

Effect of an Aggression Management and Violence Prevention (AMVP) Training Programme among Nurses Working in Psychiatric and Emergency Settings

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Abstract

Introduction: Aggression is a professional hazard for those who are employed in the psychiatric setting. There is evidence that 52% of the nurses working in the emergency department experience physical or other violence from clients. There are not many studies conducted in India regarding the application of aggression management training in a psychiatric setting. **Material and Method:** A quantitative method was used for implementing a participatory training programme. There were 44 trainer group nurses and 138 trainee group nurses from psychiatric, emergency and intensive care settings. The trainer group nurses were trained by the investigator and the trainee group nurses were trained by the trainer group nurses. An interpretive exercise was developed and validated to assess the competency of the nurses on aggression management and violence prevention. There were two posttests for the trainer group nurses and there was one posttest for the trainee group nurses. **Results:** Among the trainer group nurses, majority (93.2%) of the nurses were non-competent during the pre-test. But all the nurses (100%) were competent during the post-test one and the post-test two. Among the trainee group nurses, majority (97.1%) of the nurses were non-competent during the pre-test and all the nurses (100%) were competent during the post-test. Majority of the key personnel (82%) opined that, their staff perform better aggression management practices after the training programme. **Conclusion:** An aggression management and violence prevention (AMVP) training programme based on participatory approach was found to be more effective to empower the nurses to work in psychiatric and emergency settings.

Keywords: participatory training programme, aggression management, violence prevention, nurses from psychiatry and emergency settings.

Introduction

Aggression is a professional hazard for those who are working in the mental healthcare setting¹.

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It is the responsibility of the nurses to arrange a safe environment for the clients, caregivers and other healthcare providers working in a psychiatric setting. During the last decade, the research on violence has increased and knowledge about different aspects of violent behaviour by clients in a psychiatric unit has grown. The concept of AMVP training programme for nurses working in the psychiatry, emergency and intensive care departments is not well implemented in the Indian setting.

Client related aggression is an enduring problem in psychiatric setting. It is a multidimensional problem

with serious concerns. These aggressions are verbal or physical and most of the time towards healthcare providers. Around 20-45% of hospitalized clients with psychiatric disorder shows violent behaviour. It has been reported that the prevalence of violence experienced by the mental healthcare workers due to aggressive client behaviour is between 14% and 61%². There is considerable evidence to show that training the nurses in psychiatric setting leads to minimization of aggressive behaviour in the clients. The client directed violence in psychiatric-mental healthcare setting may be reduced by providing violence prevention training for nurses and other healthcare providers.

There are not many studies conducted in India regarding the application of aggression management training in a psychiatric setting. There is a need in the Indian setting to develop an eco-system for the nurses and the clients to deliver safe and secure psychiatric nursing care. As per the new Mental Healthcare Act of 2017; healthcare providers need to be trained in order to safeguard the rights of the clients³. There is a need for training the nurses regarding the safety processes to be followed while restraining a patient. Therefore, an AMVP training programme was planned among nurses working in psychiatric facilities, emergency room, and intensive care units, who are dealing with aggressive and violent patients.

Material and Method

A quantitative approach was used for implementing a participatory training programme on aggression management and violence prevention. The training programme was implemented in 10 selected hospitals of Udupi and Dakshina Kannada districts of Karnataka. The sample size was calculated based on the findings of the pilot study. There were 44 trainer group nurses and 138 trainee group nurses for the AMVP training programme. Among the trainer group nurses, 24 were from psychiatric setting, 13 were from emergency setting and 7 were from intensive care unit. Among the trainee group nurses, 78 were from a psychiatric setting, 32 were from an emergency setting, and 28 were from the intensive care unit. The trainer group nurses were trained by the investigator and the trainee group nurses were trained by the trainer group nurses. There were

two posttests for the trainer group nurses at an interval of 7 days and 3 months and there was only one posttest for the trainee group nurses after 7 days of the training programme.

The present study used purposive and convenient sampling techniques. Trainer group nurses were selected based on the suggestion given by the nurse administrators of respective hospital. Nurses having minimum 6 months of experience in psychiatric, emergency or intensive care unit were selected as trainee group nurses. Nurse administrators who were actively involved in supervising the trainer and trainee group nurses were selected as key personnel to collect the overall opinion about the AMVP training programme.

The data collection instruments comprised of demographic proforma, interpretive exercise to assess the competency of nurses on violence prevention and aggression management, and opinionnaire to assess the impact of AMVP training programme. Validity, pretesting, reliability and pilot study were carried out prior to the data collection. Ethical approval was obtained from institutional ethical committee of XXXX Hospital, Mangaluru. An informed consent was taken from the participants after elucidating about the study and Participant Information Sheet was also distributed. The total duration of the study was 24 months.

The AMVP training programme consisted of the following components. A self-learning material on aggression management and violence prevention, a video presentation on aggression management techniques and safe use of soft limb restraints, interactive session on basics of aggression management, a demonstration on safe use of soft limb restraints and techniques of self-protection, and simulated situations to practice violence prevention and aggression management techniques.

Results

SPSS-16 software was used to analyse the quantitative data. The data were analyzed separately for trainer group nurses and trainee group nurses. The results are as follows.

Training for Trainer Group Nurses:**Table 1: Frequency and Percentage Distribution of Characteristics of Trainer Group Nurses**

N=44

Variable	Frequency (f)	Percentage (%)
Age (in years)		
20-30	24	54.5
31-40	7	15.9
> 40	13	29.5
Gender	11	25
Male	33	75
Female		
Professional qualification		
Diploma	30	68.2
Graduation	11	25
Any other	3	6.8
Designation		
Staff Nurse	28	63.6
Ward in-charge	8	18.2
Nurse administrator	8	18.2
Current area of work		
Psychiatry	24	54.5
Causality	13	29.5
ICU	7	15.9
Total years of experience		
1-3	13	29.5
4-6	6	13.6
>6	25	56.8

The data presented in table 1 show that 54.5% of the trainer group nurses were between the age group of 20-30 years. Among them, 75% were females and 68.2% were studied diploma in nursing. Sixty-four percentage

of the nurses were staff nurses by designation. Maximum nurses (54.5%) were from a psychiatric setting. Most of the nurses (56.8%) had more than 6 years of experience as a nurse.

Table 02: Level of Competency of Trainer Group Nurses

N=44

Competency Level	Range of Score	Pre		Post one		Post two	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Non-competent	0-17	41	93.2	-	-	-	-
Partly competent	18-20	3	6.8	-	-	-	-
Competent	21-34	-	-	44	100	44	100

The data presented in table 02 show that majority (93.2%) of the nurses were non-competent during the pre-test. But, all the nurses were competent (100%) during post-test one and post-test two.

Table 03: Area Wise Competency of Trainer Group Nurses

N=44

Areas of competency	Maximum possible score	Pre -test Mean±SD	Post-test I Mean±SD	Post-test II Mean±SD	Actual Gain	Actual % Gain
De-escalation	07	2.8±1.2	5.7±0.98	5.9±0.97	3.1	44.29
Self-protection	08	2.7±1.2	5.8±1.01	5.9±0.99	3.2	40.00
Restraining	04	2.3±1.1	3.7±0.5	3.9±0.4	1.6	40.00
Prevention	07	2.9±1.2	5.3±1.2	5.7±1.01	2.8	40.00
Other AMVP Techniques	08	2.7±1.3	4.1±1.5	4.4±1.7	1.7	21.25

The data presented in table 03 show that the mean post-test one and post-test two competency scores are higher than mean pre-test competency scores in all the areas of competency. The actual percentage gain is more in the area of de-escalation (44.29) and less in the area of other AMVP techniques (21.25).

Fisher's exact test revealed that there was no significant association between competency and selected demographic variables and it was inferred that aggression management and violence prevention related competency of trainer group nurses who participated in the AMVP training programme was independent of their age, gender, professional qualification, designation, current area of work, and years of experience.

Repeated measures one-way ANOVA test was carried out to find out the effectiveness of AMVP training programme among trainer group nurses. The test result showed that there was a significant difference in the competency of trainer group nurses who were participated in the AMVP training programme between the pre, post I and post II test scores, i.e., $p < .05$. It was also inferred that the competency increased significantly immediately after the training, and the performance was consistently higher three months after the training programme.

Training for Trainee Group Nurses:

Table 04: Frequency and Percentage Distribution of Characteristics of Trainee Group Nurses

N=138

Variable	Frequency (f)	Percentage (%)
Age (in years)		
20-30	86	62.3
31-40	19	13.8
> 40	33	23.9
Gender		
Male	15	10.8
Female	123	89.1
Professional qualification		
Diploma	88	63.8
Graduation	45	32.6
Any other	5	3.6
Designation		
Staff Nurse	116	84.1
Ward in-charge	17	12.3
Nurse administrator	5	3.6
Current area of work		
Psychiatry	72	52.2
Causality	38	27.5
ICU	28	20.3
Total years of experience		
1-3	72	52.2
4-6	17	12.3
>6	49	35.5

The data presented in table 04 show that most of the (62.3%) trainee group nurses were between the age group of 20-30 years. Majority of them (89.1%) were females. Majority of them (63.8%) studied diploma in nursing. Eighty-four percentage of the nurses were staff nurses by designation. Maximum nurses (52.2%) were from psychiatric area. Maximum nurses (52.2%) had 1-3 years' experience as a nurse.

Table 05: Level of Competency of Trainee Group Nurses

N=138

Competency	Range of Score	Pre test		Post test	
		Frequency	Percentage	Frequency	Percentage
Non-competent	0-17	134	97.1	-	-
Partly competent	18-20	4	2.9	-	-
Competent	21-34	-	-	138	100

The data presented in table 05 show that majority (97.1%) of the nurses were non-competent during pre-test and all the nurses were competent (100%) during post-test.

Table 06: Area Wise Competency of Trainee Group Nurses:

N=138

Area		Maximum possible score	Mean	SD	Mean %	Actual gain	Actual % Gain
De-escalation	Pre	07	2.6	0.89	37.1	3	42.86
	Post		5.6	0.98	80		
Self-protection	Pre	08	2.3	0.9	28.8	3.1	38.75
	Post		5.4	1.2	67.5		
Restraining	Pre	04	2.2	0.9	55	1.3	32.50
	Post		3.5	0.5	87.5		
Prevention	Pre	07	2.2	0.9	31.4	2.9	41.43
	Post		5.1	1.1	72.9		
Other AMVP Techniques	Pre	08	1.9	0.9	23.8	2.3	28.75
	Post		4.2	1.2	52.5		

The data presented in table 06 shows that the mean post-test competency scores of trainee group nurses are greater than the mean pre-test competency scores in all the areas of competency. The actual percentage gain is more in the area of de-escalation (42.86) and less in the area of other AMVP techniques (28.75).

Chi-square test revealed that there was no significant association between competency and the selected demographic variables and it was inferred that aggression management and violence prevention related competency of trainee group nurses who participated in the training programme was independent of their age, gender, professional qualification, designation, current area of work, and total years of experience.

Paired sample t test was carried out to find out the effectiveness of AMVP training programme among trainee group nurses. The test result showed that there was a significant difference in the average competency between pretest and posttest ($p < .05$). It was inferred that in the present study there was significant increase in the competency of the trainee group nurses who have undergone the AMVP training programme.

Opinion from Key personnel:

N=26

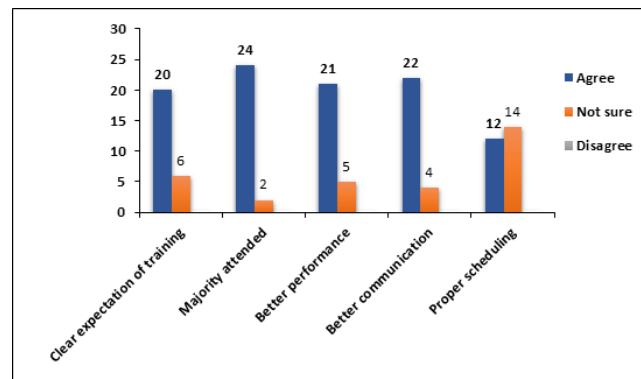


Figure 01: Cluster bar diagram showing opinion of key personnel regarding AMVP training programme

The data presented in figure 1 show that majority of the key personnel (92%) expressed that, most of their staff attended the AMVP training programme. Following the participation in the training programme, majority of them (81%) found that their staff perform better aggression management practices. The majority of the key personnel (85%) also expressed that the educational sessions which their staff received, helped them to communicate more efficiently concerning aggression management related matters.

Discussion

The current study revealed that the AMVP training programme was very effective in improving the competency of nurses; especially to improve the competency in using de-escalation and other techniques, self-protective measures, safe use of restraints, and preventive measures. The training was found to be effective for both the trainer group nurses and the trainee group nurses.

The present study was supported by a study done by Grube et al., (2001) to find out the effectiveness of a self-defense training to control aggressive behaviour. The result showed that the training increases the degree of self-protective behaviour and concurrently decreases the amount of strain in violent situations⁴. The present study also revealed that the AMVP training programme developed confidence in many of the nurses and also motivated the nurses to think positively about aggression management.

A study done by Arguvanli et al., (2015) concluded that the AMVP training programme was very effective in improving the knowledge and developing a favorable attitude towards aggression management and violence prevention among nurses. The mean knowledge score was 40.7 ± 18.2 before the training, 75.2 ± 22.4 immediately after the training and 68.1 ± 24.0 after three months of the training⁵. Whereas the present study has a slight increase in the mean score 3 months after the training programme, this may be because of the assessment of competency instead of assessing only the knowledge.

A one group pretest-posttest study done by Mthuvanakatachalam et al., (2014) show that there was a significant improvement in the knowledge score regarding aggression management after the training programme (<0.001 ; paired sample 't' test). The mean pre-test score was 7.97 ± 2.8 and the post-test score was 11.63 ± 1.96 . The study was conducted for the multi-disciplinary team members in a psychiatric setting. These findings were in harmony with the present study findings.

Conclusion

The present study revealed that the AMVP training programme developed confidence in many of the

nurses and also motivated the nurses to think positively about aggression management. Training of trainers and motivating the trainers to train the trainees will help to improve the competency of both trainer and trainee group nurses in aggression management and violence prevention. The AMVP training programme can be made mandatory for a newly hired employee in psychiatric and emergency settings.

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Ethical Clearance: Ethical clearance was obtained from institutional ethics committee of Kasturba Medical College, Mangaluru.

References

1. McPhaul KM, Lipscomb JA. Workplace violence in health care: recognized but not regulated. *Online Journal of Issues in Nursing*. 2004 Sep 30;9(3):7.
2. Guay S, Goncalves J, Boyer R. Evaluation of an education and training program to prevent and manage patients' violence in a mental health setting: a pretest-posttest intervention study. *InHealthcare* 2016 Sep (Vol. 4, No. 3, p. 49). Multidisciplinary Digital Publishing Institute.
3. Duffy RM, Kelly BD. India's Mental Healthcare Act, 2017: content, context, controversy. *International journal of law and psychiatry*. 2019 Jan 1;62:169-78.
4. Grube M. Aggressive behavior in psychiatric patients. Possible modification by self-defense training. *Der Nervenarzt*. 2001 Nov;72(11):867-71.
5. Bilgin H, Keser Ozcan N, Tulek Z, Kaya F, Boyacioglu NE, Erol O, Arguvanli Coban S, Pazvantoglu O, Gumus K. Student nurses' perceptions of aggression: An exploratory study of defensive styles, aggression experiences, and demographic factors. *Nursing & health sciences*. 2016 Jun;18(2):216-22.
6. Mthuvanakatachalam S, Kaur H, Joshi P, Negi S, Sonika P. Effectiveness of Aggression Management Training Programme for Staff Nurses and Ward Attendants Working in a Selected Psychiatric Hospital. *Journal of Psychiatric Nursing*. 2014 Jan 1;3(1):9.