

Influence of Age on the Grocery Shopping Behavior in Selected Cities of Karnataka, India

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Abstract

The retail industry in Indian is one of the most developing industries in the country. In 2014, India was ranked at 20th position in Global Retail Development Index (GRDI) among the top 30 developing economies as per AT Kearney. India retail market is an appealing destination for reasons like the growth in the middle class, higher disposable income among the youth, growth in the economy, spending habit, the higher percentage of youth population, increasing demand for branded products. The purpose of this paper is to find out whether the "Age" of the shoppers influences the grocery purchase behaviour. The survey was done by collecting information through a developed questionnaire. Few major cities of Karnataka state were identified for the selection of respondents. The cities selected were Bangalore, Mangalore, Mysore, Chitradurga, Davangere, Puttur and Mandya. This paper examines the existence of any association between "Age" of the shoppers and grocery shopping behavior variable. The grocery shopping behavior variables included in the study are "Shopping Frequency", "Preferred Shopping Time", "Preplanning Purchase", "Preferred Shopping Companion", "Store Loyalty", "Reason for Shopping from a Specific Shop", "Store Membership", "Preferred Shopping Day", and "Preferred Payment Mode. The study proved that "Age" of shoppers does have influence on some of grocery shopping behaviour variables and some other shopping behaviour variables are not influenced by the "Age" of the shoppers.

Keywords: *shopping behavior, grocery purchase behavior, shopping variables, demographic influence*

1. Introduction

Before 1990's, it was a seller's market with a restricted number of brands and little choice offered to customers in the Indian retail industry. Need of trained manpower, unfavorable tax laws and government policies discouraged the growth of organized retailing in India during that period. Lack of consumer knowledge and limitations over entry of foreign players into the sector were hindrance to the growth of organized retailing in India (Dhivya Sathish and VenkatramaRaju, 2010). There has been tremendous growth in Indian Retail industry from the past fifteen years. The retail industry accounts for over 10 per cent of the India's GDP and around eight per cent of the employment and is one of the largest industries in India. Retail sector is one of India's fastest growing sectors with a 5 per cent compounded annual growth rate. (Dhivya Sathish and VenkatramaRaju, 2010). As per the India Retail Report, 2009, the Food and grocery is the second-largest segment of the retail trade and it comprises of 53 percent of total private spending. The Indian grocery and food retail industry is dominated by unorganized markets (Bajaj et al., 2005). Retail industry is also characterized by increasing competition from new formats like super markets, specialty stores, convenience stores, discount stores and hypermarkets (Aryasri and Jayshankarprasad, 2009). The consumers are moving from unorganized retail to organized retail due to favorable changes in demographic, economic, social and psychological factors. Retailers are in need to understand the consumer demographics and psychographics in order to sustain and develop in the competitive retail market. This study is done to prove the existence of influence of age of the shoppers, if any, on grocery shopping behaviour.

2. Literature Review

Research in the past has revealed association between demographic characteristics and choice of retail format. Crask and Reynolds (1978), compared the demographic features of frequent and infrequent customers of department stores and found that frequent customers tend to be younger, more educated, and had higher incomes. Sampson and Tigert (1992), found that warehouse club members stand for an upscale market compared to the general populace. Findings from the study highlighted that warehouse club customers were more educated and had higher incomes. Work by Arnold (1997) found important differences between the age, education, household size of large-format department store customers as compared to non-shoppers.

A few studies have examined the effect of consumer demographics on retail format choice in the grocery context. Zeithaml (1985), conducted a field study to examine the effects of five demographic variables (gender, female working status, age, income, marital status) on supermarket shopping variables (e.g. shopping time, number of supermarkets visited weekly, amount of money spent). The study detected major shifts in demographic characteristics of US grocery consumers and the author predicted that the traditional mass market for grocery products in the US would break into various market fragments as new retail formats emerged. In particular, the study emphasized that changes in the family unit (e.g. increases in the number of working females, male shoppers, and single, divorced, or widowed households) would drive changes in grocery patronage in the USA. Stone (1995), compared the demographic profiles of supermarket shoppers and warehouse club shoppers, finding that warehouse club members were younger, more educated, and had higher incomes. Fox *et al.* (2004), examined the effect of demographics on format choice across three formats: grocery stores, mass merchandisers, and drug stores. Findings from the study indicated that household size, income, and level of education influence consumers' format choices.

3. Methodology

The primary data was collected by distributing the structured questionnaire to the respondents. The respondents were the grocery store shoppers. Stratified sampling technique was used to select

the sample respondents. Some major cities in the state of Karnataka were identified and within those cities, few respondents were selected. Totally 246 questionnaires were distributed among the grocery shoppers in the selected cities. The cities selected were Bangalore, Mangalore, Mysore, Chitradurga, Davangere, Puttur, Mandya. Demographic variable details and shopping variable details were collected from the respondents through the questionnaire. Demographic variables like Age, Gender, Income, Profession and shopping variables like shopping frequency, reason for shopping, referred by, membership details, time of shopping, day of shopping, shopping companion, pre planning purchase, payment mode, and loyalty towards a store were collected. The collected data were tabulated and analysed using SPSS software. Chi Square analysis was used to analyze the dependency between the independent demographic variables and dependent shopping variables. Inferences were drawn based on the statistical analysis.

4. Results and Discussion

The age of the respondents were categorized into three categories i.e. 20 to 29 years, 30 to 49 years and 50 years and above. The first category represents the "Youngsters", the second age segment refers to the "Middle Age" and the third age category represents the "Older Age" segment. Shopping variables that was examined were, "Shopping Frequency", "Preferred Shopping Time", "Preplanning Purchase", "Preferred Shopping Companion", "Store Loyalty", "Reason for Shopping from a Specific Shop", "Store Membership", "Preferred Shopping Day", and "Preferred Payment Mode. The age of the respondents and the individual shopping behavior variables was cross tabulated and the existence of association between the two variables were examined by conducting Chi-Square tests using SPSS software package.

4.1 Age and Shopping Frequency

Respondent's "Age" was analyzed against "Shopping Frequency". Shopping frequency options were "Daily", "Weekly" and "Monthly". The respondents were asked to opt for the frequency that best matched their shopping frequency. Applying Chi-square test following results was generated.

Table No: 4.1 a: Cross Tabulation of Age and Shopping Frequency

		Shopping Frequency			Total
		Daily	Weekly	Monthly	
Age	20 - 29 Years	10	21	79	110
	30-49 Years	9	22	72	103
	50 Years and Above	7	16	10	33
Total		26	59	161	246

Table No: 4.1 b: Chi-Square Test Results: Age and Shopping Frequency

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.967 ^a	4	.000
Likelihood Ratio	19.919	4	.001
Linear-by-Linear Association	10.288	1	.001
N of Valid Cases	246		

a. 1 cells (11.1%) have expected count less than 5. The minimum expected count is 3.49.

As seen in the table above, Pearson Chi-Square value is .000 which is less than value of 0.05, indicating that there is significant association between the “Age” of the shoppers and “Frequency of Grocery Shopping”. It can be observed from the frequency table that more number of younger generations prefer shopping on monthly basis as compared to the older generation. Middle and Older generation shoppers prefer shopping more frequently than the younger generation. This behavior may be due to the time availability to the different aged group. As the younger generation may have less time for shopping they may prefer to shop once in month and vice a versa. Hence it can be concluded that age of the shoppers influence shopping frequency.

4.2 Age and Reason for Shopping from a Specific Shop

Preference for a specific grocery shop is influenced by one or more specific reason. Through exploratory research some of the reasons for shopping which were identified were “Convenience”, “Promotional Offers”, “Quality Products”, “Parking Facility”, “Variety of Products”, “Product Display” and “Fresh Goods”. The respondents were asked why do they prefer a specific shop for shopping their groceries?. Reasons like “Parking Facility”, “Variety of Products”, “Display” and “Fresh Goods” had to be clubbed as the frequency were less for these variables.

As the Pearson Chi-Square value is 0.147, it is interpreted that there is no significant association between “Age” of the shoppers and “Reason for Shopping”. Hence it is concluded that irrespective of the age of the shoppers the shoppers have different reasons for choosing a particular store for shopping for groceries. Age of shoppers does not influence the reasons for which they are choosing a particular store.

Table No: 4.2 a: Cross Tabulation of Age and Reason for Shopping

		Reason for Shopping				Total
		Convenience	Promotional Offers	Quality Products	Parking Facility, Variety of Products, Display, Fresh Goods	
Age	20 - 29 Years	59	16	24	11	110
	30-49 Years	50	15	30	8	103
	50 Years and Above	19	1	6	7	33
Total		128	32	60	26	246

Table No: 4.2 b: Chi-Square Test Results: Age and Reason for Shopping

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.510 ^a	6	.147
Likelihood Ratio	9.916	6	.128
Linear-by-Linear Association	.573	1	.449
N of Valid Cases	246		

a. 2 cells (16.7%) have expected count less than 5. The minimum expected count is 3.49.

4.3 Age and Membership

In order to know the influence of “Age” of the shoppers on having shopping “Membership” the grocery shoppers were asked as whether they have membership in the shop where they do grocery shopping or not. The data related to the two variables were cross tabulated. The results are as below.

Table No: 4.3 a: Cross Tabulation of Age and Membership

		Membership		Total
		Yes	No	
Age	20 - 29 Years	17	93	110
	30-49 Years	17	86	103
	50 Years and Above	3	30	33
Total		37	209	246

Table No: 4.3 b: Chi-Square Test Results: Age and Membership

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.102 ^a	2	.576
Likelihood Ratio	1.223	2	.542
Linear-by-Linear Association	.383	1	.536
N of Valid Cases	246		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 4.96.

The Pearson Chi-Square value is 0.576. The chi square test reveals that there is no significant association between grocery shoppers "Age" and shopping "Membership". It is concluded that the age of the shopper does not influence any shoppers to have or not have membership with any grocery store.

4.4. Age and Preferred Shopping Time:

Different grocery shoppers prefer different shopping time. Generally preferred shopping time was identified as "Morning", "Afternoon" and "Evening". The respondents were asked their preferred time for shopping groceries from the shop.

Table No: 4.4 a: Cross Tabulation of Age and Preferred Shopping Time

		Preferred Shopping Time			Total
		Morning	Afternoon	Evening	
Age	20 - 29 Years	4	6	100	110
	30-49 Years	8	8	87	103
	50 Years and Above	7	0	26	33
Total		19	14	213	246

Table No: 4.4 b: Chi-Square Test Results: Age and Preferred Shopping Time

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.345 ^a	4	.010
Likelihood Ratio	13.200	4	.010
Linear-by-Linear Association	6.909	1	.009
N of Valid Cases	246		

a. 2 cells (22.2%) have expected count less than 5. The minimum expected count is 1.88.

The Pearson Chi-Square value is 0.010. The Chi-Square test indicates that there is significant association between the grocery shoppers "Age" and "Preferred Shopping Time". It can be interpreted that more number of shoppers coming under the age group of 20-29 years, 30-49 years, i.e the "Young" and "Middle" age segment prefer shopping in the evening compared to "Morning" and "Afternoon". Hence it is assumed that majority of the shoppers coming under this age group would be the working, hence they prefer "Evening" time to shop groceries. Whereas the shoppers falling under the older age segment are normally retired or have more free time for shopping prefer "Morning" and "Afternoon". This test reveals that, the age of the shoppers influence the shopping time preference.

4.5. Age and Preferred Shopping Day:

Grocery shoppers prefer different day for grocery shopping. The respondents were asked the preferred day for grocery shopping. The options given were "Sunday/ Other Holidays", "Special Offers Day" and "No Specific Days". The Respondents "Age" data was tested with preferred shopping day.

Table No: 4.5 a: Cross Tabulation of Age and Preferred Shopping Day

		Preferred Shopping Day			Total
		Sunday/ Other Holidays	No Specific Days	Special Offers Day	
Age	20 - 29 Years	77	8	25	110
	30-49 Years	69	9	25	103
	50 Years and Above	29	2	2	33
Total		175	19	52	246

Table No: 4.5 b: Chi-Square Test Results: Age and Preferred Shopping Time

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.012 ^a	4	.198
Likelihood Ratio	7.310	4	.120
Linear-by-Linear Association	2.269	1	.132
N of Valid Cases	246		

a. 1 cells (11.1%) have expected count less than 5. The minimum expected count is 2.55.

Pearson Chi-Square value is 0.198. Hence it is proved that there is no significant association between the shoppers "Age" and "Preferred Shopping Day". From this we can conclude that shoppers age does not influence the shopping day preference.

4.6. Age and Preferred Shopping Companion:

Some grocery shoppers tend to go shopping with a companion. The companion may be their friend/relatives, parents or any other family members. The options given to the respondents were "Alone/None", "Friends/ Neighbours" and "Parents/ Family Members".

Table No: 4.6 a: Cross Tabulation of Age and Preferred Shopping Companion

		Shopping Companion			Total
		Alone/None	Friends/Neighbours	Parents/Family Members	
Age	20 - 29 Years	25	29	56	110
	30-49 Years	33	4	66	103
	50 Years and Above	6	5	22	33
Total		64	38	144	246

Table No: 4.6 b: Chi-Square Test Results: Age and Preferred Shopping Companion

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22.082 ^a	4	.000
Likelihood Ratio	24.476	4	.000
Linear-by-Linear Association	1.142	1	.285
N of Valid Cases	246		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.10.

Pearson Chi-Square value is 0.000. This test reveals that there is significant association between the shoppers "Age" and "Preference for Shopping Companion". The analysis shows that compared to

middle and older aged respondents, younger aged respondents prefer to shop more with "Friend/Relatives". Middle aged respondents preferred to less of "Friend/ Relatives" and more number of respondents in this segment preferred shopping companion as "Parents/ Family Members". Almost 50% of respondents from both younger aged and middle aged segments preferred going shopping alone. 67% of the older aged respondents preferred to go shopping with "Family Members". Hence it can be said that the younger aged grocery shoppers prefer "Friend/ Relatives" as their shopping companion and older aged and middle aged grocery shoppers preferred to go shopping with "Family Members". It can also be concluded that younger and middle aged grocery shoppers prefer to go shopping alone compared to the older aged grocery shoppers. So age of the shoppers influence the shopping companion preference.

4.7. Age and Preplanning Purchase:

Grocery purchases are done with or without preplanning. The options given to the respondents for preplanning the grocery purchases are "Always", "Sometimes" and "Never".

Table No: 4.7 a: Cross Tabulation of Age and Preplanning Purchase

		Preplanning Purchase			Total
		Always	Sometimes	Never	
Age	20 - 29 Years	8	86	16	110
	30-49 Years	25	63	15	103
	50 Years and Above	3	20	10	33
Total		36	169	41	246

Table No: 4.7 b: Chi-Square Test Results: Age and Preplanning Purchase

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.162 ^a	4	.001
Likelihood Ratio	17.396	4	.002
Linear-by-Linear Association	.009	1	.926
N of Valid Cases	246		

a. 1 cells (11.1%) have expected count less than 5. The minimum expected count is 4.83.

Pearson Chi-Square value is 0.001. The chi-square test proves that there is significant association between "Age" and "Preplanning" the grocery purchases. 24% of middle aged respondents "Always" pre planned grocery purchases where as 61% of the same segment "Sometimes" did

preplanning of their grocery purchases and only 14.5% of this segment “Never” pre planned their grocery purchases. Only 7% of younger aged respondents “Always” pre planned their grocery purchases, 78% of them “Sometimes” pre planned their grocery purchases and only 14.5% of this segment “Never” pre planned their grocery purchases. Only 3% of the older aged respondents “Always” pre planned grocery purchases and 60% of the same segment “Sometimes” did pre planning of their grocery purchases and only 30 % of this segment “Never” pre planned their grocery purchases. It is evident that the younger and middle aged grocery shoppers pre plan their grocery purchases compared to older aged segment. With this it can be concluded that the age of the shoppers influence the pre planning the purchase.

4.8. Age and Preferred Payment Mode

Normal mode of payments available for grocery shoppers are cash or debit card/ credit card. The respondents were asked to choose mode of payment that they opt for paying for grocery purchases.

Table No: 4.8 a: Cross Tabulation of Age and Preferred Payment Mode

		Payment Mode		Total
		Cash	Debit Card, Credit Card	
Age	20 - 29 Years	86	24	110
	30-49 Years	85	18	103
	50 Years and Above	30	3	33
Total		201	45	246

Table No: 4.8 b: Chi-Square Test Results: Age and Preferred Payment Mode

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.830 ^a	2	.243
Likelihood Ratio	3.127	2	.209
Linear-by-Linear Association	2.680	1	.102
N of Valid Cases	246		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.04.

As the Pearson Chi-Square value is 0.243, it indicates that there is no significant association between the age of the respondents and payment mode the respondents opt for while doing their grocery purchases. So age of the shoppers does not influence the payment mode preference.

4.9. Age and Store Loyalty

Dick & Basu (1994) describe loyalty as a combination of strong relative attitude and high repeat patronage. Oliver (1999) states that loyalty is a intensely held commitment to re buy or re-patronizes a preferred product or a service consistently in future, thus cause recurring same-brand or same brand-set purchase, in spite of situational influence and marketing hard work having likely switching behaviour.

Table No: 4.9 a: Cross Tabulation of Age and Loyalty

		Changing Shops		Total
		Yes	No	
Age	20 - 29 Years	64	46	110
	30-49 Years	38	65	103
	50 Years and Above	16	17	33
Total		118	128	246

Table No: 4.9 b: Chi-Square Test Results: Age and Loyalty

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.663 ^a	2	.008
Likelihood Ratio	9.743	2	.008
Linear-by-Linear Association	4.109	1	.043
N of Valid Cases	246		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 15.83.

As the Pearson Chi-Square value is 0.008, it indicates that there is significant association between the age of the respondents and store loyalty. Based on the statistics in the cross tabulation it can be interpreted that, majority i.e. 58% of the shoppers under the younger age segment, keep changing shops for their grocery purchases. Middle and older age segments are more loyal as compared to the younger age shoppers. Hence it is interpreted that the age of the shoppers influence store loyalty.

5. Conclusions

From this study it is evident that “Age” of shoppers influences “Shopping Frequency”, “Preferred Shopping Time”, “Preplanning of Purchase”, “Preferred Shopping Companion” and “Store Loyalty”. This study also proves that “Age” of the shoppers does not influence “Reason for Shopping from a Specific Shop”, “Store

Membership”, “Preferred Shopping Day”, and “Preferred Payment Mode”. From this study, it is evident that demographic factors like age have influence on the shopping behaviour of the customer. Hence it is important on the part of the grocery retailers to consider the demographic factors of the shoppers while developing the marketing strategies for the grocery retail stores. In spite of considerable studies on the influence of demographic factors on the shopping behaviour, there is ample opportunities for researchers to conduct studies to know the influence of demographic variables on various grocery shopping behavior variables.

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