each question might measure slightly different matters. We therefore focused mainly on happiness and discuss life satisfaction as a complement to happiness.

3.2.4   Social Capital

The literature on determinants of happiness has focused mainly on internal factors such as income and marital status. But other important external factors are present

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[1] Veenhoven (2012) , Happiness in India (IN), World Database of Happiness, Erasmus University Rotterdam, The Netherlands. Viewed on 2019–03-04 at http://worlddatabaseofhappiness.eur.nl.

Table 3.1 Summary of variables used in the empirical analysis

Nominal variable (question)	Variable discription	Freq.	%	Obs.	Mean	Std. Dev.	Min.	Max.
Gender	Male(=1)	59.7	59.7	4,046	1.40	0.49	1	2
	Female(=2)	40.3	40.3					
Marital status	Single(=1)	1393	34.4	4,046	1.68	0.54	1	4
	Married(=2)	2572	63.6					
	Divorced(=3)	45	1.1					
	Widowed(=4)	36	0.9					
Education	Below HSC/SSC(=1)	322	8.0	4,013	2.73	0.60	1	3
	Attended college but has not graduated(=2)	440	11.0					
	College graduate or higher(=3)	3251	81.0					
Child	Don't have(=0)	1255	31.0	4,046	0.69	0.46	0	1
	Have(=1)	2791	69.0					
House	House(no)(=0)	1210	29.9	4,046	0.70	0.46	0	1
	House(owned)(=1)	2836	70.1					
Health	Unhealthy(=1)	158	3.9	4046	3.83	1.61	1	5
	If pressed to say, I would say "unhealthy."(=2)	259	6.4					
	Normal level of health(=3)	1395	34.5					
	If pressed to say, I would say "healthy."(=4)	520	12.9					
	Healthy(=5)	1714	42.4					
Age	Less tha 20(=1)	401	9.9	4,046	0.70	0.46	0	1
	20 to 29 years old(=2)	1060	26.2					
	30 to 39 years old(=3)	1031	25.5					

(continued)

Table 3.1 (continued)

Nominal variable (question)	Variable discription	Freq.	%	Obs.	Mean	Std. Dev.	Min.	Max.
	40 to 49 years old(=4)	763	18.9					
	50 to 59 years old(=5)	497	12.3					
	60 or above(=6)	294	7.3					
City size	Large-sized cities (population of one million or larger)(=1)	2470	62.6	3,945	1.59	0.91	1	4
	Medium-sized cities (population of less than one million)(= 2)	925	23.4					
	Small-sized cities(=3)	251	6.4					
	Towns or villages(=4)	299	7.6					
Income	None (no income)(=1)	450	12.3	3,662	3.40	2.19	1	15
	Less than $4,999(=2)	951	26.0					
	$5,000 to $9,999(=3)	908	24.8					
	$10,000 to $19,999(=4)	671	18.3					
	$20,000 to $29,999(=5)	274	7.5					
	$30,000 to $39,999(=6)	139	3.8					
	$40,000 to $49,999(=7)	81	2.2					
	$50,000 to $59,999(=8)	63	1.7					
	$60,000 to $69,999(=9)	25	0.7					
	$70,000 to $79,999(=10)	26	0.7					
	$80,000 to $99,999(=11)	20	0.5					
	$100,000 to $119,999(=12)	15	0.4					
	$120,000 to $139,999(=13)	12	0.3					

(continued)

Table 3.1 (continued)

Nominal variable (question)	Variable discription	Freq.	%	Obs.	Mean	Std. Dev.	Min.	Max.
	$140,000 to $159,999(=14)	12	0.3					
	$160,000 or more(=15)	15	0.4					
Work status	Top level manager, executive(= 1)	1001	24.7	4,046	3.55	2.21	1	8
	Regular employee(=2)	924	22.8					
	Civil servant(=3)	80	2.0					
	Contract /fixed-term /Part-time employee/home-based work(=4)	459	11.3					
	Self-employed(=5)	632	15.6					
	Student(=6)	505	12.5					
	Unemployed (includes homemakers) (=7)	293	7.2					
	Other(=8)	152	3.8					
Happiness	0(Very Unhappy) (=0)	9	0.2	4,046	7.61	1.78	0	10
	1(=1)	22	0.5					
	2(=2)	42	1.0					
	3(=3)	66	1.6					
	4(=4)	104	2.6					
	5(=5)	213	5.3					
	6(=6)	378	9.3					
	7(=7)	786	19.4					
	8(=8)	1100	27.2					
	9(=9)	834	20.6					
	10 (Very Happy) (=10)	492	12.2					

Table 3.1 (continued)

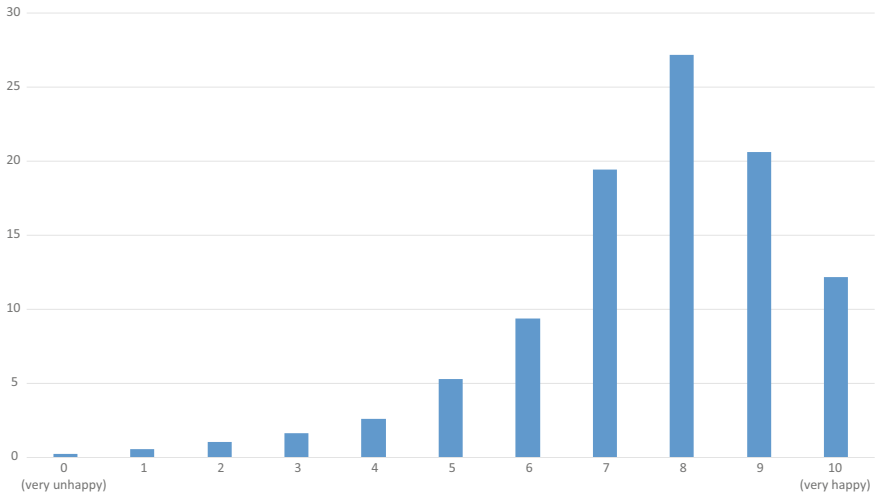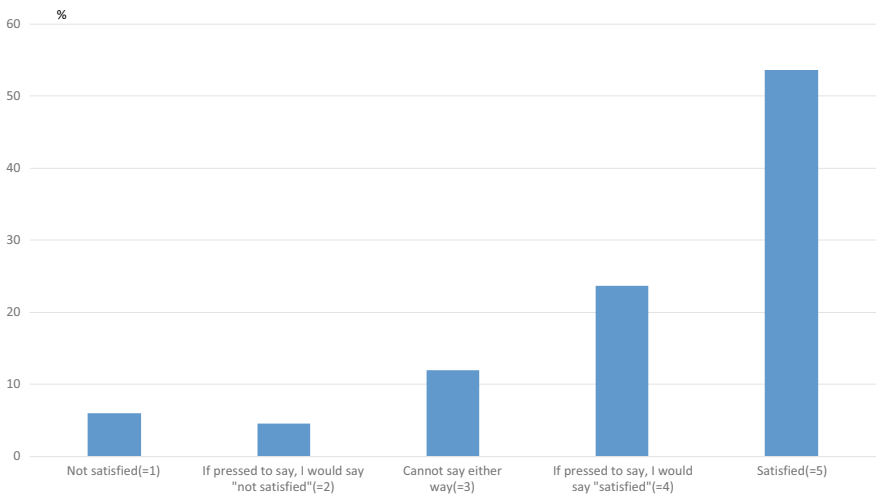| Nominal variable (question)	Variable discription	Freq.	%	Obs.	Mean	Std. Dev.	Min.	Max.
Life satisfaction	Not satisfied(=1)	244	6.0	4,046	4.14	1.168	1	5
	If pressed to say, I would say "not satisfied"(=2)	187	4.6					
	Cannot say either way(=3)	485	12.0					
	If pressed to say, I would say "satisfied"(=4)	960	23.7					
	Satisfied(=5)	2170	53.6					

Fig 3.1 Happiness (n = 4,046)

Fig. 3.2 Life satisfaction (n = 4,046)

as well such as the environment around people. Social capital is the representative external factor.

Social capital can be broken down and operationalized into a number of sub-dimensions. One distinction is between cognitive and structural social capital. Structural social capital refers to externally observable behaviors and actions within the network such as roles, rules, precedents, and procedures. Cognitive social capital refers to people's perceptions of the level of interpersonal trust as well as norms of

reciprocity within the group, which includes norms, values, attitudes, and beliefs (Villalonga-Olives & Kawachi, 2015, p. 47).

Another distinction is between bridging social capital and bonding social capital.[2] These two types of social capital are recognized by Putnam (2000). Bridging social capital refers to relationships with people from other communities, cultures, or socio-economic backgrounds (Oztok et al., 2015, p. 20). Bonding social capital refers to strong ties of attachment between relatively homogeneous individuals (Oztok et al., 2015, p. 20). Whereas bonding social capital bonds actors covered by it, bridging social capital bridges actors with other actors outside (Sato, 2013, p. 3). Furthermore, it is said that bonding social capital is inward-looking and bridging social capital is outward-looking.

The following six questions about social capital were asked:

1. (Generalized trust) "On a scale from 0 to10, how much do you basically trust your fellow Indians?" Generalized trust is defined as general beliefs about the extent to which other people can be trusted. It is essential for cooperative relationships (Ostrom, 2000), thriving democracies (Putnam, 1993; Tavits, 2006), and economic growth (Knack & Keefer, 1997).[3] This question was answered on a scale from 0 to 10, where 0 is *extremely dissatisfied* and 10 is *extremely satisfied*.

2. (Direct reciprocity) "Do you think that the person you helped might also help you in the future? Choose the appropriate response." This question measures direct reciprocity, with responses on a scale from 1 to 3. Although cooperation has been observed in the past behavior of a known partner under direct reciprocity, cooperation has also been observed in anonymous social experiences under generalized reciprocity. Therefore, the following question measures generalized reciprocity.

3. (Generalized reciprocity) "Do you think that when you help a person in trouble, someone will also help you whenever you are in trouble?"

4. (Structural social capital: extent of relationship) "How often do you meet with your neighbors? Please select the best response for each of the following questions."

   A.   How frequently do you meet with your neighbors?
   B.   How many neighbors do you meet with?

5. (Structural social capital: neighborhood activities) This question relates to neighborhood activities that you participate in. "Do you currently participate in any of the following activities?

   A.   Activities designed to promote relationships between people in the area (such as neighborhood groups and associations)

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[2] Szreter and Woolcock (2004). This paper also introduced linking social capital, which describes relationships across individuals who occupy different statuses of power within a social hierarchy.

[3] See Dawson (2017).

    B.   Sports, hobbies, and amusement activities (such as various types of sporting activities and artistic and cultural activities)

    C.   Volunteer, NPO, civic, and other similar types of activities

    D.   Other organizational activities (such as political activities and religious activities)

6.   (Particularized trust) "Do you have anyone you can consult with or rely on regarding any problems or worries you may have in daily life?" Please select how much you can rely on the person(s) for each item below.

    A.   Your neighbors

    B.   Your immediate family members

    C.   Other relatives

    D.   Friends and acquaintances

    E.   Doctors and counselors

    F.   Schoolteachers and cram school tutors

    G.   Your own caste members

    H.   Your own religious group members.

Particularized trust is defined as beliefs about the extent to which only specific individuals associated with a certain network or networks can be trusted.

Table 3.2 presents the results of the social capital questions. The average of generalized trust (question 1) was 8.4, which is higher than that in Japan. The average values for questions 2, 3, and 4 were also higher than in Japan. Neighborhood activities (question 5) in which respondents participated were mainly A. activities designed to promote relationships between people in the area (such as neighborhood groups and associations) and B. sports, hobbies, and amusement activities (such as various types of sporting activities and artistic and cultural activities). For question 6, respondents mainly relied on B. immediate family and D. friends and acquaintances.

Principal component analysis was used to obtain factors for each respondent using an orthogonal rotation (i.e., a varimax rotation) in order to reduce the social capital dataset to a more manageable size. Four factors were derived from the rotated factor matrix, which is a matrix of factor loadings of each variable. Table 3.3 shows the varimax-rotated four-factor component matrix. Variables are listed in order of size of their loadings. There are four factors. Questions that loaded highly on factor 1 seemed to relate to structural social capital. Therefore, factor 1 was labeled as structural social capital. Questions that loaded highly on factor 2 seemed to relate to particularized trust, such as family members, friends, and acquaintances. Therefore, factor 2 was labeled as particularized trust (neighborhood) factors. Questions that loaded highly on factor 3 seemed to relate to particularized trust, such as caste members, religious group members, schoolteachers, and cram school tutors. Therefore, factor 3 was labeled as particularized trust (religious and educational). Questions that loaded highly on factor 4 seemed to relate to reciprocity and generalized trust. Therefore, factor 4 was labeled as reciprocity and generalized trust.

Structural social capital, particularized social capital (N, neighbors), and particularized social capital (RE, religion and education) are bonding social capital whereas

Table 3.2 Results of social capital questions

Nominal variable (question)	Variable description	Freq.	%	Mean	Std. Dev.	Skewness
1. On a scale of 0–10, please rate how much you basically trust your fellow Indians?	0 (I do not trust people at all)(=1)	21	0.5	8.40	2.003	−1.097
Generalized trust	1(=2)	45	1.1			
	2(=3)	62	1.5			
	3(=4)	94	2.3			
	4(=5)	108	2.7			
	5(=6)	316	7.8			
	6(=7)	378	9.3			
	7(=8)	746	18.4			
	8(=9)	990	24.5			
	9(=10)	802	19.8			
	10 (I trust people a great deal)(=1 1)	484	12.0			
	total	4046	100.0			
2. Do you think that the person you helped might also help you in the future? Choose the appropriate	I disagree(=1)	181	4.5	2.49	0.583	−0.626
Direct reciprosity	Cannot say either way(=2)	1717	42.4			

(continued)

Table 3.2 (continued)

Nominal variable (question)	Variable description	Freq.	%	Mean	Std. Dev.	Skewness
	I agree (=3)	2148	53.1			
3. Do you think that when you help a person in trouble, someone will also help you whenever you are in	I disagree(=1)	188	4.6	2.57	0.581	−0.995
Generalized reciprosity	Cannot say either way(=2)	1353	33.4			
	I agree (=3)	2505	61.9			
4. How often do you meet with your neighbors? Please select the best response for each of the following auestions						
A. How frequently do you meet your neighbors?	Never (=1)	128	3.2	2.91	0.795	−0.219
	Hardly ever (greetings only) (=2)	1088	26.9			
	We stand around and talk on a daily basis (=3)	1844	45.6			

(continued)

Table 3.2 (continued)

Nominal variable (question)	Variable description	Freq.	%	Mean	Std. Dev.	Skewness
	We consult with each other and lend each other daily supplies, etc. We cooporate with each other to make our lives better (=4)	986	24.4			
B. How many neighbors do you meet?	No one. I don't even know who my next door neighbors are(=1)	134	3.3	2.96	0.884	−0.203
	I know and interact with a few people in my neighborhood (=2)	1270	31.4			
	I know and interact with a decent amount of people in my neighborhood(=3)	1281	31.7			
	I know and interact with many people in my neighborhood(=4)	1361	33.6			
				Mean	Std. Dev	Skewness

(continued)

Table 3.2 (continued)

Nominal variable (question)	Variable description	Freq.	%		Mean	Std. Dev.	Skewness
	Never(=1)	Hardly ever(=2)	Yes, occasionally(=3)	Yes, often(=4)			
5. This question is about neighborhood activities that you participate in. Do you currently participate in any of the following activities?							
A. Activities designed to promote relationships between people in the area (such as neighbourhood groups and associations)	291(7.2%)	713(17.6%)	945(48.1%)	097(27.1%)	2.95	0.856	−0.595
B. Sports, hobby, and amusement activities (such as various types of sporting activities, and artistic and cultural activities)	382(9.4%)	909(22.5%1)	742(43.1%)	1013(25%)	2.84	0.909	−0.428
C. Volunteer, NPO, civic, and other similar types of activities	630(15.6%)	224(30.3%)	1495(37%)	397(17.2%)	2.56	0.950	−0.110

(continued)

Table 3.2 (continued)

Nominal variable (question)	Variable description	Freq.	%			Mean	Std. Dev.	Skewness
D. Other organizational activities(such as political activities and religious activities)	720(17.8%)	089(26.9%)	1540(38.1)	697(17.2)		2.55	0.974	−0.151
						Mean	Std. Dev	Skewness
6. Do you have anyone that you can consult with or rely on regarding any problems or worries that you may have in daily life? For each of the items below, please select how much you can rely on the	Not at all(1=)	Hardly at all(2=)	Cannot say either way(3=)	To a certain extent(4=)	Deeply(=5)			
A. Your neighbors	606(15%)	708(17.5%)	739(8.3%)1	663(41.1%)	330(8.2%)	3.10	1.225	−0.413
B. You immediate family members	218(5.4%)	330(8.2%)	129(10.6%)1	422(35.1%)	647(40.7%)	3.98	1.151	−1.125
C. Other relatives	398(9.8%)	595(14.7%)	i05(19.9%)1	793(44.3%)	455(11.2%)	3.32	1.153	−0.600
D. Friends and acquaintances	203(5%)	378(9.3%)	459(11.3%)1	920(47.5%)	086(26.8%)	3.82	1.084	−1.022
E. Doctors and counselors	389(9.6%)	556(13.7%)	786(19.4%)1	622(40.1%)	593(17.1%)	3.41	1.199	−0.575

(continued)

Table 3.2 (continued)

Nominal variable (question)	Variable description	Freq.	%			Mean	Std. Dev.	Skewness
F. School teachers and cram school tutors	754(18.6%)	779(19.3%)	907(22.4%)	1213(30%)	393(9.7%)	2.93	1.273	−0.126
G. Your own caste members	821(20.3%)	790(19.5%)	922(22.8%)	1133(28%)	380(9.4%)	2.87	1.283	−0.060
H. Your own religious group members	850(21%)	664(16.4%)	889(22%)	158(28.6%)	485(12%)	2.94	1.329	−0.124

Table 3.3 Rotated factor matrix

	Factor 1	Factor 2	Factor 3	Factor 4
	Structural	Particularized (N)	Particularized (RE)	Reciprocity and generalized trust
5.A. Activities designed to promote relationships between people in the area (such as neighborhood groups and associations)	0.801	−0.035	−0.008	−0.023
5.B. Sports, hobby, and amusement activities (such as various types of sporting activities, and artistic and cultural activities)	0.762	−0.009	−0.058	−0.027
5.C. Volunteer, NPO, civic, and other similar types of activities	0.746	−0.103	0.118	−0.096
4.B. How many neighbors do you meet?	0.687	0.039	−0.060	0.085
4.A. How frequently do you meet your neighbors?	0.667	0.167	−0.146	0.099
5.D. Other organizational activities(such as political activities and religious activities)	0.599	−0.164	0.234	−0.049
6.B. You immediate family members	−0.066	0.908	−0.167	−0.047
6.D. Friends and acquaintances	−0.074	0.774	0.001	−0.010
6.C. Other relatives	−0.077	0.598	0.279	0.085
6.A. Your neighbors	0.220	0.564	0.092	0.003
6.E. Doctors and counselors	0.004	0.451	0.379	−0.130
6.G. Your own caste members	−0.011	−0.009	0.875	0.043
6.H. Your own religious group members	−0.013	−0.062	0.866	0.080
6.F. School teachers and cram school tutors	0.045	0.110	0.718	−0.049

Table 3.3 (continued)

	Factor 1	Factor 2	Factor 3	Factor 4
	Structural	Particularized (N)	Particularized (RE)	Reciprocity and generalized trust
2. Direct reciprosity	–0.016	–0.119	0.077	0.849
3. Generalized reciprocity	–0.078	–0.028	0.020	0.845
1. Generalized trust	0.202	0.217	–0.073	0.505

Note: Extraction Method:Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 6 iterations

Table 3.4 Correlation coefficients between happiness and social capital

	Happiness
Structural	0.3367*
Particularized (N)	0.2418*
Particularized (RE)	0.0839*
Reciprocity and generalized trust	0.3365*

* denotes significance at the 5%

reciprocity and generalized trust are bridging social capital when considering questions that loaded on each factor. Hereafter we will label these types of social capital as STRUCTURAL, PARTICULARIZED(N), PARTICULARIZED(RE), and RECIPROCITY AND GENERALIZED TRUST.

This analysis revealed four scales in the social capital questionnaire. Table 3.4 shows correlation coefficients between happiness and these four factors. All correlation coefficients are positive and significant, with structural social capital and reciprocity and general trust strongly correlated with happiness.

3.2.5   Other Variables

The average age of survey respondents was 32 years, and 59.7% were men and 40.3% were women. Average income was about $7,500, which is rather higher than the GNI per capita in U.S. dollars of $1,830 in 2017.[4] The distribution of marital status was 29.3% single, 63.6% married, 1.1% divorced, and 0.9% widowed. The relationship between marriage and happiness has been widely studied and there is a general consensus that marriage has a positive effect on happiness.

Education level was divided into three categories: below higher secondary certificate/state secondary certificate (HSC/SCC), attended college but has not graduated,

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[4] Viewed on 2019/09/05 at https://data.worldbank.org/indicator/NY.GNP.PCAP.CD?locations=IN.

Table 3.5 Average of happiness by city size

	Average of happiness
Large-sized cities	8.76
Medium-sized cities	8.56
Small-sized cities	8.26
Towns or villages	8.11

and college graduate or higher. The third category, college graduate or higher, was 81%.

City sizes were divided into four types: large-sized cities (population of 1 million or more), medium-sized cities (population of less than 1 million), small-sized cities, and towns or villages. The largest number of respondents lived in large-sized cities. Table 3.5 shows the average level of happiness by city size.

3.2.6 Happiness Analysis

This section describes the results of estimating ordered probity equations in which individual's well-being levels are regressed on a set of personal characteristics.

Our basic economic model was based on the orthodox manner. The basic regression estimated is as follows:

$$y_i = a + b_1 x_{i1} + b_2 x_{i2} + ... b_k x_{ik} + e_i, i = 1, ..., n$$

where y_i is happiness for each respondent i, x_{ij} (j = 1, …, k) are explanatory variables, and i indexes the *n* sample observations. The explanatory variables include those mentioned in the data section. The term e_i is a random disturbance. The appropriate specification is an ordered logit model because responses to the happiness question are ordinal rather than cardinal in nature.

Table 3.6 shows results for the whole sample (1) with columns (2) and (3) breaking down the data into different subsamples, where the dependent variable is happiness. Columns (4), (5), and (6) of Table 3.6 present the same results for life satisfaction, which will be discussed as a complement to happiness.

From the findings in Table 3.6, happiness has a positive and statistically significant correlation with female dummy, house (owned) dummy, health, no of income, top level manager, executives, self-employed, STRUCTURAL, PARTICULAR-IZED(N), RECIPROCITY AND GENERALIZED TRUST, and city size, whereas happiness does not have a statistically significant relationship to marital status, age, and education level for the whole sample.

We can confirm that our results fit the usual patterns that are found in the happiness literature, including Praag et al. (2003), Blanchflower and Oswald (2004), and Stutzer and Frey (2012). There are some specific findings in the case of India.

Table 3.6 Results of estimation (happiness and life satisfaction)

	Variables	Dependent Variables					
		Happiness			Life satisfaction		
		(1)	(2)	(3)	(4)	(5)	(6)
		Whole sample	Male	Female	Whole sample	Male	Female
Marital status	Single	Reference			Reference		
	Married	0.0853	0.0174	0.1936	0.4325	0.4912	0.3589
		[0.75]	[0.12]	[1.06]	[3.59]**	[3.12]**	[1.85]
	Divorced	0.067	−0.7073	0.6323	0.1784	−0.3297	0.4616
		[0.20]	[−1.41]	[1.45]	[0.50]	[−0.60]	[0.96]
	Widowed	−0.0255	−1.381	0.9169	0.5076	−0.1614	1.0697
		[−0.07]	[−2.65]**	[1.98]*	[1.24]	[−0.28]	[1.78]
Gender	Male	Reference			Reference		
	Female	0.1574			0.2445		
		[2.36]*			[3.29]**		
Age	Age	−0.0891	−0.1686	−0.0536	−0.326	−0.697	0.376
		[−0.63]	[−0.92]	[−0.21]	[−2.08]*	[−3.49]**	[1.34]
	Age squared	0.0136	0.0241	0.0124	0.0726	0.1186	−0.0221
		[0.74]	[1.05]	[0.36]	[3.50]**	[4.60]**	[−0.56]
House	House (owned) dummy	0.1739	0.106	0.2534	0.1403	0.1402	0.1067
		[2.51]*	[1.16]	[2.36]*	[1.87]	[1.42]	[0.91]
Child	Child dummy	0.0546	0.1322	−0.1165	−0.0684	−0.013	−0.1552
		[0.54]	[1.04]	[−0.69]	[−0.64]	[−0.10]	[−0.86]

(continued)

Table 3.6 (continued)

		Dependent Variables					
		Happiness			Life satisfaction		
		(1)	(2)	(3)	(4)	(5)	(6)
Health	Health	0.5334	0.5112	0.5866	0.4633	0.4657	0.4763
		[17.88]**	[13.40]**	[12.03]**	[14.63]**	[11.52]**	[9.15]**
Education	HSC/SSC	Reference			Reference		
	Attended college but has not graduated	−0.2639	−0.1593	−0.4605	0.1632	0.3288	−0.1176
		[−1.75]	[−0.85]	[−1.75]	[1.02]	[1.67]	[−0.42]
	College graduate or higher	−0.1692	−0.154	−0.2249	−0.0429	0.1398	−0.3644
		[−1.32]	[−0.95]	[−1.03]	[−0.32]	[0.83]	[−1.58]
Income	NI of income	0.15	0.337	−0.0785	0.2221	0.3513	0.0738
		[2.03]*	[3.37]**	[−0.69]	[2.62]**	[3.06]**	[0.57]
Work status	Top level manager, executive	0.2433	0.1797	0.3753	0.1238	0.1166	0.1547
		[2.77]**	[1.63]	[2.54]*	[1.25]	[0.95]	[0.91]
	Regular employee	Reference			Reference		
	Civil servant	0.2847	0.335	−0.0867	0.0455	0.0865	−0.3384
							(continued)

4 Happiness and Social Capital in India
Table 3.6 (continued)

	Dependent Variables					
	Happiness			Life satisfaction		
	(1)	(2)	(3)	(4)	(5)	(6)
	[1.21]	[1.25]	[−0.17]	[0.18]	[0.30]	[−0.61]
Contract /fixed-term /Part- time employee/home-based work	0.1497	0.1637	0.1336	0.0621	0.1894	−0.0952
	[1.33]	[1.02]	[0.82]	[0.50]	[1.07]	[−0.54]
Self-employed	0.3564	0.193	0.6526	0.057	0.0551	0.0594
	[3.53]**	[1.51]	[3.92]**	[0.52]	[0.40]	[0.32]
Student	0.0625	0.1307	−0.0921	0.0055	−0.1196	0.2775
	[0.41]	[0.68]	[−0.35]	[0.03]	[−0.58]	[0.98]
Unemployed (includes homemakers)	0.1521	0.2493	0.0052	0.0643	0.1119	−0.0843
	[1.05]	[0.94]	[0.03]	[0.40]	[0.38]	[−0.40]
Other	0.2309	0.1162	0.2703	0.3905	0.333	0.2789
	[1.21]	[0.49]	[0.83]	[1.69]	[1.11]	[0.75]
Social capital STRUCTURAL	0.512	0.523	0.5052	0.2814	0.3114	0.2395
	[13.02]**	[10.19]**	[8.13]**	[6.66]**	[5.67]**	[3.54]**

(continued)

Table 3.6 (continued)

		Dependent Variables					
		Happiness			Life satisfaction		
		(1)	(2)	(3)	(4)	(5)	(6)
	PARTICULARIZED(N)	0.321	0.2757	0.3957	0.2884	0.2324	0.3738
		[8.60]**	[5.82]**	[6.45]**	[7.20]**	[4.54]**	[5.72]**
	PARTICULARIZED(RE)	−0.0648	−0.0594	−0.0664	−0.0769	−0.0299	−0.1311
		[−1.78]	[−1.23]	[−1.17]	[−1.91]	[−0.56]	[−2.10]*
	RECIPROCITY AND GENERALIZED TRUST	0.5542	0.5789	0.4892	0.2116	0.2146	0.1936
		[15.34]**	[12.67]**	[8.18]**	[5.55]**	[4.46]**	[3.04]**
City size	Large-sized cities	0.2546	0.1789	0.4335	0.0131	−0.1461	0.3192
		[1.98]*	[1.16]	[1.80]	[0.09]	[−0.85]	[1.24]
	Medium-sized cities	0.243	0.1184	0.4789	0.0735	−0.1644	0.4932
		[1.80]	[0.73]	[1.92]	[0.50]	[−0.91]	[1.84]
	Small−sized cities	0.1365	0.2077	−0.0011	0.1053	−0.073	0.3903
		[0.79]	[1.00]	[−0.00]	[0.57]	[−0.32]	[1.17]
	Towns or villages	Reference			Reference		

Table 3.6 (continued)

	Dependent Variables					
	Happiness			Life satisfaction		
	(1)	(2)	(3)	(4)	(5)	(6)
cut1	−4.4892	−4.5475	−4.6317	−0.8624	−1.3142	−0.1781
	[−9.62]**	[−7.71]**	[−5.93]**	[−2.56]*	[−3.09]**	[−0.31]
cut2	−3.2098	−3.402	−3.1512	−0.1464	−0.5914	0.5369
	[−8.92]**	[−7.33]**	[−5.27]**	[−0.44]	[−1.40]	[0.93]
cut3	−2.4077	−2.5158	−2.461	0.8645	0.4155	1.5705
	[−7.25]**	[−5.96]**	[−4.36]**	[2.59]**	[0.99]	[2.73]**
cut4	−1.6622	−1.7926	−1.6768	2.2494	1.8512	2.9079
	[−5.21]**	[−4.42]**	[−3.09]**	[6.70]**	[4.38]**	[5.03]**
cut5	−0.9658	−1.1819	−0.8536			
	[−3.09]**	[−2.97]**	[−1.60]			
cut6	−0.1482	−0.2695	−0.1534			
	[−0.48]	[−0.69]	[−0.29]			
cut7	0.7697	0.6478	0.7808			

Table 3.6 (continued)

	Dependent Variables					
	Happiness			Life satisfaction		
	(1)	(2)	(3)	(4)	(5)	(6)
	[2.50]*	[1.66]	[1.48]			
cut8	2.0666	1.9265	2.1336			
	[6.67]**	[4.90]**	[4.04]**			
cut9	3.6113	3.4649	3.7255			
	[11.51]**	[8.71]**	[6.96]**			
cut10	5.2272	5.1028	5.3339			
	[16.38]**	[12.60]**	[9.81]**			
N	3566	2143	1423	3566	2143	1423
ll	−5793.1274	−3485.33	−2282.59	−3927.7057	−2351.3397	−1558.457
r2_p	0.1223	0.1188	0.1359	0.0933	0.1017	0.0907
df_m	26	25	25	26	25	25
chi2	1614.4034	939.5383	718.1525	808.4873	532.3641	310.8016
p	0	0	0	0	0	0

Note: t statistics in brackets. *$p<0.05$, ** $p<0.01$

3.2.7 Education

Our estimation did not show a significant education–happiness relationship, consistent with the results in Lakshmanasamy (2010, 315 respondents). Our result is not surprising, given its consistency with the literature that shows a negative or absent education–happiness relationship Clark and Oswald (1996). There is a view that happiness depends upon the gap between real conditions and aspirations. Happiness is not likely to increase with a higher education level, because education raises aspiration targets. Another reason to account for the lack of relationship between education and happiness is that education is instrumental. Education becomes insignificant when other variables are included as repressors. Therefore, education acts mainly through its effects on variables such as income and social capital.

3.2.8 Work Status

Happiness has a positive and statistically significant correlation with top-level manager, executive, and self-employed (reference variable is "regular employee"). These results are reasonable. The self-employed have greater independence and autonomy compared with the employed. This accounts for greater happiness in the self-employed (Benz & Frey, 2004, p. 98; Andersson, 2008). In general, greater freedom in the work environment, such as the opportunity to "be your own boss" is an important source of happiness at work (Benz & Frey, 2004, p. 98). These conditions can also apply to top-level manager and executive.

3.2.9 Marital Status

Being married was not associated with happiness in all cases. Being married is likely to have a statistically significant and positive correlation with happiness compared with being single due to the wide range of marital benefits, including increased earnings, insurance against adverse life events, and gains from economies of scale and specialization within the family.[5] However, happiness did have a positive and statistically significant correlation with being married for the whole sample and male respondents when applying life satisfaction as the dependent variable instead of happiness (see columns (4) and (5)). Young women in particular did not rate their marriage as happy in each case (see column (6)) due to poverty as well as "husband-related" (e.g., extramarital affairs, alcoholism, abuse) and "in-law-related" reasons.[6] These reasons might not apply to the present study because our data included much older married women. Future research is needed to determine the reasons.

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[5] Stutzer and Frey (2006).

[6] Ghosh, Lahiri and Datta (2017, p. 123).

3.2.10   Age

Age was not significant in the three cases (see columns (1), (2), and (3)). There is a well-defined U-shape between happiness and age in the literature (e.g., Blanchflower & Oswald, 2008). Age also has a positive and statistically significant correlation with happiness in another Indian happiness study (Lakshmanasamy, 2010). However, age was not significant even after applying age as the sole repressor in the present study. Even so, age did have a U-shape over life cycle when applying life satisfaction as the dependent variable instead of happiness for the whole sample and male respondents (see columns (4), (5), and (6)). Survey-based measures are sensitive to question type. Therefore, measurement methods might account for the stated difference, because happiness was measured on an 11-point integer rating from 0 to 10 whereas life satisfaction was measured on a 5-point integer rating from 1 to 5.

3.2.11   City Size

Large cities, medium-sized cities, and small cities were positively correlated with happiness (reference variable is "town and village"). But only large cities had a statistically significant correlation with happiness. As indicated by Albouy (2008), happiness does not tend to depend upon city size when controlling for the full set of individual, household, and area characteristics.

There are pros and cons in the case of large cities. The pros are gains from the reduced cost of moving goods across space, labor-market pooling, the benefits of moving people across firms, and the large flow of ideas, all of which creates human capital at the individual level and facilitates innovation. The cons are commuting costs and high land prices. The props outweighed the cons for large cities in the present study.

3.2.12   Social Capital

STRUCTURAL, PARTICULARIZED(N), and RECIPROCITY AND GENERALIZED TRUST had a positive and statistically significant correlation with happiness in the three cases. Contrary to what might be expected, PARTICULARIZED (RE) was not significantly correlated with happiness.

Relationships exist between social capital and social outcomes such as better health, low crime rates, and effective government administration (e.g., Putnam, 1993; Helliwell & Putnam, 1995; Ichino & Maggi, 2000). As for the effects of social capital on happiness and SWB, most previous studies provided evidence of a positive relationship (e.g., Bartolini et al., 2016; Helliwell, 2006; Orlowski & Wicker, 2015; Pinquart & Sörensen, 2000).

How does social capital affect happiness? There are many channels through which increases in social capital improve happiness. For example, benefits come through greater efficiency in economic outcomes and government. Networks also improve cooperation both within and among communities. Therefore, those who are connected are more likely to feel happier than those who are not.

The present analysis concludes that social capital is associated with a high level of both happiness and life satisfaction, although some demographic factors are differently associated with both. We now proceed to an analysis of determinants of social capital.

3.3   Social Capital and Hypothesis

There are recent theoretical contributions in the literature on social capital. Glaeser et al. (2002) provided a simple model that analyzed an individual's decision to accumulate social capital. Chou (2006) considered three channels through which social capital can affect economic growth, human capital, financial development, and collaboration between firms. Beugelsdijk and Smulders (2009) analyzed a model of economic growth, bonding social capital, and bridging social capital. Roseta-Palma et al. (2010) sophisticated the analysis of Beugelsdijk and Smulders (2009). Agénor and Dinh (2013) generalized Routledge and von Amsberg (2003), Chou (2006), Bofota et al. (2012), and Growiec (2012) and focused on the macroeconomic effects of social capital, insisting that the key benefit of social capital is to help promote imitation.

The present study used the model of social capital formation by Glaeser et al. (2002) (the GLS model) because it facilitates empirical analysis, although more sophisticated models exist.

The GLS model treats social capital as an individual characteristic and is similar to the model of human capital. Individual social capital is represented as the stock variable, S. Each individual receives a per-period utility flow of S R($\widehat{S}$), which is the flow pay-off to the individual, where $\widehat{S}$ is the aggregate per-capita social capital, R($\widehat{S}$) is a differentiable function with aggregate per-capita social capital as its argument, and R'($\widehat{S}$) > 0 is assumed. The social capital stock follows the dynamic budget constraint,

$$S_{t+1} = \delta\varphi S_t + I_t$$

$(1-\delta)$ is the depreciation rate. φ is defined as $(1-\theta)+\theta\lambda$, where θ is the probability that an individual leaves the community and λ is the proportion of which the value of social capital falls when an individual leaves the community. Therefore, φ represents the depreciation factor arising from mobility. The level of investment I_t needs a time cost $C(I_t)$, where $C(\,\cdot\,)$ is increasing and convex. The opportunity cost of time is the

wage rate w. It is assumed that individuals have a known lifespan of T periods and that they discount the future with discount factor β.

The individual's maximization problem is as follows:

$$\max_{I_0,\ldots,I_t} \sum_{t=0}^{T} \beta^t [S_t R(S_t) - wC(I_t)]$$

$$s.t. S_{t+1} = \delta\varphi S_t + I_t, \forall t$$

The individual maximizes his objective function, taking aggregate per capita social capital, $\hat{S}$, as fixed. The first-order condition associated with this investment problem is given by

$$wC'(I_t) = \frac{1 - (\beta\delta\varphi)^{T-t+1}}{1 - \beta\delta\varphi} R(\hat{S})$$

This first-order condition implies the following comparative static results. The left (right) side of the above equation is the marginal cost (marginal benefit) of social capital investment. Social capital investment (I) rises with β (discount factor), $R(\hat{S})$ (occupational returns of social skills), and $\hat{S}$ (aggregatesocialcapital) because an increase in these variables raises the marginal benefit. In contrast, social capital investment (I) decreases with θ (mobility), $(1-\delta)$ (rate of social capital depreciation), $(1-\lambda)$ (rate of social capital depreciation due to relocation), and t (age) because an increase in these variables lowers the marginal benefit. Because an increase in w (opportunity cost of time) raises the marginal cost, social capital investment declines.

3.3.1 Empirical Analysis of Social Capital

In order to examine the hypotheses previously proposed, OLS was utilized to conduct the estimations. The estimated equation takes the following form

$$SC_i = a + b_1 x_{i1} + b_2 x_{i2} + \ldots b_k x_{ik} + u_i, i = 1, \ldots, n$$

where SC_i is social capital for each respondent i, x_{ij} (j = 1, …, k) are explanatory variables, and i indexes the *n* sample observations. The explanatory variables include those mentioned in the data section. The term u_i is a random disturbance.

Estimate results are shown in Table 3.7. A regression was conducted for each type of social capital. The parameters are presented, with ** and * in Table 3.7 to indicate significance at the 1% and 5% significance levels, respectively. The adjusted R-squared is around 0.1 (which is relatively high in studies of this kind.)

Table 3.7 Estimation results (social capital)

	Variables	Structural	Particularize (N)	Particularized (RE)	Reciprocity and generalized trust
Gender	Male	Reference			
	Female	–0.0552	0.0674	–0.1014	–0.021
		[–1.67]	[1.98]*	[–2.90]**	[–0.62]
Age	Less than 20	0.0119	0.0486	0.0756	0.035
		[0.15]	[0.58]	[0.89]	[0.42]
	20–29 years old	0.1353	–0.08	0.1132	0.1048
		[2.60]**	[–1.49]	[2.05]*	[1.95]
	30–39 years old	Reference			
	40–49 years old	–0.2638	0.0272	–0.0604	–0.1543
		[–5.69]**	[0.57]	[–1.23]	[–3.22]**
	50–59 years old	–0.3673	0.1152	–0.196	–0.312
		[–6.92]**	[2.10]*	[–3.48]**	[–5.69]**
	60 or above	–0.3472	0.1538	–0.2519	–0.4429
		[–5.27]**	[2.26]*	[–3.61]**	[–6.51]**
Marital status	Single	Reference			
	Married	0.0158	0.0844	0.0823	0.0811
		[0.27]	[1.39]	[1.33]	[1.34]
	Divorced	0.0055	0.2545	0.1372	–0.0872
		[0.03]	[1.55]	[0.82]	[–0.53]
	Widowed	–0.1062	0.0695	0.061	0.2436
		[–0.59]	[0.37]	[0.32]	[1.32]
Child	Child dummy	0.3158	–0.0065	0.3183	0.1791
		[6.43]**	[–0.13]	[6.12]**	[3.53]**
House	House (owned) dummy	0.3052	0.1851	0.2188	0.2509
		[8.85]**	[5.18]**	[5.98]**	[7.04]**
Income	Nl of income	0.3664	0.1525	0.1951	0.2312
		[11.32]**	[4.55]**	[5.69]**	[6.92]**
Education	HSC/SSC	Reference			
	Attended college but has not graduated	–0.1141	0.166	–0.0741	–0.2172

(continued)

Table 3.7 (continued)

	Variables	Structural	Particularize (N)	Particularized (RE)	Reciprocity and generalized trust
		[–1.54]	[2.17]*	[–0.94]	[–2.84]**
	College graduate or higher	–0.0705	0.3091	–0.0942	–0.088
		[–1.12]	[4.74]**	[–1.41]	[–1.35]
City size	Large-sized city (population of one million or larger)	Reference			
	Medium-sized city (population of less than one million)	0.0351	–0.101	0.0239	0.0236
		[0.92]	[–2.55]*	[0.59]	[0.60]
	Small-sized city	0.0545	–0.2721	–0.01	–0.0617
		[0.81]	[–3.93]**	[–0.14]	[–0.89]
	Town or village	–0.0593	–0.2672	–0.0666	–0.042
		[–0.93]	[–4.07]**	[–0.99]	[–0.64]
	_cons	–0.6178	–0.5595	–0.4719	–0.3884
		[–7.03]**	[–6.15]**	[–5.06]**	[–4.27]**
	R-squared	0.1267	0.0636	0.0621	0.0736
	Adj-r-squared	0.1225	0.0591	0.0576	0.0692
	N	3566	3566	3566	3566

Note: t statistics in brackets. * < 0.05, ** $p < 0.01$

3.3.1.1 Gender

Women benefited more than men from social capital for PARTICULARIZED(N) but less for PARTICULARIZED(RE). PARTICULARIZED(N) pertains to informal networks, although PARTICULARIZED(RE) pertains to social networks. One interpretation of this result is that women are more likely to gain from participation in informal networks than men, who generally have greater access to social networks (Elgar et al., 2011, p. 1051).

3.3.1.2 Age

Social capital was negatively correlated with age for STRUCTURAL, PARTICULARIZED (RE), and RECIPROCITY AND GENERALIZED TRUST, but positively with PARTICULARIZED (N). Figure 3.3 shows the average level of social capital
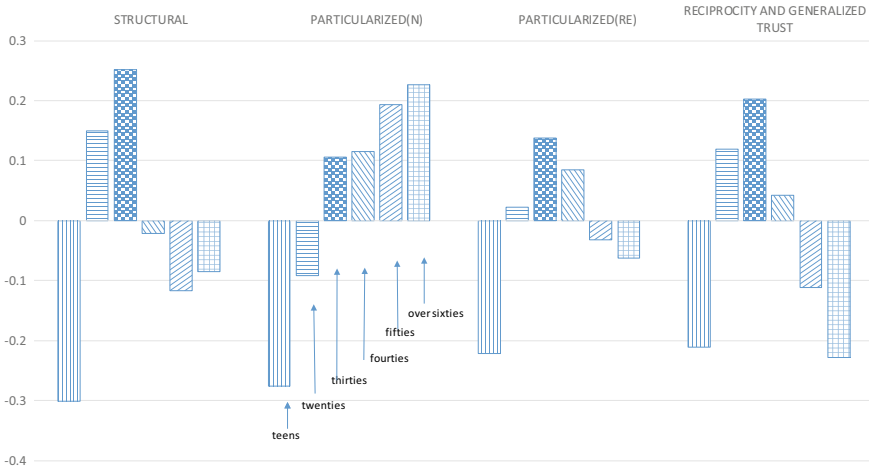
Fig. 3.3 Average of social capital by age (n = 3,565)

by age. Each level of social capital of the teens is minus and large, but the teens do not have a significant effect on social capital according to Table 3.7.

Glaeser et al. (2002) found a strong age effect, where levels of social capital followed an inverted U-shaped curve over the life cycle. However, the same inverted U-shaped curve effect was not found in the present study when the analysis controlled for socio-economic variables.

Social capital declines as age increases except in the case of PARTICULARIZED (N), which contradicts the hypothesis. As PARTICULARIZED (N) includes immediate family members and friends, people as they age are likely to depend on them. If so, this type of social capital might increase for them.

3.3.2   Marriage, Having Children, and Home Ownership: Mobility

The GLS model predicts a negative relationship between mobility and social capital. Variables pertaining to mobility are marriage, having children, and home ownership. Getting married requires time for discussing and deciding about relocation. Furthermore, relocation is expensive because a couple might need to purchase furniture and other household furnishings. In addition to the aforementioned reasons, having children also involves much time and costs such as those related to changing schools. Homeowners are relatively reluctant to move because transaction costs are high in the real estate market. These three variables thus lead to high levels of social capital according to the hypothesis.

Coefficients on each type of social capital for married people were not statistically significant at the 5% level when "singlehood" was the reference variable. Social capital was positively correlated with having children for STRUCTURAL, PARTICULARIZED (RE), and RECIPROCITY AND GENERALIZED TRUST, but not with PARTICULARIZED (N). Coefficients for homeowners were significant at the 1% significance level in each case.

3.3.2.1 Income

The GLS model predicts that social capital investment declines with the opportunity cost of time. The estimation included controls for natural log of income. Coefficients were positively significant in all cases. However, this result contradicted the hypothesis. An interpretation of this result is that because higher income produces higher education, those with higher education invest in social capital when education (human capital) is complementary to social capital.[7]

3.3.2.2 Education

A higher discount factor raises social capital according to the hypothesis. A higher discount rate means more patience, which means higher human capital and a higher education level in human capital theory. Therefore, higher education predicts a higher level of social capital. This relationship emerges in the case of PARTICULARIZED (N).

3.3.2.3 City Size

With increasing urbanization, it has become necessary to assess the effect of urbanization on social capital. The costs of connection are important elements in social connection, and social connection declines as the costs of that connection increase (Glaeser & Sacerdote, 2000, p. 13). In urban areas, people are more likely to form social connections because people are spatially intimate. Figure 3.4 presents the average level of social capital by city size for each type of social capital and shows that the bigger the city size, the greater the social capital. However, this relationship was significant only for PARTICULARIZED (N). The costs of connection had no effect on the other types of social capital.

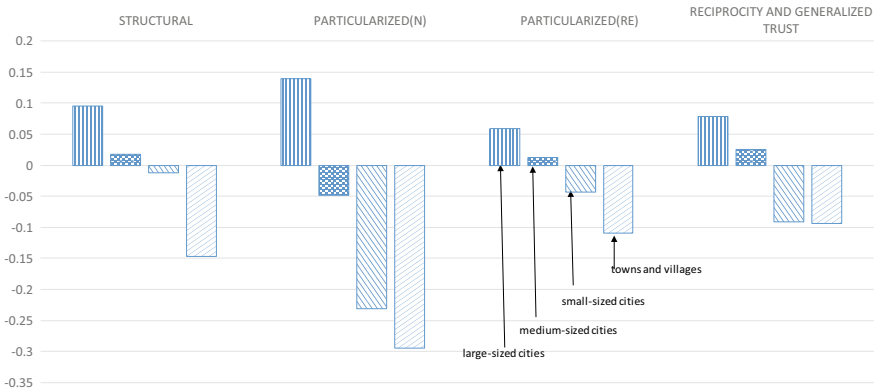[7] Glaeser et al. (2002), p. F454.

Fig. 3.4 Average of social capital by age (n = 3,565)

3.4   Conclusion

It can now be confirmed that the results of this study fit the usual patterns that are found in the happiness literature. However, there are some specific findings in the case of India. There is no significant education–happiness relationship in the estimation. Happiness had a positive and statistically significant correlation with top-level manager, executive, and self-employed (reference variable is "regular employee"). Being married was not associated with happiness in all cases (whole sample, male and female), whereas being married is likely to have a positive and statistically significant correlation with happiness in the happiness literature. Age was not significant in the whole sample and in men and women, whereas there is a well-defined U-shape between happiness and age in the happiness literature. Only large cities had a statistically significant correlation with happiness. Three dimensions of social capital (i.e., STRUCTURAL, PARTICULARIZED (N), and RECIPROCITY AND GENERALIZED TRUST) had a strong positive correlation with happiness whereas PARTICULARIZED (RE) did not.

The same estimation was attempted using life satisfaction instead of happiness and a marked diversity was found between happiness and life satisfaction. For example, life satisfaction had a positive and statistically significant correlation with being married in the whole sample and in men, whereas happiness did not in all cases. Age had a U-shape over life cycle when life satisfaction was used as the dependent variable. Standard questions about happiness and life satisfaction were used. To date, it is not clear which of the two measures is more suitable for SWB. In fact, many well-being measures have been used in empirical studies (see overview of measures by Bartels (2015). This point will be left for future research.

The results of the research reported here clearly confirmed the presence of a positive relationship between social capital and SWB (for both happiness and life satisfaction). In that sense, social capital was a big predictor of happiness. Finally,

the determinants of social capital were estimated. The conclusion was almost hypo-thetical in the case of three types of social capital (i.e., STRUCTURAL, PARTIC-ULARIZED (RE), and RECIPROCITY AND GENERALIZED TRUST) with the exception of PARTICULARIZED (N). SWB plays an important role in the policy-making process in India. Therefore, decisionmakers in India need to explore how public policy contributes to the formation of social capital.

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