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Capacity building and assessment of grass root workers regarding their role in prevention and management of the COVID-19 pandemic at a rural health care facility in Delhi

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Abstract
Introduction: As various emerging and re-emerging diseases have occurred over time; this era is traversing through another pandemic of novel coronavirus. Management of COVID-19 focusses on spreading awareness to the community regarding methods of transmission and preventive strategies for COVID-19. Thus, capacity building of frontline workers plays a key role in the management of COVID-19.
Methodology: A training evaluation study was carried out on ASHA and Anganwadi Workers at the Rural Health Training Center, Barwala for a duration of two months. Pretest and post test were conducted to assess the impact of the training sessions. Paired t test for difference between means for pre- and post-intervention sessions and Fisher's Exact Test for proportion of subjects with and without correct knowledge were applied.
Results: Comparison of Mean scores obtained by the group of participants in Pre-Test and Post-Test assessments came out to be statistically significant. An improvement of 15.5% was observed post training sessions, though the difference was not statistically significant.
Conclusion: The training sessions evaluated in this study were successful in raising awareness of the group of participants and helped to bridge the gap remaining after government endeavor.

Keywords: COVID-19, frontline workers, capacity building, training evaluation

Introduction
Health workers are at the front line of any outbreak response and discharge substantial responsibilities at each level without fearing themselves of being exposed [1].
Various emerging and re-emerging diseases e.g. Ebola in 2016 and Nipah in 2018, have impacted health and other health-related parameters over time [2]. In this era, another novel coronavirus has emerged as a public health emergency of international concern [3]. Beginning in December 2019, and till 8th July, 2020, there have been 11500302 cases confirmed cases of novel coronavirus disease globally, with 5,35,759 deaths [4].
A key strategy for managing COVID-19 is via awareness and preventive methods followed by the community. Frontline workers can support the health system in generating awareness, implementing prevention strategies, support with contact tracing and isolation of potential cases, for which it is critical to strengthen their preparedness [5]. Hence, it is of utmost importance to build the capacities of the frontline workers with the most scientific and relevant information.
Grass root workers like Accredited Social health Activist (ASHA) and Anganwadi Worker (AWW) form a very important component of the entire team of frontline workers of the health system. The present study has focused to build and assess the capacity of the grass root workers regarding their role in prevention and management of the COVID-19 pandemic, conducted at a Rural Health Care facility in Delhi, keeping in view another substantial concern of their safety.

Methodology
A training evaluation study was carried out at the Rural Health Training Center, Barwala for

a duration of two months. The Study was conducted on all the AWWs and their helpers catering to RHTC Barwala. Since, no ASHA is catering to area under this study the same from Jain Colony (adjacent to area under RHTC, Barwala) were trained for the ongoing COVID-19 pandemic for a period of one month, through a series of training sessions. Anganwadi workers having any co-morbid condition like Asthma, Lung disorder, Cardiovascular disease, Diabetes were excluded from the study. Prior permission from institutional ethics committee was taken. No violation of ethics is visible as the study involved only training of the workers.

One session was organized per week. Pretest was conducted before the start of training sessions to assess their preliminary knowledge and post test was conducted to assess the impact of the training sessions. Self-designed, pre-tested Questionnaire was used for assessing knowledge before and after the training sessions. IEC material in the form of power point presentations, charts, AV Aids, Health talks were used, to provide relevant information.

Statistical Analysis

Descriptive statistics were analyzed using Microsoft Excel. Paired t test for difference between means for pre- and post-intervention sessions was conducted to test the statistical significance if any. Fisher's Exact Test and Chi square test were applied for proportion of subjects with and without correct knowledge regarding the various aspects of the disease.

Results

Table 1 shows mean score obtained by the group of participants in Pre-Test and Post-Test assessments. P-value came out to be 0.025 using paired t-test which is statistically significant. Hence, an overall statistically significant improvement is observed post training sessions.

Table 2 shows total participants giving correct response to the questions asked, which is also expressed as percentage of the total group. More than three-fourth (76.9%) of the respondents were aware of the mode of spread of COVID-19 before training whereas correct responses increased to 100% post training sessions, thus showing an improvement score of 23.1% (Table 2: Field 2A). An improvement of 7.6% was observed after training, in the awareness levels of the frontline workers when they were asked if only those with symptoms can spread the disease (Table 2: Field 2B). Improvement of 15.4% was observed in the respondents during the post training assessment, regarding the symptoms of COVID-19 (Table 2: Field 2C). Regarding the testing strategy, 30% gave the correct answer before training whereas correct responses increased to 61% post training session, thus showing an improvement score of 30% (Table 2: Field 2D).

All the respondents were aware of their role as frontline workers in both before and after training assessments (Table 2: Field 2E).

In the total group of subjects, total Pre-Test score came out to be 61.5% and Total Post-Test Score came out to be 77%. Hence, an improvement of 15.5% was observed post training sessions, though the difference was not statistically significant. (Table 2: Field 2F)

Discussion

A public health approach like Training for Capacity Building is of utmost importance to reinforce health-related knowledge and behavior in a target audience in connection with a specific problem and within a pre-defined period of time [6].

A study by Guleri *et al* found significant improvement in knowledge of ASHA followed by skill based training and the mean knowledge score got almost doubled after training (from 8.68 to 15.27 in a 30 point score, paired t test $p<0.0001$) [7]. This is in accordance with our study where mean score was obtained to test for improvement in Pre-Test and Post-Test assessments. P-value using paired t-test came out to be statistically significant ($p<0.025$). Hence, an overall statistical improvement is observed post training sessions. Kohli *et al* showed that ASHAs knowledge had improved but their practices were still poor due to number of problems faced by them which need to be addressed through skill based training in terms of good communication and problem solving [8]. This is in coherence with our study which aimed to impart knowledge to the grass root workers viz. ASHA and AWW regarding COVID-19, wherein the post-test score for assessment of knowledge showed an improvement of 15.5% after training sessions of frontline workers.

Training sessions have been shown to improve knowledge and practice, by previous researchers. A study conducted by Shaikh *et al* observed that Training/IEC sessions helped in improvement in routine child care practices. During baseline survey, it was found that except immunization all other key child practices were poor. After 9 months of repeated heath education sessions, it was observed that all practices were improved with statistically significant difference [9]. Cofie *et al*. in their study concluded that an IEC campaign is important in improving the understanding of any concept and should be integrated in planning and evaluations [10]. Zaman conducted a study on knowledge and practices of HIV/AIDS, and indicated that the IEC intervention had significantly increased the knowledge and positive attitude of the study population [11].

Capacity building, through IEC/training sessions, plays a crucial role in improving understanding, creating awareness and adopting the recommended strategies. Hence, it is of utmost importance to include Capacity Building in planning, implementation and evaluation. It provides a platform for the understanding of important health issues and initiatives. It also contributes to achieving better health outcomes in all public health interventions. In this study also, significant improvement has been observed in the post training assessment on all aspects of knowledge and awareness regarding COVID-19.

Ministry of Health & Family Welfare (MOHFW) has focused on human resource development for combating the present pandemic, which includes training of ASHA and AWW, along with other categories of personnel. Accordingly, training resources have been developed and training sessions are being conducted for these workers [12]. In spite of such government efforts, our study proved to be important as it helped to fill the gaps.

Potential Limitations of the Study

Since the sample size of the heath care workers on which training has been done is small, the adequate power of the design of the study cannot be ensured. One of the major reasons of not getting access to adequate sample size of health care workers for training exercise executed is limited

number of frontline workers catering to the designated facility. The other potential reason of getting statistical non-significant improvement in awareness with the training sessions could be pre-sensitization of the same by massive and effective IEC campaigning by the government.

One of the possible strategies to gain a significant increase in awareness is scaling up the training programme to include more health care workers from other peripheral centers attached to the central institution.

Table 1: Composite Pre-test and Post-Test score of the participants.

	Pre-Test	Post-Test
HCW 1	3	5
HCW 2	4	3
HCW 3	4	4
HCW 4	4	3
HCW 5	2	4
HCW 6	2	3
HCW 7	3	4
HCW 8	2	3
HCW 9	3	4
HCW 10	4	4
HCW 11	4	4
HCW 12	2	4
HCW 13	3	5
Mean	3.076	3.846
SD	0.862	0.688
p-value- 0.025 (Paired t-test) Statistically Significant		

Table 2: Awareness level of participants as observed from Pre-Test and Post-Test

Fields assessed			Percentage Improvement	P value*	Significance
A. How does COVID-19 spread?					
Response	Pre-Test (%)	Post-Test (%)	23.1%	0.220	NS
Correct Answer	10 (76.9)	13 (100)			
Incorrect Answer	3 (23.1)	0			
B. Can only those with symptoms of COVID-19 spread the disease?					
Response	Pre-Test (%)	Post-Test (%)	7.6%	1.000	NS
Correct Answer	2 (15.4)	3 (23.01)			
Incorrect Answer	11 (84.6)	10 (76.9)			
C. What are the main symptoms of COVID-19?					
Response	Pre-Test (%)	Post-Test (%)	15.4%	0.480	NS
Correct Answer	11 (84.6)	13 (100)			
Incorrect Answer	2 (15.4)	0			
D. Should everyone with flu like symptoms be tested for COVID-19?					
Response	Pre-Test (%)	Post-Test (%)	30.08%	0.237	NS
Correct Answer	4 (30.7)	8 (61.5)			
Incorrect Answer	9 (69.3)	5 (38.5)			
E. What is your role as a frontline worker regarding COVID-19?					
Response	Pre-Test (%)	Post-Test (%)	0	1.000	NS
Correct Answer	13 (100)	13 (100)			
Incorrect Answer	0	0			
F. Composite Pre-test and Post-Test score of the participants.					
Scores	**Pre-test Score**	**Post-test score**			
Score Obtained	40	50	Percentage Improvement – 15.5% Fisher's exact test: The two-tailed P value equals 0.0872 (Not statistically significant)		
Total Score	65	65			
Percentage	61.5	77			

*Two-tailed Fisher's Exact Test

Conclusion

COVID-19 has demonstrated that to contain any outbreak, the success lies in the learning and adaptability of the people and the decision makers i.e. from the public at risk to the public health system that can deliver the best suited prevention strategies [13]. Hence, the burden falls on the shoulders of the health care workers involved in delivering health services.

Thus, a training programme plays a very important role to enhance the efficiency and functioning of frontline workers. But it is never complete until its methods and results are evaluated. The training session evaluated in this study was successful in raising awareness of the group of participants and helped to bridge the gap still remaining after government endeavor.

References

1. Health Workers. Accessed June 9, 2020. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical guidance/health-workers

2. Bloom DE, Cadarette D. Infectious Disease Threats in the Twenty-First Century: Strengthening the Global Response. Front Immunol. 2019;10. doi:10.3389/fimmu.2019.00549
3. WHO declares coronavirus outbreak a global health emergency. STAT. Published January 30, 2020. Accessed June 9, 2020. https://www.statnews.com/2020/01/30/who-declares-coronavirus-outbreak-a-global-health-emergency/
4. Coronavirus (COVID-19) events as they happen. Accessed July 8, 2020. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen
5. Understanding the role of Indian frontline workers in preventing and managing COVID-19. Oxford Policy Management. Published April 1, 2020. Accessed June 12, 2020. https://www.opml.co.uk/blog/understanding-the-role-of-indian-frontline-workers-in-preventing-and-managing-covid-19
6. WHO EMRO | Information, education and communication | Community-information | Child health and development | All-Pages. Accessed June 16, 2020. http://www.emro.who.int/child-health/community-information/information/All-Pages.html
7. Guleri SK, Gupta A, Nandeshwar S, Dixit S, Sakalle S. Skill based training of accredited social health activists: training effectiveness assessment using training and programme evaluation model. International Journal of Medical Research and Review 2017;5(1):54-60. doi:10.17511/ijmrr. 2017.i01.08
8. Kohli C, Kishore J, Sharma S, Nayak H. Knowledge and practice of Accredited Social Health Activists for maternal healthcare delivery in Delhi. Journal of Family Medicine and Primary Care 2015;4(3):359. doi:10.4103/2249-4863.161317
9. Shaikh S, Memon S, Ahmed I, Amna, Manzoor R, Shaikh S. Impact of an IEC (Information, Education and Communication) intervention on key family practices of mothers related to child health in Jamshoro, Sindh. Pak J Med Sci 2014;30(3):611-618. doi:10.12669/pjms.303.4798
10. Cofie P, De Allegri M, Kouyaté B, Sauerborn R. Effects of information, education, and communication campaign on a community-based health insurance scheme in Burkina Faso. Glob Health Action 2013, 6. doi:10.3402/gha. v6i0.20791
11. Impact assessment of IEC intervention on knowledge attitude and practice (KAP) of HIV/AIDS in Assam Zaman FA - Ann Trop Med Public Health. Accessed June 16, 2020. http://www.atmph.org/article.asp?issn=17556783;year=2013;volume=6;issue=6;spage=644;epage=648;aulast=Zaman
12. MOHFW. Advisory for human resource management of COVID-19. [Internet]. EMR Division, Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India. [cited 2020 Jun 22]. Available from: https://www.mohfw.gov.in/pdf/AdvisoryforHRmanagement.pdf
13. Adapting training and skills development to meet the COVID-19 Challenge | GOARN. Accessed June 12, 2020. https://extranet.who.int/goarn/content/adapting-training-and-skills-development-meet-covid-19-challenge