ReAttach Therapy International Foundation, Torenstraat 1A, 5528 AT Hoogeloon, The Netherlands
Journal for ReAttach Therapy and Developmental Diversities, 2022 May 28; 4(2):62-71.
https://doi.org/10.26407/jrtdd2021.1.45
eISSN: 2589-7799
Psychological Research

Effectiveness of Self-Management Therapy in the Management of Psychological Distress Among Adolescents with Hearing Loss in Oyo State, Nigeria

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Received: 20-October-2021
Revised: 29-November-2021
Accepted: 6-December-2021
Online first: 7-December-2021

Scientific article

Abstract

Introduction: Psychological wellbeing has been linked to wellness in all facets of life. However, this may be altered when man becomes distressed because of some factors influencing man's stable psychological wellness. Hence, such conditions need to be moderated.

Objective: The primary objective of this study is to examine the effectiveness of self-management therapy in the management of psychological distress among adolescents with hearing loss.

Methods: This study is quasi experimental pre-test-post- test design to investigate the effectiveness of self-management therapy in the management of psychological distress using a sample of 39 adolescents with hearing loss purposively selected through the Kesler Psychological Distress Scale with index scores of 19 and above. Clinical Outcomes in Routine Evaluation (Core-10) and Rosenberg Self-esteem Rating Scale were used for both pre and post- test.

Results: The results revealed that there was a significant main effect of treatment (self-management therapy) on management of psychological distress among adolescents; there was a significant main effect of onset of hearing loss on participants' management of psychological distress and there was a significant interaction effect of onset of hearing loss and self-esteem on participants' management of psychological distress.

Conclusion: Self- management therapy proved effective in the management of psychological distress among adolescents with hearing loss; hence the focus should be on the use of self-management therapy to manage distressed conditions among adolescents with hearing loss.

Keywords: Psychological distress, hearing loss, Self-management therapy, Adolescents, Onset of loss, Self-esteem

Citation: Adeniyi, O.S., Olufemi-Adeniyi, A.O., Raheem, W.A. Effectiveness of Self-Management Therapy in the Management of Psychological Distress Among Adolescents with Hearing Loss in Oyo State, Nigeria. *Journal for ReAttach Therapy and Developmental Diversities*, 2022 May 28; 4(2):62-71. https://doi.org/10.26407/jrtdd2021.1.45

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1. Introduction

Hearing loss is a health condition associated with loss of auditory sensitivity to verbal or acoustic information due to anomalies of auditory frameworks. Hearing loss is challenging at any age, but it poses unique issues for adolescents' age because it is a stage of identity formation and personality development. Most research on children and adolescents with hearing loss focused on speech and language development, because these individuals have auditory challenges in a sound-dominated world (Theunissen, Rieffe, Kouwenberg , Soede , Briaire &, Frijns 2011). However, the impact of hearing loss can be far reaching and can affect the total life-style of the affected.

Early onset of hearing loss in children not only leads to delay in speech development and language skills but also affects quality of life. Research in the quality of life of people with hearing loss has revealed that that the loss can cause social isolation, low self-esteem and depression (Hogan, Shipley, Strazdins, Purcell, & Baker 2011; Brown, & Comes, 2015). The problem of hearing loss at any age is also linked with anxiety, poor self-esteem and value, cognitive decline and lower health related quality of life (Mehboob, Raf, Ahmed & Mehjabeen 2019) and psychological distress. Psychological distress is defined as the condition of emotional disturbance with feelings of anxiety such as restless and tense depression in the form of a feeling of hopelessness and loss of interest in social interaction (Niazi, Ejaz & Muazzam, 2020). Thus, psychological distress in broad terms is regarded as a disturbance of the mood state, which is characterised by depression and anxiety (Abiola, Lawal & Habib, 2015).

Generally, health is a state in which an individual is able to adapt to internal and external environmental stressors. This adaptation cuts across various facets of life which include thoughts, emotions and behaviours as they relate to age, status and cultural norms. Contrarily, to be mentally unhealthy indicates a psychological state that results in behavioural anomalies which affect daily functioning (Oyewunmi, Oyewunmi, Iyiola, & Ojo, 2015). Psychological distress has serious consequences on adolescents and adults. The impact manifests in the disruption of social and psychological functioning (Fergusson and Woodward, 2002; Alika, Akanni and Akanni, 2016) as well as suicidal ideation across all ages (Ogunwale, 2016). Even after symptoms are in remission, episodes tend to recur and interfere with the adolescent's ability to function both at home and school (Kovac, Feinberg, Crouse-Novak, Paulauskase & Finkelstein, 1984 cited in Raheem, 2016).

Essentially, the major problem of individuals with hearing disabilities is communication difficulty emanating from auditory dysfunctions that limit social interaction. The problems of communication and social interaction associated with hearing loss have significant impact on social and psychological well-being of adolescents with hearing loss. Losing ability for conversation in the form of speech and being aware of this limitation can cause a great concern for adolescents with hearing loss who are beginning to develop a sense of identity (Adeniyi and Kuku, 2016). Adolescents with hearing loss who are unable to maintain social interaction in the form of talking, joking and picking up social cues may lose their sense of identity and this may adversely affect their social and scholastic performance in the form of self-esteem and self-efficacy that may result in poor academic achievement (Adeniyi and Kuku 2016).

Like any other persons, individuals with hearing loss are also psychologically distressed. The condition is often compounded and varied with the kinds of pathology they suffer from and the degree of severity, as well as the onset of hearing loss. Deafness acquired in adulthood creates problems that are different from the problems of those who were born with hearing loss or who lost their hearing during their early childhood (Munoz-Bael and Ruiz, 2000). Congenital deafness is more of a linguistic problem because they do not learn spoken language before the loss. Their inability to develop effective verbal communication may lead to social rejection, little education and low job status which have powerful impact on their self-esteem (Strong and Shaver, 1991). Jambor and Elliott's (2005) research on self-esteem and coping strategies of deaf students, revealed that deaf individuals who identify with deaf culture developed positive self-esteem than those who identify with the hearing culture. On the other hand, deafness acquired in adulthood also has issues with self-esteem. Hearing loss in adulthood significantly changes the lives of the individuals. They

have to learn to adjust and adopt new communication strategies and lifestyle. Also, those with profound hearing loss cannot conduct a conversation where hearing and speaking are the required. They lose a lot of information during the communication process, even with the use of hearing aids (Adeniyi, 2012).

Self-esteem is highly correlated with overall psychological wellbeing (Amos, Okoye & Hamsatu, 2016), achievement (Ademokoya & Shittu, 2007) and ability to cope with stressful life events (Nwanko, Okechi & Nweke 2015). Self-esteem can be negative or positive, high or low. Studies suggest that factors such as mode of communication at home, type of environment, the onset of hearing loss and severity of hearing loss can significantly affect self-esteem of people with hearing loss (Adeniyi & Kuku, 2016). Also, it was also reported that children with hearing loss may develop lower self-esteem than hearing peers due to differences in physical appearance such as wearing devices, physical differences related to a syndrome and communication difficulties (Warner-Czyz, Loy, Evans, Wetsel, & Tobey 2015). However, as important as self-esteem is, studies have reported conflicting influences. While some studies have arguably reported low self-esteem in children with hearing loss (Bat-Chava, 1993; Bat-Chava & Deignan, 2001; Huber, 2005; Tambs, 2004; Weisel & Kamara, 2005), others have posited equivalent esteem ratings across auditory status (Sahli, Arsian & Belgin, 2009; Percy-Smith et al Caye-Thomasen, Gudman, Jensen, & Thomsen., 2008) and yet a few others have revealed more positive self-esteem in children with hearing loss versus hearing peers (Cates, 1991; Kluwin, 1999).

Having presented the myriad of potential risk factors for exhibiting psychological distress among hearing impaired adolescents, there is the need to evolve methods that could help these adolescents exhibit more effective interpersonal, cognitive and emotional behaviours that should lead to improved functioning outcomes. There are a number of psychotherapeutic techniques that can be employed to manage psychological distress including cognitive therapy (Raheem, 2016), self-management therapy (Falaye & Afolayan, 2015), social skills training (Ibudeh, 1991), and self-efficacy building strategy (Okeke, 2009). For the purpose of this study, self- management therapies were employed. This was because the technique has been gaining credence in recent years.

Self-management therapy is a behaviour therapy for the management of psychological distress. This therapy, according to Rehm (1977), Fuchs and Rehm (1977) involves didactic presentations of instructional exercises to teach concepts and skills and application of those skills to day-to-day lives. Moreover, self-management aims at three outcomes; to help the client acquire more effective interpersonal, cognitive, emotional behaviour, to alter the client's perceptions and evaluate attitudes of problematic situations and to either change a stress-inducing or hostile environment or learn to cope with it by accepting it as inevitable. It is thought of as a procedure designed to promote one's awareness of behaviour and ability to function when one is aware of his own behaviour (Nelson, Smith, Young, & Dodd, 1991). There are three subtypes including self-monitoring, self-evaluation, and self-reinforcement (McCoach, 2008). Self-monitoring can be used for self-management treatments which involves being aware of and correctly labeling a student's own negative behaviour (Baskett, 2001). This sub-skill is found useful because a client should be aware of his/her negative behaviour before attempting to correct it (Baskett, 2001). This makes the management of the undesired behaviour constructively interesting and achievable. Self-evaluation as a sub-skill involves comparing one's own behaviour against a self or externally determined standard. Self-evaluation is not used alone in intervention but with one or more sub-skills of self-management for its effectiveness (McCoach, 2008). In its part, self-reinforcement as presented by Badura's social learning theory to involve self-determined standards, self- determination that the standards have been met and free, unrestricted access to reinforcers (Cole & Bambara, 1992).

Studies have revealed the efficacies of self-management therapy in managing behaviour inimical to the wellbeing of people. For instance, Anyamene, Nwokolo and Azuji (2016), employed self-management therapy on secondary school students experiencing test anxiety and reported the effectiveness of self-management technique in managing test anxiety among secondary students. In a related study, Isiyaku (2016) employed self-management therapy on

bullying behaviour among secondary school students in Katsina State. The result of the study revealed that self-management is very effective. Going by the efficacy and effectiveness of self-management therapy in the management of undesired behaviour among young adults and adults that are without hearing loss, self-management therapy is a feasible intervention for the management of psychological distress among adolescents with hearing loss. This study, therefore, investigated the effectiveness of self-management therapy in the management of psychological distress among adolescents with hearing loss in Oyo State, Nigeria.

2. Hypotheses

1. There is no significant main effect of treatment (Self-management Therapy) on participants' management of psychological distress.
2. There is no significant main effect of onset of hearing loss and self-esteem on participants' management of psychological distress.
3. There is no significant interaction effect of onset of hearing loss and self-esteem on participants' management of psychological distress.

3. Methodology

The study adopted the pre-test-post-test control group, quasi-experimental design investigating the effectiveness of self-management therapy on psychological distress management among adolescents with hearing loss. The population for this study comprised adolescents with hearing loss. Two integrated secondary schools were purposively selected. Purposive sampling technique was used to select 190 adolescents with hearing loss. The Kesler Psychological Distress Scale with index scores of 19 and above was the screening tool used to determine their psychological distress. The numbers of adolescents with hearing loss having psychological distress were 39. The losses range from 85dB and above with pre and post lingual hearing loss using total communication as mode of instruction. None of the samples were either fitted with hearing aids or had cochlea implants. 16 were male and 23 were female aged from 12 to 21. The participants were randomly assigned to Self-management Therapy (17) and Control (22) groups. The requirement for participating in the study were: that they should be having hearing loss, should exhibit symptoms of psychological distress, should not be at risk of self-harm, should be within 12 and 21 years of age and be willing to participate without coercion. The instruments used were Kessler Psychological Distress Scale (K10), Clinical Outcomes in Routine Evaluation (Core-10) and Rosenberg Self-esteem Rating Scale. The Kessler Psychological Distress Scale (Kessler, Barker, Colpe,, Epstein, Gfroerer and Hiripi, 2003) is a 10-item one-dimensional scale specifically designed to assess psychological distress. The K10 was designed with item response theory model to optimise its precision and sensitivity in the clinical range of distress. The scale evaluates how often respondents experienced anxio-depressive symptoms. Each item is scaled from 0 (none of the time) to 4 (all of the time) and the local score is used on the index of psychological distress. The instruments were revalidated by sharing it with experts in the areas of Clinical and Counselling Psychology and Special Education. The reliability of the instrument was re-established through test-retest method. The fresh Kessler Psychological Distress Scales has a reliability coefficient of 0.63. The CORE-10 which is a brief outcome measure, comprising 10 items, is drawn from the CORE-OM (which contains 34 items) developed by Michael Barkham et al (1998). CORE-10 is measuring a single construct – psychological distress. The scale evaluated how often over the last week the respondents experienced anxiety, nervousness, and panic, amongst others. Each item was scaled from 0 (not at all) to 4 (all of the time). The scale was administered for both pre-test and post-test. The instrument was also revalidated by sharing it with experts in the areas of Clinical and Counselling Psychology, and Special Education. The reliability of the instrument was re-established and yielded 0.71 through test-retest method. The Self-esteem scale developed by Rosenberg (1965) was adopted. The scale was constructed in four likert type from Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) with ten items. Samples of the items on the inventory include: (I feel that I have a number of good qualities; I feel I am a person of worth, at least on an equal plane with others). The scale is to enable the classification of the participants into high or low self-

esteem. It was also revalidated with reliability index of 0.60. All the scales were with Bio-data to know the age, sex, state of origin, religious affiliation, family type family status and onset of hearing loss. The procedure for data collection was carried out in three phases. That is, pre-treatment phase; treatment and Post-treatment phase. In pre-treatment phase, permission was sought from the school to be used. After permission had been granted, adolescents with hearing loss were contacted by the help of the school authority in each of the selected schools. The adolescents with hearing loss contacted were informed with the intentions of the study. Thereafter, the parents of those who wished to participate were contacted. Appointments were booked with the participants. On the appointment date, previous activities were recapped. Screening of the adolescents for the study eligibility was done by administering Kessler psychological distress scale (K-10). The treatment session started with the administration of the Clinical Outcomes in Routine Evaluation (CORE-10) to the two groups for the purpose of obtaining pre-test scores. Rosenberg's self-esteem scale was also administered to classify the participants into the two levels of self-esteem. The participants in the experimental group were subjected to 10 weeks of the treatment protocol. The participants in the control group participated only in the pre- and post-treatment sessions. There was a session of therapy in each week which lasted for about 60 minutes using self-management therapy, while the control group was exposed to distress education counselling. Clinical Outcome in Routine Evaluation (CORE-10) and Rosenberg's self-esteem scale were used to collect post-test scores. Data collected was analysed using Analysis of Covariance.

4. Results

4.1 Hypothesis One

There is no significant main effect of treatment (Self-management Therapy) on participants' management of psychological distress.

Table 1.1

Summary of Analysis of Covariance of Post-psychological Distress by Treatment

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Square
Corrected Model	762.448a	2	381.224	77.341	0.000	0.811
Intercept	122.789	1	122.789	24.911	0.000	0.409
Core10_Pre	6.764	1	6.764	1.372	0.249	0.037
Treatment	744.378	1	744.378	151.015	0.000	0.808
Error	177.45	36	4.929			
Total	6508	39				
Corrected Total	939.897	38				

The result from Table 1.1 revealed that there is a significant main effect of treatment (self-management therapy) on management of psychological distress among adolescents ($F_{(1,36)} = 151.015$; $p<0.05$, partial $\eta^2 = 0.808$). Due to the value above, hypothesis 1 was rejected. In order to determine the magnitude of the significant main effect across the treatment groups, the estimated marginal means of the treatment groups were carried out and the result is presented in Table 1.2.

Table 1.2

Estimated Marginal Means for Post-psychological Distress by Treatment and Control Group

Treatment	Mean	Std.Error
Self-management Therapy	6.97	0.539
Conventional Therapy	15.796	0.474

Results in Table 1.2 showed that participants exposed to Self-management Therapy had the lowest adjusted post-psychological distress mean score (6.970) compared to their counterparts who were exposed to Conventional Therapy which is the control group (15.796). This implies that the participants who were exposed to Self-management Therapy had better results on psychological distress than the control group.

4.2 Hypothesis Two

There is no significant main effect of onset of hearing loss and self-esteem on participants' management of psychological distress.

Table 2.1

Summary of Analysis of Covariance of Post-psychological Distress by Onset of Hearing Loss and Self-esteem

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Square
Corrected Model	625.49	6	104.248	10.61	0.000	0.665
Intercept	36.122	1	36.122	3.676	0.064	0.103
Core10_Pre	49.061	1	49.061	4.993	0.033	0.135
Onset of Loss	102.063	1	102.063	10.388	0.003	0.245
Self-Esteem	367.244	2	183.622	18.689	0.000	0.539
Onset*Esteem	83.565	2	41.783	4.253	0.023	0.21
Error	314.407	32	9.825			
Total	6508	39				
Corrected Total	939.897	38				

The results from Table 2.1 revealed that there is a significant main effect of onset of hearing loss on participants' management of psychological distress ($F_{(1,32)} = 10.388$; $p<0.05$, partial $\eta^2 = 0.245$). By implication, hypothesis two was rejected. This implies that onset of hearing loss had a main effect on the management of psychological distress.

Table 2.2

Estimated Marginal Means for Post-psychological Distress by Pre-Lingual and Post-Lingual Onset of Loss

Onset of Loss	Mean	Std.Error
Pre-Lingual	13.467	0.678
Post-Lingual	9.793	0.892

Result in Table 4.2 showed that participants that are of post-lingual onset of loss had the lowest adjusted post-psychological distress mean score (9.793) compared to their counterparts who are of pre-lingual onset of loss (13.467). Hence, post-lingual onset of loss participants has low psychological distress.

Similarly, there is a significant main effect of self-esteem on participants' management of psychological distress ($F_{(2,46)} = 18.689$; $p<0.05$, partial $\eta^2 = 0.539$). The null hypothesis was rejected which implies that self-esteem had a main effect on the management of psychological loss. Table 2.3 shows the estimated marginal means which explains that participants that had high self-esteem had the lowest adjusted post-psychological distress mean score (8.782) compared to their counterparts who had moderate self-esteem (10.050) and low self-esteem (16.058)

Table 2.3

Estimated Marginal Means for Post-psychological Distress by Low Self-esteem, Moderate Self-esteem and High Self-esteem.

Self-esteem	Mean	Std.Error
Low Self-esteem	16.058	0.922
Moderate Self-esteem	10.05	1.121
High Self-esteem	8.782	0.813

4.3 Hypothesis Three

There is no significant interaction effect of onset of hearing loss and self-esteem on participants' management of psychological distress**.**

The results from Table 2.1 revealed that there was a significant interaction effect of onset of hearing loss and self-esteem on participants' management of psychological distress ($F_{(2,32)} = 4.253$; $p<0.05$, partial $\eta^2 = 0.210$). By implication, hypothesis three was rejected. This implies that onset of hearing loss and self-esteem had an interaction effect on the management of psychological distress. In other words, the effect of onset of hearing loss on the management of psychological distress depends largely on the self-esteem of the participants.

5. Discussion

The study revealed that that there is a significant main effect of self-management therapy on the management of psychological distress among adolescents with hearing loss. The implication of this is that self-management proved efficient in the management of distress since the experimental group exposed to self-management therapy experienced a reduction in psychological distress symptoms. The study corroborated a body of research that has used psychotherapeutic techniques for the management of psychological distress among individuals with hearing loss. The result corroborated the study carried out by Anyamene, Nwokolo and Azuji (2016) who reported effectiveness of self-management technique on test anxiety among Secondary aged students. The study also lends credence to Isiyaku (2016) study of self-management therapy on bullying behaviour among secondary school students in Katsina State. The outcome of the study revealed a positive impact of self-management on bullying behaviour among the participants. It can be seen from the outcome of this study and previous studies that self-management therapy helps in mitigating the incidence of variants of distress among various experimental groups at different times; focusing researchers in the area of psychotherapy to give more attention to applications of self-management therapy.

The study further revealed that onset of hearing loss and self-esteem has effects on the management of psychological distress among adolescents with hearing loss. This implies that both self-esteem and onset of hearing loss have implications on the psychological construct of individuals. For instance, deafness acquired in adulthood creates problems that are different from the problems of congenital hearing loss

(Munoz-Bael and Ruiz, 2000). Children born with deafness have more of a linguistic problem because they do not learn any spoken language properly before the loss occurred hence their communication disability may lead to poor self-esteem (Strong and Shaver, 1991; Jambor and Elliott, 2005). On the other hand, deafness acquired in adulthood also has issues with self-esteem. Hearing loss in adulthood significantly changes the lives of such individuals because, they have to start a new life and learn how to adapt to a new situation. Repeated experiences of ineffective communication led to frustration and a feeling of deficiency that could diminish self-esteem of individuals with acquired and profound hearing loss (Jambor and Elliott, 2005). Arguably, studies have revealed inconsistent impact of hearing loss on self-esteem. While some studies have reported low self-esteem in children with hearing loss (Bat-Chava, 1993; Bat-Chava & Deignan, 2001; Huber, 2005; Tambs, 2004; Weisel & Kamara, 2005), others have posited equivalent esteem ratings across auditory status (Sahli & Belgin, 2006; Percy-Smith et al Caye-Thomasen, Gudman, Jensen, & Thomsen., 2008) and yet few others have revealed more positive self-esteem in children with hearing loss versus hearing peers (Cates, 1991; Kluwin, 1999). So, the implication of this may be because of different environmental variables. The results further established that there is interaction effects of self-esteem and onset of hearing loss in the management of psychological distress in adolescents with hearing loss. These informed the need to find a way of stabilising the self-esteem of children with hearing loss. This is because according to (Amos, Okoye and Hamsatu, 2016), self-esteem correlated with academic performance overall psychological wellbeing.

6. Conclusion

This study investigated the effectiveness of self-management therapy in the management of psychological distress among adolescents with hearing loss. The results revealed that self-management therapy is efficacious in the management of psychological distress and that self-esteem and onset of hearing loss have significant impact in the management of psychological distress and their interaction effect of the two variables in the management of psychological distress. The outcome of this study has revealed the efficacy of self-management therapy in the management of psychological distress which by implication, the body of literature has been enriched and relatively, variants of psychological problems can be mitigated by its application.

7. Recommendation

School counsellors and special education teachers should consider using self-management therapy to manage some psychological problems that may be manifested by adolescents with hearing loss and self-esteem of adolescents with hearing loss should be boosted because this forms the basis of adaptive living.

8. Limitation to the study

The researchers were confronted with negative attitudes towards research from many school head teachers, limiting the scope of the study

9. Conflict of interest

The authors declare no conflict of interest

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