"Effectiveness of Breathing Exercises as Therapeutic Play on Respiratory status among Children"

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BACKGROUND OF THE STUDY

Acute lower respiratory infections remains one of the most frequent reason for hospitalization in young children and offer a major challenge to the health care delivery facilities in developing countries like India, because of high morbidity and mortality rate..Lower respiratory infection are leading factor for death in children in developing countries resulting is nearly about 1.9 million child deaths per year, out of which 20% are estimated to occur in India. [1]

Breathing techniques are helpful for reducing breathing difficulty. The ultimate goal is for children to be able to relax quickly when faced with stressful situation. Breathing exercises play a notable role in airway clearance and parenchyma expansion by enhancing the efficiency of respiratory muscles and reduce the respiratory efforts and improve the lung function. [2]

OBJECTIVES

1) To assess and compare the respiratory status among children undergoing Nebulization therapy in experimental and comparison group before and after administration of breathing exercises as therapeutic play.

2) To determine the association of respiratory status among children undergoing Nebulization therapy with their selected variables.

MATERIAL AND METHOD

In this study Quantitative research approach with Quasi-experimental Non-equivalent control group pre-test post-test design was used. The setting of the study was Pediatric Medicine ward of Civil Hospital Ambala and AVS Ravi Hospital Yamuna-Nagar, Haryana and the sample was children admitted in hospital with lower respiratory tract disorder at the age group of 5-18 years. The sample size was 60 children with lower respiratory tract disorders (30 in experimental group and 30 in comparison group). The Modified Clinical Respiratory Score tool was used for the study to assess the respiratory status among children and the techniques was observation and Bio-Physiological Measurement.

PROCEDURE OF DATA COLLECTION

Experimental group: Pre-assessment of respiratory status among children was assessed. Then after 5 minutes of administration of Nebulization, breathing exercises as therapeutic play (balloon inflation, candle blowing, blow air into water with a straw was administered for 15 minutes once in a day for 3 days consecutively and then post-assessment was taken daily 5 minutes after the administration of breathing exercises as therapeutic play.

Comparison group: Pre-assessment of respiratory status among children was assessed. Then only nebulization therapy was administered and then post-assessment was taken daily after 25 minutes of administered.

SUMMARY

The major findings showed that the mean respiratory status was decreased in 2nd & 3rd post- intervention. These findings were consistent with the findings of Beulah Hepzibah was conducted study on effectiveness of blow-bottle exercises and the result showed that in the post-assessment 2ndand 3rd there is significant difference in study group at 0.001 level of significance.

RESULTS

The computed chi square value for the selected variables in experimental and comparison group showed both the groups were homogenous and comparable.

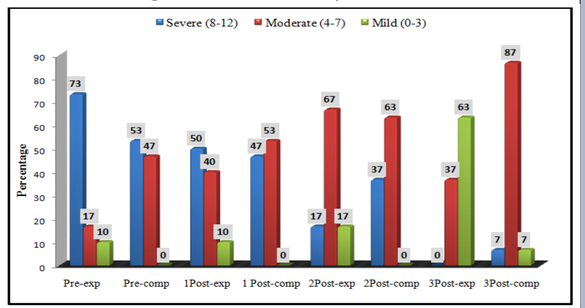


Figure 1: Bar Diagram Showing Respiratory Status among Children undergoing Nebulization therapy in Experimental and Comparison Group

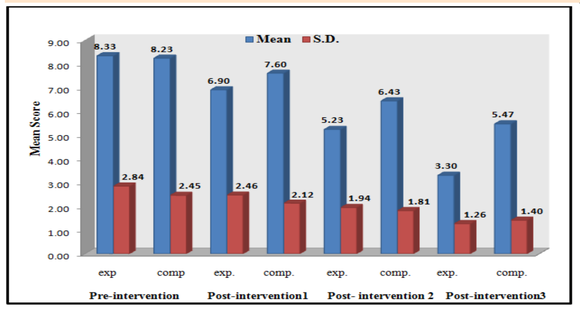


Figure 1: Bar Diagram comparison between the experimental and comparison group among children undergoing Nebulization therapy before and after administration of breathing exercises as therapeutic play

CONCLUSION

Respiratory status of children improved significantly in experimental group where breathing exercises as therapeutic play was administered along with nebulization therapy as compared to comparison group. So it is concluded that Breathing exercises as therapeutic play was effective in improving the respiratory status among children undergoing nebulization therapy with lower respiratory tract disorders.

RESULT CONTD..

Mean, Mean difference, standard deviation of difference, and 't ' value of respiratory status after Administration of Breathing Exercises as Therapeutic Play among Children undergoing Nebulization Therapy in Experimental and Comparison Group

Intervention	Group	Mean ±SD	M_D	SE_{MD}	't'value	'p'value
Post-intervention-1	Experimental	6.90 ±2.46				
	Comparison	7.60 ±2.12	0.70	0.59	1.17	0.24^{NS}
Post-intervention-2	Experimental	5.23± 1.94				
	Comparison	6.43 ±1.81	1.20	0.48	2.47	0.01*
Post-intervention-3	Experimental	3.30± 1.26				
	Comparison	5.46 ±1.40	2.16	0.34	6.27	0.001*

Maximum score= 12 Minimum score= 0

't' (1.17, 2.47, 6.27)= 2.00(p≤0.05) *significant(p≤0.05)-NS not significant(p> 0.05)

The table shows that there was a significant difference in post-intervention 2nd and 3rd between experimental and comparison group in respiratory status of children as computed 't' values **2.47 and 6.27** were higher than the tabulated 't' values **(2.00).** There was significant reduction in mean respiratory status in experimental and comparison group in all content area of Modified clinical respiratory score, except skin color t=1.54, p= 0.13 in experimental group, whereas in use of accessory muscles t= 1.54, p=1.16 and skin color t= 1.43, p=1.16 in comparison group and there was no significant association of respiratory status among children undergoing nebulization therapy with their selected variables except family h/o smoking and family h/o respiratory disease.

REFERENCES

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