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IMPACT OF PATIENT COUNSELING ON THE KNOWLEDGE, ATTITUDE, PRACTICES AND QUALITY OF LIFE IN COVID SURVIVORS WITH POST-COVID COMPLICATIONS

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ABSTRACT

Context: The Main Purpose of Patient counseling is mainly to improve the patient's Quality of life and to provide pharmaceutical care for patients through which all the drug therapy related problems were minimized.

Aim: The Aim of the study is to access the impact of patient counseling on the Knowledge, Attitude, Practices and Quality of life in COVID Survivors with post COVID Complications.

Materials & Methods: It is a Prospective interventional study. Based upon the Patient selection criteria, the participants were selected and they were allocated into control and test groups respectively, the patient in the control and test groups were counseled whereas the controlled group receives counseling at the end of the study. The follow up cases was carried out over a period of 6 months, the scores were evaluated and statistically analysed for Knowledge, Attitude, Practices and Quality of life.

Results: It was found that the Test groups which received the extensive patient counseling shows significant improvement in the Knowledge, Attitudes, Practices as well as the Quality of life when compared to the control groups.

Conclusion: Our study found that the Patient counselling provided has an impact on the People thus the Patient counselling significantly improves the Knowledge outcomes in the Patients. The Psychological intervention like Patient counselling will significantly increases the Patient Quality of Life and it must be encouraged as this useful thing has to be circulated than that of the Myths and rumours about the COVID Sequale.

Keywords: COVID-19, Post-COVID Complications, Patient Counseling, Quality of Life

INTRODUCTION

The emerging pandemic of an unknown Pneumonia cases with severe respiratory symptoms was originated in December 2019 in the city of Wuhan, China **[1]**. The causative agent was identified to be the Novel Corona virus and is known as Severe Acute Respiratory Syndrome Coronavirus-2 (SARS CoV-2). Later the WHO renamed the epidemic virus as Corona Virus Disease-2019(COVID-19) **[2]**. The COVID-19 has been confirmed to be the seventh identified Corona Virus in the family to affect humans. The COVID-19 emerges with a wide variety of Clinical Manifestations ranging from Asymptomatic to mild, to severe symptoms in the affected patients. The most prevalent symptoms are fever, sore throat, dry cough, myalgia, diarrhea, Ageusia and Anosmia **[3]**.

It is noted that the larger Proportion of Patients will continue to report the Persistent symptoms of COVID-19 even after recovering from COVID-19.The Symptoms mainly fatigue is continuing in the Patient throughout the period of recovery and almost 80% of the COVID Discharged patients reported fatigue is most reported in Post illness which lasts for several weeks **[4]**.

It is now worth addressing people about the Post COVID Care in the Post Discharged Period. Psychological Intervention through counseling, Post COVID guidelines must be needed for the complete recovery of COVID-19 **[5, 6]**. To summarize, it is widely known that patients who are well informed about medications and their use are more likely to receive safe and successful pharmacological therapy. Pharmacists are responsible for counseling patients prior to giving drugs. Counseling is a compassionate engagement between a pharmacist and a patient that may extend beyond simply giving information about the drug and how and when to use it **[7, 8]**.

To measure the impact of patient counseling, this study should focus on patient's knowledge, attitude, practice, and quality of life with Post COVID Complications.

THE SPECIFIC AIM AND OBJECTIVE OF THE STUDY

The Aim of the study is to assess the Impact of Patient counseling on the Knowledge, Attitude, Practices and Quality of life in COVID Survivors with Post COVID Complications. The Main Objective of the study is to explore the Knowledge about the Post-COVID Complications in the COVID recovered patients and to impart the knowledge about the Post-COVID Care through Patient counseling thereby improving their quality of life.

METHODOLOGY

Study Site: The Study was conducted through Google forms circulated and it is a web based Cross-sectional survey study

Study Duration: The Study was conducted in the span of 6 Months (December – May 2021)

Study Design: This is a Prospective Interventional study which involves participants who were recovered from COVID-19 and discharged from Hospital / completely recovered from Hospital. The Subjects were recruited randomly by sending an invitation to participate in the study. After obtaining a proper consent from the participants, they were randomly allocated in two groups (i.e) Test and Control groups. Both were provided with the validated & structured Questionnaire on Post-COVID Complications and Pre-counseling Data were assessed. Patient in the test group are counseled and given information about the recommended guidelines on Post-COVID complications and Management whereas, control group receives the information only at the end of the study. The same Questionnaire is again circulated upon both groups and post- counseling Data were assessed. The Scores were evaluated and statistically analysed.

Study Instruments: A Questionnaire with 21 questions to evaluate the Knowledge, Attitude and Practices on Post-COVID Complications.

Sample size: 218.

PARTICIPANT SELECTION:

Inclusion Criteria:

1. Participants who recovered from COVID-19 recently, discharged from Hospital / completed Home Quarantine
2. Participants willing to give Consent of study
3. Participants with an age group above 18 years of Age

Exclusion Criteria:

1. Participants not willing to give Consent of study
2. Participants with an age group below 18 years of Age

Informed Consent has been obtained from the participants prior to the Participation in the study and the study has been approved by the Institutional Ethics Committee with reference no: **VISTAS-SPS/IEC/I/2021/04.**

STATISTICAL ANALYSIS:

Completed questionnaires were coded, reviewed for accuracy; the data were entered into Epidata 3.1 and exported to SPSS version 24 and analyzed using descriptive statistics and logistic regression. All categorical variables, including respondents of socio-demographics details, and others were expressed as percentage and frequencies. The knowledge scores were calculated by Mean (± SD). The association of each covariate was assessed first with bivariate logistic regression to identify a candidate variable for multivariate logistic regression.

RESULTS

Around 228 participants responded to the study questionnaire. Out of which, 10 last participants responses were excluded as the calculated sample size for the study was 218.

Table 1 shows that most of the participants are in the age group of 41– 50 years of age that accounts for about (35.7%) of the Control study population, and that most of the participants are in the age group of 41–50 years of age that accounts for about (37.6%) of the Test study population.

Figure 1 depicts that the age group of 41-50 years has the highest number of participants in both control and test groups and the age group of > 50 years of age has the lowest number of participants**.**

Table 2 reveals that the male participants (65.1%) are predominantly more in number than females (34.9%) in Control Group. Similarly in Test Group also male participants (55.1%) are predominantly more in number than females (44.9%) in this study.

Figure 2 depicts In Both Control and Test groups the female participants (34.9%, 44.9 %) are less in number than male (65.1%, 55.1%) in this study.

Table 3 shows that in Control Group Predominantly Most of them were Self Quarantined (67.8%) than that of Hospital Admitted (32.1%), similarly in test group also Most of them were Self Quarantined (73.4%) than that of Hospital Admitted (26.6%).

Figure 3 depicts In Both Control and Test groups the only few people were Admitted in Hospital in the management of Post- COVID Complications (26.6% , 73.4%) respectively.

Table 4 States that there is no significant difference in the Knowledge outcomes before and after counseling in the Control group

whereas there is a significant Difference in Knowledge outcomes in Test Group at 95% Confidence Interval.

Figure 4 States that there is no significant difference in the Knowledge outcomes before and after counseling in the Control group whereas there is a significant Difference in Knowledge outcomes in Test Group at 95% Confidence Interval.

Table 5 States that there is no significant difference in the Attitude outcomes before and after counseling in the Control group whereas there is a significant Difference in Attitude outcomes in Test Group at 95% Confidence Interval.

Figure 5 States that there is no significant difference in the Attitude outcomes before and after counseling in the Control group whereas there is a significant Difference in Attitude outcomes in Test Group at 95% Confidence Interval.

Table 6 States that there is no significant difference in the Practice outcomes before and after counseling in the Control group whereas there is a significant Difference in Practice outcomes in Test Group at 95% Confidence Interval.

Figure 6 depicts that there is no significant difference in the Practice outcomes before and after counseling in the Control group whereas there is a significant Difference in Practice outcomes in Test Group at 95% Confidence Interval.

Table 7 shows that the question K4 (94.03%) has the highest number of correct responses in the knowledge section, followed by the question K1 (88.07%).

Table 8 shows that the question A7 (91.74%) has the highest number of correct responses in the Attitude section, followed by the question A3 (87.61%).

Table 9 shows that the question P6 (95.41%) has the highest number of correct responses in the Attitude section, followed by the question P3 (88.53%).

Table 1: Age wise Distribution

Age in years	Control (Number of Participants %)	Test (Number of Participants %)
20 – 30	31 (28.4%)	25 (22.9%)
31 – 40	27 (24.7%)	29 (26.6%)
41 – 50	39 (35.7 %)	41 (37.6%)
> 50	12 (11.2 %)	14 (12.8%)

Control - Age (Mean ± S.D) = 39.85 ± 11.60; Test - Age (Mean ± S.D) = 41.12 ± 10.45

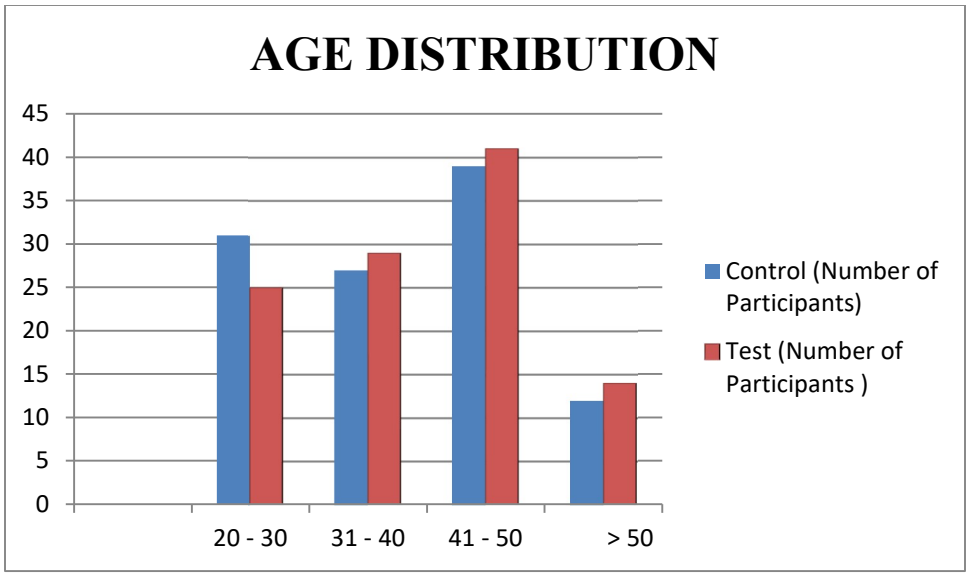

Figure 1: Age wise Distribution

Table 2: Gender Distribution

Gender	Control Number of Participants (%) n = 218	Test Number of Participants (%) n = 218
Male	71 (65.1%)	60 (55.1%)
Female	38 (34.9%)	49(44.9%)

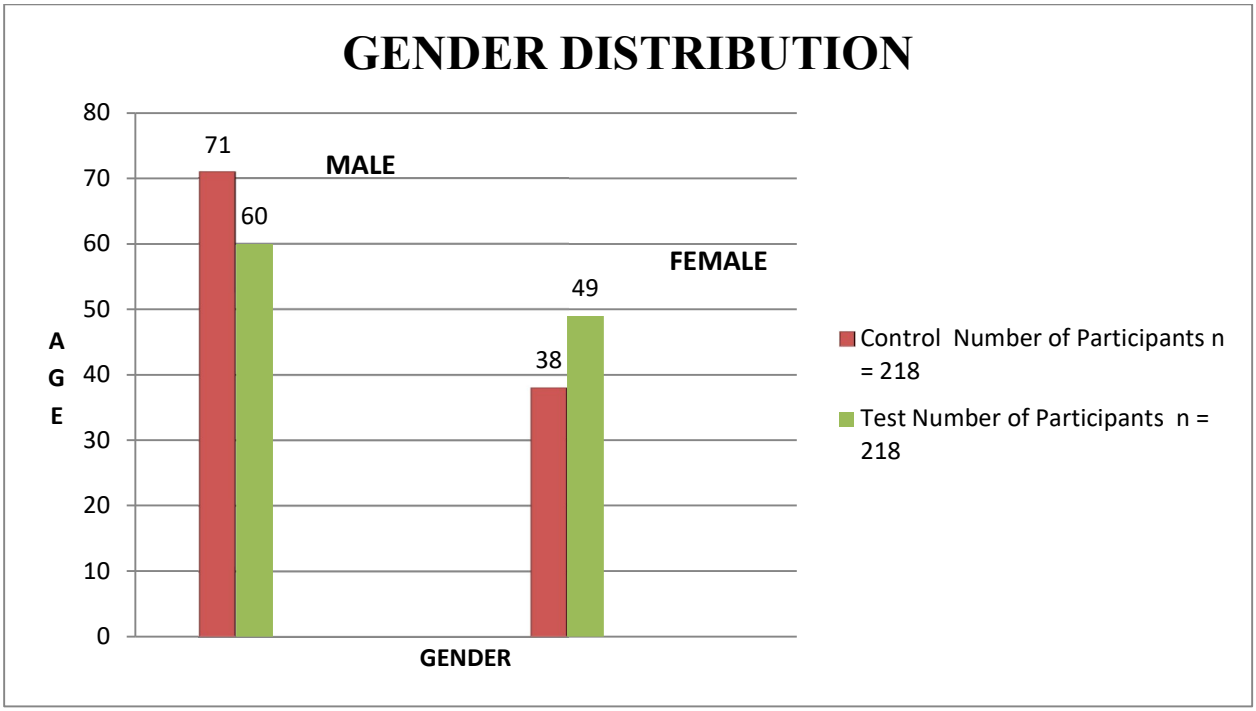

Figure 2: Gender Distributions

Table 3: Type of Care

Type of Care	Control Number of Participants (%) n = 218	Test Number of Participants (%) n = 218
Admitted in Hospital	35 (32.1%)	29 (26.6%)
Self Quarantined at Home	74 (67.8%)	80 (73.4%)

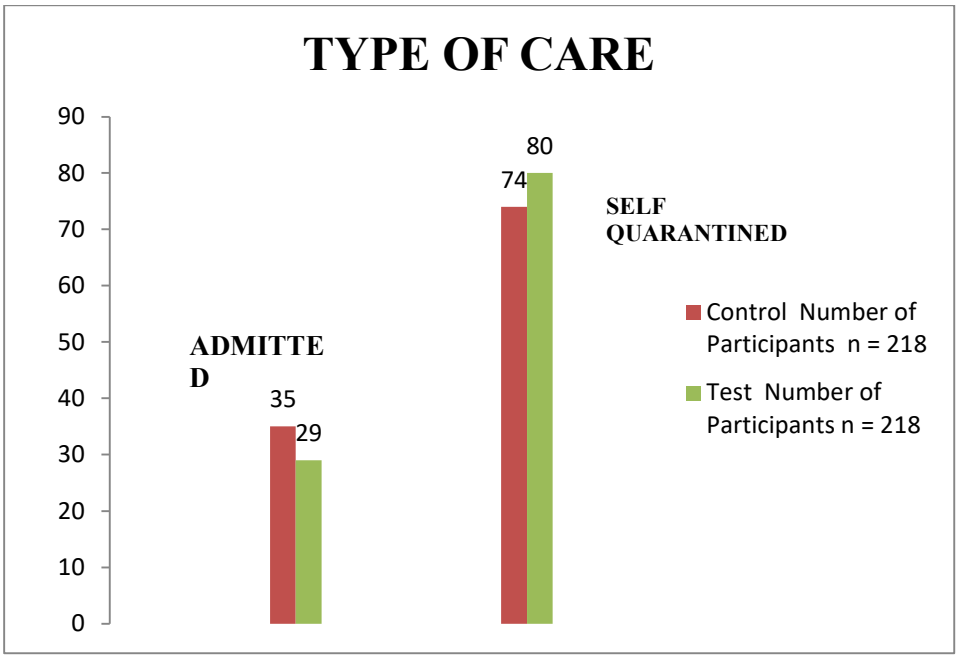

Figure 3: Type of Care

Table 4: Effect of Patient Counselling on Knowledge Outcomes

Group	Pre counseling	Post Counselling	P value	Significance
Control (n=109)	8.12 ± 1.10	8.23 ± 0.35	0.1984	Not Significant
Test (n=109)	8.08 ± 1.16	11.67 ± 0.88	> 0.0001	Significant

*** P < 0.05 is considered to be significant**

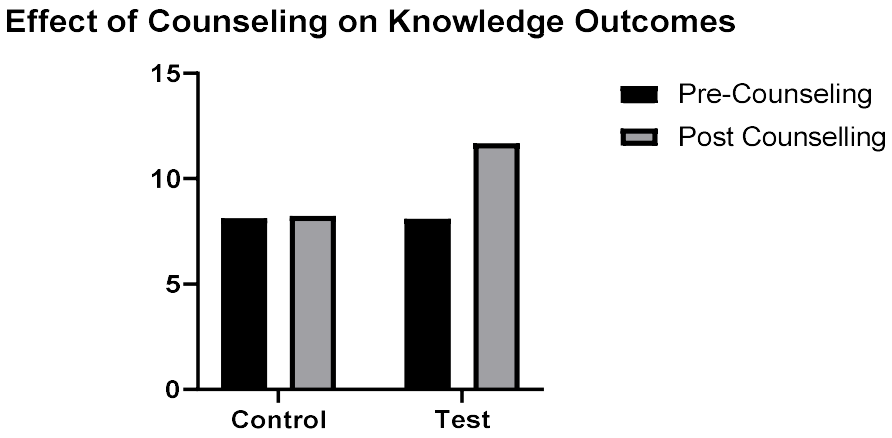

Figure 4: Knowledge outcomes before and after counseling

Table 5: Effect of Patient Counselling on Attitude Outcomes

Group	Pre counseling	Post Counselling	P value	Significance
Control (n=109)	8.09 ± 1.64	8.45 ± 0.92	0.2479	Not Significant
Test (n=109)	8.01 ± 1.50	11.23 ± 0.97	> 0.0001	Significant

*** P < 0.05 is considered to be significant**

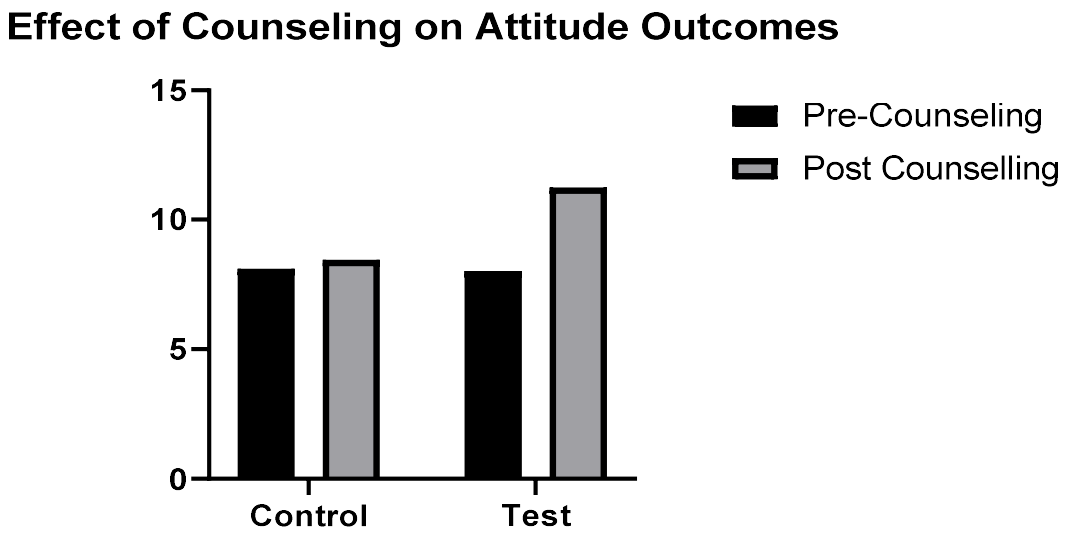

Figure 5: Effect of Patient Counselling on Attitude Outcomes

Table 6: Effect of Patient Counselling on Practices Outcomes

Group	Pre counseling	Post Counselling	P value	Significance
Control (n=109)	7.02 ± 1.25	7.16 ± 0.76	0.3421	Not Significant
Test (n=109)	7.05 ± 1.70	10.84 ± 0.99	> 0.0001	Significant

*** P < 0.05 is considered to be significant**

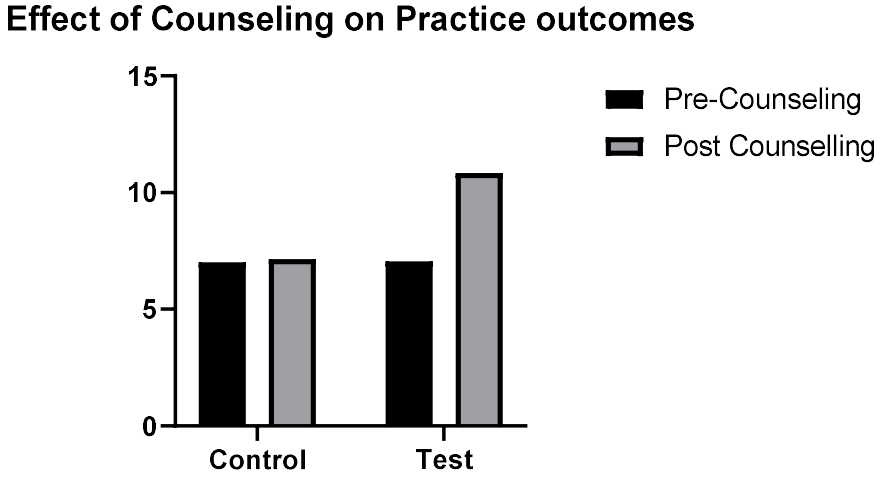

Figure 6: Effect of Patient Counselling on Practices Outcomes

Table 7: Frequency and percentage of participants in Test Group after Counselling with correct responses to the knowledge items on the questionnaire

Questionnaire	Frequency (%)
K1. The Most common Post-COVID Complications are Fatigue, sore throat, Body ache & Breathing Difficulty	192 (88.07 %)
K2. Post-COVID Complications can even be life-threatening if not treated early	153 (70.18%)
K3. Taking Immune Promoting AYUSH medications can improve the Post-COVID Complications and can be recommended	167 (76.60%)
K4. After COVID-19 illness, recovered patients may continue to report wide variety of signs & symptoms	205 (94.03%)
K5. Balanced Nutritious Diet, Especially Freshly Soft diet will help in early improvisation of COVID Complications.	173 (79.35%)
K6. Taking CHYAWANPRASH (5mg/ Teaspoon) daily is effective in Post-Recovery Period	161 (73.85%)
K7. The Recovery Period is longer for those Patients who suffered from the more severe form of Disease	185 (84.86%)

Table 8: Frequency and percentage of participants in Test Group after Counselling with correct responses to the Attitude items on the questionnaire

Questionnaire	Frequency (%)
A1. A holistic approach is needed for follow-up care and well being of all COVID recovered Patients	185 (84.86%)
A2. A regular Practice of Yogasanas and Mild Breathing Exercises will be helpful in improving Post-COVID Complications (Breathing Difficulties)	163 (74.77%)
A3. A Person recovered from COVID have to share the Positive experiences and create awareness among the People to overcome myths and Social stigma	191 (87.61%)
A4. COVID Survivor need a Psycho-social and Mental Health support to get completely recovered from COVID	187 (85.77%)
A5. Chyawanprash can be given in Post- Recovery Period as it seems to be effective	175 (80.27%)
A6. With all due Precautions like Physical Distancing one can resume their Professional work in a graded manner	155 (71.10%)
A7. Severe Post-COVID Complications must require critical care support and also the more stringent follow up	200 (91.74%)

Table 9: Frequency and percentage of participants in Test Group after counselling with correct responses to the Practices items on the questionnaire

Questionnaire	Frequency (%)
P1. Do you continue the COVID Appropriate Behavior of using the Mask Hand and Respiratory Hygiene and Physical Distancing?	175 (80.27%)
P2. Do you avoid Participating in a group session of Yoga, Meditations after your COVID?	147 (67.43%)
P3. Are you still experiencing symptoms of COVID like Cough, Breathing Difficulty and Extreme Fatigue?	193 (88.53%)
P4. Could you able to do regular routine after recovering from COVID as like you did before?	163 (74.77%)
P5. Are you still being quarantined even after discharge from Hospital or after shows negative in RT-PCR?	191 (87.61%)
P6. Do you gargle regularly with turmeric & salt?	208 (95.41%)
P7. Are you aware of AYUSH Medications recommended for Post-COVID Patients?	178 (81.65%)

DISCUSSION

COVID-19, caused by SARS CoV-2 – an enveloped virus **[1]**, has emerged as a pandemic and it is rapidly demanding innovative ways and therapeutic measures to tackle the spread of infection and to mitigate and prevent the complications that might arise after the infection. It is noted that the larger Proportion of Patients will continue to report the Persistent symptoms of COVID-19 even after recovering from COVID-19.The Symptoms mainly fatigue is continuing in the Patient throughout the period of recovery and almost 80% of the COVID Discharged patients reported fatigue is most reported in Post illness which lasts for several weeks **[2]**. It is now worth addressing people about the Post COVID Care in the Post Discharged Period. Psychological Intervention through counseling, Post COVID guidelines must be needed for the complete recovery of COVID-19. This KAP cross-sectional study has been conducted to identify whether the Patient Counselling has improved the knowledge, positive attitude and appropriate practice towards the Post-COVID Care. Using inclusion and Exclusion Criteria, a total of 228 Patients were enrolled in study and were randomized to control and Test Groups, of the 228 enrolled the last 10 responses were excluded as the sample size is 218 is then allocated into the Test and Control groups as 109 Patients on each groups. A Structured and Validated Questionnaire which consists of 21 Questions which consists of Each 7 Questions in Knowledge, Attitude and Practices respectively. Male Participants exceeds Female in the Study i.e.(35.7% in Control Group and 37.6% in Test Group), In the study the number of Patients between the age group 41-50 years where found to be more in both Test and Control Groups (65.1% in Control and 55.1% in Test). Most of the Participants were Home Quarantined (67.8% Control and73.8% in Test) than Hospital Admitted (32.1% in Control and 26.6% in Test). The Study has been Conducted to know whether the Patient counselling has improved the Knowledge, Attitude and Practices of Post-COVID Care among the Test group where the received the counselling. It is found that the Control Group who does not receives any Counselling does not shows any significant differences in the Knowledge, Attitude, Practices but the Test group who receives the counselling has significant differences in Knowledge, Attitude, Practices student T test was used to analyze the data and significance was found out by comparing the calculating t value with tabulated t value at 95% confidence interval (p=0.005). p value

<0.001 was considered to be significant. At baseline all patients had poor knowledge and attitude towards their disease and thus poor QOL. At the end of the study patients of test group received extensive counseling regarding the Post COVID Complications and its management showed greater improvement in treatment outcomes, KAP and QOL than in patients in control group. Our study confirms that improvement in knowledge of the Post COVID Care and its management had positive impact on treatment outcomes and quality of life. This study thus emphasis the impact of patient counseling on KAP and QOL in patient with Post COVID Complications.

CONCLUSION AND SUMMARY

Our study found that the Patient counselling provided has an impact on the People thus the Patient counselling significantly improves the Knowledge outcomes in the Patients. However, there were some uncertainties in the KAP of our target population which needs to be resolved. The Psychological intervention like Patient counselling will significantly increases the Patient Quality of Life and it must be encouraged as this useful thing has to be circulated than that of the Myths and rumours about the COVID Sequale. With the second wave of COVID-19 still in progress, it is now time to address these Post COVID Complications and the Importance of the Post-COVID Care as these may help improve outcomes in patients with COVID-19.

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CONFLICT OF INTEREST

The Authors declare that there is no Conflict of Interest among them.

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