Knowledge, Attitude And Practices of Cardiac patients during the COVID-19 pandemic in a Tertiary Care Medical College Hospital

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2. Professor & HOD
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5. Physician Assistant

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ABSTRACT:

BACKGROUND AND AIM: The majority of patients under treatment for chronic systemic diseases were affected directly or indirectly by this COVID – 19 pandemic, residing both in rural & urban areas. This study was done to understand the knowledge, attitude & practices of patients with cardiac disease attending Saveetha Medical College Hospital located in the outskirts of Chennai, for treatment. Methods: This was observational cross sectional study conducted for 3 months from 20th July – 20th Oct 2020. 395 patients were enrolled in this study. A questionnaire was created with a total of 20 questions for knowledge, attitude & practice toward COVID -19 among cardiac patients. Patients answering 50% of questions correctly in each section were termed to have adequate knowledge, attitude & practices. All statistical analysis was performed using Statistical Package for Social Science (SPSS version 17). Knowledge, attitude & practices of enrolled patients residing in rural & urban areas were compared according to their age, sex, education, occupation & socio – economic status & type of family. Results: Out of the 395 patients enrolled, 234 (59%) were male & 290 (73.23%) were more than 40 years of age. 266 patients (69.6%) were from urban areas & 130(30.4%) were from rural areas. 252(63.8%) of patients were classifiable in class V of modified Kuppuswamy socio economic scale. The average level of knowledge by age, sex, education, occupation, socio economic & type of family was 72% for
urban patients & 64.2% for rural patients with no statistical significance. 99.2% knew that mask should cover both nose & mouth. 97.5% knew that frequent hand washing could be one of the strategies to prevent COVID-19 infection. 99.5% felt that social distancing was an important factor. 88% agreed that mask was to be worn every time one steps out of the house. 98% of patients both in urban & rural areas had a positive appropriate attitude. The majority, 78.7% patients had no fear of death. 80.3% knew to avoid frequent touching of eyes, nose & mouth to decrease chance of COVID-19 infection. The level of practice of the knowledge, was very low, only 13.7% of patients residing in urban areas and 16.7% of patients in rural areas were practicing the guidelines. CONCLUSION: The level of knowledge & attitude of these patients, both residing in urban & rural areas was high. The point of concern was the level of practice of the knowledge gained about the COVID-19. In all ages, males/ females, even educated, employed, in all socio economic strata, the level of practice of usage of mask, frequent hand washing and social distancing was below 20%. Approximately 80% of patients did not practice proper hand washing, masking & safe distancing practices, even though they had the knowledge & proper attitude.

Keywords: Knowledge, Attitude, Practices, COVID-19, cardiac patients.

INTRODUCTION:

COVID-19 – 19 pandemic is an unprecedented event. It has given us lot of uncertainty, job losses & mental despair. It has also severely affected patients with pre-existing chronic diseases, who require regular medications and monitoring. Patients with pre-existing cardiac diseases were also severely affected.

Saveetha Medical College & Hospitals is situated on NH48, on the Chennai- Bangalore Highway, approx. 31Km from Chennai city. It caters to both patients coming from Chennai city & also the surrounding villages, designated rural areas by the last Census study. So it caters patients coming from city of Chennai and also from surrounding rural areas.

This study was done to understand the Knowledge, Attitude & Practices of patients with cardiac disease attending this hospital for treatment, so as to help them in managing their lives better.

Materials/Methods: This study was conducted for a period of 3 months from 20th July 2020 to 28th October 2020.

395 cardiac Patients were enrolled in the study.
A questionnaire was created with a total of 21 questions on Knowledge, Attitude & Practices of cardiac patients during this pandemic in English & Tamil, and was validated by 2 independent physicians. These questions were based on public health information and Covid-19 guidelines given by Government of India. A few questions on the socio-demographic profile of each patient, was also added to the questionnaire. A consent form both in English and Tamil was made for the patients enrolling into the study. Institutional Ethics Committee approval was got before starting this study.

All patients attending Cardiac outpatient department, from 20/7/2020 to 20/10/2020 were explained about this study individually by the outpatient social worker, if they agreed to participate, they were required to sign the consent form, and enrolled into the study.

The socio demographic information consisted of age, gender, educational qualification, occupation, marital status, residential address, mobile number & per capita income. Knowledge, Attitude & Practices questionnaire consisted of 11 questions on knowledge on covid-19 which included symptoms of covid-19 infection and transmission. 4 questions on Attitude & 6 questions on Practices during this Covid pandemic. Any patient answering more than 50% questions correctly in each section was termed to have adequate knowledge on covid-19, but patients who did not answer correctly the questions on facemask, hand washing and social distancing were termed to have inadequate knowledge.

Statistical Analysis:

All statistical analysis was performed using Statistical Package for Social Science (SPSS, version 17) for Microsoft windows. The data were not normally distributed, therefore Non-parametric tests were performed. Descriptive statistics were presented as numbers and percentages. The data were expressed as Mean and SD. Independent sample student t test / Mann Whitney test were used to compare continuous variables between two groups. A Pearson correlation coefficient analysis / Spearman's rho correlation was used to examine the association of two related variables A chi-squared test was used for comparison between two attributes. A two sided p value < 0.05 was considered statistically significant.

Result:

Total of 395 patients were enrolled in this study (Figure 1). 234 (59%) patients were male and 290 (73.23%) patients were more than 40 years of age Table 1. One third of the patients 36 (30.0%) had no formal education & 18 (4.6%) were post graduates. 120 (32%) of patients were from rural areas. 151 (38.2%) were unemployed. 252 (63.8%) of patients were classifiable as class V of modified Kuppuswamy socio economic scale. Most of them 306 (77.5%) were in nuclear families. 243 (61%) of patients knew that body pain, breathlessness, weakness, fever can be the presenting symptoms of COVID-19 Table 2. 194 (49.1%) patients knew that patients with co morbidities were more susceptible to covid-19. 276 (69.9%) understood that people with ages beyond 65 years were more susceptible, but only 216 (54.7%) knew that infection with corona virus, can be fatal. 337 (85.3%) knew that this pandemic originated from Wuhan province of China. 366 (92.7%) answered that the most common mode of spread of Covid-19 was through droplets after coughing and sneezing. The majority of patients 209 (52.9%) did not know that covid-19 can be contacted from asymptomatic Covid.
positive patients. 232(58.7%) walked for more than 1 km daily even during lockdown & 22(5.6%) continued to smoke. For 260(65.8%) patients two wheeler was the mode of transport to come to hospital in case of emergency during the lockdown. Only 208 (52.7%) were continuing to take cardiac medications. Very surprising was the understanding that frequent washing of hand with soap and water to prevent covid–19 infection. 385 (97.5 %) of patients said that they knew that frequent hand washing could be one of the ways to prevent Covid-19. 392 (99.2 %) of patients know that mask should cover both mouth & nose, but 248 (88.1%) could agree that a mask has to be worn every time one steps out of the house. 320 (81%) felt that social distancing of 3 feet was enough to give protection from infection with covid-19 instead of 6 feet advised. Only 55 (13.9%) of patients were taking herbal medication together with cardiac medications to boost their immunity. 317 (80.3 %) knew that touching eyes, nose, mouth has to be avoided to decrease the chance of covid-19 infection. Overall 386 (97.7%) agreed that proper masking, frequent hand washing & social distancing were major interventions to decrease incidence of covid-19 infection. The overall level of knowledge by age, sex, education, occupation, socio economic level & type of family was 72% in urban patients & 64.2% in patients residing in rural areas (figure 2). There was no statistical difference in level of knowledge for covid-19, between patients residing in urban or rural areas. More than 95% of patients residing in both urban & rural areas had appropriate positive attitude (figure 4), 311 (78.7%) had no fear of death due to COVID-19 infection.

The point of concern was the level of practice of the knowledge (figure 3). Only 16.7% of patients residing in rural areas, 13.7% of patients in urban areas were practicing the guidelines. Patients residing in urban & rural areas were low in practice of the COVID-19 guidelines. In urban areas, only 4(5.7%), patients less than 40 years of age, 32(15.6%) patients more than 40 years of age practiced the guidelines (frequent hand washing, wearing mask & safe distancing) Table 2. Even among the educated only 26 (14.4%) and employed 20 (17.4%) practiced masking, hand washing & safe distancing. In urban patients 22(23.7%) of patients belonging to class II – IV, socio economic scale and 14(7.7%) in class V practiced the guidelines. Patients staying in joint families fared better, 14 (23.7%). The rural patients were no different Table 3. Only 17% of patients with predominance of males 15(18.3%) practiced the guidelines. Educated patients 18(21.4%), employed patients 11(20.8%) fared marginally better among the lower socio economic class V only 8(11.4%) cared for the guidelines. On the whole the level of practice was very low in both urban & rural patients, with no statistical difference between them.

Discussion:

The level of knowledge of our patients in the study regarding COVID-19 guidelines was 68.1% as compared to 74% in a study from Visakapatnam1, 94.38% from Jammu and Kashmir2 and 81.64% from a study from Saudi Arabia4 and 90% from a study in China11. 47.1% of patients in our study were aware of person to person spread from asymptomatic carriers as compared to 50% from a study from Saudi Arabia4. Attitude was appropriately good in our study. It was seen that knowledge, attitude, practices strongly correlated with disease prevention5. More the knowledge of the disease, better was the practice to prevent the infection5. In our study even though the knowledge was 68.1%, the level of practice was less than 20% with no statistical significance between rural and urban areas. 77% of patients practiced the guidelines in Visakapatnam study1, 87% in the study done in Jammu & Kashmir2, 98% of participants wore masks in a study from China11.
The reason for this low practice of guidelines in our study population has to be assessed. Repeated focused messages, stressing the need to practice Covid-19 guidelines has to be discussed with these patients more intently making them understand the benefits of these measures.

**Conclusion:**

Many studies have reported high level of knowledge, attitude & practice of the guidelines to prevent COVID-19 infection. In our study even though the level of knowledge of the patients was 68.1%, the level of practice was less than 20% of the COVID-19 practice guidelines. To effectively control this pandemic, more focused & effective strategies have to be devised to make the population understand the benefits of these interventions and help in decreasing the incidence of COVID-19 infection.

Financial support.
NIL

Conflict of interest
NIL

**References:**

1. Kartheek AS. Gara K H, Knowledge, attitude and practices towards COVID-19 among Indian residents during the pandemic. A cross sectional online survey. J NTR Unit Health Science 2020;9;107-15


TABLE 1

Knowledge, Attitude & Practices of cardiac patients during the COVID-19 Pandemic in a Rural Tertiary Care Medical College Hospital.

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| **Sex**          |       |         |
| Male             | Count | 234     | 0.015  |
| % within Residence / Area | 59.20% |         |         |
| Female           | Count | 161     |         |
| % within Residence / Area | 40.80% |         |         |
| **Total**        | Count | 395     |         |
| % within Residence / Area | 100.00% |         |         |

| **Education**    |       |         |
| No formal education | Count | 130     | 0.416  |
| % within Residence / Area | 32.90% |         |         |
| Educated         | Count | 265     |         |
| % within Residence / Area | 67.10% |         |         |
| **Total**        | Count | 395     |         |
| % within Residence / Area | 100.00% |         |         |

| **Occupation**   |       |         |
| Unemployed       | Count | 227     | 0.664  |
| % within Residence / Area | 57.50% |         |         |
| Employed         | Count | 168     |         |
| % within Residence / Area | 42.50% |         |         |
| **Total**        | Count | 395     |         |
| % within Residence / Area | 100.00% |         |         |

<p>| <strong>Socio economic status</strong> |       |         |
| II / III/IV             | Count | 143     | 0.136  |
| % within Residence / Area | 36.20% |         |         |
| V                          | Count | 252     |         |
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<td>INADEQUATE</td>
<td>P VALUE</td>
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<td>AGE</td>
<td>24 68.6%</td>
<td>11 31.4%</td>
<td>0.518</td>
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<td>&lt; 40 YEARS</td>
<td>6 17.1%</td>
<td>29 82.9%</td>
<td>0.928</td>
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<tr>
<td>&gt;40 YEARS</td>
<td>53 52.4%</td>
<td>32 37.6%</td>
<td>14 16.5%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>77 64.2%</td>
<td>43 35.8%</td>
<td>100 16.7%</td>
</tr>
<tr>
<td>SEX</td>
<td>56 68.3%</td>
<td>26 31.7%</td>
<td>0.166</td>
</tr>
<tr>
<td>MALE</td>
<td>21 55.3%</td>
<td>17 44.7%</td>
<td>0.166</td>
</tr>
<tr>
<td>FEMALE</td>
<td>77 64.2%</td>
<td>43 35.8%</td>
<td>100 16.7%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>77 64.2%</td>
<td>43 35.8%</td>
<td>100 16.7%</td>
</tr>
<tr>
<td>EDUCATION</td>
<td>20 55.6%</td>
<td>16 44.4%</td>
<td>0.198</td>
</tr>
<tr>
<td>NOFORMAL</td>
<td>2 5.6%</td>
<td>34 94.4%</td>
<td>0.033</td>
</tr>
<tr>
<td>EDUCATED</td>
<td>57 67.9%</td>
<td>27 32.1%</td>
<td>18 21.4%</td>
</tr>
<tr>
<td>82 97.6%</td>
<td>2.4%</td>
<td>0.350</td>
<td>82 97.6%</td>
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<table>
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<tr>
<th></th>
<th>Class II-IV</th>
<th>Class V</th>
<th>Total</th>
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<tbody>
<tr>
<td><strong>SOCIOECONOMIC</strong></td>
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<td></td>
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<tr>
<td><strong>OCCUPATION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UNEMPLOYED</td>
<td>42 (62.7%)</td>
<td>25 (37.3%)</td>
<td>69 (98.6%)</td>
</tr>
<tr>
<td>EMPLOYED</td>
<td>35 (66%)</td>
<td>18 (34%)</td>
<td>53 (93.3%)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>77 (64.2%)</td>
<td>43 (35.8%)</td>
<td>120 (98.3%)</td>
</tr>
<tr>
<td><strong>TYPE OF FAMILY</strong></td>
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</tr>
<tr>
<td>JOINT</td>
<td>16 (53.3%)</td>
<td>14 (46.7%)</td>
<td>22 (67.8%)</td>
</tr>
<tr>
<td>FAMILY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NUCLEAR FAMILY</td>
<td>61 (67.8%)</td>
<td>29 (32.2%)</td>
<td>90 (100%)</td>
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http://doi.org/10.36295/ASRO.2020.2323101
<table>
<thead>
<tr>
<th>TOTAL</th>
<th>77</th>
<th>43</th>
<th>20</th>
<th>100</th>
<th>118</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>64.2%</td>
<td>35.8%</td>
<td>16.7%</td>
<td>83.3%</td>
<td>98.3%</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

Table 3

Figure 1

<table>
<thead>
<tr>
<th>Residence</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Rural</td>
<td>30.4%</td>
</tr>
<tr>
<td>Urban</td>
<td>69.6%</td>
</tr>
</tbody>
</table>
Inadequate knowledge Adequate knowledge

<table>
<thead>
<tr>
<th>Area</th>
<th>Inadequate knowledge</th>
<th>Adequate knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>35.8%</td>
<td>64.2%</td>
</tr>
<tr>
<td>Urban</td>
<td>28%</td>
<td>72%</td>
</tr>
</tbody>
</table>
Figure 3

Comparison between area of residence and level of Practice

<table>
<thead>
<tr>
<th></th>
<th>Inadequate</th>
<th>Adequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>83.3%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Urban</td>
<td>86.9%</td>
<td>13.1%</td>
</tr>
</tbody>
</table>
Figure 4

Comparison between area of residence and level of Attitude

<table>
<thead>
<tr>
<th></th>
<th>Inappropriate</th>
<th>Appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>1.7%</td>
<td>98.3%</td>
</tr>
<tr>
<td>Urban</td>
<td>2.2%</td>
<td>97.8%</td>
</tr>
</tbody>
</table>