6.1 DISCUSSION

Hypothesis 1: Age

The national sample for the first study confirms the hypothesis that age of an individual significantly impacts the choice of public healthcare service provider over private healthcare service providers. It was found that with an increasing age the likelihood of utilization of public healthcare services increases. Similar results were obtained for the rural as well as the urban samples thereby confirming the hypothesis related to the significance of age in affecting choice of healthcare services provider.

For the second study, irrespective of urban or rural area of residence, age was found to be insignificant in determining the choice of public healthcare service provider as compared to private healthcare service provider or Indian medicine providers. The reason for this outcome could be attributed to the similar distribution of age of the sample respondents for all the service providers. Descriptive statistics for the second study show that the average age among the respondents varied between 40 to 45 years for all the three service providers i.e. public, private and Indian medicine providers in both rural and urban areas. Further, the standard deviation of age in urban area for public, private and Indian medicine providers was 14.7, 15.8 and 14.2 years respectively. Corresponding figures for rural area were 12.4, 11.9 and 12.6 years respectively.

Hypothesis 2: Gender

The national sample for the first study confirms the hypothesis that females are more likely to utilize public healthcare service provider over non public healthcare service providers. Further,
the study results show that for the urban as well as rural sample, females are more likely to utilize public healthcare services thus supporting the hypothesis for both the samples.

For the second study in the urban sample females were found to be more likely to utilize public healthcare services as compared to private healthcare services. Thus, the findings support the hypothesis on females’ preference for public healthcare services in urban area. Gender was found to be insignificant when it comes to making the choice between public and Indian medicine providers in urban area.

When we look into the results for the rural area we find that the likelihood of females utilizing public healthcare services is very high when compared to Indian medicine providers, thereby confirming our hypotheses related to higher utilization of public providers by females. For the choice between public and private service providers, we find that the gender doesn’t play a significant role. This may be due to the low levels of awareness in rural females (Ghosh, 2006; Vissandjee, Barlow & Fraser, 1997) regarding the difference between public and private service providers (since both are allopath based) and various health benefits associated with getting treated at the public healthcare services (for example subsidized treatment for females). This would be particularly true for basic (non-critical) illnesses where cost of treatment does not vary much between the two service providers in this area.

**Hypothesis 3: Education**

The national sample of the first study results confirms the hypothesis that education is a significant determinant in choosing public healthcare services when compared to private healthcare services. Results have revealed that individuals, who had attained higher education, were more likely to utilize private healthcare services. Similar results have been obtained for the
urban and rural samples in the first study thereby confirming the hypothesis with respect to education in rural and urban areas of India.

For the urban sample of the second study, results indicate that with higher education individuals are more likely to utilize public healthcare services as compared to private healthcare services. This finding is in contrast to the findings of the first study. This result could be ascribed to the nature of illness (routine, non-critical) of the sampled individuals in the urban area as revealed by descriptive statistics. In case of non-critical nature of illness, it is very likely that the importance of features like range of services offered or expertise required for a particular treatment is reduced. As a result individuals with higher education are likely to evaluate the choice of provider based on the perceived cost of treatment associated with a particular service provider. Given the fact that in urban areas private healthcare services are perceived to be costly as compared to their public counterparts, individuals with higher education may opt for public healthcare services as compared to private healthcare services for ailments which require very basic/routine treatment.

When it comes to the choice between Indian medicine providers and public healthcare providers, the results confirm the hypothesis that higher educated individuals prefer to use public healthcare service providers.

The rural sample of the second study reveals that education is not having any significant impact on the choice of healthcare services provider by an individual (both for the choice between public and private and between public and Indian medicine provider). Descriptive statistics show that the education levels of the rural sample are mainly primary or secondary. It is possible that
because of this skewness in the sample with respect to the education levels, the ability to choose healthcare services based on education is not demonstrated in the rural sample.

**Hypothesis 4: Income**

In the first study, the economic status of an individual is represented with the help of standard of living index (calculated with the help of assets possessed by the household the individual belongs to) whereas in the second study, the information on average monthly income was collected directly from the respondents. The findings of the first study (national sample and also the rural and urban sample separately) show that income of an individual has a significant impact on the choice of healthcare services provider. As hypothesized, individuals belonging to the lower income group are more likely to utilize public healthcare services as compared to non public healthcare services.

Similar findings were observed in the second study for the urban sample, wherein with a rise in income the likelihood of an individual to gravitate towards private healthcare services increased thereby supporting the hypothesis relating to income. When we compare Indian medicine providers with public healthcare service providers, we observe a greater likelihood of choosing Indian medicine providers with a rise in income of the individuals. This result is counter intuitive as Indian medicine providers are perceived to provide treatment for non-critical ailments using traditional medicinal methods. A follow up conversation with some of the users of Indian medicine providers revealed that Indian medicine providers’ are frequently utilized for life style related illnesses and they offer highly personalized services. This could be one of the probable reasons for the results so obtained.
The rural sample of the second study reveals that income was not a significant factor in choosing the healthcare services provider. This result was irrespective of the choice between public and private or public and Indian medicine providers. This outcome could be understood when we take into consideration the distribution of income in the sample. It is observed that in the sample the income levels of individuals are almost similar (irrespective of the provider chosen for treatment). The descriptive statistics reveal that the mean income of rural individuals opting for public, private and Indian medicine providers are Rs. 8523, 8542 and 9068 respectively (Standard deviations are Rs.3794, 3873 and 3725 respectively).

**Hypothesis 5: Caste**

The results for the national sample support the hypothesis that individuals belonging to the scheduled caste or tribe communities are more likely to utilize public healthcare services as compared to private healthcare services. Caste plays an important role in the rural society of India in making the choice for a healthcare services provider. This claim is substantiated when we look into the results for the rural sample of the first or the second study. Findings show that even after improvement in literacy levels of the rural population of India, caste is still a key factor influencing the choice and utilization of healthcare services. The hypothesis related to higher likelihood of utilization of public healthcare services by people belonging to the scheduled caste/tribe communities is supported by the findings of the rural sample of both the studies.

The urban sample of the first study shows a similar trend whereas the urban respondents of second study provide us with the findings that caste does not play a role in making a healthcare choice decision. This contradictory finding of the urban samples of the first and second study
could be explained by two reasons. One is that since 2005-06 when NFHS data was collected, the social awareness about human equality has grown among the urbane population, thus decreasing the sensitivity towards caste of an individual among the society. The second (more plausible) reason is that the data for second study has been collected from a city that has been known to be having citizens bearing a more progressive mindsets as compared to some of the other societies in India, thereby making the caste based distinction redundant.

**Hypothesis 6: Marital Status**

Marital status was not found to be of significance for the national sample of the first study as well as for the urban and rural sample of both the studies. Though we had hypothesized that it may play an important part but results prove that marital status of an individual is not making any impact on his/her choice of health care service provider. This is probably due to the reason that majority of the respondents, from urban as well as rural areas in both the studies, had utilized healthcare services for general ailments and not particularly for family planning and maternal healthcare related reasons.

**Hypothesis 7: Accessibility**

Accessibility was represented by two different ways in the studies conducted as has been previously mentioned. Results obtained from the national sample confirm the hypothesis that accessibility is a significant determinant in utilization of public healthcare services over non public healthcare services. The findings of the rural sample from the first study implied that Anganwadi coverage (measure of accessibility) plays a significant role in making the choice for public healthcare services provider vis – a – vis private healthcare services provider. These findings reinforce the importance of basic Anganwadi services in rural healthcare system. For the
urban areas accessibility was not found to be a significant determinant. The reason for this result could be identified as an easy availability of different types of service providers in urban areas which effectively reduces the contribution of Anganwadi services in influencing the choice of healthcare service provider.

For the urban sample, the second study proves the hypothesis related to significance of accessibility as a determinant in making the choice for healthcare services provider. For this sample individuals are more likely to opt for private healthcare provider or Indian medicine provider when the distance from their residence to the nearest public healthcare establishment (government hospital) increases. These findings highlight the importance of distance as an accessibility measure in choice of healthcare services made by an individual.

The results of the second study’s rural sample revealed that distance did not have a significant impact on the choice of healthcare services. This finding defies the generally accepted importance of distance especially in the rural context. This atypical result may be due to the presence of a rural hospital in the sampled area. A hospital has a bigger set-up and greater scope as compared to smaller health care centers. By virtue of being in the rural area, minor difference in distances would not deter people from using services of this hospital. Therefore, although the rural area identified for the study was in the interior parts of the country, because of the presence of a hospital, the sensitivity of the residents towards distance may not turn out to be significant (as compared to other interior parts of the country).

**Hypothesis 8: Exposure to mass media**

The results of first study did not find any significant impact of exposure to mass media on the choice of healthcare services for the national, urban as well as the rural sample. This indicates
that the messages related to the healthcare services broadcasted by the health agencies were either not reaching the intended audience or were not having the desired effect in terms of choice of healthcare services providers.

On the contrary, the rural as well as the urban sample of the second study confirms the hypothesis that an individual getting exposed to mass media is more likely to opt for public healthcare services provider over non public (both private and Indian medicine) healthcare services provider.

These different findings of both the studies confirms the increasingly active role played in recent years by both the print as well as the digital media in spreading communication messages related to health in India. There has also been an increased penetration of devices (e.g. televisions, mobile phones) capable of carrying public messages to the urban as well as rural parts of India. This has made it possible for the concerned agencies (predominantly state driven public healthcare agencies) to communicate the desired messages related to healthcare services to a larger audience.

**Hypothesis 9: Religion**

The analysis of the data from urban sample shows that religion does not play a role in affecting the choice related to a healthcare services provider. In the modern societal context the findings are relevant as with the passage of time individuals and societies have become more and more progressive and forward looking. As a result cultural and religious boundaries are dissolving. This progressive cultural phenomenon is similar to the one that plays a role in the influence of caste and is rooted in the character of the city from which the data for second study has been
collected. This city is known to be having citizens with modern and progressive mindsets and therefore religious influences cease to play a critical role.

When we compare the preference for public healthcare service providers with private healthcare service providers in the rural area, we find that Muslims are more likely to utilize public healthcare services in rural as well as urban areas, thus confirming our proposed hypothesis on importance of religion in choosing a provider. For the choice between public healthcare service providers and Indian medicine providers the data from the rural sample indicates that rural people are indifferent to this choice and they perceive both healthcare providers as similar. While, the reason for indifference in urban region is attributed to the progressive mindset, it could be similarity in service elements that contributes to the indifference in rural area.

**Hypothesis 10: Cost of treatment**

For urban areas, when we compare public and private healthcare service providers, we find that cost of treatment does not have a significant impact on choice of provider. When we compare public vs. Indian medicine providers, the likelihood of utilization of Indian medicine providers rises thereby confirming the proposed hypothesis related to the cost of treatment.

For the rural sample, cost of treatment is insignificant in affecting the choice for healthcare services provider for both private as well as Indian medicine providers. The average cost of treatment in rural areas for public, private and Indian medicine provider was observed to be Rs. 156, 160 and 166 respectively (Standard deviations are Rs. 82, 79 and 82 respectively). As a result of these costs being almost similar, one does not observe an association between cost and choice of healthcare service provider made by an individual.
Hypothesis 11: Health Insurance

In the urban areas, health insurance is found to be insignificant in affecting healthcare services utilization choice made by an individual. This is true for the case of private healthcare providers as well as Indian medicine providers. It is observed (refer to descriptive statistics) that the penetration levels of health insurance is low among the respondents which could be one reason for insignificant influence of insurance. Another likely explanation for this result could be due to the nature of illness (mostly non critical and basic) of the respondents in this sample (as mentioned previously as well). Mostly, these illnesses do not fall under the coverage of health insurance schemes. As a result health insurance coverage does not determine an individual’s choice of healthcare services provider. Therefore, the analysis for this sample shows that health insurance coverage does not have any significant relationship with the choice of a healthcare service provider.

In the rural sample too, the findings indicate that insurance does not have a significant role to play in the choice between public and private service provider. This may be due to the fact that in rural areas there is little to differentiate between the services offered by public and private healthcare services providers as both offer services that mostly targets basic ailments. As a result, in rural areas treatment is generally sought for illnesses that are typically routine in nature. Insurance schemes usually do not offer coverage for such illnesses. Therefore, even though individuals may be having better perceptions about private providers, since insurance is taken out of equation owing to lack of coverage options, it does not play a significant part in the choice of providers in rural areas.
For the choice between public healthcare service provider and Indian medicine provider, findings reveal that access to health insurance coverage significantly impacts this choice. Those having health insurance are more likely to opt for public healthcare services as compared to Indian medicine provider. This finding confirms the proposed hypothesis. Although, one must admit that they are a little mystifying, due to the fact that sample mostly consists of individuals seeking treatment for basic ailments and hence less likely to be covered under insurance. Sample statistics (see Table No. 19) shed more light on this as it indicates that the number of individuals who utilized public healthcare service providers and having insurance was much higher to those who were utilizing Indian medicine providers.

Table No. 19. Cross tabulation of insurance and type of provider for the rural sample (study 2)

<table>
<thead>
<tr>
<th>Type of Provider Utilized</th>
<th>Insurance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Public</td>
<td>105</td>
<td>40</td>
</tr>
<tr>
<td>Indian Medicine Provider</td>
<td>87</td>
<td>10</td>
</tr>
<tr>
<td>Private</td>
<td>85</td>
<td>48</td>
</tr>
</tbody>
</table>

**Hypothesis 12: Perceived Service Quality**

Uniform findings are reported across the urban and rural samples for the study conducted confirming the hypothesis that higher perceived service quality of the private healthcare services providers would lead to a higher likelihood of an individual choosing them over public healthcare services providers. Results reveal that the average perceived service quality of private healthcare service providers was higher as compared to that of public healthcare services providers.
Contrasting findings were observed for the choice between public healthcare services and Indian medicine providers in terms of perceived service quality for both rural as well as urban areas of the sample. It was found that Indian medicine providers’ services were perceived to be of higher quality as compared to public healthcare service providers and thereby leading to greater likelihood of the choice of Indian medicine provider. This result is contrary to expectations, nevertheless it is supported by the mean scores, of perceived service quality that were obtained on a scale of 5. The average score of public providers was 2.84 (urban) and 1.77 (rural) as compared to the Indian medicine providers who obtained mean scores of 3.89 (urban) and 4.28 (rural). Follow-up discussions with the sample respondents indicate that many Indian medicine providers provide (as also mentioned before) personalized care and attention that could lead to better perception of quality and subsequent preference for these providers.

6.2 IMPLICATIONS

This section is divided into two parts. The first part throws light on theoretical implications of the studies conducted. The second part concentrates on managerial and policy making implications that can be derived from this study.

THEORY

The major theoretical contribution of this dissertation is the integration and adaptation of different theoretical strands from the domain of healthcare utilization into a framework which is apposite to study the choice of healthcare services. The suitability of this framework is subsequently demonstrated for a developing country (India) which by virtue of being low on human development indicators provides an appropriate context for the study. Theoretically, the study proposed and was able to empirically demonstrate that there are key differences between
rural and urban population with regards to the choice of healthcare services. The second part of the study serves the dual purposes of overcoming the data related limitation of the first part and validating the results of the first part. The former is achieved by explicitly taking into cognizance certain critical aspects of the current socio-economic environment for both the rural as well as the urban population. This includes better operationalization of variables like income and accessibility and modeling the influence of variables like cost of treatment, insurance, and perceived service quality.

**PRACTICE**

**Public Agencies**

There are various findings from both the studies that can aid managers (in both public as well as private enterprises) as well as policy makers in the field of healthcare. The study reveals that cost of treatment and income are key factors that affect choice of healthcare providers in the urban settings. The result indicates that in the rural settings there is a huge potential in terms of healthcare infrastructure that is left unfulfilled. So much so, that even after improvements in income levels, rural people are indifferent towards choice of healthcare service providers primarily owing to the lack of options available to them in terms of variety and quality of healthcare services. As far as public healthcare service providers are concerned, there is a huge concern regarding the negative perceptions about quality among the general population. These findings raise crucial issues pertaining to the functioning of public healthcare services in India especially when private healthcare services themselves are unregulated. Although the policy makers are trying to address this issue at various levels, additional efforts are required in this direction to change this negative perception among the general public. This would be a huge step
forward in terms of increasing utilization of public healthcare services among the targeted population.

The study’s findings support the importance of accessibility for improving utilization of public healthcare services. Thus, density of public healthcare facilities should be further improved to increase preference for public healthcare services. The significance of mass media in tilting the balance towards public healthcare services is empirically shown in the study for both rural as well as urban areas. Thus, utilizing market segmentation techniques, the information on policy initiatives related to healthcare services and schemes available at various levels of public facilities should be disseminated to further strengthen the utilization of public healthcare services across the country.

The preference of Indian medicine providers is indicated in the rural sample and they are perceived to have a better quality of healthcare services as compared to their public counterparts. Given this outcome and the fact that the Indian state has recognized the scientific basis for these healthcare systems, there should be increased efforts from the policy makers to strengthen this alternative option of healthcare services. Complimentary services in healthcare would result in increasing the gamut of healthcare options, which in turn should contribute to an overall healthy society. Such initiatives would not only improve the development indicators of the country but would also be a significant step in the direction of achieving the millennium development goals in healthcare.

The most important policy making contribution of the second study comes from the fact that it has demonstrated the importance of variables like cost of treatment, income, perceptions of quality and distance in making a choice for healthcare services provider for urban and rural
populations of India. These variables are overlooked in terms of data collection in state sponsored countrywide surveys (e.g. NFHS). Policy makers should take a note of the importance of these variables and possibly include them in data collection for carrying out future such health related surveys.

**Private Agencies**

The findings of the study also have some key implications for private agencies. The lack of healthcare infrastructure in rural areas means that there is a huge untapped market of potential consumers who seek quality treatment. In the light of the fact that private healthcare service providers have scored higher in terms of perception of the quality of their services this outcome should serve as a call for action for private players. Findings also reveal that that those exposed to mass media prefer public healthcare services. This implies that private healthcare service providers are not focusing enough on mass media as a tool to attract patients. They should take a leaf out of public healthcare services and realize the strength of mass media in improving utilization of their facilities especially in rural areas. If a concerted effort is made by the private players in terms of distinguishing their services from other service providers and spreading awareness about the same they can tap the huge potential in the rural markets.

Findings indicate that insurance coverage does not affect the choice of healthcare service providers. This could primarily be due to lack of coverage options offered by the insurance companies on general (non critical) treatments. Private healthcare providers can collaborate with insurance companies in this regard and make their services much more attractive as compared to their public counterparts by providing affordable insurance coverage for non critical illnesses (especially concerning outpatient department treatments (OPDs)). This could be hugely beneficial to the private providers in the long run in getting a captive audience for their services. The importance of accessibility in choosing a provider for treatment has been confirmed by the findings of the studies conducted. Private healthcare service providers may also improve on their customer base by increasing their presence across the country, particularly in rural areas.