

Impact of rational emotive behavioral therapy on personal value system of students with visual impairment

A group randomized control study

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Abstract

Background: Visually impaired students have been reported to struggle with value system and rash decision making process. This study examined the impact of rational emotive behavioral therapy (REBT) in reducing negative personal value system of visually impaired people.

Method: A group-randomized trial design was adopted using 56 students with visual impairment. The participants received a value-based rational emotive behavior programme and were assessed at 3 points using PVS and ABS-2-AV.

Results: The result of analysis of covariance showed that there was no significant difference between the treatment and control groups in initial personal value in Nigerian as measured by PVS. At the post-treatment the effect of V-REBP was significant in personal value and follow-up assessment respectively in favour of treatment group.

Conclusion: We concluded that there is significant impact of rational emotive behavioral therapy on reduction of negative personal value system of students with visual impairment.

Abbreviations: ηp^2 = effect size, % = percentage, χ^2 = chi-square, ΔR^2 = adjusted R^2 , ABS-2-AV = attitudes and belief scale 2-abbreviated version, ANCOVA = analysis of covariance, ICD-10-CM = International Classification of Diseases, Tenth Revision, Clinical Modification, Mean (SD) = mean (standard deviation), n = number of participant, NCCG = no-contact control group, P = probability value, PC = personal value, PVS = personal value scale, REBT = rational emotive behavior therapy, sig = associated probability, V-REBP = value-based rational emotive behavior programme.

Keywords: personal value system, rational emotive behavioral therapy, value-based rational emotive behavior programme, visually impaired people

1. Introduction

Values are the basis of human formation that predicts its form and traits. Value could mean laid down rules, regulations, and standards that guide individuals in a particular setting or an organization. Values are also seen as the level of trust, esteem,

worth, or merit placed on people or objects.^[1] It is worthy to note that values are the degree of importance attached to something that influences behavior.^[2] Values are both vital and important aspects of any person which informs one's decision and direction.^[3] Values create the belief that life is significant and

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The datasets generated during and/or analyzed during the current study are not publicly available, but are available from the corresponding author on reasonable request.

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serve as a degree of how important one's activities are, that's, reliable with that person's value system. Given the significance of value in a school setting, Bloom, Krathwohl, and Masia^[4] stated that value is the highest level of the affective domain of every student. Therefore it should be of important interest to professionals regardless of the field of study.^[5] This is because the value is a centre and determining the tendency of human disposition to action. Upon this, it helps students to determine career choice, direct future, and become productive in the world.

Value could be conceptualized in the philosophical and psychological dimensions.^[6] Philosophically, value is a rational construct that is underlined by human conduct.^[6] Psychologically, value affects the thoughts and feelings of an individual; hence it is associated with human behavior.^[7] Behaviorally, visually impaired people have displayed distrust, mistrust, disgust, low acceptance, unwillingness, irritation, and moodiness in the face of decision making.^[8] Negative values are undesirability, unworthiness, sub-standard, and inferiority.^[9] Across Nigeria, studies have shown that visually impaired people have been found to display more irrational beliefs, thoughts, and negative perceptions of self than the deaf, dumb, and other physically impaired people.^[10–12] These irrational beliefs, thoughts, and negative perceptions of self are a direct consequence of negative value.^[13]

In Nigeria, literature has shown that self-pity has made physically challenged persons most vulnerable to temper tantrums.^[9] Their temper tantrum nature is the direct cause of their fragrant negative value system.^[14] Physical impairment is a serious stout that effectively hampers goodness, morality, righteousness, and behavioral acumen. Those that are visually impaired because of the negative value system can unleash mayhem to their victims without any form of remorse.^[14] Visually impaired students have been reported to struggle with the value system and rash decision-making process.^[15] Globally, visually impaired people are estimated to be 2.2b,^[16] in Africa 26.3m.^[17] It has been recorded in Nigeria that visually impaired persons have a negative value system.^[18] Value system is an underlying belief that negatively affects the decision of those that are visually challenged.^[19] Negative value system is a commonplace among the blind.^[20] Negative and unrealistic operational value system is associated with individuals that are blind more compared to other populations with different disabilities.^[19] Visually impaired students perceive themselves with low self-concept, self-esteem, as socially incompetent and are emotionally ridden in the face of other typical developing individuals.^[21] Lack of rational value system has made visually impaired people to openly display aggressive behaviors that cause mood distortion, cognitive disturbances, and eventually affect academic performance.^[22]

Apart from the display of aggression as a result of the negative value system visually people in Nigeria, they also display a negative attitude towards self.^[23] Past literature has revealed that 87% of visually impaired in Nigeria are shredded with a negative attitude.^[24] Negative attitude is found to be prominent among visually impaired because of their irrational belief as being downtrodden.^[14] More so, negative value systems of the physically challenged present them with negative predetermine behavior and attitude.^[2] The visually impaired students tend to have distorted operational value systems that will help them readjust in doing the right thing expectedly.^[24] It was revealed that the visually impaired persons because of the wrong notion of the inability of the normal students to support them have developed significantly negative attitudinal development.^[25] By

extension, visually impaired persons attach more importance to negative that significantly influences their attitude and self-image.^[26] Furthermore, visually impaired students show a negative attitude towards their colleagues that undermines the achievement of goals and objectives as well as emotional adjustment.^[25]

Literature has shown that apart from negative attitudes and perceptions about self among visually impaired individuals as a result of negative value systems, they have irrational thoughts on their self-concept and as such considers it to be very low.^[27] Empirically, it was found that the value system visually impaired persons has a positive high relationship with low self-concept.^[1] Due to the negative value system, visually impaired people have low self-concept and poor self-esteem which may be a direct consequence of their poor orientation.^[13] Negative value system has prompted the visually impaired persons to frequently have battles with low self-concept.^[1]

The visually impaired persons as a result of negative value systems have associated their lifestyle with negative self-perception.^[28] Empirical-based literature showed that visually impaired people have strong irrational perceptions leading them to violence, laxity, and social incompetence when actively involved in social activities.^[29] Regrettably, a poor value system impairs active social functions.^[30] Given the possible influence of value system on behaviors and how false operational value system could be associated with cognitive-behavioral responses of the population with visual impairment, we proposed that rational emotive behavior therapy could dispute those dysfunctional beliefs. Past literature has proven the efficacy of rational emotive behavioral therapy in the harmonization of behavioral problems.^[31,15]

The rational emotive behavior therapy developed by Albert Ellis is attracting greater attention in human behavior modification (REBT).^[32] REBT was developed by Dr Albert Ellis in the 1950s with the main reason for addressing the weakness of psychoanalysis.^[33] REBT is a therapy that has the aim of reduction of negative and irrational beliefs. In doing this, REBT tries to clarify irrational and rational belief systems and advice that in reaction to mischief, maltreatment, failure, and uncertainties, there is every tendency that people can respond with a negative value or belief system. It is worthy to note therefore, that irrational beliefs lead to negative value systems, emotions, and negative behavior. Consequently, REBT is suitable for the reduction of irrational beliefs and value systems and thereby helps in rationality. There is a paucity of literature on the use of REBT in reducing the negative value system among visually impaired. This study proposes the use of REBT in the reduction of negative value system among visually impaired.

Empirically, it was submitted that REBT has a significant impact on the reduction of symptoms and signs of conduct-disorder among visually impaired people.^[34] Negative value system of visually impaired persons lurks around conduct-disorders which ranged from low self-concept, negative attitude, poor socialization, and poor behavioral and emotional dispositions.^[28] Poor value system is a product of poor conduct disorder of visually impaired people.^[30] Value system as closely related to self-confidence showed a statistically significant relationship between irrational beliefs and self-confidence as a result of treatment with rational emotive behavioral therapy.^[35] It was reported that the negative value system of the visually impaired persons is attributed to an irrational belief system.^[36] Report showed that a negative value system strongly correlated

unjustifiable beliefs.^[36,37] Studies have further shown that irrational belief of the visually impaired significantly predicts subjective negative value system like distrust,^[38] irritation,^[39] aggression,^[40] negative attitude^[10] and poor social disposition.^[22] Therefore, we argued that the weight of the negative value system of the visually impaired person increases due to negative self-orientation. Upon the increase, few psychological-based interventions addressed the wellbeing of people with visual impairment. Additionally, to the best of our knowledge, none has addressed the negative personal value system of people with visual impairment associated with irrationality. Based on these backdrops, it is worthy to note that the unjustifiable and irrational belief of the visually impaired people could be responsible for the unrealistic positive value system.^[41] From the angle of REBT, a negative value system of dump students could be addressed using rational-emotive behavioral techniques.^[12] A study revealed that the use of REBT-based therapy has a significant reduction effect on the negative value system of students with leg deformation.^[39] REBT has been proven to be very effective in the reduction of negative value perception of self among depressed autistic students.^[40] To that end, the main of this study is to investigate the impact of rational emotive behavior therapy in reducing the negative value system of the visually impaired students.

Based on the existing knowledge gap and purpose, this study posed to ask, what is the impact of rational emotive behavioral therapy (REBT) on reducing negative personal value systems of visually impaired people? In this study, the researchers hypothesized that a negative personal value system will be significantly reduced when exposed to the REBT-intervention compared to a waitlist control group. Furthermore, the researchers hypothesized that a significant reduction in negative personal value system among visually impaired students will be maintained at follow-up among the participants.

2. Method

2.1. Ethical statement

Research Ethics Committee of the institutions of the researchers granted ethical approval for the study. Also, a letter of informed consent was obtained from the parents. This research was conducted following the research principles of the American Psychological Association.

2.2. Design

The study adopted a group-randomized trial design. In the group randomized trial design, participants are allocated to groups based on the study conditions, and participants of these groups are monitored to ascertain the efficacy of the desired intervention.^[42] The group-randomized trial design gives room for randomization, control group, and ensures internal validity through REBT clinical trials.^[43-46] This design allows for Randomized assignment of the subjects into treatment and control group to ensure matching.^[47]

2.3. Measures

A 60-item instrument titled personal value scale (PVS) developed by Scott^[48] was used to measure the participants' values which include intellectualisation, kindheartedness, social competence, fidelity, academic actualization, physical changes, condition,

sincerity, spirituality, self-regulation, craftiness, and self-reliance. The instrument is a self-report that consists of 12-subscales with 6 items each. The item samples include Having a strong intellectual curiosity, Always telling the truth, even though it may hurt oneself or others, Working and living in harmony with other people, Never losing one's temper, no matter what the reason, Never cheating or having anything to do with cheating situations, even for a Friend, Working hard to improve the prestige and status of one's group. The PVS has 3-point Likert options of Always admire (3) Depends on Situation (2) Always Dislike (1). These responses ratings were considered appropriate for personal value system determination within a group.^[49] The PVS has been proven to have reliability and validity. There are some inherent systematic limitations on the usage which include: (a) the short form of it is at variance with the long-form, (b) the short form does not optimally balance consent in responses, and (c) the long-form that has 240-items are cost-intensive for some researchers to use.^[49] Scott^[48] therefore, filtered some items from the long-form to balance the short form. Thus the Cronbach alpha reliability coefficients for the PVS short form ranged from .55 to .78 while the long-form was from .80 to .89 respectively. Convergent construct validity was established for short form and long form with coefficients of .66 to .81 for intellectualization, physical changes, and religiosity. This justified the fact that the instrument is valid and reliable to measure the personal value system. Additionally, the internal consistency of .77 was found by the present researchers in the Nigerian context.

The Attitudes and Belief Scale 2-Abbreviated Version (ABS-2-AV) developed by Hyland et al^[50] is a 24-item self-report that measures 4 dimensions of irrational beliefs such as demandingness, catastrophizing, frustration intolerance, and self-downing and the 4 rational belief processes namely preferences, REB, frustration tolerance, and self-acceptance). The item is scored in line with a 5-point Likert scale ranging from Strongly Disagree = 1 to Strongly Agree = 5, with higher scores showing the greater endorsement of a given belief process.^[51]

2.4. Participants and procedure

The participants were 56 students with visual impairment in Imo state Nigeria. The power of the sample size was ascertained using GPower 3.1 software.^[52] The demographic characteristics of the participants were gender (n=34 males and n=22 females), with an age range of 13 to 21, class, religious affiliation, ethnicity, state of origin, position in the family, parental educational status, family size, etc (see Table 1). The clinical/psychological characteristics of the participants are low, mild, and severe visual impairment.

The inclusion criteria for a participant to be eligible in this study are (1) the participants must have been diagnosed using the guidelines of International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) of World Health Organization, (2) the participants must be in regular/ inclusive schools, (3) must complete expression of interest form, and (5), any students that were identified by the teachers as having signs of visual impairment. Exclusion criteria are (1) health status of the participants (2) typical developing students (3) people in special schools, (4) those that are receiving treatment from counsellors, etc, (5) inability to complete the expression and self-concept form were not included and (6) The process of selection of the participants was implemented by the researchers. The researchers concealed the selection process to avoid bias.

Table 1
Demographic characteristics of the participants.

Characteristics	V-REBP group n (%)	No contact control group n (%)	Statistic χ^2	Sig
Gender				
Male	17 (60.7)	15 (53.6)	0.292	.589
Female	11 (39.3)	13 (46.4)		
Age				
16 yr & below	6 (21.4)	6 (21.49)	0.101	.951
17–19 yr	14 (50.0)	15 (53.6)		
20 yr and above	8 (28.6)	7 (25.0)		
Religious affiliation				
Christianity	17 (60.7)	17 (60.7)	0.786	.675
Islam	6 (21.4)	8 (28.6)		
Others	5 (17.9)	3 (10.7)		
Ethnicity				
Igbo	11 (39.3)	11 (39.3)	1.636	.651
Hausa	6 (21.4)	6 (21.4)		
Yoruba	7 (25.0)	4 (14.3)		
Others	4 (14.3)	7 (25.0)		
State				
Enugu	9 (32.1)	5 (17.9)	2.227	.527
Imo	5 (17.9)	7 (25.0)		
Anambra	5 (17.9)	8 (28.6)		
Others	9 (32.1)	8 (28.6)		
Position in the family				
First	8 (28.6)	4 (14.3)	2.204	.531
Second	7 (25.0)	10 (35.7)		
Third	7 (25.0)	9 (32.1)		
Fourth	6 (21.4)	5 (17.9)		
Parents edu				
Primary	6 (21.4)	4 (14.3)	1.249	.524
Secondary	9 (32.1)	13 (46.4)		
Tertiary	13 (46.4)	11 (39.3)		
Family size				
5 & below	8 (28.6)	5 (17.9)	2.808	.422
6–10	11 (39.3)	11 (39.3)		
11–15	3 (10.7)	5 (17.9)		
16 & above	6 (21.4)	3 (10.7)		

% = percentage, χ^2 = chi-square, n = number of participant, V-REBP = value-based rational emotive behavior programme, Sig = associated probability.

After the selection process of the participants, 56 participants were recruited out of 69 students that submitted and completed expression of interest form and whose parents completed written form consent as directed by the researchers. The 56 recruited participants were screened at time 1 (pre-test) using PVS and ABS-2-AV. The assessment aimed to ascertain the baseline of the condition (false personal value system). The participants were grouped into 2 (value-based rational emotive behavior programme group: 28 participants and no-contact control group: 28 participants) see consort flow diagram (Fig. 1) of participants randomization for further details.

The participants in the treatment group were exposed to value-based rational emotive behavior programme (V-REBP) while those in the no-contact control group were held constant and did not have access to V-REBP. The researchers are very much aware that the no-contact group has the right to the intervention that was denied them. The ethical implications of not involving the no-contact group were duly acknowledged by the researchers in the limitation section. The treatment group was administered with rational emotive intervention programme by the rational emotive behavior counsellors using both Igbo and English

Languages because they are bilingual in their language development. These counsellors have PhD as their highest qualification and more than 7 years of cognate knowledge and experience on the administration of rational emotive behavioral therapy. The treatment ran from November to February 2019. This period enabled the participants to receive intervention for 12 weeks. Introduction, rapport, decorum, ethical conduct, behavior, traits, signs, and manifestations of negative value system were explored in the first to fourth sessions. In session 5 to 8, the participants were shown ways to identify negative value system, ways to address events and activities associated with the negative value system and its possible and plausible management methods using cognitive-behavioral techniques. The sessions 9 to 12 were engrossed with the continuation of identification of fundamental belief systems that are associated with negative personal value systems and roles of rational emotive behavior principles. Consequently, the disputation approach was used to overcome irrational thoughts and beliefs. Each of these sessions was accompanied by revisions and feedbacks. Interestingly, all the participants actively and duly participated in the 12 sessions. This implied that 100% was recorded in their compliance level. The researchers provided 2 coaster buses to convey the participants to Imo State. Within this period, the researchers provided food worth 5 US dollars for each attendee. After the session, both the participants in the treatment group and the no-contact control group were assessed in Time 2. A one-month follow-up meeting was established after 6 months of testing to ascertain the students' retention level. The researchers carried-out the follow-up contacts once every week. After which third assessment (Time 3) was done on the participants to mark the end of the therapy. The breakdown of the intervention procedure is shown in Table 2.

2.5. Intervention

Value-based rational emotive behavior programme (V-REBP) developed by the researchers was the treatment plan. The principles of rational emotive behavioral therapy (REBT) were strictly adhered to during the design of this manual. The V-REBP manual is a social, psychological, and educational programme that was geared at the usage of REBT dictates in correcting irrational beliefs associated with negative value system among visually impaired persons. The manual is a composite of 12 sessions for 12 weeks. The mechanism was one session for one hour (1 h) every week. The negative value system was identified using participants' explored situations, ideas, and experiences as well as interpretations given by them. Therefore, they were able to show how they have erroneously given weight to activities, situations, and events correlated with the value system. Their interpretations and explanations affected their value systems. The identified negative value system expression was (1) my life is in shambles, I do not attract recognition from my peers, (2) I always perceive the school authority antagonizing me and my efforts (3) I am dumbfounded that my right to education can be trampled on. (4) I foresee the host community making a caricature of my enthusiastic efforts to be educated, etc. The therapists used logical disputation by changing their magical beliefs. This functional disputing approach was used in making the visually impaired people understand the adverse effect of the magical belief and how it has informed their negative value system.^[53] Similarly, Socratic, Didactic, and metaphorical styles were used in disputing the irrational beliefs of the visually impaired people. The various strategies that were employed during

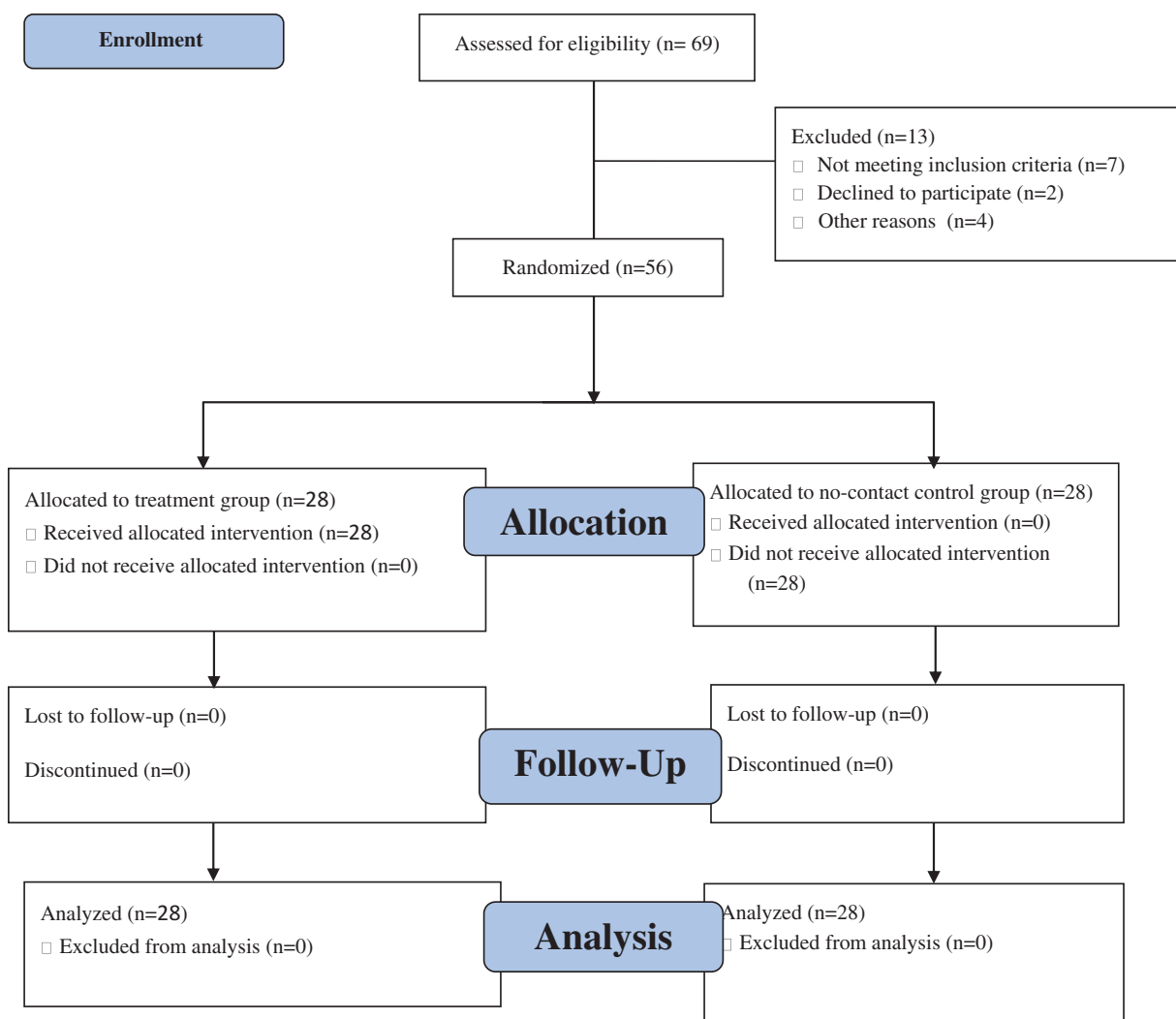


Figure 1. Participants flow diagram.

the intervention ranged from relaxation, hypnosis, meditation, behavioral exercise, cognitive disputation to biofeedback.^[54–59] The visually impaired persons were taught how to voluntarily disregard irrational thoughts (see Table 2).

2.6. Data analysis

The data of the pre-test, post-test, and follow-up were subjected to statistical analysis using SPSS version 22. Specifically, analysis of covariance (ANCOVA) was used for the method of data analysis. ANCOVA was used by the researchers because (1) the participants were completely randomized into treatment and control groups; (2) the independent variable with 2 levels (rational emotive behavioral therapy and waitlisted control groups) was categorical; (3) the dependent variables (personal values) data was continuous at pre-test, post-test and follow-up stages respectively; (4) the personal values data at pre-test, post-test, and follow-up stages were simultaneously analyzed; (5) personal values at pre-test and post-test stage did not correlate above $r = .90$ (see Table 4) as suggested by Tabachnick and Fidell^[60]; (7) Levene's Test of Equality of Error Variance at pre-test, post-test and follow-up stages were not significant (pre-

test: $P = .299$; post-test: $P = .757$; and follow-up: $P = .507$; see Table 5).

3. Results

Table 3 reveals the study outcomes for the participants in the treatment group (V-REBP) compared to the no-contact control group (NCCG) over the 3 periods. Before the treatment, Table 2 reveals that there was no significant difference between the treatment and control groups in initial personal value in Nigerian as measured by PVS, $F(1,55) = .545$, $P = .464$, $\eta^2 = .010$, $\Delta R^2 = .015$. At the post-treatment the effect of V-REBP was significant in personal value as measured by PVS, $F(1,55) = 76.229$, $P = .001$, $\eta^2 = .594$, $\Delta R^2 = 0.629$. After the post-treatment, a follow-up result show that $F(1,55) = 130.286$, $P = .001$, $\eta^2 = .715$, $\Delta R^2 = 0.743$ which is still significant in favour of treatment group. Furthermore, the (partial eta squared) value of 0.594 at the post-test level was indicative that V-REBP accounted for about a 59.4% increase in the personal value of participants in Nigeria.

Table 4 result show the association between personal value and irrational belief at pre-treatment, post-treatment, and follow-up (Time 1, Time 2, and Time 3) stages. The value of .682, .748, and

Table 2
Summary of the value-based rational emotive behavior programme.

Objectives	Weeks	Sessions	Activities	Techniques
To familiarize present the participants with the operational documents and guidelines for the programme	1	1	Formal introduction and familiarization by a way of stating names, classes, religion, ethnicity etc. exchange of pleasantries, rapports and the establishment of norm, standard and decorum for the programme commencement.	Therapeutic agreement
Education on negative personal value system	2–3	2–3	Apt explanation of personal value system stress Explanation of negative personal value system	Bodily and mood observation technique
Highlighting of signs and symptoms of negative personal value system	4–5	4–5	Brief explanation of the traits, characteristics, signs and symptoms associated with negative personal value system. Exposition on how these signs and symptoms are related to negative personal value system Brief revision, and take home activities were done	Bio-feedback, relaxing practical exercise techniques
Identification of negative personal value systems related behavior	6	6	How to identify conditions associated with negative personal value system. Highlighting and making meaningful the irrational conceptions of personal value system	Hypnosis and practice activities were the techniques
The subjects were given detailed and in-depth knowledge on the basis of the programme and its purposes.	7	7	The meaning of rational emotive behavior therapy was divulged to the students. Rational emotive behavior therapy was related negative personal values. Discussions were initiated on how to overcome conditions, events that are associated negative personal value system. Brief revision, and take home activities	Cognitive disputation, mood observation and practical exercise were the techniques
The researchers endeavoured to determine the ideolog, philosophies and irrational beliefs that preoccupy the subjects about their negative personal value system	8	8	The ideologies, philosophies and irrational beliefs systems that becloud negative value systems were identified and disputed through clarifications. Brief revision, and take home activities	Bio-feedback, relaxation, meditation and Yoga skills were the practical techniques
To dwell in positivism	9	9	Management of negative personal value system in the mist discouraging environmental conditions and challenging situations. Dealing with those identified irrational beliefs and emotional prompts that trigger negative personal value systems. Brief revision, and take home activities (conclusion of Self-Help form)	cognitive disputation, behavior and practice exercises, hypnosis, meditation, Soya skills and problem-solving are the techniques
The subjects were positioned to reduce unjustifiable and erroneous beliefs as well as over-evaluation of phenomena. They were also helped in the ways to make use of accurate beliefs and rational self-assessment.	10	10	The subjects were briefed how to have positive reflection on reality as to accurately apply them tackle life personal value situations, They were properly briefed on how to address and dispute any form of absolutism, imminent undue inferences and self-defeating ideologies. Brief revision, and take home activities	Cognitive disputation, behavioral practice, meditation, Yoga skills, problem-solving approach and Rational-emotive behavioral techniques
To help make life meaningful again through self- worth development	11	11	How to devise coping strategies and face realities of life instead of the delimiting factors of negative personal value systems	Behavioral practices Coping strategies, problem- solving approach, rational-emotive behavior, value redefinition skills, cognitive dismissal approach and practice activities.
Follow-up	12	12	Brief revision, and take home activities and termination of the session	

.806 was obtained for the association between personal value and irrational belief at pre-test treatment, post-treatment, and follow-up stages respectively. The results indicate that there is a strong association between personal value and irrational belief (Table 5).

4. Discussion

The study ascertained the impact of rational emotive behavior therapy in the reduction of personal negative value system of

students with visual impairment students. The findings of this study corroborated with our conjecture on the effect of rational emotive behavior therapy on the reduction of personal value system of visually impaired students. Before treatment, the findings from the study showed no significant difference when the treatment group and the no-contact group on their negative value system. Literature reported that up to 80% of the visually impaired students have a personal negative value system.^[28] The researchers recorded a significant reduction in the personal value system of visually impaired students that were exposed to the

Table 3
Multivariate analysis of variance showing the effect of REBT on perceptions of personal value in Nigeria as measured by PVS.

Time	Measures	Group	Mean (SD)	F	P	η_p^2	ΔR^2	95%CI
Pre-test	PV	V-REBP	105.29 (5.62)	.545	.464	.010	.015	102.82–106.21
		NCCG	104.04 (6.26)					
Post-test	PV	V-REBP	136.89 (6.94)	76.229	.001	.594	.629	127.41–130.88
		NCCG	121.96 (7.81)					
Follow-up	PV	V-REBP	139.00 (5.49)	130.286	.001	.715	.743	128.61–131.61
		NCCG	121.96 (7.81)					

ΔR^2 = adjusted R^2 , η_p^2 = effect size, mean (SD) = mean (standard deviation), NCCG = no-contact control group, P = probability value, PC = personal value, V-REBT = Rational emotive behavioral programme.

Table 4
Regression analysis of participants' responses on personal value and irrational belief.

Model	R	R ²	Adjusted R ²	Std. error of the estimate	Change statistics					Durbin-watson
					R ² change	F change	df1	df2	Sig. F change	
Time1	.682	.466	.456	2.72056	.466	47.051	1	54	.000	1.397
Time2	.748	.560	.551	3.34154	.560	68.604	1	54	.000	.807
Time3	.806	.650	.644	2.87142	.650	100.394	1	54	.000	.694

intervention. Expository, it was revealed that there is a significant interaction effect of treatment and time on the reduction of the negative personal value system of students using rational emotive behavioral therapy. Before the intervention, the pre-test enumerated that the students exhibited some irrational and erroneous personal negative thoughts and belief systems. Some of the identified thoughts and irrational and rash belief, decision and thoughts are, that my life is not worth it, I do not think my sight lost will enable to earn recognition from my peers, I always perceive that I am a burden to the school authority and I feel that my presence does not encourage effective teaching by the teachers. The report showed that visually impaired exhibit irrational behavior and absolute thought disorder.^[30] Going by the assumptions of REBT, it was shown that negative conduct and value systems emanate from an absolute and irrational belief system.^[30] Consequently, negative personal value-orientated behavior, self-esteem, self-confidence, and aggression is reported to be the aftermath of irrational beliefs.^[31] This assertion above was authenticated by the items in the personal value scale used for the study. These irrational belief systems dissuade logical and critical thinking leading to rash decision making and maladjustment among the visually impaired people.^[61] This buttressed the fact that a negative value system is not devoid and devout of poor behavioral and cognitive manifestations.^[62] The irrational holistic view of the visually impaired persons is the root cause of their negative value system.^[63] It has been revealed that a negative value system also promotes conduct disorder of the physically challenged.^[63] The study of Obike^[64] showed that

physically impaired persons are more of the repository of erroneous beliefs that are the measures of their obvious unruly behaviors.

A past study showed that REBT significantly efficacious on the reduction of the cognitive shortcoming of the visually impaired people,^[34] as well as low self-esteem, irrational attitude, devocalization, and emotional incongruence.^[28] REBT has been found to very effective in the reduction of poor conduct-disorder of physically challenged.^[30] REBT was used to reduce significantly irrational thought beliefs on self-confidence.

Concurring to the findings of this study was Ejekwu^[65] who reported that the work value system improved after a series of positive perspective talks during workshops and conferences. From the revelation given by the author, the programme was valued laden and value system management. Irrational emotional consideration grow-up negative personal value system mostly among the physically challenged people.^[66] Supporting the finding of this study was Ejekwu^[65] who displayed the effectiveness of REBT in reducing irrational organizational goal orientations among a population of workers that are physically challenged. A cross-section of studies done on people that are physically challenged revealed a reduction in behavioral misconduct due to rational emotive behavioral intervention.^[63] The significant reduction effect of the rational emotive behavioral intervention has been reported to reduce undecieve behavioral disposition.^[67] Interestingly, the study has buttressed the efficacy of REBT in reducing rash and behavioral expression over time.^[66,68,69] Scholars have also attested to the effectiveness of REBT in personal social acceptance and belongingness.^[69-71]

The major strenghts of this study are: (1) this study has shown to be the first to unravel the efficacy of REBT on the reduction of negative personal value system among visually impaired students, (2) the researchers were able to carry out follow-up study after a long period and (3) the study was specifically on visually impaired students with negative value system. Even though this study has sterling recognitions, there were some underlining limitations. Some of the limitations are (1) the study made use of quantitative

Table 5
Levene's test of equality of error variances.

	F	df1	df2	Sig.
PrePV	1.256	3	52	.299
PostPV	.396	3	52	.757
FPV	.787	3	52	.507

data for analysis which may have not elicited the desirable responses from the participants, therefore there is a need for a proper mix between quantitative and qualitative means of data collection. (2) Other typical developing children in the schools may have a negative personal value system yet this study excluded them without equal consideration. Therefore, subsequent studies should allow them to access the same intervention.

4.1. Practice implications

The study has made it very clear that rational emotive behavioral therapy has shown a significant reduction in the personal value system of visually impaired students. There are practice implications for the findings of this study. There is a clarion call for experts and practitioners of REBT to have advancement in their expertise and prowess in the disputation of the irrational negative value system of the visually impaired students that could lead to the philosophical, psychological, physiological, and social well-being of these students. The study has given credence to the importance of REBT in the management of a personal value system and value-related issues among the visually impaired students. There is therefore urgent need for experts and practitioners of REBT to provide clinical support services to those who show asymptomatic and symptomatic personal negative value systems. The social workers should also seize any relevant opportunity where there is an encounter with persons with a personal negative value system to dislodge them of the attendant irrational and illogical thoughts as well as beliefs using REBT approach of disputation. If these personal negative value systems are not properly taken care of among visually impaired students, it may degenerate to typically developing students thereby hampering the effective and efficient achievement of school goals and objectives.^[64] It may also lead to poor cognitive development among the visually impaired students,^[63] lack of interest,^[72,73] disjointed, and critical reflections^[74] and pronounced maladaptive and maladjusted behaviors.^[63,67] Going from social, psychological and physiological conditions stemming from the negative personal value system of the visually impaired students, it is most expedient at this time for the social workers, clinical counsellors, psychologists, teachers, psychiatrist, school administrators, public health providers, churches and host communities to provide the necessary and professional advice and assistance especially to these crop of students through the reductions of their irrational beliefs.

Past literature revealed that visually impaired students who are having a rash and behavioral misconduct do not understand that it is a direct consequence of irrational value placement.^[75] The use of REBT should be most appropriate at this time. Therefore, REBT therapists and experts should intensify efforts to demystify the irrational negative value system associated with visually impaired students. The involvement of relevant REBT professionals will not only reduce the negative value system of the physically challenged students but will increase the actualization of their academic achievement in school as well as in the attainment of educational goals and objectives.^[68] However, this noble gesture cannot be achieved with adequate sensitization and orientation of the school administrators, teachers, and parents of these visually impaired students.^[75] The effective collaboration of the relevant stakeholders such as the psychologists, counsellors, physicians, parents, and social workers will mitigate the erroneous notions and malicious behaviors of physically impaired students,^[11] these stake-

holders can make the academic and social activities of the visually impaired students profiting by engaging them in perspective talks, realistic personal positive evaluation, and informative value assessment patterns.^[74] More so, mindfulness and biofeedback should be applied.^[45] These techniques and skills will enhance the demystification of the negative personal value systems of the visually impaired students. The researchers suggest that the school administrators should integrate the principles and strategies of REBT in the counselling approaches of students with a negative value system especially the visually impaired students. This study should not only be domiciled in Nigeria but should be replicated in other countries of the world by rational emotive behavioral therapists to reduce the negative value system of the visually impaired students across the globe. The researchers also recommend that rational emotive behavioral therapy be adopted by stakeholders in and outside the school system in cushioning the effect of the personal negative value system of visually impaired students.

5. Conclusion

From the findings of this study, it was concluded that that rational emotive behavior therapy is effective in reducing personal negative value system among students as well as the reduction of such behavior over a long period. Consequently, the researchers suggest that future studies should be carried out with a triangulation study using rational emotive behavior therapy on visually impaired students who manifest symptoms and signs of negative value system.

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