



EFFECTIVENESS OF BATES THERAPY VS ACUPRESSURE ON VISUAL PROBLEMS AMONG ELDERLY PEOPLE IN SELECTED AREAS AT NAMAKKAL DISTRICT – PILOT STUDY

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Abstract:

The eye is the window of the human body through which it feels its way and enjoys the beauty of the world, but as age rises elderly people develop visual problems by showing the symptoms like blurred vision, visual defect, fore sight and short sight, etc, which blocks the beauty of eye sight. Assess the effectiveness of Bates therapy Vs Acupressure on Visual problems among elderly people. Two group pretest and posttest True experimental design was adopted for the study. KK illam and Little Flower sister's old age home, Erode. 30 elderly people with visual problems fulfilling the inclusion criteria were selected by simple random sampling. A pre-test was conducted by using Visual Acuity assessment scale & Visual Functioning Questionnaire. Immediately after pre-test Bates therapy Vs Acupressure was given twice in a day for 45 days and again post test was conducted to assess the effectiveness of treatment. Collected data was analysed by using descriptive and inferential statistics. In posttest, the mean score of the experimental group I sample was 102.2 (SD= 8.93) and the group II mean score was 121.3 (SD = 9.42). The paired 't' test value in experimental group I was 12.24 & 11.23 whereas in experimental group II it was 8.42 & 9.4. This showed that the Bates therapy was more effective than acupressure in enhancing the practice of the sample regarding visual problems. There was a statistically no significant association found between the post test scores of the sample with their demographic variables. The findings imply the need for educating elderly people on effective management of visual problems.

Key Words: Effectiveness, Acupressure, Bates Therapy, Visual Problems & Elderly People.

1. Introduction:

Ageing is a fact of life which does not takes place all of a sudden. It is fixed and definite for all individual in the normal course of a life time. Anyone who lives for a reasonably long time must definitely undergo the process of ageing. With ageing, there are many morphological, physiological and sociological changes which affect the life of elderly people [1]. Good health is one of the crucial for the elderly to maintain independence , autonomy and to remain productive that leads to improve quality of life in the old age .India is the second populous country in the world with 99.87 million persons 60 years of age , constituting 8.3 percent of the total population. [2]. Tamil Nadu has the highest number and proportion of elderly people living in their own especially elder women. Roughly one out of every 14 people aged over 60 is 7.5% to be precise, lives all by himself/herself compare with the average of 4% or one in 25. For elder women, the situation is even worse. More than one in nine 11.5% had no companionship or support at home against the national average of 5.5% [3]. And Dr. Merrill, (2004) [4] conducted clinical study on 21 subjects with common visual

problems including myopia, presbyopia, hyperopia and astigmatism that completed a 6 week course of vision therapy eye exercises. 19 subjects obtained improvements in refractive error, 19 subjects obtained improvements in visual acuity, and 16 subjects reduced their dependency on corrective lenses so they no longer needed them or only wore them part of the time.

Problem Statement:

A Comparative study to assess the effectiveness of Bates therapy Vs Acupressure on Visual problems among elderly people in selected areas at Namakkal District

Objectives:

- ♠ To assess the level of visual problems among experimental group I and II of elderly people before and after Bates therapy and Acupressure
- ♠ To determine the effectiveness of Bates therapy and Acupressure on visual problems among elderly people in experimental group I and II.
- ♠ To compare the effectiveness of Bates therapy and Acupressure on visual problems among elderly people in experimental group I and II.
- ♠ To find out the association between post test scores on visual problems among experimental group I and II of elderly people and their demographic variables.

Hypotheses:

- H₁: There will be a significant difference in visual problems between experimental group I and II elderly people before and after Bates therapy and Acupressure.
- H₂: There will be a significant difference between Bates therapy and Acupressure on visual problems among experimental group I and II elderly people.
- H₃: There will be a significant association between post test scores of visual problems among experimental group I and II of elderly people with their demographic variables.

2. Materials and Methods:

The experimental evaluative research approach was used to find out the effectiveness of the intervention. True experimental design (two group pre and posttest design) was adopted. An elderly person with visual problems residing in old age home at Rasipuram Talku was selected by using simple random samplings technique. Total sample was 30 elderly, out of 15 were experimental group I and 15 were experimental group II. There are three sections tools were used. They are; Demographic variables, Visual Acuity assessment scale and Visual Functioning Questionnaire. Pretest was conducted by using Visual Acuity assessment scale and Visual Functioning Questionnaire. Implementing the Bates therapy in experimental group I and Acupressure in experimental group II for the duration of 30 minutes twice in a day for 45 day and posttest was conducted with same pretest tool after 45 days. Inter-rater reliability (Cronbach's Alpha) was used to find out the reliability of the Visual Acuity assessment scale and Visual Functioning Questionnaire ($r^1 = 0.97$ and $r^2 = 0.82$). Descriptive Statistics - Percentage, Mean and Standard Deviation and Inferential Statistics - 't' test and Chi -square test was used.

3. Results and Discussion:

Section A: Percentage distrubation of adolescent girls according to their demographic variables.

Experimental group - I and II shows that,

- ✓ Highest percentage (47% and 60%) of elderly people were in the age group of 60 -65 years.
- ✓ 67% and 73% of them were female
- ✓ Most (60% and 53%) of them had diabetes mellitus
- ✓ All (100%) of thed had visual problems below 15 years

- ✓ 60% and 80% percentage of the elderly using spectacles .
- ✓ Similar percentage (60% and 60%) of them using spectacles below 10 years.
- ✓ Highest percentage (53% and 80%) of elderly had cataract
- ✓ 67% and 80% of them had eye check up twice in a year
- ✓ 40% and 34% of elderly had primary and higher secondary education.
- ✓ Similar percentage (87%& 87%) of them non vegetraian.

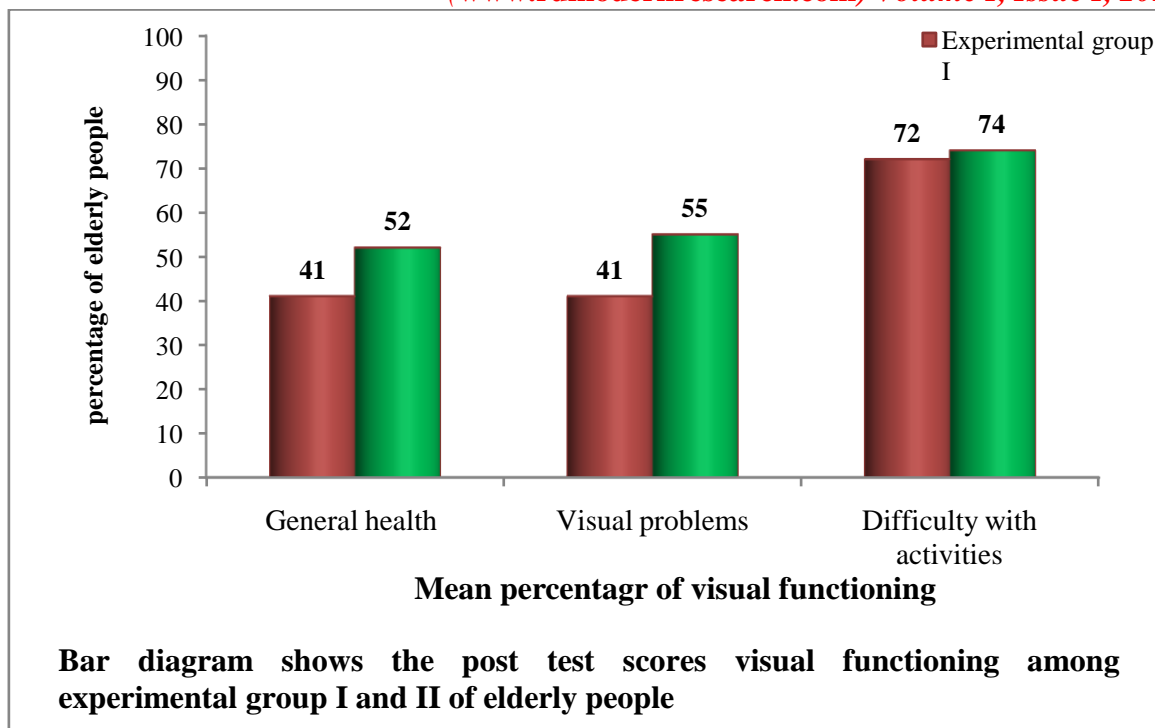
Section B: Frequency and percentage distribution of post test scores of visual acuity among elderly people in experimental group I and II (N₁= 15) (N₂ = 15)

Level of visual acuity	Experimental group I				Experimental group II			
	Post test score				Post test score			
	Right eye		Left eye		Right eye		Left eye	
	F	%	F	%	F	%	F	%
Sever	-	-	-	-	-	-	-	-
Moderate	1	7	-	-	6	40	5	33
Mild	14	93	15	100	9	60	10	67
Normal		-	-	-	-	-	-	-

The result of post test scores showed that in experimental group I 93% in right eye and all (100%) in left eye elderly had mild visual acuity whereas in experimental group II 60% in right eye and 67% in left eye elderly had mild visual acuity. The result showed that Bates therapy was more effective in reducing visual problems among elderly people than acupressure.

Section C Comparison of Mean, SD and percentage of pre and post test scores of visual function in experimental group I and II

Elderly Residents	Max Scores	Experimental Group I			Experimental Group II			Difference in mean %
		Post test			Post test			
		Mean %	SD	Mean %	Mean	SD	Mean %	
General health & Vision Difficulty with activities	24	9.9	0.25	41	12.5	0.96	52	11
Response to visual problems General health & Vision	72	29.6	0.42	41	39.3	0.45	55	14
Difficulty with activities	45	32.8	0.81	72	33.5	0.28	74	2
Total scores	141	102.2	8.93	72	121.3	9.42	86	14



Section D: (a). Significance of Pre and Post test scores of experimental group I and II

Sl. No.	Areas	't' Value		Level of Significant
		Experimental group I	Experimental group II	
1	Visual acuity	12.24	8.42	$P < 0.05$ Significant
2	Visual functioning	11.23	9.4	$P < 0.05$ Significant

df – 14 (n-1) Table Value = 2.145 ($P < 0.05$ Significant)

The paired 't' test score for visual acuity 12.24 and visual functioning 11.23 in experimental group I whereas in experimental group II score was 8.42 and 9.4 when compared to table value (2.145) it was high. It seems that bates therapy is more effective than acupuncture among elderly people with visual problems. The current study was agreed with **Adler (2002)**, conducted a study and concluded that Bates Therapy is an effective treatment for convergence insufficiency. The restoration of near point of convergence values to normal accompanied by a reduction in symptoms was concluded as successful treatment. Routine eye exercises were shown to have a highly significant ($t = 14.61, p < 0.001$) effect.

(b). Unpaired 't' test value of post test scores of experimental group I and II.

S. No	Areas	Unpaired 't' value	Level of significant
1.	Visual acuity	5.82	$P < 0.05$ Significant
2.	Visual functioning	6.21	$P < 0.05$ Significant

df = 28 Table Value = 2.02 Significant at $P < 0.05$

The unpaired 't' test total score was 5.82 in Visual acuity and 6.21 in Visual functioning, when compared to table value (2.02) it was high. It depicts that bates therapy is more effective than acupuncture among elderly people with visual problems.

4. Conclusion:

The study concluded that post test score in experimental group I and II depicts that, in experimental group I 93% in right eye and all (100%) in left eye elderly had

mild visual acuity whereas in experimental group II 60% in right eye and 67% in left eye elderly had mild visual acuity. The result showed that Bates therapy was more effective in reducing visual problems among elderly people than acupressure. The overall mean percentage in experimental group I was 72% whereas in experimental group II it was 86%, it revealing the difference of 14%. The paired 't' test value in experimental group I was 12.24 & 11.23 whereas in experimental group II it was 8.42 & 9.4. Highly significant association was found between posttest scores of visual problems among both the groups. No significant association was found between posttest and their demographic variables of both the groups among elderly people.

5. Recommendations

Based on the findings of the study the following recommendations have been made for further study.

- A study can be conducted with large samples to generalize the findings.
- A similar study can be conducted in different settings.
- A similar study can be conducted on visual field and pupillary size to light in different settings.
- A similar study can be conducted on various other types of visual problems (myopia, hyperopia, astigmatism, dry eye etc).
- A study can be conducted with control group.
- A comparative study can be undertaken to compare the effectiveness of Bates therapy with other therapies (vision therapy, leech therapy, hirudo therapy etc).
- A similar study can be conducted to test the effectiveness of Bates therapy and acupressure on all age groups.

6. Acknowledgement:

Researchers express their gratitude to the chairman Dr. N. Ganapathy, Dhanvantri College of Nursing, The Principal Prof. P. Padmavathi, Head of the Department of obstetrics and Gynaecological Nursing for their her efficient guidance, encouragement, motivation, valuable suggestions, Constant support and encouragement.

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