



## **Improving Quality of Life among Thalassemia Major in Adolescents: Video Assisted Teaching**

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### **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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## **ABSTRACT**

**Background:** Thalassemia major (B-TM) a grave health concern that poses serious health consequences during which there arises a mandatory need for regular blood transfusions that is vital for survival.. This led to the conception of this video assisted teaching to improve the Quality of Life (QOL) among B-TM patients.

**Aim:** To assess the effectiveness of video assisted teaching on knowledge regarding quality of life among Thalassemia Major Adolescence and to find the association between knowledge regarding quality of life among Thalassemia Major Adolescence with selected demographic variables.

**Materials and methods Sample:** A Pre- test and post - test designs was conducted in Gujarat. A total of 50 adolescents were included in study. The data from the thalassemic major adolescents is collected using a predefined questionnaire. Descriptive and inferential statistics were used to analyze the collected data, and the results were interpreted in terms of the study's goal and hypothesis. The 0.05 level of significance was chosen.

**Results:** Post-test result shows that majority of thalassemic major adolescence 11(22%) were having adequate knowledge, 39(78%) were showing moderate knowledge regarding quality of life among thalassemic major adolescence.

**Conclusion:** The study's goal was to see how efficient video assisted education is at improving

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knowledge about quality of life among thalassemia major adolescent. The goal of measuring thalassemia major adolescent knowledge and evaluating the effectiveness of video assisted instruction, researchers used a one-group pre-test and post-test approach. The knowledge of thalassemia major adolescents was assessed using a questionnaire. The data was interpreted by suitable appropriate statistical methods.

*Keywords: Thalassemia; quality of life; health instruction; video assisted teaching.*

## 1. INTRODUCTION

Globally, thalassemia remains to be a serious public health concern due to its increased prevalence sweeping across continents. The worldwide prevalence is estimated to be 2.55 per 1,000 newborns and more than 3000 die annually in their late teenage or early 20s resulting from uncontrolled iron overload [1,2]. Individuals affected by thalassemia develop symptoms that worsen with age making them medically, psychologically and socially dependent. The only proven cure for B-TM is allogenic stem cell therapy but still it is not applicable for everyone due to medical and financial constraints. Hence, blood transfusion and chelation therapy remain the primary treatment modality [3]. Quality of Life among thalassemia patients has always been overlooked. Especially when it comes to children and adolescents the complications of B-TM have been grave leading to significant anxiety, low mood, hopelessness and problems with socialization [4]. Adolescents suffering from B-TM develop negative cognition about life and self, which leads to low self-esteem. Parents of adolescents with B-TM develop concerns regarding poor growth and development, frequent hospitalization and financial issues. The above-mentioned factors prompt us to pivot the focus on the psychosocial wellbeing and Quality of Life among adolescents with B-TM [5]. There are clear evidences from the past literatures that there is a poor prognosis in patients with B-TM along with Depression, anxiety and stress. Early identification and management prove to be effective in this scenario. Adolescents with B-TM have impaired reasoning, abstract thinking deficits in language, attention, memory, visual spatial skills, and executive functions; a low intelligence quotient appears to be associated with poor school performance and physical or social limitations [6]. A multi-disciplinary approach is essential to promote Quality of Life in patients with B-TM. Adolescents are deprived from their normal life style due to frequent hospitalization, missing school, college, sports

and other recreational activities that are vital for a healthy mind and body. This pushes them into a sense of inadequacy and compensated selfimage [7].

The hardship of living with B-TM disrupts the entire family in all domains of life affecting their cognition, emotions and physical wellbeing as well. Adolescents with B-TM develop an idea that their life is different from others and they cannot lead a normal life. This thought affects their perception on wellbeing and Quality of Life. Hence there is a need to modify their cognitions and perceptions about the disease in order to promote their Quality of Life [8].

### 1.1 Need for the Study

The compiled nature of the disease and multi-modal treatment regimen for B-TM warrants a need for detailed assessment to understand the factors that cause the psychosocial concerns and poor quality of life among adolescents with B-TM [9]. The purpose of this study is to evaluate these factors as well as their effectiveness of health instruction through a Video assisted health education to promote the quality of life among adolescents with B-TM [10].

## 2. MATERIALS AND METHODS

It's a Pre- test and post - test design conducted at out patient at Shree Jalaram hospital which serves a large number of thalassemia adolescents. Convenience, purposeful sampling technique was used in this study. The inclusion criteria for the study included adolescents between age 10-19 years with B-TM being treated at Shree Jalaram hospital, Rajkot. Adolescents who were physically and mentally challenged were excluded from the study. A questionnaire to for demographic and clinical data such as age, gender, education, frequency of blood transfusion, family past history and duration of illness.

## 2.1 Field Work Descriptions

The duration of data collection of the main study was 7 days from 1/6/2015 to 8/6/2015. The study was conducted in Shri Jalaram Hospital at Rajkot. The participants were selected according to selection criteria. Data was collected between 2pm to 3pm from Monday to Monday. Patient who were present in the hospital were selected by convenient sampling. The investigator initially established the rapport with the patients. The purpose of the study, type of data collection procedure was explained to them and written consent was obtained from the patients who were present at the time of study. Each patients were given a closed ended questionnaires prior to Video Assisted Teaching program and the duration was 1 hour then after 7 days same questionnaires were provided and post-test were conducted.

## 3. RESULTS

Out of the 50 number of participants 39 were male and 11 were female. The post-test results show that the majority of thalassemic major adolescence 11 (22%) had adequate knowledge, while 39(78%) had moderate knowledge of quality of life among thalassemic major adolescence.

The Fig. 1 shows that the pre-test and post-test score of Thalassemia major adolescence on knowledge of quality of life; there is enhancement of knowledge of quality of life in all the aspect of post-test at 5% level of significance. So, it shows that, the VAT was effective.

The above table shows that, in the pre-test 17 (34%) patients were having inadequate knowledge, 29(58%) were having moderate knowledge of quality of life. Post-test result shows that majority of patients 39(78%) were having adequate knowledge 11(22%) were having moderate knowledge regarding quality of life.

The Table 4 shows that the analysis of association of selected demographic variables with post-test level of knowledge regarding quality of life among thalassemia major using chi-square test revealed that there was significant association relationship between post-test knowledge of patients with the variables such as age, gender, father's occupation, and family history of thalassemia. Because the obtain value were more than the table value at 0.05 level of significance. So the research hypothesis H1 is accepted and the null hypothesis is rejected.

**Table 1. Frequency and percentage distribution of Thalassemia Major adolescence according to demographic variables**

Demographic variables		Frequency N = 50	Percentage
1. Age (In year)	10-12	25	50%
	13-16	18	36%
	17-19	07	14%
2. Gender	Male	39	78%
	Female	11	22%
3. Occupation of father	Labour	21	42%
	Farmer	18	36%
	Driver	02	4%
	Others	09	18%
4. Family history of Thalassemia	Yes	39	78%
	No	11	22%

**Table 2. Aspect wise mean knowledge score of pre-test and post-test**

Aspect	Statement	Max. score	Mean score	Knowledge score		Paired 't' test
				Mean (%)	S.D (%)	
Pre-test	20	16	11.07	36.90	4.64	10.67
Post-test	20	19	17.24	57.48	4.46	
Enhancement	-	-	-	20.58	0.18	-

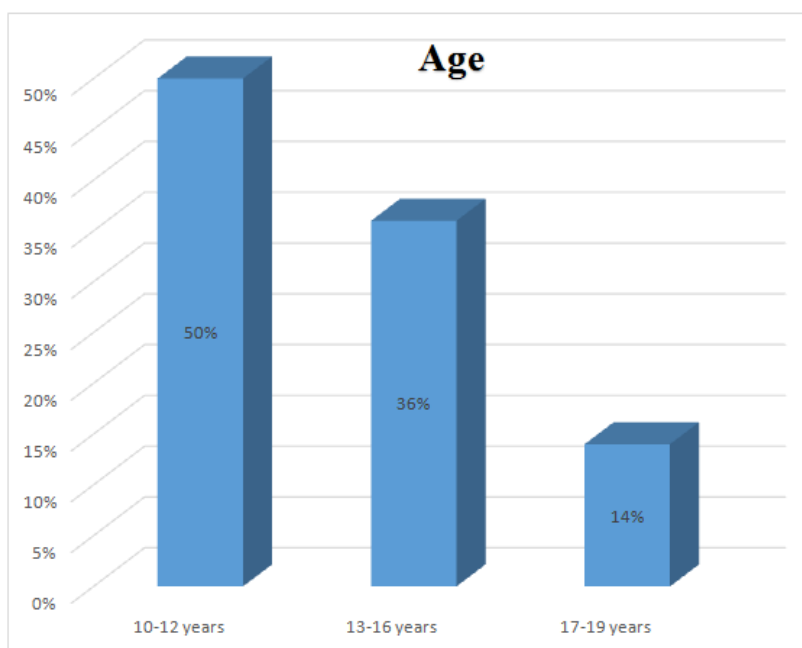


Fig. 1. Percentage distribution of thalassemia major adolescence according to Age

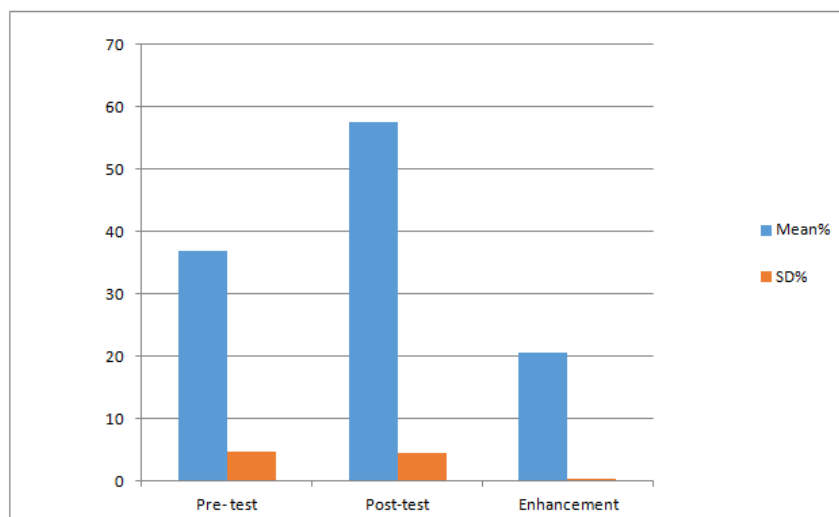


Fig. 2. Aspect wise mean knowledge score of pre-test and post-test

Table 3. Frequency distribution of the thalassemia major adolescence according to knowledge of quality of life before and after vat

Knowledge level	Respondents knowledge level			
	Pre-test		Post-test	
	No.	%	No.	%
Inadequate (<50%)	17	34	00	0
Moderate (50-75%)	29	58	11	22
Adequate (>75%)	04	08	39	78

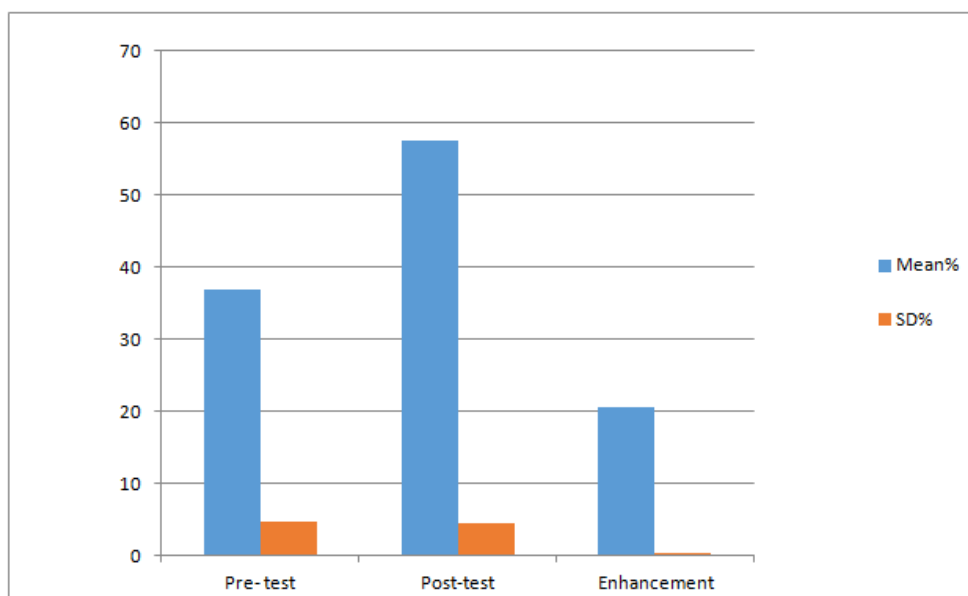


Fig. 3. Aspect wise mean knowledge score of pre-test and post-test

Table 4. Association between knowledge regarding quality of life among thalassemia major with selected demographic variables

Demographic variables	Sample(n)		Respondent knowledge				Chi-square value X2
	No. (50)	%	Adequate		Moderate		
			No.	%	No.	%	
<b>1. Age (year)</b>							
10-12	25	50	14	28	11	22	6.941
13-16	18	36	14	28	4	8	df=2
17-19	7	14	7	14	0	0	S
<b>2. Gender</b>							
Male	39	78	28	56	11	22	10.27
Female	11	22	2	4	9	18	df=1, S
<b>3. Father's occupation</b>							
Labor	21	42	15	30	6	12	12.9
Farmer	18	36	5	10	13	26	df=3
Driver	2	4	1	2	1	2	S
Other	9	18	2	4	7	14	
<b>4. History of thalassemia</b>							
Yes	39	78	34	68	5	10	8.67
No	11	22	5	10	6	12	df=1, S

Note: S-Significant at 5% level ( $p < 0.05$ ) ; NS- Not significant at 5% level ( $p > 0.05$ )

#### 4. DISCUSSION

In order to achieve the study's goal, the current study evaluated the impact of video assisted instruction on knowledge of quality of life among thalassemia major adolescent patients. The sample was chosen using a straightforward sampling procedure and a one-group pre-test post-test design [11]. A questionnaire was used

to collect data from 50 people before and after video assisted teaching. The study's findings have been examined in relation to the aims, hypothesis, and findings from other investigations [12].

Description of socio demographic variables as depicted in Table 1 reveals that maximum number of patients 25(50%) belongs to 10-12

years, 18(36%) belongs to 13-16 years and 7(14%) belongs to 17-19 years. About 39(78%) patients are male and 11(22%) patients are female. Father's occupation of patients is 21(42%) labor, 18(36%) farmer, 2(4%) driver, 9(18%) others. 39(78%) patient having family history of thalassemia and 11(22%) not having history of thalassemia [13].

Regarding pre-test the present study shows that majority 17(34%) of patients having inadequate knowledge, were 29(58%) having moderate knowledge. This indicates that knowledge regarding quality of life among thalassemia major adolescence was inadequate and it was necessary for investigator to improve the knowledge regarding quality of life among thalassemia major through VAT which would enable them to have an adequate knowledge among thalassemia major adolescence [14]. Assessment of knowledge revealed that the mean percentage knowledge of the thalassemia major adolescence such as 57.48% in related statement. Among the demographic variables analyzed in this age, gender, father's occupation and family history of thalassemia are found to have significant association with the knowledge score [15].

The result of the study proved that the thalassemia major adolescence had inadequate knowledge during pre-test, Hence it becomes the responsibility of health personnel to create awareness about the development of knowledge through video assisted teaching. The findings of this study help scope in the following areas.

The knowledge needs to be enable nursing personnel to identify knowledge regarding quality of life among thalassemia major adolescence so as video assisted teaching helps to improve knowledge regarding quality of life of thalassemia major adolescence.

## 5. CONCLUSION

The purpose of the study was to determine the effectiveness of video-assisted teaching on knowledge of quality of life among thalassemia major adolescent patients. In this study, the researcher used a Pre- test and post - test design approach one group pre-test and post-test design and with a view of measure the knowledge of thalassemia major adolescence and also evaluate the effectiveness of video assisted teaching. A questionnaire was used to assess knowledge of thalassemia major

adolescence. The data was interpreted by suitable appropriate statistical methods.

## The conclusion drawn on the basis of the findings of the study includes:

- The level of knowledge of thalassemia major adolescence was inadequate before Video assisted teaching.
- The video assisted teaching was effective in increasing the knowledge of thalassemia Major adolescence.
- I.e. overall and in all aspects in the post-test scores were high compared to pre-test scores.
- A paired 't' test resulted in a significant difference between the pre-test and post-test. knowledge score regarding quality of life among thalassemia major adolescent all the knowledge components under research (P0.05).
- A statically significant association was observed in age, gender, family history of thalassemia with in post-test on knowledge of 0.05 level of significance.

## CONSENT

The purpose of the study, type of data collection procedure was explained to them and written consent was obtained from the patients who were present at the time of study.

## ETHICAL APPROVAL

It's not applicable.

## ACKNOWLEDGEMENT

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## COMPETING INTERESTS

Authors have declared that no competing interests exist

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