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

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Abstract

Psychological wellbeing has been linked to wellness in all facets of life. However, these processes become altered when man becomes distressed because of some factors ranging from intra to inter personal factors influencing man's stable psychological wellness. Hence, such conditions need to be moderated. This study examined the effectiveness of self-management therapy in the management of psychological distress among adolescents with hearing impairment. The study employed quasi experimental pre-test-post- test design with a sample of 39 adolescents with hearing impairment purposively selected using Kesler Psychological Distress Scale with index scores of 19 and above as distress threshold. Clinical Outcomes in Routine Evaluation (Core-10) and Rosenberg Self-esteem Rating Scale were used for both pre and post- test among participants. Three hypotheses were tested in the study. 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. Stakeholders in the education and care of adolescents with hearing impairment were encouraged to employ self-management therapy in reducing their psychological distresses.

Key words: Psychological distress, hearing impairment, self-management therapy, adolescents, onset of loss, self-esteem.

Introduction

Hearing impairment is a health condition associated with loss of auditory sensitivity to verbal or acoustic information due to anomalies of auditory frameworks whether in the outer, middle, inner and or part of the brain responsible for interpretation of auditory signal which can lead to partial or total hearing loss in the affected individuals. Hearing loss is challenging at any age, but it poses unique issues for the young adults especially those at the adolescents' age because it is a stage of identity formation and personality development. Most researches on children and adolescents with hearing impairment focused on speech and language development, because these individuals have auditory challenge 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 total life style of the affected.

Early onset of hearing loss in children not only leads to delay in speech development and language skills, its multiplying effects at later age negatively impact on the quality of life. Research in the area of quality of life of people with hearing impairment have revealed that loss or disability of hearing can likely cause social isolation, low self-esteem and depression (Hogan, Shipley, Strazdins, Purcell, & Baker 2011; Brown, & Cornes, 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). These are symptoms of psychological distress in children, young adults and adults. Psychological distress is defined as the condition of emotional disturbance with feelings of anxiety such as restless and tense depression in the form of feeling of hopelessness and loss of interest in social interaction (Niazi, Ejaz, & Muazzam, 2020). Thus, psychological distress in broad term is regarded as a disturbance of the mood state, which is characterised by features of depression and anxiety (Abiola, Lawal & Habib, 2015). The condition is described as the basic component of mental health deficiency as both emotional and social wellbeing would be affected.

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 disruption in social and familial functioning, and poor school performance on the part of school adolescents and adults (Fergusson & Woodward, 2002; Alika, Akanni, & Akanni, 2016) as well as suicidal ideation across 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 as cited in Raheem, 2016).

Essentially, the major problem of individuals with hearing impairment 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 impairment. Losing ability for conversation in the form of speech and being aware of this limitation can cause a great concern, for the growing adolescents with hearing impairment who are beginning to develop a sense of identity (Adeniyi & Kuku, 2016). The problems of communication, peer relation, self-esteem, social interaction and hosts of others may lead to isolation that can motivate a shift in the adolescents with hearing impairment's social and emotional approaches to the world around them and also their self-perception. Adolescents and most especially adolescents with hearing impairment who are unable to maintain social interaction in the form of talking, joking and picking up social cues may lose sense of identity and this may adversely affect their social and scholastic performance in the form of self-esteem and self-efficacy which may invariably result in poor academic achievement and social performance (Adeniyi & Kuku, 2016).

Like any other persons, individuals with hearing impairment 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 the adulthood creates problems that are different from the problems of those who were born with hearing impairment or who lost their hearing during their early childhood (Munoz-Bael & Ruiz, 2000). Congenital deafness is more of a linguistic problem because people with hearing impairment most often do not learn any spoken language properly before the loss occurred. Their communication challenge may lead to social rejection, little education, low status job and low income which have a powerful

impact on their self-esteem (Strong and Shaver, 1991; Jambor & Elliott, 2005). On the other hand, deafness acquired at adulthood also has issues with self-esteem. Hearing loss (HL) at adulthood significantly changes the lives of such individuals. They have to learn to adjust and adopt new communication strategies and lifestyles. They have to establish a new identity and recreate their social relationships. Also, those with profound hearing loss cannot conduct a conversation where hearing and speaking are required. They need cues such as face-to-face communication with constant eye contact, lip reading and understanding of body language. These are rarely available encounters with hearing people, and they are likely to lose a lot of information during the communication process, even with the use of hearing aids (Adeniyi, 2012). Repeated experiences of ineffective communication lead to frustration and a feeling of deficiency that could diminish self-esteem of individuals with profound hearing loss (Jambor & Elliott, 2005) and thereby result in psychological distress. On the other hand, those with mild or moderate hearing loss are often caught in the middle since they do not define themselves as deaf.

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 manifest in different forms. It can be negative or positive, high or low depending on the situation, environment and circumstances of well-being. Studies suggest that factors such as mode of communication at home, type of environment, the onset of hearing impairment and severity of hearing loss can significantly affect self-esteem of people with hearing impairment (Adeniyi & Kuku, 2016). Also, it was 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 in the life of individuals, studies have reported conflicting influence. While some studies have arguably reported low self-esteem in children with hearing impairment (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, 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).

Whichever position achieved by different authors at different times, self-esteem is nevertheless a psychological construct that makes up adaptive living of man and may be influenced by many factors within and outside the individuals.

Having presented the myriad of potential risk factors for exhibiting psychological distress among hearing impaired adolescent individuals, 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 (psychological wellbeing). There are a number of psychotherapeutic techniques that can be employed to manage psychological distress including cognitive therapy (Raheem, 2016), self-management therapy (Falaye, Ajibola & Afolayan, 2015), social skills training (Ibudeh, 1991), and self-efficacy building strategy (Okeke, 2009). For the purpose of this study, self- management therapy was 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 the day-to-day lives of participants through homework/ assignments. Moreover, self-management therapy may aim 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 that it is inevitable. Self-management therapy is a strategy developed based on the cognitive theory. It is thought of as a procedure designed to promote one's awareness of behaviour and ability to function when he/she is aware of his/her 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 in several 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). Research on self-reinforcement reported increase in positive behaviour, and improve academic performance (Cole & Bambara, 1992).

In self-management therapy, tasks and assignment take a central role. Tasks stress the importance of changing behaviours outside the helping relationship and help the client perceive the continuity between treatment sessions and daily life experiences. Assignments yield information about the client's skills and treatment objectives. Assignments are often presented as tentative and safe efforts to acquire new behavioural repertoires. They provide opportunities to experience new life patterns. However, there are four steps to follow whenever a client is asked to complete a task or assignment such as information, anticipatory practice or rehearsal, execution in natural settings and review. During the information stage, the requirements involve didactic instruction about a particular technique or discussion of how the technique can be tailored to the client's routine (Cole & Bambara, 1992). In rehearsal stage, the client imagines and practises the assigned task within the safety of the therapy and environment. Rehearsal provides opportunities for the helper to model various behaviours, clarify the details of the situation and the behaviour to be executed, and extinguish some of the anxiety associated with them. Role plays are commonly used during rehearsal. The anticipatory task is allowed to be performed in a natural setting that is devoid of emotional stress after which the client is allowed to review the process and take note of mistakes made during the process.

Studies have revealed the efficacies and effectiveness of self-management therapy in managing behaviour inimical to the wellbeing of people. For instance, Anyamene, Nwokolo and Azuji (2016) 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 bully behaviour among secondary school students in Katsina State. The result of the study revealed that self-management is very effective in managing behaviour disorders among students. Also, in a systematic review examining the relationship

between self-management interventions and distress in adult cancer patients receiving active tumor-directed therapy in nine studies that met inclusion criteria out of 5,156 articles identified. The review suggested that self-management interventions may help address psychological distress in patients receiving cancer treatment. It can then be inferred that self-management can be used to reduce some unwanted and even self-injurious behaviour in both adults, young adults and even among children. Going by its efficacy and effectiveness in management of undesired behaviour among young adults and adults that are without hearing impairment, self-management therapy is feasible intervention for the management of psychological distress among adolescents with hearing impairment. This study, therefore, investigated the effectiveness of self-management therapy in the management of psychological distress among adolescents with hearing impairment in Oyo State, Nigeria owing to the fact that some students with hearing impairment in some secondary schools in Oyo state have been exhibiting some signs that can be likened to distresses between and among their classmates.

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.

Methodology

The study adopted the pre-test-post-test control group, quasi-experimental design with the purpose of examining the effectiveness of self-management therapy on psychological distress management among adolescents with hearing impairment in Oyo State. The population for this study comprised adolescents with hearing impairment in Oyo State.

Two integrated secondary schools were purposively selected from two senatorial districts of Oyo State. Purposive sampling technique was used to select a total of 190 adolescents with hearing impairment. The Kesler Psychological Distress Scale with index scores of 19 and above was the screening tool used to determine hearing impaired adolescents with psychological distress. The numbers of adolescents with hearing impairment having psychological distress were 39 out of the

population of 190 adolescents with hearing impairment initially purposively selected. Male participants were 16 (41.03%) while female participants were 23(58.97%). The adolescents were in the 12 to 21 age range. The participants were randomly assigned to Self-management Therapy (SM, 17) and Control (22) groups in view of the location of the schools. The participants were required to satisfy each of the following criteria before they could be assigned to the two experimental conditions. That is, they should be having hearing impairment, should exhibit symptoms of psychological distress (A Kesler Psychological Distress scale with index scores of 19 and above), should not have the risk of self-harm, should be within 12 and 21 years of age and should be willing to participate without coercion. Three research instruments were used in this study. They included, 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 & Hiripi, 2003) is a 10-item one-dimensional scale specifically designed to assess psychological distress in population surveys. The K10 was designed with item response theory model to optimise its precision and sensitivity in the clinical range of distress, and to insure a consistent sensitivity across gender and age groups (Kessler et al., 2003). The scale evaluates how often respondents experienced anxio-depressive symptoms (for instance nervousness, sadness, restlessness, hopelessness, and worthlessness). Each item is scaled from 0 (none of the time) to 4 (all of the time) and the local score is used on index of psychological distress. Several studies showed no substantial bias for the K10 in relation to gender, education (Baillie, 2005) or age (OConnor & Parslow, 2010). For the purpose of this study, the instrument was revalidated by sharing it with experts in the areas of Clinical and Counselling Psychology and Special Education. The recommendations of the experts indicated that the i2nstrument is suitable for the distressed adolescents with hearing impairment. The reliability of the instrument was re-established through test-retest method. This method involved administration of the instrument to fifteen (15) distressed adolescents with hearing impairment, (other than those that were involved in the study) on two occasions of four weeks interval. The fresh Kessler Psychological Distress Scales internal consistency estimates yielded a mean 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). It was developed by Barkham et al (2013)

in UK. 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, among 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 recommendations of the experts favoured the suitability of the instrument for the distressed adolescents with hearing impairment. The reliability of the instrument was re-established through test-retest method. This method involved administration of the instrument to 15 distressed adolescents with hearing impairment (other than those that were involved in the study) on two occasions of four weeks interval. The fresh CORE-10 (psychological distress scale) internal consistency estimates yielded a mean coefficient of 0.71. Self-esteem scale which was developed by Rosenberg (1965) was adopted. The scale was constructed in four likert scale type ranging from Strongly Agreed (SA), Agreed (A), Disagreed (D) and Strongly (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. Bio-data scale was separately constructed to get the demographic variables of the participants in form of age, sex, state of origin, religious affiliation, family type (whether monogamy or polygamy), family status (whether intact or broken) 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 or evaluation phase. In pre-treatment phase, permission to use the selected secondary schools was sought from the principal of each of the schools. After permission had been granted, adolescents with hearing impairment (HI) were contacted by the help of the principals, and class teachers in each of the selected schools. The adolescents with hearing impairment contacted were given the description of the study, including the key ethical issues associated with the research. Thereafter, the parents of those who wished to participate were contacted and the description of the study, including the key ethical issue, was also given to them. However, those adolescents who wished to participate in the study and the researcher negotiated for the next appointment date. On the appointment date, the researcher came into contact with the adolescents

with hearing impairment and previous activities were recapped having ascertained that they have hearing impairment through medical records in the schools which indicated the status of their deafness and degrees. Following this was the screening of the adolescents for the study eligibility. This was done by administering Kessler psychological distress scale (K-10). The context within which distress had risen was also established using the structural approach format (Questions on Distress). 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. Thereafter 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 and each session lasted for about 60 minutes. The participants in the experimental group were managed with self-management therapy, while control group were only exposed to distress education counselling during the treatment period. Self-management therapy is an adaptation from Falaye, Ajibola and Afolayan's (2015) self-management therapy. A weekly session that enables the distressed adolescents become skilled in the application of relevant learning principles to their problematic situation associated with having hearing loss was conducted. The techniques in the treatment protocol include acquiring basic skills needed for effective self-management therapy, obtaining reinforcement, self-monitoring, challenge test reward, and stimulus control. The treatment guide was supported by daily mood rating log sheets, questions on distress, daily record of dysfunctional thought, weekly self-monitoring record, and pleasant event sheet. The guide for control group consisted of only distress education. Clinical Outcome in Routine Evaluation (CORE-10) and Rosenberg's self-esteem scale were used to collect post-test scores from the two groups respectively. Ethical considerations include confidentiality of data collection, translation of protocol to sign language, beneficence, non-maleficence to participants and voluntariness. Data collected was analysed using analysis of covariance (ANCOVA).

Results

Hypothesis One

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

Table 1: Summary of Analysis of Covariance (ANCOVA) 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 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 2: Estimated Marginal Means for Post-psychological Distress by Treatment and Control Group

Treatment	Mean	Std.Error
Self-management Therapy (SMT)	6.97	0.539
Conventional Therapy (CVT)	15.796	0.474

Result in Table 2 showed that participants exposed to Self-management Therapy (SMT) had the lowest adjusted post-psychological distress mean score (6.970) compared to their counterparts who were exposed to Conventional Therapy (CVT) which is the control group (15.796). This implies that the participants who were exposed to Self-

management Therapy had better result on psychological distress than the control group.

Hypothesis Two

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

Table 3: **Summary of Analysis of Covariance (ANCOVA) 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 3 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 4: 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 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 have 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 5 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 5: 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

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 3 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.

Discussion

The study revealed that that there is a significant main effect of treatment (self-management therapy) on the management of psychological distress among adolescents with hearing impairment. The implication of this is that self-management proved efficient in the management of distress among the participants. Since the experimental group was exposed to self-management therapy, the intervention was

found to have contributed significantly to the reduction in the psychological distress symptoms among the participants. The study corroborated a body of research that has used psychotherapeutic techniques such as self-management therapy for the management of psychological distress among individuals with hearing impairment. 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 Students. The study also lends credence to Isiyaku (2016) study of self-management therapy on bully behaviour among secondary school students in Katsina State. The outcome of the study revealed positive impact of self-management on bully behaviour among the participants. In essence, self-management therapy can be seeing as very effective in reducing psychological distress among adolescents with hearing impairment who are psychologically distress.

The study further revealed that onset of hearing and self-esteem has effects in the management of psychological distress among adolescents with hearing impairment. This implies that both self-esteem and onset of hearing loss have implication on psychological construct of individuals. For instance, deafness acquired in the adulthood creates problems that are different from the problems of those who were born with hearing impairment or who lost their hearing during their early childhood (Munoz-Bael & 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 social rejection, little education, low status job and low income which have a powerful impact on self-esteem (Strong and Shaver, 1991; Jambor & Elliott, 2005). On the other hand, deafness acquired at adulthood also has issues with self-esteem. Hearing loss (HL) at 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 lead to frustration and a feeling of deficiency that could diminish self-esteem of individuals with acquired and profound hearing loss (Jambor & 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 impairment (Bat-Chava, 1993; Bat-Chava & Deignan, 2001; Huber, 2005; Tambs, 2004; Weisel & Kamara, 2005), others have posited equivalent esteem ratings across auditory status (Sahli, Arslan, & Belgin, 2009; Percy-Smith, 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 impairment. These informed the need to find a way of stabilising the self-esteem of children with hearing impairment whether congenital or adventitious. This is because according to (Amos, Okoye & Hamsatu, 2016), self-esteem is highly correlated with overall psychological wellbeing.

Conclusion

This study investigated the effectiveness of self-management therapy in the management of psychological distress among adolescents with hearing impairment. The results revealed that self-management therapy is efficacious in the management of psychological distress among the participants and that self-esteem and onset of hearing loss have significant impact in the management of psychological distress among adolescents with hearing impairment and their interaction effect of the two variables in the management of psychological distress.

Recommendation

School counsellors, special education teachers and other stakeholders should consider using self-management therapy to manage some psychological problems that may be manifested by adolescents with hearing impairment and self-esteem of adolescents with hearing impairment should be boosted because this forms the basis of adaptive living. This can be done by helping them to develop positive and high self-esteem through self-management training.

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