

EFFECT OF COGNITIVE RESTRUCTURING AND SELF-INSTRUCTIONAL THERAPIES ON BLINDISM BEHAVIOUR OF STUDENTS WITH BLINDNESS IN OYO STATE

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ABSTRACT

This study investigated the effects of cognitive restructuring and self instructional therapies on blindism behavior among students with blindness in Oyo State, Nigeria. A pretest and posttest quasi experimental research design was employed, with participants selected through purposive sampling. Sixty students with blindness were screened using the Snellen Chart and assigned to three groups. Cognitive restructuring group consisted of 20 participants, self instructional therapy group had 20 participants, and the control group also had 20 participants. Data were collected using an adapted Blindism Scale. The intervention lasted ten weeks, and data analysis was conducted using Analysis of Covariance and the Scheffé post hoc test at the 0.05 level of significance. Findings indicated a significant effect of cognitive restructuring on blindism behavior among students with blindness. Self instructional therapy also produced a significant reduction in blindism behavior. However, no significant interaction effect was found between the two therapies. Similarly, gender did not significantly interact with either therapy independently. A significant interaction effect was observed between treatment and gender on blindism behavior. The study concluded that both cognitive restructuring and self instructional therapies are effective in reducing blindism among students with blindness. It recommended training special educators, therapists, and caregivers in these therapeutic approaches, adopting student centered teaching methods, and fostering collaboration among educators, psychologists, and parents to enhance behavioral outcomes.

Keywords: Effect, Cognitive restructuring, Self instructional therapy, Blindism Behaviour, Students, Blindness.

Introduction

The onset of blindness usually brings negative events into an individual's life. Persons with visual impairment particularly those with blindness often experience more problems than their sighted counterparts, which may affect the way they think and behave in the society. Persons with blindness often suffer from depression at a higher rate than their sighted counterparts.

Students with blindness according to Cahaya, Subagya, and Mohammad (2021) are individuals who have lost all or part of their visual function. The loss of the visual system creates barriers and have an impact on activities in the blind people's daily life. Visual

impairment according to Abodunrin and Abodunrin (2020) is a condition characterized by deficiency in the organ of sight which hinders individual capability from performing certain functions that requires the use of sight. It happens when there is a disease attack on the eye (e.g. measles) or when there is accident affecting eye (e.g. domestic or road accident). Children with visual impairment do not present a typical personality profile, thus, it is possible to recognize certain frequently occurring traits, namely high levels of anxiety, some difficulties in social interactions, an excessive production of speech (with declarative rather than communicative intent) serving to fill an emotional void, behavioral rigidities that need to be early detected and constantly monitored. (Fazzi, Micheletti, Galli, Rossi, Gitti, and Molinaro 2019). It is possible that difficulty with eye movements contributes to abnormal visual behaviors. Visual comorbidities are relatively common among children with Autism spectrum disorder (ASD) and about 20 and 44% of Autism spectrum disorder children have visually significant refractive error, one-third have strabismus, and one-fifth have amblyopia (Margaret and Susan 2023). Based on the findings of Margaret and Susan (2023), ASD is 30 times more common in children with congenital blindness.

According to Sarah and Jennifer (2021) Restricted or repetitive behavior (RRB) is common for individuals with visual impairment. The ability to behave is quite a difficult thing for blind. (Cahaya, Subagya, and Mohammad 2021). This is a direct or indirect result of disability limitations. When an individual with blindness finds it difficult to adjustment to the environment, it could result in social rejection or withdrawal from the society.

Blindism is seen as repetitive behavior in children with blindness. Blindism could also be regarded as the unconscious habit of children with visual impairment. Usually, children with blindness particularly those with congenital blindness exhibit undesirable behaviour or actions including but not limited to frequent eye rubbing, eye poking and pressing, body twisting or rocking, repetitive handling of objects, dragging legs, finger flicking, light gazing, rapid forced blinking, tongue stimulation, hitting the tip of cane guide repeatedly on ground while waiting or alone, wrinkling the nose, grimacing, jerking or banging the head, head turning, eye rubbing, hand and finger flapping and unusual hand postures.

Blindism according to Mohammad, Donni, Supriyadi, and Intan (2022) is the behavior of the visually impaired with repeated distinctive movements which become unconscious habits. Many children with visual impairment exhibit some unacceptable self-stimulatory behaviour known as blindisms. Blindism may be as a result of visual loss. This is because these children do not see and are usually loss in thought. They do not usually care for their physic as they could not appreciate beauty. The undesirable behaviour that children with blindness engage in may be to stimulate their brain as they do not get the visual stimulation like their sighted counterpart. Even though researchers have not agreed on the causes of blindism in children with visual impairment. However, this stereotyped behaviours could also be observed in children with other disability such as autism.

Many children with visual impairment are not socialized. As a result, they play with themselves or part of their body and this turns to a habit that is not acceptable in our society. All undesirable behaviour exhibited by children with blindness may be caused by stress/anxiety, fatigue or boredom. Tics exhibited by children with blindness are harmless but

without adequate measure to caution the child, they may not overcome it and they may take it to adulthood.

Children with visual impairment may find stimulation in acceptable ways rather than socially unacceptable mannerism. For example, they may be introduced to a variety of toys. They may also be engaged in other socially acceptable activities like singing with them, and exploring objects. This would divert their attention from unacceptable behaviour.

Blindism is also known as mannerisms that a child with blindness uses to cope with tensions that may arise as a result of stimulation deficit, physical activity deprivation, fear, excitement, frustration and insecurity. Learners with blindness should be taught essential behaviour that would enable them cope with life demands because they could not imitate expected behaviour like their sighted peers. Stereotyped behaviour usually occurs in children with blindness as professionals working with children with blindness usually notice strange repetitive behavior among children with blindness. Blindisms, is also known as restricted or repetitive behavior (RRB) in visually impaired children, and stereotyped behaviors in blind children are a set of stereotypes (stereotyped, habitual and characteristic movements) in visually impaired children (Molinaro, Micheletti, Rossi, Gitti, Galli, Merabet, Fazzi, and Elisa 2020).

Blindism is a reflex movement such as pricking the eye, shaking their heads, banging their heads, shaking their bodies. (Cahaya, Subagya, and Mohammad 2021). Individuals with vision impairments according to Eleanor (2025), especially those who have been blind since birth or infancy, have a tendency to develop repetitive self-stimulating movements. These behaviors includes but not limited to; body picking, rocking, spinning, head-wagging or weaving, hand clapping, rolling the eyes back, or light-gazing. Increased focus on students' positive behaviors in general is an effective way to reduce activities considered to be negative. (DeMario and Crowley in Eleanor 2025). The ability of children with blindness to adjust to environment depends on several internal and external factors like home, social, educational and psychological adjustment. (Sunday and Assam 2023)

Blindism, also known as restricted or repetitive behavior (RRB) in visually impaired children, and stereotyped behaviors in blind children are a set of stereotypies (stereotyped, habitual and characteristic movements) in visually impaired children. (Wikipedia, 2025). Blindism appear most often in those who are congenitally blind. Frequent movements include body rocking, repetitive handling of objects, hand and finger movements, and eye poking, pressing and rubbing. (Wikipedia, 2025). Whatever persons with blindness do (productive or unproductive) becomes a habit. Certain techniques for accomplishing life's daily tasks and the attitudes and beliefs associated with them can have lasting impacts on the adjustment-to-blindness process. (Justin 2020). According Justin (2020), Students who are blind have gotten into a habit of negative self-talk. Children with visual impairment are usually carried away with this undesirable behaviour which in turn affects their physical appearance and social life. In fact, a research conducted by (Mohammad, Donni, Supriyadi, and Intan, 2022) concluded that almost every person with visual impairment exhibits blindism behaviour which causes children to experience lack of concentration and problems in social interaction barriers.

Cognitive restructuring is a therapeutic technique where individuals learn to identify, challenge, and modify negative or irrational thinking and behaviour. Cognitive restructuring

techniques deconstruct unhelpful thoughts and rebuild them in a more balanced and accurate way (Rebecca, 2023). Cognitive therapy attempt to redress maladaptive learning and behaviour by helping persons with blindness to become 'realistic' in their thinking. Therapists could engage persons with blindness in a collaborative and experimental process, the outcome of which is purportedly the promotion of healthy and realistic cognitive restructuring. Cognitive restructuring would be useful in helping children with visual impairment to cope with blindness behaviour and faulty thoughts as faulty thoughts lead to maladaptive behaviours.

Cognitive restructuring is a group of therapeutic techniques that help people notice and change negative thinking patterns. (Rebecca, 2023). The goal of cognitive restructuring is to help persons with blindness to identify problematic automatic thoughts (what are termed 'cognitive distortions'), and to help the individual challenge the validity of these thoughts. Cognitive restructuring helps in correcting maladaptive or dysfunctional behaviors, and an individual's cognitions about oneself, the future, and the world. When cognitive restructuring is adequately used as intervention, it would be effective in modifying underlying cognitive distortions associated with the onset of feelings of hopelessness and enhances skills to manage life difficulties.

Blindness leads to trauma and personal loss. Individuals with blindness lose their sense of value, what they can offer to their loved ones, and how they may contribute to society more generally. There is evidence to suggest cognitive restructuring approach can be useful to address the underlying cognitions contributing to profound emotional difficulties.

Cognitive restructuring therapy is a as structured, goal-directed, and collaborative intervention strategies that focus on the exploration, evaluation, and substitution of the maladaptive thoughts, appraisals, and beliefs that maintain psychological disturbance. A key goal of cognitive restructuring therapy is to reverse maladaptive schema-congruent processing bias by questioning the automatic acceptance of negative schema-congruent information and encouraging assimilation of more adaptive schema-incongruent data. (Clark, 2013). Cognitive distortions represent mistakes in thinking about specific situations that lead to negative behavioral and emotional outcomes that include development of sadness, hopelessness, and feelings of anxiousness (Persons; Collin 2019). Specific cognitive distortions have been found to negatively correlate with the lower quality of life following the onset of a disability and include overgeneralization, catastrophizing, personalizing, and selective abstraction (Smith, Follick, Ahern, and Adams; Collin 2019). Cognitive distortions, which are false or harmful patterns of thinking that can cause suffering, are something that cognitive behavioral therapy assists clients in recognizing and challenging. Cognitive distortions involving irrational ideas or biases may result in distress, anxiety, or depression. Cognitive restructuring and thought monitoring helps individuals to identify and modify these distortions by recognizing cognitive distortions and replacing them with more realistic and adaptive thinking, mood and functioning can improve. (Herbert & Forman, 2011; Kaidbay, 2025).

Cognitive restructuring therapy is effective for treating depression, generalized anxiety, phobia, panic, paranoid, conversive disorder, poor attention, truancy, frustration, mood disorder and drug abuse (Rodriguez, 2014; Zandi & Moradi 2016).

Cognitive restructuring focuses on the relationship between emotions, current maladaptive or dysfunctional behaviors, and an individual's cognitions about oneself, the future, and the world (Beck;Collin 2019).

Self-instruction therapy on the other hand is an approach that enables an individual to regulate their behaviour by themselves. When individuals with visual impairment are taught how to regulate their behaviour by themselves, they will be able to control their behaviour better and maintain their behaviour without the interference of others. Self-instruction therapy mimic the manner in which language is normally used to self-regulate behavior. (Graham et al;Robert 2012). When individuals with visual impairment are taught how to regulate their behaviour by themselves, they will be able to control their behaviour better and maintain their behaviour without the interference of others Robert (2012). The benefits of self-instructional therapy according to

Donald (2004) includes; reduction of anxiety, improves self-esteem, aids in breaking unhealthy habits, encourages positive behavior change and coping with addiction.

Mettler (2008) explained that adjustment to blindness helps a blind person to refine and correct bad habits. Habit is seen as behaviors that are performed with a minimum of cognitive effort, allowing for an effective use of our limited cognitive capacities. (Jager; Justin 2020). The automatizing of behavior makes habits less susceptible to change than reasoned behavior. Bad habits are habits that provide positive outcomes in the short run but detrimental outcomes in the long run and bad habits are difficult to change because cognitive information about negative outcomes struggle to influence automatic behavioral scripts. (Justin 2020). Breaking bad habits according to Justine (2020) can be difficult, but creativity, common sense, and a commitment to change can enable practitioners to help students with blindness to develop the discipline to live the lives they want.

Self-instructional therapy involve guiding individuals to internalize prompts or cues that promote self-regulation of thoughts and actions. This therapy has been utilized in various domains, including education, therapy, and skill acquisition. Grounded in cognitive-behavioral principles, self-instructional techniques help individuals enhance self-control, problem-solving skills, and overall cognitive functioning by teaching them how to instruct themselves in challenging situations.

Self-instructional therapy makes learners active participants in the learning process as against the conventional teaching method and it enables them to talk to themselves (Rukevwe, 2022). Montague (2014), states that it helps pupils to generate self-statements and use a range of strategies to self-monitor their own learning and performance as well as become models for their peers.

Self-instruction place learner at the centre of learning. It describes a situation in which learners can assume varying degrees of responsibilities for their learning. For self- instructed learning to occur, two conditions must be satisfied; firstly, the learner must take care of his learning by making decisions concerning all aspects of learning including determining the objective, defining progressions, selecting techniques used and evaluating what has been acquired. To do this, the learner is trained in certain learning strategies like planning and organizing,

evaluating, practicing, timed practicing, developing and using memory aids, getting help, asking for correction and peer-learning. Secondly, there must be a learning structure in which the learner can exercise control over the learning process. (Anyichie, and Onyedike 2012). self instruction ensures the independence of student. Self-instructional therapy is a powerful approach for promoting self-regulation, autonomy, and critical thinking across various ways of life. With self instruction, students would be able to monitor and regulate their cognitive activities, as well as other processes and functions associated with metacognition.

Hypotheses

The following hypotheses would be tested at 0.05 level of significant:

There is no significant effect of cognitive restructuring on the intensity of blindisms in individuals with blindness.

There is no significant effect of self-instructional therapy on the intensity of blindisms in individuals with blindness.

There is no significant interaction effect between cognitive restructuring and self-instructional therapy on students with blindism

There is no significant interaction effect of treatments and gender on blindism

Methods

This paper adopted pretest-posttest quasi-experimental research design. Quasi-experimental research is a research design that attempts to establish cause-and-effect relationships. This design involved a pre-test of the subjects before the introduction of treatment followed by a post-test of the subjects after the treatment. The population of this study consists of learners with blindness in selected primary and secondary schools. The participants was selected using a purposive sampling technique. Special primary and secondary schools was selected in Okeho and Ibadan. Participants was divided into three groups: treatment group 1 (School 1), treatment group 2 (School 2) and a control group (school3). 60 participants was selected having ascertained that they are with blindness through the use of Snellen chart. The participants comprised of 20 students with blindness from school 1, (cognitive restructuring), 20 students with blindness from School 2 (self instruction technique) and 20 students from school (no treatment). The inferential statistics of Analysis of Covariance (ANCOVA) was used to analyse the data collected while Sheffe Post-Hoc analysis was used to isolate the source of significant main effect of the variables. The null hypoptheses was tested at 0.05 level of significance.

Results

Hypothesis One: There is no significant effect of cognitive restructuring on the intensity of blindisms in individuals with blindness.

Table 1: Frequency distribution of participants by gender

Treatment	Gender	Mean	Std. Deviation	N
cognitive restructuring	Female	2.90	2.079	10
	Male	4.50	1.179	10
	Total	3.70	1.838	20
Control	Female	13.50	4.994	10
	Male	21.30	6.165	10
	Total	17.40	6.770	20
self-instruction	Female	5.50	1.080	10
	Male	4.70	1.567	10
	Total	5.10	1.373	20
Total	Female	7.30	5.522	30
	Male	10.17	8.781	30
	Total	8.73	7.415	60

Table 1 reveals that males and females have equal chance of participating in the study.

Table 2

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2593.133 ^a	5	518.627	43.046	.000	.799
Intercept	4576.267	1	4576.267	379.832	.000	.876
pretest	133.628	1	133.628	8.939	.004	.138
Treatment	2272.933	2	1136.467	94.327	.000	.777
GENDER	123.267	1	123.267	10.231	.002	.159
treatment * GENDER	196.933	2	98.467	8.173	.001	.232
Error	650.600	54	12.048			
Total	7820.000	60				
Corrected Total	3243.733	59				

a. R Squared = .799 (Adjusted R Squared = .781)

Hypotheses

The following are the summary of findings as shown in Table 2:

H₀: There is no significant effect of cognitive restructuring on the intensity of blindisms in individuals with blindness.

The average blindism score for participants receiving cognitive restructuring (Mean = 3.70) is significantly lower than that of the control group (Mean = 17.40), indicating that cognitive restructuring does have a significant effect ($F(2, 54) = 94.327, p < 0.001$) on reducing the intensity of blindisms. This suggests that hypothesis one which proposed no significant effect is invalid and stand rejected. This indicates that alternative hypothesis will rather be valid. Therefore, significant effect of cognitive restructuring on the intensity of blindisms in individuals with blindness.

Ho₂: There is no significant effect of self-instructional therapy on the intensity of blindisms in individuals with blindness.

As shown in table 1 and 2, in line with the null hypothesis that is stated above, the self-instruction group had a mean score of 5.10, which is not significantly different from the cognitive restructuring group ($p = 0.623$). However, it is significantly lower than the control group (Mean = 17.40, $p < 0.001$). Hence, that hypothesis two which proposed no significant effect is invalid and stand rejected. This means there is a significant effect of self-instructional therapy on the intensity of blindisms in individuals with blindness.

Ho₃: There is no significant interaction effect between cognitive restructuring and self-instructional therapy on students with blindism

Table 2 indicated no significant interaction effect between cognitive restructuring and self-instructional therapies on students with blindism ($F(2, 54) = 1.378, p = 0.930$). This means that the effect of one treatment does not depend on the level of the other.

Ho₄: There is no significant interaction effect of treatments and gender on blindism.

The result in table 1 and 2 in consonance to the null hypothesis, shows significance for the interaction of treatment and gender ($F(2, 54) = 8.173, p = 0.001$). This means that gender has interaction with treatment, and affects how each treatment have impact on blindism.

Discussion of Findings

The finding of this study revealed significant effect of cognitive restructuring on the intensity of blindisms in individuals with blindness. This implies that cognitive restructuring technique is capable of managing the blindism behaviour of learners with blindness. This is line with the Research Conducted by Ahmad, Abdulmumini, Usman, Rabi, and Sofiazianti (2024) on the effects of Cognitive Restructuring on correcting behaviour among students. This finding also corresponds with the research of Nia, Tahmasebian and Kakabaraee (2014) which shows that cognitive restructuring has effect on anxiety level. And concluded that cognitive reconstructing helps students to focus on task and focus on self response.

It is also similar with the study of Ahmad, Abdulmumini, Usman, Rabi, and Sofiazianti (2024) on the effects of Cognitive Restructuring on Academic Procrastination among Secondary School Students revealed that cognitive restructuring techniques was effective in reducing academic procrastination cramming.

The finding also indicated significant effect of self-instructional therapy on the intensity of blindisms in individuals with blindness. This means that self-instructional therapy is effective in managing blindism behaviour in learners with blindness. This corresponds with the research work of Cahaya, Subagya, and Mohammad (2021), on reducing Blindism Behavior with Self-Management Therapy for Blind Students, the research shows that self-management techniques can reduce blindism behavior for students with visual impairment. Previous

studies found that cognitive restructuring can improve students' self efficacy (Cristi, 2013), student procrastination (Agustin, 2017), improve assertive behavior (Hasibuan, Purwanto, and Japar, 2018), and reduce consumptive behavior (Yuliyana, Wibowo, & Japar, 2018). The research of Motevalli, Sulaiman, Hamzah, Garmjani, Kamaliyeh and Roslan (2013) on the effects of cognitive restructuring intervention on state and trait anxiety also concluded that cognitive restructuring is an effective intervention for reducing students' trait anxiety symptoms.

It is also consolidated by the research of Nurul (2023) who worked on the effect of self management techniques with self monitoring strategies, antecedent manipulation, self praise and self instruction, self evaluation, and self reinforcement in reducing blindism behavior in blind children. The research results showed that there was an increase in the mean level of the target behavior and the research concluded that the application of self-management techniques can reduce blindism behavior in blind children.

The findings also revealed that there is a significant interaction effect of treatments and gender on blindism. This implies that gender does interact with treatment, and it affects how each treatment impacts blindism. This finding is contrary to the research work of Salihu, Paiko and Yunusa (2023) on effects of Cognitive Reframing and Self-Management Techniques on Dependent Personality Behaviour among Senior Secondary School Students in Suleja Education Zone, Niger State, Nigeria. The findings revealed that there is no significant difference in the effectiveness of cognitive reframing and self-management counselling techniques on dependent personality behaviour among senior secondary school students in Suleja education zone, Niger State. Also, the research work of Edim and Abodunrin (2023) on Cognitive behavioural and systemic therapies on school adjustment of students with visual impairment in cross river state, revealed that the treatments are effective in fostering positive thought pattern of pupils with visual impairment and also in improving family relationships with these pupils necessary for school adjustment with no moderating effect of gender and age of onset.

Conclusion

The findings from this study signify that cognitive restructuring and self-instructional therapies have a positive impact on reducing the intensity of blindism behaviors in individuals with blindness. The study provides evidence that cognitive restructuring as a therapy as the capacity to identify ineffective patterns in thinking, challenging and changing them to be more effective. Also, it helps in correcting negative emotion, and enables learners with blindness be more skillful in behavior. While self-instructional therapy on the other hand builds self-confidence in learners with blindness and enables learners with blindness to take responsibility in correcting their misbehavior. This research emphasizes the need for teachers particularly special educators to work hand in hand with psychologists and parents of students with blindness in correcting the blindism behaviour of their learners. Also, this brings to light the need for teacher to guide the learners with blindness on the best way to correct and take responsibility of their blindism behaviour.

Recommendations

Based on the findings of this research work, the following recommendations are put forward: There should be a training for special educators, therapists, and caregivers on the use of cognitive restructuring technique in correcting the blindness behaviour of their learners with visual impairment.

Student should be allowed to control and or correct their behaviour and they should be supported with necessary tools and advice.

Teaching should be student-centered. This would ensure the total attention of students with visual impairment. No student would think of engaging in blindness behaviour when their full attention is in what they are learning.

Self-instructional interventions that can be used in both individual and group settings should be designed to manage blindness behaviour through self-regulation and self-monitoring strategies

Materials should be adapted to meet the specific needs of learners with blindness. This would ensure accessibility and usability.

Awareness program should be organized for stakeholders (teachers, families and the community) on the effectiveness of cognitive restructuring and self-instructional therapies for managing blindness behaviour.

Finally, resources and information should be provided in formats suitable for individuals with visual impairments.

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