

THE ROLE OF A WHATSAPP CLINICAL DISCUSSION GROUP IN THE CLINICAL MANAGEMENT OF COVID-19 CASES: AN EXPERIENCE OF TERTIARY CARE HOSPITALS IN PUNJAB, PAKISTAN

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ABSTRACT

Objective: To assess the usefulness of the Whatsapp group made for managing the patients of COVID-19 at different govt. sector hospitals of Sahiwal, Punjab.

Study Design: A web-based cross-sectional analytical survey.

Place and Duration of Study: Sahiwal Medical College Sahiwal, from 1st June to 10th June 2020.

Methodology: A validated questionnaire was distributed among 95 members of the Whatsapp group at Sahiwal Medical College Sahiwal. Results were assessed by using SPSS version-24.

Results: The response rate of our study was 75.78%. Most were younger than 30 years of age (69.40%) and majority (80.60%) belonged to clinical departments. Out of 58 clinical side doctors, 44 (75.86) belonged to medicine and allied departments while 14 (24.14%) belong to surgery and allied departments. Results showed that the helpful discussion in the group increased the confidence of the participants by 4.24 times with 95% C.I. of 2.76 to 6.52. Speedy management of the patients due to Whatsapp group also increased the confidence of the study participants by 6.30 times with 95% C.I. of 2.03 to 19.49. Discussions on Whatsapp group and increase in knowledge of participants related to COVID-19 through Whatsapp also helped participants to speed up the management of the patients by 3.77 times with 95% C.I. of 2.54 to 5.61.

Conclusion: Hence our study concludes that the usefulness of the Whatsapp group for management of COVID-19 patients was very well perceived by our survey population. It increased their confidence in managing the patients of COVID-19.

Keywords: COVID-19, Perceived usefulness, Whatsapp group.

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INTRODUCTION

COVID-19 fell upon the humanity like a wrath and impacted all the nations irrespective of the ethnicity, culture and economy¹. As most were terrified by this pandemic but still few stood firm as front line warriors in countering the situation². Healthcare workers were among them as the patient tool rose dramatically within days after the first case reported in China in Dec, 2019. Many healthcare workers even lost their lives while managing the patients of COVID-19³.

Like other countries almost all over the world, Pakistan also affected by COVID-19 as first case reported here on 26th Feb, 2020⁴. Since then there is a rise in rise in cases of COVID-19 across the country generally and in Punjab

province particularly. Doctors and paramedic staff belonging to this part of the world also performed their duties with the maximum of their capabilities⁵. They worked with extra shifts and over nightly without much incentive. Many lost their lives as well. But due to their utmost efforts the pandemic of COVID-19 is being fought bravely and being dealt with accordingly⁶.

As the patients of COVID-19 presented to outdoors with mild to high severity, the need for emergency consultation rose from senior professors and consultants. It became slightly difficult for on duty doctors to consult with them in emergency situations⁸ specially related to management of COVID-19 patients as the senior pros were also working on other domains of COVID-19 at the same time. So, a Whatsapp group was made by including all the duty doctors of COVID-19 isolation wards and flu counters at

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District Health Quarter hospital Sahiwal and Govt. Haji Abdul Qayyum hospital Sahiwal. The senior consultants were also included in the group. This survey was targeted to assess the usefulness of this Whatsapp group in management of the COVID-19 patients.

METHODOLOGY

This cross-sectional survey was conducted at Sahiwal Medical College Sahiwal, from 1st June 2020 to 10th June 2020 among members of a Whatsapp group. Questionnaire (validated after detailed discussion by board of senior most faculty members) was sent to all the 95 members of Whatsapp group but 72 responded. Every member was individually also sent the questionnaire and reminded time and again but still few did not respond. This Whatsapp group was made in the last week of March 2020 among doctors belonging to different departments who were appointed for duty at the flu counter and isolation wards for the patients of COVID-19. There was extensive discussion carried out in the group related to management of the COVID-19 patients. Some screen shots of the discussion related to COVID-19 patients management (figure).

Sample size was calculated by using following formula;

$$\text{Sample Size} = \frac{Z_{1-\alpha/2}^2 p(1-p)}{d^2}$$

$Z_{1-\alpha/2}$ is standard normal variate (at 5% type 1 error ($p < 0.05$) it is 1.96. As in majority of studies p -values are considered significant below 0.05 hence 1.96 is used in formula.

p = Expected proportion in population based on previous studies or pilot studies = 0.20 (7).

d = Absolute error or precision = 0.09

Sample size = 76.

Convenient sampling technique was used.

Only those doctors were included in survey who were members in the Whatsapp group made for management of COVID-19 patients only. Doctors who were not members of this group were excluded. The survey was approved by Ethics review committee of Sahiwal Medical

College Sahiwal via letter no. 55/DME/SLMC /SWL. An informed consent was taken before filling of questionnaire forms. Questionnaire was made through Google docs and distributed among the participants through same Whatsapp messenger group. It was done due to lockdown in Pakistan due to COVID-19 hence social distancing was made sure while conducting this study.

Data were assessed by using SPSS version-24. Demographic frequency distributions were calculated along with the percentage frequencies of different responses by the participants to the questions. We calculated odd's ratio as tool of measuring confidence of our study participants with 95% confidence interval. Then we compared the increase in confidence of the participants in managing the COVID-19 patients and their speedy management with different responses. Statistical significance was calculated by measuring p -value by Chi-square test.

RESULTS

Out of 95 faculty members of the Whatsapp group 72 responded, hence making the response rate of our study as 75.78%. We calculated the different demographic characteristics of our study population.

Equal no. of female and male doctors participated in our study (50% each). As far as the age groups of our participants is concerned, most were younger than 30 years of age (69.40%) As far as the departments' involvement is concerned majority (80.60%) belong to clinical departments while remaining from basic medical sciences departments. Out of 58 clinical side doctors, 44 (75.86) belonged to medicine and allied departments while 14 (24.14%) belong to surgery and allied departments. Out of 72 members of our study population 42 (58.30%) were not having post-graduation degree while remaining 30 (41.70%) were having post-graduation degrees in their respective fields. And finally out of 42 participants without any post-graduation degree 10 were demonstrators in basic sciences departments while remaining 32 (76.20%) were medical officers (table-I).

We also calculated percentage frequencies of different responses our study participants for usefulness of Whatsapp group as a learning tool. Majority (94.40%) of the 72 members of our survey found the discussion in Whatsapp group related to COVID-19 as very helpful. 50 out of 72 (69.40%) were of the opinion that the response of the consultants on Whatsapp group was quick and speedy. Majority (83.30%) also confirmed that other diseases can also be managed by the

Table-I: Demographic characteristics of study sample (n=72).

Variable	n (%)
Gender	
Male	36 (50)
Female	36 (50)
Age	
>30	50 (69.40)
≤30	22 (30.60)
Department	
Basics	14 (19.40)
Clinical	58 (80.60)
If Clinical side then	
Medicine/Allied	44 (75.86)
Surgery/Allied	14 (24.14)
Post-Graduation	
Yes	30 (41.70)
No	42 (58.30)
If no post-graduation then	
Demonstrator	10 (23.80)
Medical Officer	32 (76.20)
Post-graduate trainee	-
Length of service	
≥ 2 years	58 (80.55)
< 2 years	14 (19.45)

same method. 91.70% of the total participants were of the view that response of the consults was right on time. In response to another question 68 out of 72 (94.40%) members found increase in their knowledge related to COVID-19 while all 72 (100%) felt increase in their insight of clinical management of COVID-19 due to Whatsapp group. Nearly 56% of the survey population was of the view that such Whatsapp communications can be lifesaving in case of emergencies. Majority (86.10%) agreed that the discussion was relevant on the Whatsapp group. 64 members

(88.90%) also agreed that all the national and international guidelines were followed in managing the cases of COVID-19 through Whatsapp group. Most of the participants (72.20%) felt that there confidence increased after using the Whatsapp group for managing the patients of COVID-19 (table-II).

The survey participants (58.30%) did not agree to the fact that management of the patients

Table-II: Usefulness of the Whatsapp group as a learning tool (n=72).

Variable	Options	n (%)
Helpful discussion related to COVID-19	Yes	68 (94.40)
	No	4 (5.60)
Managing the patient via Whatsapp is alternative to Physical checkup	Yes	30 (41.70)
	No	42 (58.30)
Management was speedy	Yes	50 (69.40)
	No	22 (30.60)
Other diseases can also be managed by same method	Yes	60 (83.30)
	No	12 (16.70)
Response of the consultants was right on time	Yes	66 (91.70)
	No	6 (8.30)
Increase in knowledge related in COVID-19	Yes	68 (94.40)
	No	4 (5.60)
Increase in insight of clinical management of COVID-19	Yes	72 (100)
	No	-
Whatsapp communication can prove lifesaving in emergency situations	Yes	40 (55.60)
	No	32 (44.40)
Discussion was relevant	Yes	62 (86.10)
	No	10 (13.90)
Guidelines are followed for managing patients of COVID-19 according to national and international criteria	Yes	64 (88.90)
	No	8 (11.10)
Aware of not sharing the DATA without patient's consent	Yes	34 (47.20)
	No	38 (52.80)
Increase in confidence in management of COVID-19 patient	Yes	52 (72.20)
	No	20 (27.80)

on Whatsapp can replace the physical checkups of the patients. Slightly more than half of the participants (52.80%) were not aware of the fact

that patients' data cannot be shared on any social media group without their prior permission (table-II).

We also calculated odd's ratio with 95% confidence interval to check if there is any increase in confidence of the doctors in managing the patients of COVID-19 based on their perceived usefulness of the Whatsapp group as a learning tool. Results showed that the helpful discussion in the group increased the confidence of the participants by 4.24 times with 95% C.I. of 2.76 to 6.52. Speedy management of the patients due to Whatsapp group also increased the confidence of

management of other diseases with the same methodology as well. Discussions on Whatsapp group and increase in knowledge of participants related to COVID-19 through Whatsapp also helped participants to speed up the management of the patients by 3.77 times with 95% C.I. of 2.54 to 5.61. Response by consultants on time enhanced the speed of management of COVID-19 patients by the survey participants by 1.15 times with 95% CI. of 0.19 to 6.79. Discussion on Whatsapp groups is thought to be lifesaving in emergency situations by the participants helped them in speeding up the management of COVID-19

Table-III: Increased in confidence in managing patients based on their perceived usefulness of the Whatsapp group as a learning tool (n=72).

Variables	Odd's Ratio	95% Confidence Interval	p-value
Helpful discussion in the group	4.25	2.76-6.52	0.082
Speedy Management	6.30	2.03-19.49	0.23
Other diseases can also be managed by same method	1.37	0.36-5.19	0.04
Response by consultants on time	1.33	0.22-7.92	0.73
Increase in knowledge	2.77	0.36-21.20	0.63

Table-IV: Speedy management of patients based on their perceived usefulness of the Whatsapp group as a learning tool (n=72).

Variables	Odd's Ratio	95% Confidence Interval	p-value
Helpful discussion in the group	3.77	2.54-5.61	0.002
Other diseases can also be managed by same method	20	3.86-103.56	0.871
Response by consultants on time	1.15	0.19-6.79	0.334
Increase in knowledge	3.77	2.54-5.61	0.21
Lifesaving in emergency	3.11	1.09-8.82	0.75

the study participants by 6.30 times with 95% C.I. of 2.03 to 19.49. Survey participants' confidence increased by 1.37 times with the variable of management of other diseases also by the Whatsapp group with 95% C.I. of 0.36 to 5.19. Response by consultants on time increased the confidence of the participants by 1.33 times with 95% C.I. of 0.22 to 7.92. Increase in knowledge based on the perceived usefulness of Whatsapp group also increased the confidence of the participants by 2.77 times with 95% C.I. of 0.36-21.20 (table-III).

Management of the patients of COVID-19 by the participants on their perceived usefulness of the Whatsapp group as a learning tool also speeded up by 20 times with the notion of

patients by 3.11 times with 95% CI of 1.09 to 8.82.

DISCUSSION

The response rate of our study was 75.78% hence making it a valid one. A previous study by Woods *et al*, 2019 showed the response rate of only 55%⁷. Males and females participated equally in our survey. Most of the participants were younger in our study though the gender participants is equal in our study which is in contradiction to a previous study by Meghana *et al*, 2020 in which males were in higher proportion (68%)¹⁰. As the patients of COVID-19 are managed worldwide by the doctors working in clinical departments so our study also found out that 80.60% belonged to clinical side but some of the

participants of the Whatsapp group were also from the basic sciences departments as there is shortage of doctors working in the hospital because of increase in number of COVID-19 patients¹¹. Out of 58 members from clinical departments an overwhelming majority (44-75.86%) belonged to medicine and allied departments. A former study by Jazieh *et al*, 2020 showed that their Whatsapp group participants who belonged to medicine and allied departments were with

COVID-19 patients was made possible (69.40%). A previous study Quah *et al*, 2020 found the same result¹⁴. Consultants and senior pros responded right on time in the group whenever they were asked for help (91.70%). Majority (86.10%) felt that the discussion on the group was relevant which is similar to the finding of previous study¹⁵. All the international and national guidelines were followed by the participants of the group which is relevant to a previous study as

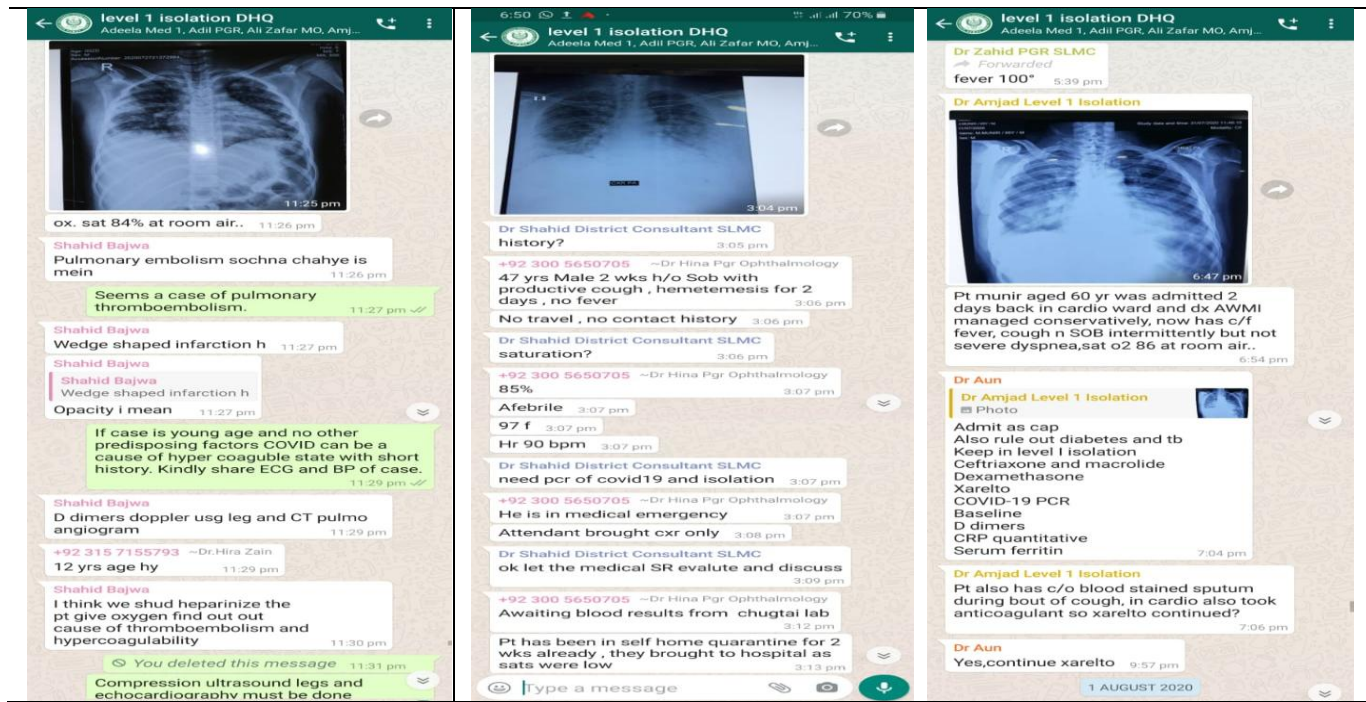


Figure: Some screen shots of the discussion related to COVID-19 patients management.

lesser participation (49%)¹². As most of the participants of the group are from younger age group (less than 30-69.40%), so there also lesser no. of doctors who have done post-graduation in our study (58.30%) which is in contradiction to a previous study by Gebbia *et al*, 2020 where post-grads were more¹³.

As far as the responses of our survey population is concerned, majority agreed to most of the aspects of the usefulness of Whatsapp group for management of the patients of COVID-19. Our study participants agreed that they found the discussions on Whatsapp as helpful (94.40%) and speedy management and treatment of the

well by Lima *et al*, 2020¹⁵.

The odd's ratio calculated by us in our study showed striking results as an overwhelming majority of our participants felt increased in their confidence in managing the patients of COVID-19 when compared with different aspects of the usefulness of Whatsapp group as a tool. Confidence interval of 95% was considered while calculating odd's ratio. Helpful discussion on Whatsapp increased the confidence of our participants by 4.24 times which is in line with the results of a previous study by Chakravorty *et al*, 2020 which found the increase in confidence by 48 times¹⁶. Speedy management of the participants was also

increased the confidence of the participants by 6.30 times. Increase in confidence by the perceived usefulness of the Whatsapp group for managing the COVID-19 patients by the participants of the survey was also due to increase in their knowledge of COVID-19 management by 2.77 times. Samarathunga *et al*, 2020 showed that increase in knowledge caused increase in confidence of the participants by 23 times¹⁷. Our survey also found statistically significant result when increase in confidence is associated with management of other diseases ($p=0.04$).

Our study population felt that the management of the patients because of Whatsapp group has become speedy by 3.77 times by increase in their knowledge of COVID-19 management. The prompt management by 20 times was felt by the participants when compared with the management of other diseases by making the Whatsapp groups for them as well. Response by the seniors on time increased the prompt management of COVID-19 patients by 3.11 times. A previous study by Deshmukh *et al*, 2020 showed that more number of participants agreed to this fact but odd's ratio was not calculated in that study¹⁸. Our results were also of high statistical significance when associated between speedy management and helpful discussion in Whatsapp group ($p=0.002$).

Increase in insight of clinical management of COVID-19 did not increase the confidence of the study participants as the odd's ratio was not possible to be calculated because none of the participants disagreed, so two by two table was not possible. Though Billings *et al* 2020 did calculate the odd's ratio and found it to increase by 2.84 times when usefulness of the Whatsapp group was compared between increase in confidence and increase in clinical insight of the participants¹⁹.

Our participants' majority was not properly aware of the fact that patients data should not be shared anywhere without their permission. Guidance must be provided to our young doctors by the senior pros in this regard.

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CONCLUSION

Hence our study concludes that the usefulness of the Whatsapp group for management of COVID-19 patients was very well perceived by our survey population. More of such groups can be made in future with improved planning so that better results can be obtained; after all it's the patient's care which matters.

CONFLICT OF INTEREST

This study has no conflict of interest to be declared by any author.

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