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Adolescent Depression and Hearing Impairment: The Causes, Complications and Management

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Abstract:
It makes intuitive sense that difficulty in hearing could predispose an individual to depressive symptoms. It is highly demanding when such an individual with a hearing impairment is also an adolescent. Adolescent depression among individuals with hearing impairment may increase the risk for subsequent depression and anxiety during adulthood, thus efforts should be directed towards ameliorating factors that could induce depressive symptoms among adolescents with hearing impairment.

Keywords: *Adolescents, depression, adolescent depression, hearing impairment*

1. Introduction

Depression represents a major mental health problem that affecting million people across the world (Herrman, Kieling, McGorry, Horton, Sargent, Patel, 2019). It can affect people at all ages, including children and adolescents. Adolescence is a period of psychosocial and physiological transitions which occurs between ages 10 and 19 years.

Several studies have shown that depressive symptoms occur over the course of childhood and adolescence and carry a great risk for the development of depressive disorders later in life (Schubert, Clark, Van, Collinson, Baune, 2017; Goodman, 2020). Depression is characterized by varying degrees of sadness, irritable mood, disappointment, hopelessness, loneliness, guilt, self-doubt, loss of interest and pleasure in most of the activities in everyday life (LaHaye, 2009). In the same view, Gotlib (1992) stated that adolescent depression does not only affect the immediate psychosocial development of a teen but also increases the likelihood of recurrence in adulthood

Adolescence period is usually believed to be a hard time especially when an adolescent is having hearing impairment and there are communication issues among his or her immediate family members and the society at large. Individuals with hearing impairment reported significantly more symptoms of depression than their normal hearing peers (Konuk, Erdogan, Atik and Ugur, 2006; van Eldik, Treffers, Veerman and Verhullt, 2004; Van Eldik, 2005). It has also been reported that adolescents with hearing loss are more depressed than their hearing counterparts (Sahli, Arslan and Beelgin, 2009).

Depression is an internal sadness combined with overwhelming feelings of hopelessness, despair, helplessness, low self-worth and loss of control. Depression in adolescents may stem from a wide variety of situations that involve social interactions such as, failure loss of a person, rejection and so on, but in some cases, depression can be caused by an associated hearing loss (Sahli, Arslan and Beelgin, 2009; Dehkhoda, Bahmani and Dadkhah, 2013). Rates of emotional and behavioral disorders are higher in deaf children and adolescents than in hearing peers (Konuk et al. 2006; (Fellinger, Holzinger, Pollard, 2012; Van Gent, Goedhart and Treffers, 2011)

In a study by Van Gent, Goedhart and Treffers (2012) among adolescents with hearing loss, it was observed that there is a higher incidence of psychopathology in children and adolescents who experiences some degrees of hearing loss.

2. Prevalence of Adolescence Depression

In a national survey of US adolescents, the cumulative incidence of depression between the ages of 12 and 17 is 13.6% among male and 36.1% among female subjects. The sex difference in incidence was significant at the age of 12 years, and it is significantly larger at ages of 13 through 17 years than at the age of 12 years while in China, (1) thirty-four-point seven percent of early adolescents display symptoms of depression. (Chi, Huang, Wang and Zhang, 2020), In Nepal, 11.1% of the school-going adolescents were found depressed. Out of (11.1%) school-going depressed adolescents, (6.3%) were having mild level of depression (3.8%) were having moderate level of depression and 32 (1.1%) were having severe level of depression (Chettri, Adhikari and George, 2019).

A Tanzanian study reported prevalence 36%, mild, moderate and severe depression were 33%, 20%, 6% respectively. (Kuringe, Materu, Nyato, Majani, Ngeni, Shao, et al., 2019). In Quebec, 27.0% had mild depressive symptoms, 9.3%, had moderate depressive symptoms, and 4.1% had severe depressive symptoms. Eight variables contributed uniquely to the variance of depressive symptoms and were, in decreasing order of importance: (1) the absence of personal goals, (2) a high level of anxiety and (3) of dysfunctional thoughts regarding success, (4) a lack of emotional adjustment to college, (5) being female, (6) receiving little warmth and encouragement of autonomy from one's mother and (7) from one's father, and (8) being attracted to members of the same or both sexes (Villatte, Marcotte and Potvin, 2017). In Australian, increased physical activity was associated to lower depressive symptomatology among males, Sweet drink and takeaway consumption were associated with higher levels of depressive symptomatology among females at follow-up. Males who were classified as overweight or obese at baseline, and remained so over the study period, were at increased risk of depressive symptomatology at follow-up. Inactivity among males over the 2-year study period was predictive of higher depressive symptomatology scores at follow-up. For females, those who increased their consumption of takeaway foods during the study period were at increased risk for developing depressive symptomatology (Hoare, Millar, Fuller-Tyszkiewicz, Skouteris, Nichols, Malakellis et al., 2016).

The prevalence of mental health problems in samples of deaf children is almost 40%, including those with even mild hearing impairment (Hogan, O'Loughlin, Miller, Kendig, 2009; Diaz, Landsberger, Povlinski, Sheward, Sculley, 2013). Kim, Kim, Park, Joe, Sim, and Choi (2017) reported a prevalence of 22.7% depression among people with hearing impairment. Also, Dreyzehner, and Goldberg (2019) reported that 26% of deaf and hard of hearing had severe depression. In another study by Wath and Devis quoted by Rostami, Bahamani, Movallali and Vahid (2014), it was discovered that 50% of deaf and hard of hearing adolescents had depression.

3. Causes of Depression

Despite intensive attempts to establish the etiologic basis of depressive symptoms among adolescents, the precise cause is not known(Deacon, Kettle, Hayes, Dennis, Tucci. et al., 2017). There is consensus that multiple etiologic factors – genetic, biochemical, psychodynamic and socio-environmental may interact in complex ways and that the modern day understanding of depressive symptoms require an understanding of the interrelationships among these factors(Phifer and Murrell, 1986).

Recent evidence confirms that crucial life events, particularly the death or loss of a loved one can precede the onset of depression (Assari and Lankarani, 2016). As a variable to quantify stress, stressful life events cover many aspects of stress, such as interpersonal relationship, academic stress, and other dimensions (Compas, Davis, Forsythe, Wagner et al., 1987). According to previous research, stressful life events are important risk factors for depression among adolescents. For instance, according to a longitudinal study, stressful life events were significantly associated with depressive symptoms (Ge, Natsuaki, Neiderhiser, Reiss et al., 2009). Besides, it revealed that stressful life events corresponded with higher levels of depressive cognitions (Hankin, Snyder and Gulley, 2016).

Lack of money is another important factor that may cause depression among adolescents with hearing impairment. Hearing aids and cochlear implants (CI) have in a considerably measures improved the level communication among individuals with hearing loss but it is pathetic that many parents could not afford these amplification devices for their children and even those that could afford, cochlear implants are not available in many centres especially in Africa. Apart from the above points, even those that have purchased these amplification devices, repair and after sale services could exacerbate their problems which may lead to depression among this special population

4. Effect of Depression among Adolescent with Hearing Impairment

Adolescent depression may pose a greater risk for subsequent depression later in life. Articles consistently found that adolescent depression increases the risk for anxiety disorders in adulthood, but evidence was mixed on whether or not a significant association existed between adolescent depression and suicidality in adulthood (Johnson, Dupuis, Piche, Clayborne, Colman, 2018).

In a follow up study among adolescents with depression, Bohman, Jonsson, Paaren, Knorring, Olsson and Knorring (2010) in their study found that, 78.4% versus 69.6%, had at least one registered out-patient visit A significantly higher proportion of the formerly depressed females had certain infectious and parasitic diseases (4.6% versus 1.0%), diseases of the nervous system (6.4% versus 2.1%), diseases of the digestive system (9.2% versus 4.1%), injuries, poisonings, and certain other consequences of external causes including attempted suicide and accidents (16.3% versus 8.2%).

Depressive symptoms are related to educational attainment along multiple margins: dropping out of high school, college enrollment, and college type (Fletcher, 2008). In Nigeria, many adolescents with hearing impairment do not go beyond secondary schools; the reason for this in not because they are retarded mentally, the range of intelligence of students with hearing impairment is not different from the range of their hearing counterparts especially non-mentally

retarded students with hearing impairment who are undergoing proper (re)habilitation irrespective of whether the hearing impairment was congenital or acquired. A study was conducted along this line of academic achievement by Ogundiran and Olaosun (2013) it was discovered that there was no significant difference in the academic achievement between students with congenital deafness and those with acquired deafness especially in Mathematics performance and English Language performance.

5. Management of Depression among Adolescents with Hearing Impairment

There is strong empirical evidence for successful therapeutic management of adolescent with mental health disorders, including depression (Sanno, Jenine and Anneliese, 2012). Psychotherapy for depression is as effective as medication in many cases and is the recommended first-line intervention for mild to moderate depression among adolescents (Sanno, Jenine and Anneliese, 2012).

Sanno, Jenine, Anneliese (2012) offered a brief review of the psychotherapeutic 'three Ts' for depression: cognitive behavioral therapy (CBT), interpersonal psychotherapy (IPT), and dialectical behavioral therapy (DBT). Common interventions highlighted for CBT include: psychoeducation (helping the clients and parents understand the connection between thoughts, feelings and behaviors) mood monitoring (keeping a mood diary, linking emotions to thoughts), pleasant activities (creating a list of activities that the client enjoys and setting aside daily time to engage in them), behavior activation techniques (joining a sport team, going for nightly family walks, identifying cognitive distortions and negative thinking patterns and replacing them with more realistic and or positive ways of thinking, communication, conflict resolution and problem solving skills.The therapist could introduce the adolescent with hearing impairment to a sporting activity of interest or choice, he or she can be introduced to a game at the Paralympics.

Specific interpersonal problem identification, development of communication and problem-solving strategies to address the specific interpersonal problem area and skills practicing in session and transmitting them to the social environment are tips listed in interpersonal psychotherapy.

The DTB model is a behavioral one. The treatment approach targets 5 functions: enhancing client's capabilities, increasing motivation, structuring the environment to increase the likelihood of success, promoting generalization from therapy to the natural environment and enhancing therapist's capabilities and motivation to treat clients effectively, the approach is a 'life enhancement' as opposed to suicide prevention (Sanno, Jenine and Anneliese, 2012).

Communication helps man to function well and productively, so also the adolescents with hearing impairment, in order to manage this special group properly, their communication barriers including individual specific interpersonal and intra personal problems should be well taken care during and after the therapeutic sessions and more importantly, they should be introduced to the best coping strategies.

6. Conclusion

Adolescence is a crucial stage in life; the way it is being managed could mar or make the live of a person with hearing impairment. Experts concerned are being implored to do their jobs on the adolescents with hearing impairment in order to drastically reduce depression among this special group.

7. Recommendations

- Audiologists should be well trained and available to render services to adolescents with hearing impairment
- Guidance counselling should be made functional in secondary schools since majority of these adolescents fall within that stage of education. Also, those that are not in school should not be left out.
- Mental Health Experts should also work with school managements in order to give helping hands anytime their services are needed as far as adolescents with hearing impairment are concerned.
- There should be a strong collaboration between Hearing Specialists and Mental Health Specialists. This synergy should drastically abate depression among adolescents with hearing impairment.

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