

CHAPTER 3

THE DEMOGRAPHIC PROFILE OF RESPONDENTS

This research is about consumer buying behavior for ecofriendly paints which was studied in green supply chain management context with reference to some selected paint manufacturing companies. For this study four cities were selected as major representatives of Gujarat state. According to study of Tanner and Cast in 2003²³⁸, demographic characteristics and psychological variables of consumers are two major determinants of consumers' environmental behavior and purchase behavior. Psychographic characteristics consist of individuals' value, belief, attitude, knowledge, perception, and so on, while demographic factors comprise age, income, occupation, education, size and type of family, number of children, and gender. Looking towards demographic factors, in Gujarat, it becomes an important decision to study demographic factors of respondents from four biggest (in manner of population) cities i.e., Vadodara, Ahmedabad, Surat and Rajkot. Knowing a demographic profile of these four cities would surely reveal many factors of randomly selected respondents. This profile glimpse would definitely help many marketers and business planners to explore a larger view of consumers from Gujarat. In this study, 800 consumers were randomly selected from Vadodara, Ahmedabad, Surat and Rajkot, 200 from each city. Structured questionnaire was used to collect information from consumers. The information was collected as per required demographic parameters like occupation, age, gender, educational qualifications, income, marital status, family type and size as well as number of children. Due to constantly changing market in this world and needs of consumers are still emerging, information collected and analysed are not going to last forever. Hence, such research on regular intervals becomes essential for any researcher. Considering census data of 2011²³⁹ from 15th national census survey from India, this survey was started in July'2012 and completed in the month of December'2012 with a fundamental goal to get deep into the area of consumer behavior towards environment friendly product. Taking all these into consideration, in this chapter, demographic profile of randomly selected respondents from four cities of Gujarat is depicted.

²³⁸ Tanner, C. & Kast, S. W., 2003, Promoting sustainable consumption: Determinants of green purchases by Swiss consumers, *Psychology and Marketing*, 20: 883–902.

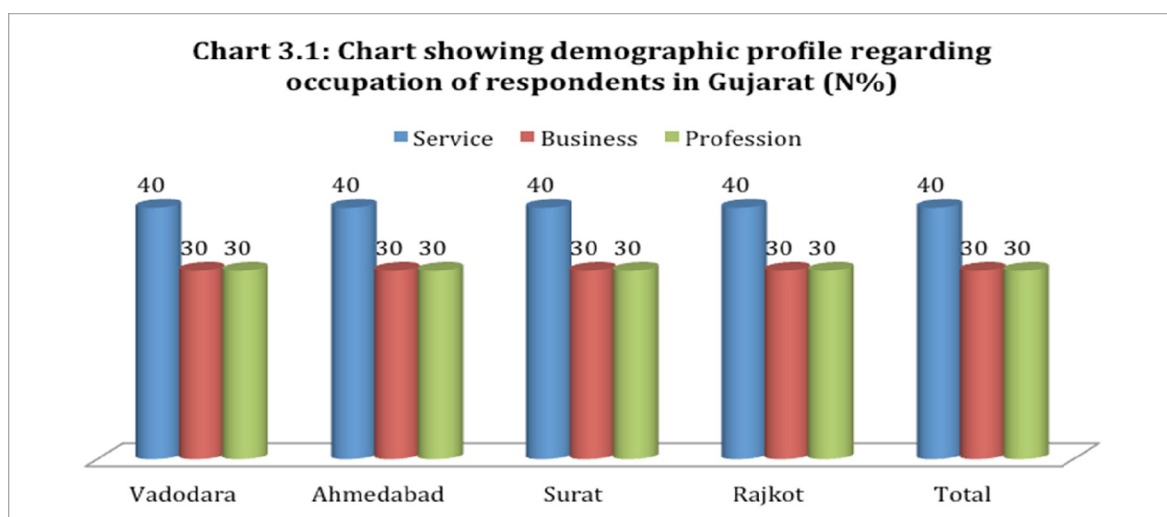
²³⁹ <http://www.census2011.co.in/census/state/gujarat.html>

3.1: Occupation

In Gujarat state, there are many personal businesses, services and jobs and professions which identify social class of an individual from this state. Hence, occupation becomes very important social factor to study. For this study, occupation is divided into three categories i.e., service class, business class and professional class. As psychographic factors affect individual's choice, segmenting the market only on the basis of income level would be inappropriate. According to Sandhe A. A. (2012)²⁴⁰ Consumers' values, taste and personality etc. are largely determine by occupation and education. Hence, occupation can be taken as more meaningful variable compared to income. Thus, stratified random sampling was done on the basis occupation, considering it as major social factor.

Table 3.1: Table showing demographic profile of respondents regarding occupation in Gujarat

Occupation	CITY								Total	
	Vadodara		Ahmedabad		Surat		Rajkot			
	N	%	N	%	N	%	N	%	N	%
Service	80	40.0	80	40.0	80	40.0	80	40.0	320	40.0
Business	60	30.0	60	30.0	60	30.0	60	30.0	240	30.0
Profession	60	30.0	60	30.0	60	30.0	60	30.0	240	30.0
Total	200	100.0	200	100.0	200	100.0	200	100.0	800	100.0



²⁴⁰ Sandhe A. A., (2012), An Empirical Study on the effect of payment mechanism and shopping situation for purchasing intention – the moderating effect of consumer involvement in selected product categories in Gujarat, Department of Commerce and Business Management, The Maharaja Sayajirao University of Vadodara.

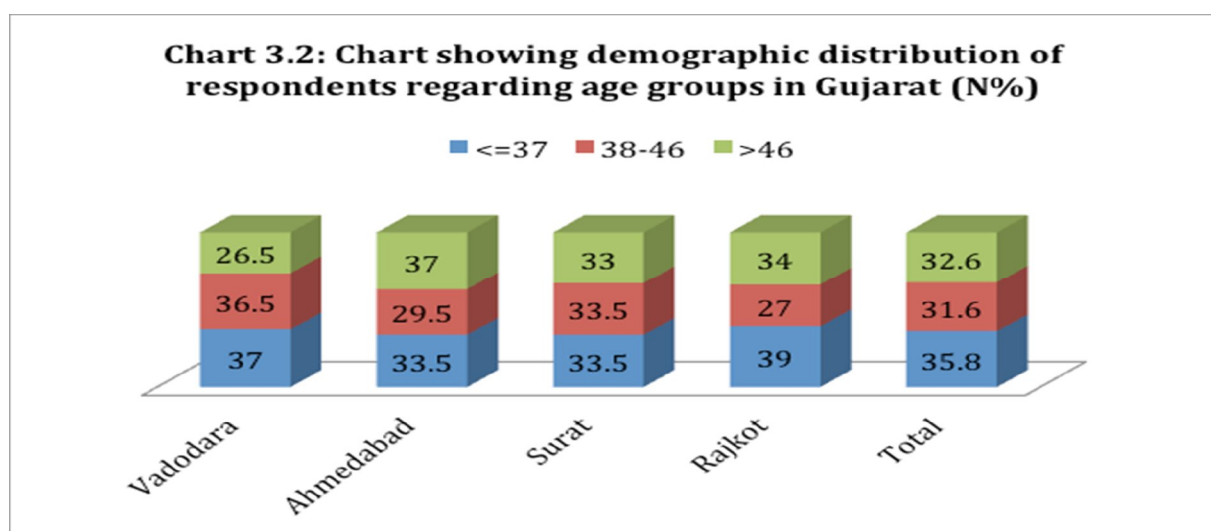
Sample for this study was collected on the bases of stratified sampling method taking three categories of occupation as different strata to collect data. Due to stratified sampling method, in this study 40% service class, 30% business class and 30% respondents with other profession were evenly scattered in all four cities.

3.2: Age

Many studies had reported differences between people with different age groups. According to Robinson and Smith (2002)²⁴¹, age differences could change people's choices and their intention to buy a product specifically which was ecologically modified. In their study, respondents with 51 to 60 years of age were more supportive to organic food compared to consumers with age below 30 years. Hence, researchers from different regions have found age to be useful variable to differentiate between needs of consumers from different age groups. Here, respondents were asked to give their proper age verified with their valid photo identities like license, passports, voters' card etc. and then with percentile distribution method their age were divided into three different groups i.e., less or equal to 37 years, 38 to 46 years and above 46 years. A brief profile description is depicted in chart 3.2 and frequency distribution is presented in table 3.2 -

Table 3.2: Table showing demographic distribution of respondents regarding age groups in Gujarat

Age (Year)	CITY								Total	
	Vadodara		Ahmedabad		Surat		Rajkot			
	N	%	N	%	N	%	N	%	N	%
<=37	74	37.0	67	33.5	67	33.5	78	39.0	286	35.8
38-46	73	36.5	59	29.5	67	33.5	54	27.0	253	31.6
>46	53	26.5	74	37.0	66	33.0	68	34.0	261	32.6
Total	200	100.0	200	100.0	200	100.0	200	100.0	800	100.0



²⁴¹ Robinson, R. & Smith, C., 2002, Psychosocial and demographic variables associated with consumer intention to purchase sustainably produced foods as defined by the Midwest Food Alliance, Society for Nutrition Education, 34: 316–325.

Here, according to the sample from all selected cities of Gujarat, percentile method was used to create three different age groups in which first group comprised of responses up to 33.33 (i.e., 37 years of age) percentile value while second group comprised of responses from 33.33 percentile value to 66.66 (i.e., 46 years) percentile value. Third age group comprised of responses above 66.66 percentile value. In overall, 67.4% respondents were below or equal to 46 years of age. While, 32.6% were above 46 years. (Ref. chart 3.2 and table 3.2)

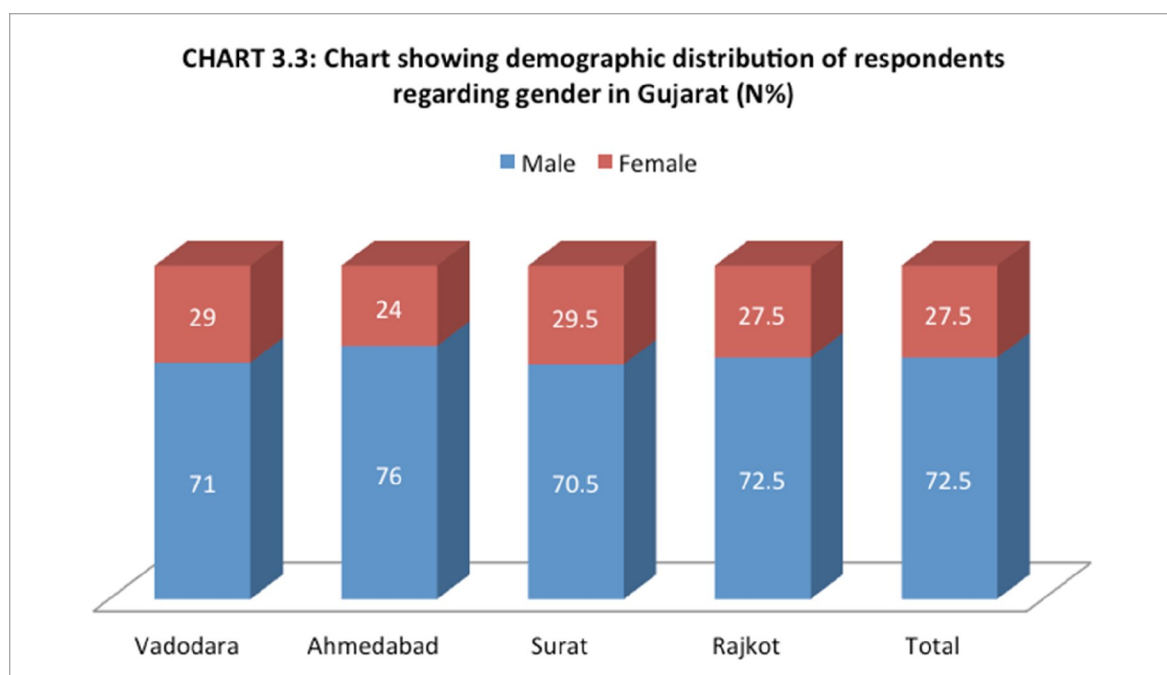
- In Vadodara, majority, i.e., 37% respondents were of age no more than 37 years while 36.5% respondents were of age 38 year to 46 years. Only 26.5% respondents from Vadodara were of age above 46 years.
- In Ahmedabad, majority, i.e., 37% respondents were of age above 46 years while 29.5% respondents were of age 38 year to 46 years. Only 33.5% respondents from Vadodara were of age 38 years to 46 years.
- In Surat, only 33% respondents were of age above 46 years while 33.5% respondents were of age 38 year to 46 years. Only 33.5% respondents from Vadodara were of age 38 years to 46 years.
- In Rajkot, 34% respondents were of age above 46 years while 27% respondents were of age 38 year to 46 years. Only 39% respondents from Vadodara were of age 38 years to 46 years.
- There was almost an equal distribution of respondents from three different age groups within all four selected cities of Gujarat.

3.3: Gender

In area of purchase behaviour towards environment friendly products, the development of gender roles and attitudes has led most researchers to argue that women had different consistency with the environment movement in products than men. Mostafa (2007)²⁴² justified this theoretically in his study that women were less aware of environment issues compared to men. This was supported, by contrast, by results of Mainieri et al. (1997)²⁴³ that women are significantly higher than men on some aspects of green buying and on environmental attitude scale.

Table 3.3: Table showing demographic distribution of respondents regarding gender in Gujarat

GENDER	CITY								Total	
	Vadodara		Ahmedabad		Surat		Rajkot			
	N	%	N	%	N	%	N	%	N	%
Male	142	71.0	152	76.0	141	70.5	145	72.5	580	72.5
Female	58	29.0	48	24.0	59	29.5	55	27.5	220	27.5
Total	200	100.0	200	100.0	200	100.0	200	100.0	800	100.0



²⁴² Mostafa, M. M., 2007a, Gender differences in Egyptian consumers' green purchase behavior: The effects of environmental knowledge, concern and attitude, *International Journal of Consumer Studies*, 31: 220–229

²⁴³ Mainieri, T., Barnett, E. G., Valdero, T. R., Unipan, J. B. & Oskamp, S., 1997, Green buying: The influence of environmental concern on consumer behavior, *The Journal of Social Psychology*, 137: 189–204.

In Gujarat as well as in India, percentage of education and working women is immensely growing which directly helping growth of their purchasing power. Hence, in this study, to check male and female consumers' green buying differences, gender profile of respondents is explained below -

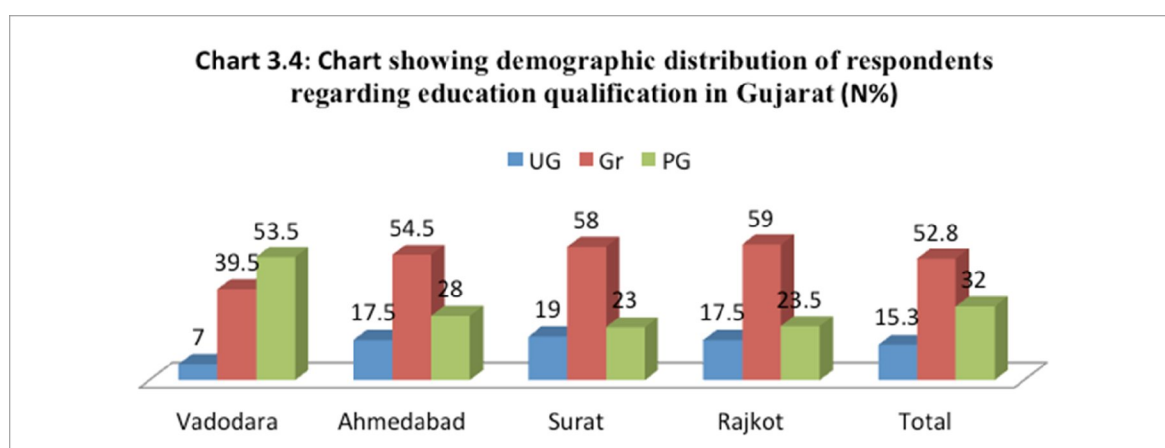
- In overall, participants in this study were comprised of 72.5% males and 27.5% females.
- Resemblance in city wise distribution of gender can be seen in chart 3.3. Male participants in Vadodara were 71%, similarly in Ahmedabad, Surat and Rajkot male participants were 76%, 70.5 % and 72.5% respectively. (Ref. chart 3.3 and table 3.3)

3.4: Educational Qualification

As per census data of 2011, in Gujarat overall, male literacy is improved by almost 7% and female literacy is improved by almost 4% in ten years. While, in urban area of Gujarat, male literacy is improved by 9% while female literacy is improved by almost 14%. Surat and Ahmedabad are two top literate cities of Gujarat. These results encourage researchers from Gujarat to study literacy level and effect of it on consumers' buying behavior. Knowledge of environmental issues and due to those issues upcoming changes in relevant products could be enhanced only through education. Hence, it could be predicted that increasing educational level of consumers would give them boost to purchase ecofriendly products. With this prediction and support of study by Robinson and Smith (2002), demographic profile of respondents is shown in table 3.4 and briefly discussed below -

Table 3.4: Table showing demographic distribution of respondents regarding education qualification in Gujarat

EDUCATIONAL QUALIFICATION	CITY								Total	
	Vadodara		Ahmedabad		Surat		Rajkot			
	N	%	N	%	N	%	N	%	N	%
Undergraduate	14	7.0	35	17.5	38	19.0	35	17.5	122	15.3
Graduate	79	39.5	109	54.5	116	58.0	118	59.0	422	52.8
Postgraduate	107	53.5	56	28.0	46	23.0	47	23.5	256	32.0
Total	200	100.0	200	100.0	200	100.0	200	100.0	800	100.0



- In Vadodara city, 53.5% of respondents were postgraduates, while 39.5% respondents were graduates. All cities other than Vadodara have nearly similar outlook with regards to educational qualification of respondents.

- Graduate respondents in Ahmedabad, Surat and Rajkot were 54.5%, 58% and 59% respectively, which looks almost similar. Likewise, undergraduates were 17.5%, 19% and 17.5% in Ahmedabad, Surat and Rajkot respectively. While in Vadodara city undergrads were just 7% which gave reduced share in overall for undergraduates with 15.3%. In overall, graduate respondents were 52.8% but due to effect of post graduate respondents in Vadodara city overall postgraduate respondents were 32%.
- From above chart, it could be observed that education of respondents from Vadodara was different from other three cities (i.e., Ahmedabad, Surat and Rajkot). Respondents from Vadodara were found to be more educated than respondents from other three cities. Numbers of postgraduate respondents from Vadodara were almost twice than respondents from other three cities individually. While under graduate respondents from Vadodara were less than half from other three cities independently. (Ref. chart 3.4 and table 3.4)

3.5: Income

Income level of consumers give them preferences to buy different products with different price tags. Consumers can buy a product which he or she can afford according to their income level. By studying consumer behavior with respect to their income level, today we have a Tata Nano of Rs.1.5 lakh and Rolce Royce of Rs.5 crore in Gujarat. Hence, purchasing power of consumers gives them wings to select an affordable product. As environment friendly products are costlier than the traditional products, it becomes important to check demographic profile of respondents from four cities of Gujarat with respect to their income level. Moreover, consumers' monthly income is necessary to know but accordingly their per capita income level also becomes an important factor. Here, consumers' income level are depicted in two categories 1) Monthly Income and 2) Per Capita Income.

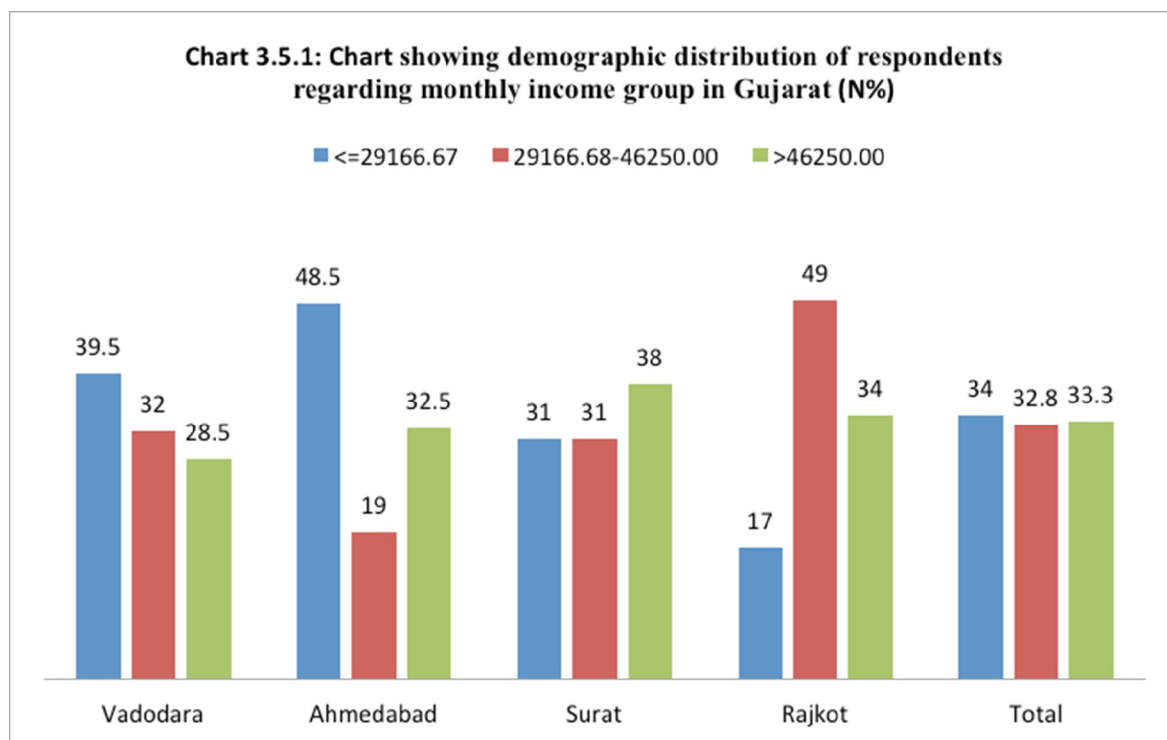
Monthly income of consumers were asked in figures and then those figures were divided into 3 different monthly income groups i.e., monthly income no more than Rs.29166.67, Rs.29166.68 to Rs.46250.00 and above Rs.46250, by percentile method.

While, Per Capita Income was divided in three groups i.e., low, moderate and high, calculated by dividing total income of the family by total number of family members.

3.5.1. Monthly Income

Table 3.5.1: Table showing demographic distribution of respondents regarding monthly income group in Gujarat

MONTHLY INCOME (Indian Rupee)	CITY								Total	
	Vadodara		Ahmedabad		Surat		Rajkot			
	N	%	N	%	N	%	N	%	N	%
Less or Equal to Rs.29166.67	79	39.5	97	48.5	62	31.0	34	17.0	272	34.0
Rs.29166.68 to Rs.46250.00	64	32.0	38	19.0	62	31.0	98	49.0	262	32.8
More than Rs.46250.00	57	28.5	65	32.5	76	38.0	68	34.0	266	33.3
Total	200	100.0	200	100.0	200	100.0	200	100.0	800	100.0



- In this study, in order to find three income groups of respondents, percentile method was used. First group comprised of responses up to 33.33 (i.e., below Rs.29166.67) percentile value while second group comprised of responses from 33.33 percentile value to 66.66 (i.e., from Rs.29166.67 to Rs.46250.00) percentile value. Third income group comprised of responses above 66.66 (i.e., above Rs.46250.00) percentile value.
- In overall, 34% respondents were having monthly income below or equal to Rs.29166.67. For the same group, percentage distribution from Vadodara, Ahmedabad, Surat and Rajkot was 39.5%, 48.5%, 31%, and 17% respectively.
- In an overall, respondents with monthly income from Rs.29166.68 to Rs.46250.00 were 32.8%. Within this group, an individual percentage distribution for Vadodara, Ahmedabad, Surat and Rajkot was 32%, 19%, 31% and 49% respectively.
- Moreover, in overall 33.3% respondents were from above Rs.46250.00 monthly income group. In this group, for individual cities, Vadodara, Ahmedabad, Surat and Rajkot was 28.5%, 32.5%, 38% and 34% respectively.
- From the above analysis it could be observed that least respondents from Rajkot were from below Rs.29166.67 monthly income group while from the same income group maximum respondents were from Ahmedabad. While, from monthly income between Rs.29166.67 and

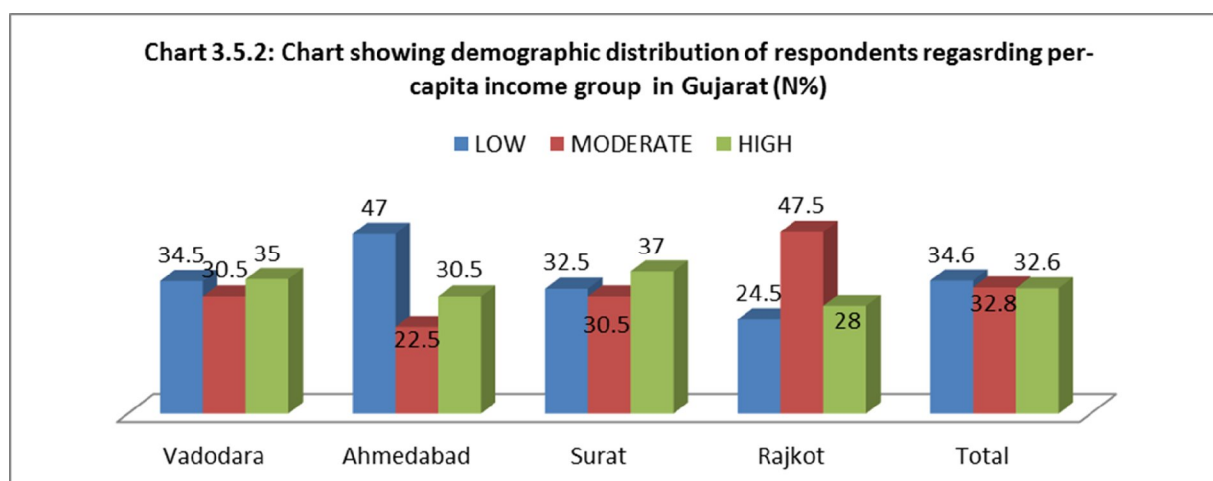
Rs.46250.00, maximum respondents were from Rajkot and least were from Ahmedabad. Respondents whose monthly income is higher than Rs.46250, maximum respondents were from Surat and minimum respondents were from Vadodara. In Surat city respondents were comparatively richer than respondents from other cities while respondents from Ahmedabad were less wealthy compare to respondents from other three cities. (Ref. chart 3.5.1 and table 3.5.1)

3.5.2. Per Capita Income

- Further, per capita income was found to test parameters taking per capita income into consideration instead of monthly income. Following table shows percentage frequency distribution within low, moderate and high level of per capita income.

Table 3.5.2: Table showing demographic distribution of respondents regarding per capita income group in Gujarat

Per Capita Income	CITY								Total	
	Vadodara		Ahmedabad		Surat		Rajkot			
	N	%	N	%	N	%	N	%	N	%
LOW	69	34.5	94	47.0	65	32.5	49	24.5	277	34.6
MODERATE	61	30.5	45	22.5	61	30.5	95	47.5	262	32.8
HIGH	70	35.0	61	30.5	74	37.0	56	28.0	261	32.6
Total	200	100.0	200	100.0	200	100.0	200	100.0	800	100.0



- Here, according to the sample from all selected cities of Gujarat, percentile method was used to create three different per capita income groups in which first group (Low per capita income)

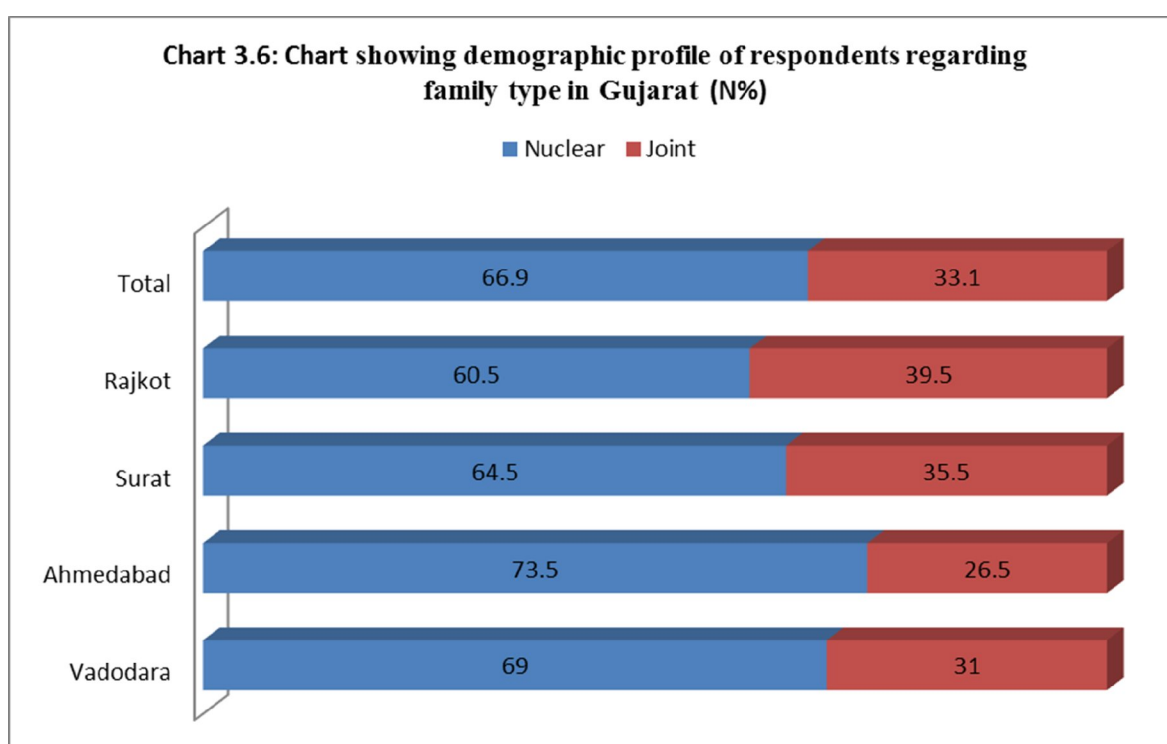
comprised of responses up to 33.33 percentile value while second group (moderate per capita income) comprised of responses from 33.33 percentile value to 66.66 percentile value. Third income group (high per capita income) comprised of responses above 66.66 percentile value.

- In an overall, 34.6% respondents were with low per capita income which in Vadodara, Ahmedabad, Surat and Rajkot was 34.5%, 47%, 32.5% and 24.5% respectively.
- Overall, moderate per capita income group consist of 32.8% respondents which as individual cities in Vadodara, Ahmedabad, Surat and Rajkot was 30.5%, 22.5%, 30.5% and 47.5% respectively.
- In selected cities of Gujarat, 32.6% respondents were having high per capita income. The same for Vadodara, Ahmedabad, Surat and Rajkot was 35%, 30.5%, 37% and 28% respectively.
- Resemblance was found in outcome of monthly income statistics and per capita statistics. Respondents from Ahmedabad were having lesser per capita income level while respondents from Rajkot were having higher income level. Compare to other cities, more respondents from Surat city were having high per capita income. (Ref. chart 3.5.2 and table 3.5.2)

3.6: Family Type

Table 3.6: Table showing demographic profile of respondents regarding family type in Gujarat

Family Type	CITY								Total	
	Vadodara		Ahmedabad		Surat		Rajkot			
	N	%	N	%	N	%	N	%	N	%
Nuclear	138	69.0	147	73.5	129	64.5	121	60.5	535	66.9
Joint	62	31.0	53	26.5	71	35.5	79	39.5	265	33.1
Total	200	100.0	200	100.0	200	100.0	200	100.0	800	100.0

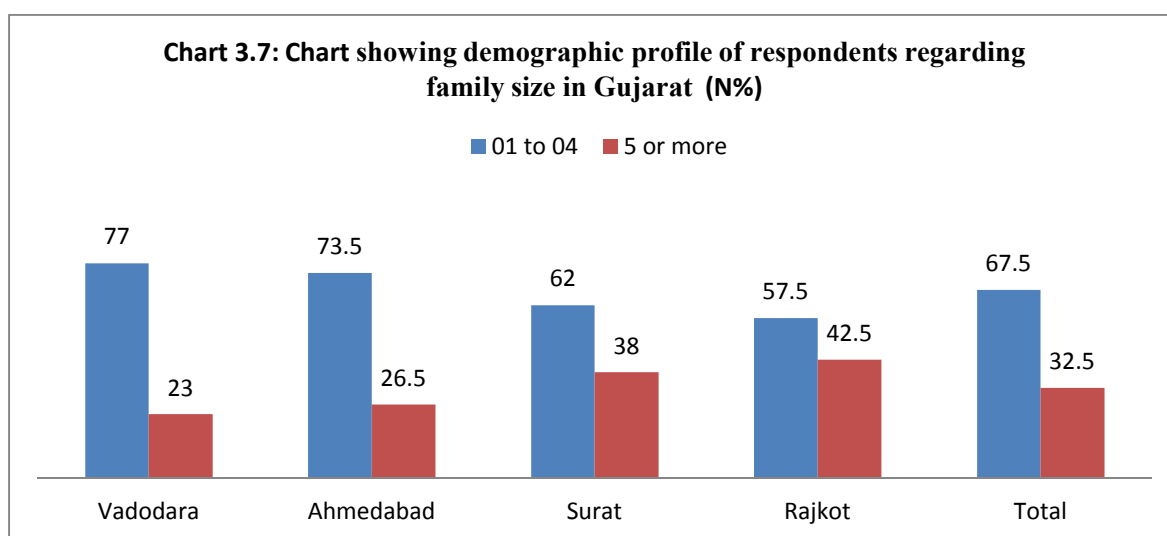


- In overall, 33.1% of respondents had a joint family structure while rest (66.9%) lived in nuclear family structure.
- In all four cities, majority of the respondent resided in nuclear family structure.
- In Ahmedabad, highest percentages (73.5 %) of respondents were inhabitant of nuclear family structure. Which followed by Vadodara (69%), Surat (64%) and Rajkot (60.5%).
- It could be seen from chart that, highest numbers of nuclear families were from Ahmedabad followed by Vadodara, Surat and Rajkot. (Ref. chart 3.6 and table 3.6)

3.7: Family Size

Table 3.7: Table showing demographic profile of respondents regarding family size in Gujarat

Family Size (Members)	CITY								Total	
	Vadodara		Ahmedabad		Surat		Rajkot			
	N	%	N	%	N	%	N	%	N	%
1-4 Members	154	77.0	147	73.5	124	62.0	115	57.5	540	67.5
Above 4 Members	46	23.0	53	26.5	76	38.0	85	42.5	260	32.5
Total	200	100.0	200	100.0	200	100.0	200	100.0	800	100.0



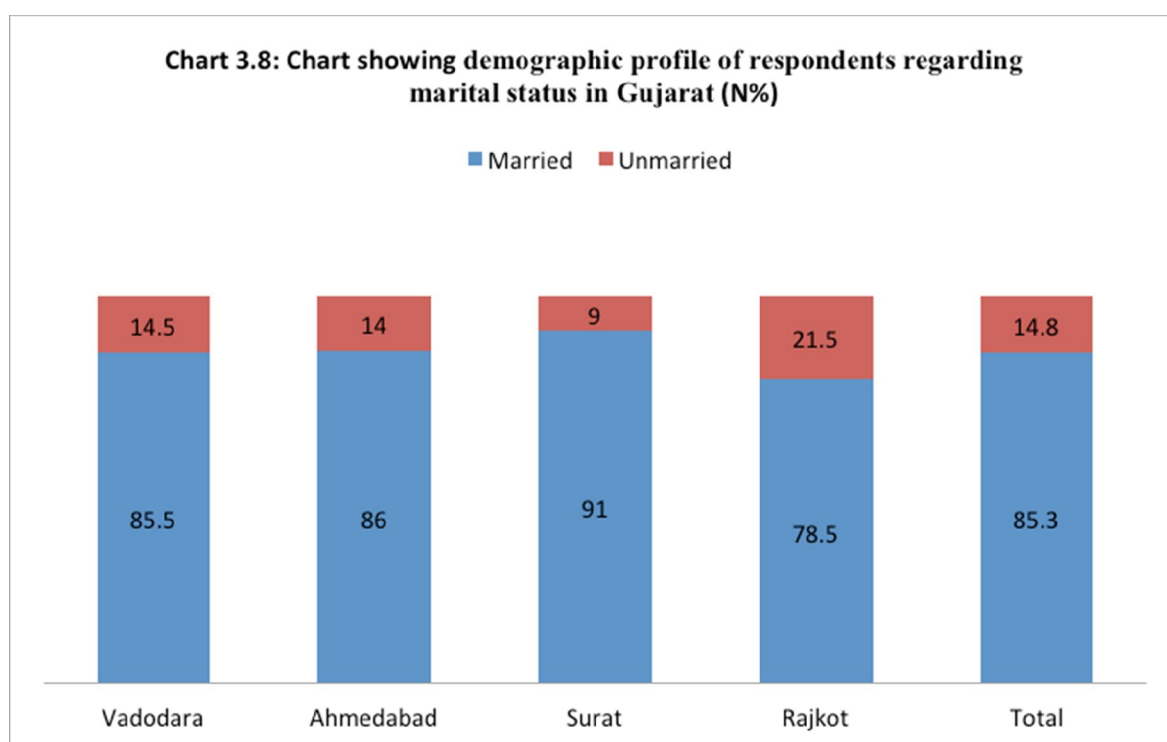
- All four cities were having maximum numbers of respondents with family members between 1 and 4.
- In Vadodara, 77% of respondents were having 1 to 4 members in their family while in Ahmedabad it was 73.5 %. (Ref. chart 3.7 and table 3.7)

3.8: Marital Status

According to Gronhoj & Olander (2007)²⁴⁴, married and unmarried respondents had difference in their consistency to buy products. This was theoretically proved in the study of Robinson and Smith (2002) that married consumers are more likely to buy environmentally and sustainably enhanced product compared to unmarried consumers. These studies have certainly made it clear that marital status of consumers from Gujarat would definitely provide very much in-depth results which might impact product marketing strategies of environment friendly products.

Table 3.8: Table showing demographic profile of respondents regarding marital status in Gujarat

Marital Status	CITY								Total	
	Vadodara		Ahmedabad		Surat		Rajkot			
	N	%	N	%	N	%	N	%	N	%
Married	171	85.5	172	86.0	182	91.0	157	78.5	682	85.3
Unmarried	29	14.5	28	14.0	18	9.0	43	21.5	118	14.8
Total	200	100.0	200	100.0	200	100.0	200	100.0	800	100.0



²⁴⁴ Gronhoj, A. & Olander, F., 2007, A Gender Perspective on Environmentally Related Family Consumption, Journal of Consumer Behavior, 6: 218–235.

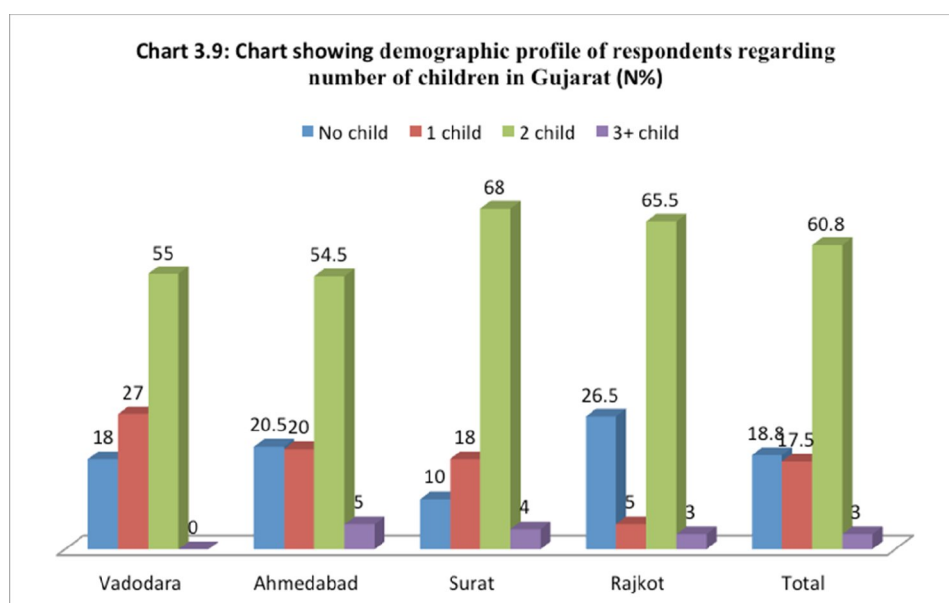
- In Surat, 91% of respondents were married while in Rajkot 78.5% of respondents were married.
- For Vadodara and Ahmedabad, figures were almost alike. 85.5% and 86% of respondents were married for respective cities.
- In overall, 14.8% respondents were unmarried while rest were married.
- Highest numbers of unmarried respondents were from Rajkot city and least numbers of unmarried respondents were from Surat city. (Ref. chart 3.8 and table 3.8)

3.9: Number of Children

Children are very important factor during purchase of any product if consumers have children in their house because product may contain toxic material, allergic content, unhealthy or physically injurious materials which should be kept away from children. Even, children in home have made researcher so think about product packing also because on majority of medicines, electronic products containing lithium have notice on it that “product should be kept out of children reach”. Child factor could be major factor to study because when children come to consumers’ mind, safety, like and dislike of children, their special rooms and toys, such types of questions come to consumes’ mind. In this study, respondents are comprised of four children groups i.e., 0 child, 1 child, 2 children and 3 or more children.

Table 3.9: Table showing demographic profile of respondents regarding number of children in Gujarat

Number of Children	CITY								Total	
	Vadodara		Ahmedabad		Surat		Rajkot			
	N	%	N	%	N	%	N	%	N	%
No child	36	18.0	41	20.5	20	10.0	53	26.5	150	18.8
1 child	54	27.0	40	20.0	36	18.0	10	5.0	140	17.5
2 child	110	55.0	109	54.5	136	68.0	131	65.5	486	60.8
3+ child	0	.0	10	5.0	8	4.0	6	3.0	24	3.0
Total	200	100.0	200	100.0	200	100.0	200	100.0	800	100.0



- In the whole only 3 % of respondents were having children 3 or more. None of the respondents from Vadodara were having children more than three. Maximum respondents with 3 or more children were from Ahmedabad (5%).
- Respondents with having two children were 55%, 54.5%, 68% and 65.5% in Vadodara, Ahmedabad, Surat and Rajkot respectively. Most of participants of this study were having 2 children. 60.8% respondents, overall, were having 2 children.
- Overall, 18.8% respondents were not having any child. Maximum respondents (26.5%) without child were from Rajkot while only 10 % respondents from Surat were not having a child. (Ref. chart 3.9 and table 3.9)