ENVIRONMENTAL AND PERSONALITY FACTORS AS CORRELATES OF PSYCHOLOGICAL ADJUSTMENT OF ADOLESCENTS WITH HEARING IMPAIRMENT IN SECONDARY SCHOOLS IN OYO STATE, NIGERIA

BY

ISAIAH, Olugbenga Ojo
NCE, B.Ed. (Hons), M.Ed. (Guidance and Counselling)
Matric No: 69565

A THESIS IN THE DEPARTMENT OF SPECIAL EDUCATION, SUBMITTED TO THE FACULTY OF EDUCATION IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY (PH.D) OF THE UNIVERSITY OF IBADAN, IBADAN, NIGERIA

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ABSTRACT

Adolescents with hearing impairment are often viewed as individuals who are psychologically maladjusted as a result of poor environmental and personality factors. Consequently, their senses of belonging in the society have been reduced to the extent that their self image have been affected. Although, several studies on adolescents with hearing impairment have focus on their academic performance, but little attempt have been made to examine or study the environmental and personality factors. This study, therefore, examined the environmental and personality factors as correlates of psychological adjustment of adolescents with hearing impairment in secondary schools in Oyo state, Nigeria.

The survey research design was adopted. The Purposive sampling technique was used to select 233 adolescents with hearing impairment from four integrated secondary schools in Ibadan, Oyo and Ogbomoso, Oyo State. Four research instruments were used for data collection: Adolescents Home and School Adjustment Questionnaire (r=0.86), personality types Questionnaire (r=0.84), Adjustment to Hearing Loss Questionnaire (r=0.83) and Psychological Adjustment Inventory (r=0.68). Three research questions were answered and six hypotheses were tested at the 0.05 level of significance. Data were analysed using descriptive statistics, Pearson Product Moment Correlation, Chi Square and Multiple Regression.

Home environment (r=0.812, p< 0.05) and school environment (r=0.773, p< 0.05) were positively correlated with psychological adjustment of adolescents with hearing impairment. Home environment, school environment, age of onset and degree of hearing loss significantly predicted psychological adjustment of adolescents with hearing impairment ($F_{(4,226)}$ = 1014.54 p<0.05) and contributed 94.7% of the total variance to the dependent variable. However, age of onset and degree of hearing loss were not significantly correlated with psychological adjustment of adolescents with hearing impairment. Also, there were no significant associations among personality types, gender and psychological adjustment of adolescents with hearing impairment. The relative contributions of the independent variables to the psychological adjustment of adolescents with hearing impairment are as follows: home environment (β=0.624), school environment (β=0.570), age of onset (β=0.004), and degree of hearing loss (β=0.000) respectively.

Home environment, school environment and personality types are important factors that enhanced psychological adjustment of adolescents with hearing impairment. Therefore, the government, parents and other stakeholders who are involved in the education of adolescents with hearing impairment should create an atmosphere that could enhance their psychological adjustment.

Key words: Adolescent, Environmental factors, Hearing impairment, Personality factors, Psychological adjustment

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DEDICATION

I dedicate this Thesis to the Almighty God, the giver of all good things. To Him be Glory, Honour and Dominion forever.

CERTIFICATION

I certify that this research work was carried out by Isaiah Olugbenga Ojo in the Department of Special Education, Faculty of Education, University of Ibadan, Ibadan, Nigeria.

…….
Date

……..
Supervisor.
Dr. (Mrs.) J.N. Onwuchekwa,
Department of Special Education,
University of Ibadan, Ibadan, Nigeria.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The period of adolescence is a stage of human development that is characterized by sudden changes psychologically, socially and physically. Consequently, the adolescents attempt to adjust to the sudden changes that are associated with the period. It is evident from literature that the period of adolescence is associated by rapid physical and emotional change, characterized by stresses and tensions as the child strives to establish an identity on the journey from dependence, independence and adulthood. They do ask the following questions: Who am I? What attitudes will I choose? Whose role will I respect? And what will be my lifestyle? (Moronkola & Aremu, 2004).

This period no doubt poses very serious adjustment problems for the adolescents with hearing impairment. This is because, they have the problems associated with the period of adolescence to contend with and those imposed on them by their impairment. The problems imposed on the adolescents with hearing impairment due to their hearing loss include academic, communication barrier, social and psychological. Osiki and Nwazuoke (1998) posited that the adolescents with hearing impairment may be self-blaming, blaming others and or God for their predicament and that they are often psychologically traumatized when the thought of their physical malfunction get to pathological level and that they are highly susceptible to adjustment problems.

Adjustment refers to the holistic adaptation of an individual to the environment (Richard, 2003; Falaye, 1997). It involves several spheres of activities such as, adaptation within family, school, work-place, self and larger society. Hence, psychologists have come up with different types of adjustments like, psychological, social, educational and marital.

According to Richard (2003) psychological adjustment refers to the process by which an individual strives to satisfy his personal needs as well as deal with the demand and constraints that are placed on him by his environment. Furthermore, it could be referred to as the ability of the individual to harmonize his mental and behavioural patterns in order to achieve his personal needs and that of his society. Also, psychological adjustment refers to individual's response to any environmental threat and the satisfaction of his personal needs. Specifically, it refers to the way by which an individual attempts to adapt to the physical and social environment, if this is not achieved, the individual concerned becomes maladjusted. In

addition, psychological adjustment is a life long process and it is necessary for people living with disabilities as well as those without disabilities.

Furthermore, the adolescents with hearing impairment are not left out of the crises that characterize the period of adolescence. This is because they have to adjust to the crises of the period of adolescence as well as the limitations that are imposed on them as a result of their impairment. Mba (1995) and Peters (2000) found out that psychological adjustment is the greatest needs of adolescents with hearing impairment. In their studies, they found out that adjustment to school, home and the larger society is one of the greatest needs of adolescents with hearing impairment.

Professionals in the fields of special education, psychology and social work are making efforts to educate the public about the need to integrate the adolescents with hearing impairment into the society, so that they could live meaningful lives by contributing their quota to the society. It seems that their efforts are not yet yielding the expected results, because all forms of discriminations still exist against individuals living with hearing impairment, which pose adjustment problems to them. Kwei (2002) posited that in the developing countries of Africa, the adolescents with hearing impairment live in a society where cultural beliefs about disabilities and attitudes toward persons with hearing impairment often include shame, prejudice and exclusion from the community. According to him, the adolescents with hearing impairment are often isolated, discriminated against and considered inferior. Also, he claimed that, some sections of the society consider them as accursed group, others subject them to various abuses that cumulatively make them bitter against the society. The adjustment of the adolescents with hearing impairment is based on the fact that they need to come to term with all the challenges of the period of adolescence and those of their hearing impairment. This implies that, they need to have smooth interaction with their environment. Thus, the smooth interaction refers to the extent to which the individual's psychological needs are satisfied, usually with the implication that maximal or optimal need satisfaction depends on a satisfactory relationship with the environment, since meeting psychological needs usually entails interaction with our physical or social surroundings (Richard, 2003).

It is obvious that among all the agencies of the society which affect children and adults, the home exerts the first influence. In the home, the foundations of children's health, both physical and psychological are laid. All children, disabilities not withstanding, need to feel affectionately secured, wanted and loved as individuals. Without such love and security, particularly in infancy and early childhood, children do not only fail to flourish physically, but

will develop certain psychological problems, which may impede adequate psychological development (Onyilofor, 2002). The responsiveness of the parents and significant others in the home is related to the psychological development of the child, which may in turn affect his psychological adjustment later in life. The responses of parents of children with hearing impairment range from stress to emotional reaction, which affects how they are able to fulfill their roles. In other words, their attitude ranges from feeling personally disgraced, guilty, negligence, or of having violated some moral or social code of conduct and of viewing the impairment as a kind of divine punishment of the parents (Warren, 1989).

According to Obani (2006), the families in general and parents in particular have often been deemed to be the most important support system available to the child. The strongest factor in moulding a child's personality is his relationship with his parents. If his parents love him with a generous, ever flowing, non-possessive affection and if they treat him as a person who like themselves, has both rights and responsibilities, then his chances of developing normally is very high, but, if they diverge from this, the child's development may be distorted.

In essence, the prevailing home environment will make or mar the psychological adjustment of adolescents with hearing impairment. Obani (2006) posited that every child will benefit psychologically from a loving home. In such a home, the parents are ready to provide for social, psychological and academic needs of their children. Sociologists, educators and psychologists discovered that the home is the first school of the child. Children reared under adverse social conditions are likely than children reared in more desirable circumstances to have adjustment problems (Nichols and Chem, 2001). Those from broken homes are likely to exhibit maladjusted behaviour at school or home. In other words, children living in broken homes or with parents having unhappy marriage are likely to develop the greatest incidence of maladjustment, while loving and caring homes are likely to rear adjusted children.

Moreover, Steward (2000) found out that the home environment exerts a powerful influence on the child. According to him, home environment may handicap a child in school and society. Also, it may provide unusual opportunities or it may close all doors or shut out all opportunities. This implies that, poor environmental stimulation at home may affect the psychological growth of the child, especially, if he has hearing impairment.

Generally, it seems that several factors related to age, gender, type of family, parental educational background, number of living parents, parents' encouragement and socio-economic status of the home affect children's emotions and attitude. Adolescents from

monogamous homes are better catered for than those from polygamous homes, because the father in particular has many children. Hence, in polygamous families, most fathers do not bother to cater for their children. The parental educational background may also affect the adolescents with hearing impairment, because it seems that illiterate parents ignorantly deal badly with their children with hearing impairment. All these factors altogether form the home environment of adolescents with hearing impairment. It is therefore, suffice to say that favourable home environment is likely to enhance the psychological adjustment of adolescents with hearing impairment, while unfavourable home environment may affect it negatively.

Furthermore, the school is as an agent of socialization has vital roles to play in the overall development of the child. Therefore, it is expected that the school environment be special needs friendly, in terms of how adolescents with hearing impairment are accepted despite their impairment, availability of learning resources and absence of communication barrier. The school environment could have great influence on the psychological adjustment of adolescents with hearing impairment, because the kind of interaction that exist in a particular school setting goes a long way in their psychological development. The school where the child with hearing impairment is not loved or accepted, makes him feel isolated, rejected and consequently becomes maladjusted (Brown, 2000).

The availability of learning facilities in the school could be of great help to the psychological adjustment of the adolescents with hearing impairment. Such facilities include hearing aids (individual and group types) and visual aids like overhead projectors. Brown (2000) was of the view that the new trend in educating the students with hearing impairment is inclusion. Inclusion, according to him, provides the best environment that develops the psychological adjustment of the adolescents with special needs. The thrust of inclusive system of education requires children with disabilities to be placed in the environment that provides the most support with least restriction.

Language barrier may be a source of maladjustment to the adolescents with hearing impairment, since they prefer to use sign language as a means of communication. Total communication should be adopted as a means of communicating with them, so that there will not be frustration due to lack of understanding of what is being communicated. Polak (2003) stressed that problem of communication among persons with hearing impairment could be a source of maladjustment. It is suffice therefore to say that the home and school environment should be prepared in such a way that the speech and language of the child would be enriched.

Apart from the environmental factors that could relate to the psychological adjustment of the adolescents with hearing impairment, there are other personality factors such as, age of onset, degree of hearing loss, gender and personality types that this study is interested in. The age of onset of the hearing loss could be very early before the child developed speech, this is called pre-lingual hearing impairment or it could be at a time when the child had already developed speech, this type of hearing impairment is called post-lingual hearing impairment. A child with pre-lingual hearing loss may have problem of adapting to his environment, because most of the activities in his environment are through communication. His poor speech and language experience could lead to maladjustment. Those with post-lingual hearing loss on the other hand, may adapt to the environment than their counterparts with pre-lingual hearing loss (Adeola, 2000).

The degree of hearing loss has a way of affecting the psychological adjustment of an individual with hearing impairment. Hence, hearing loss has its effect on those affected. In other words, hearing loss, no matter the age of onset, does affect the victim's psychological disposition, communication ability, adjustment capacities and educational achievement (Olubela, Alade and Adediran, 2003). The degree of hearing loss ranges from mild to severe, individual with mild hearing loss may perceive the speech of others through the help of amplification device, such as individual or group hearing aid, while those with severe hearing loss may depend on speech reading or sign language. To this end, the adolescent with mild hearing loss is likely to adapt to his environment better than his counterpart with severe hearing loss. This is because, the former has residual hearing that could assist him, through the use of amplification, understand the speech of others in his environment than his counterpart with severe hearing loss. It could then mean that in the process of understanding the speech of other people by an individual with severe hearing impairment, frustration may set in and this could be a potential source of adjustment problem.

Scholars have shown interest in the relationship between gender and psychological adjustment over the years. For instance, Onyilofor (2002) reported that boys and girls show different types of behaviour as they advance in age and may adjust differently to the same environmental situation. She found out that girls were better adjusted socially than boys. However, she concluded that there is not enough evidence to show that boys are more adjusted than girls. Generally, psychologists and other professionals have not been able to agree on the issue of the relationship between gender and psychological adjustment of

adolescents with hearing impairment. This has been subjected to empirical verification over the years (Onyilofor, 2002).

Furthermore, the relationship between the personality type of an individual and psychological adjustment has been of interest to educators, social workers and psychologist. Jung (1921) in the theory of personality types, postulated that the concept of personality refers to the psychological classification of different types of individuals. Personality types are sometimes distinguished from personality traits; with the latter embodying a smaller group of behavioural tendencies. Types are sometimes said to involve qualitative differences between people, whereas traits might be construed as quantitative differences. Furnham (2005) opined that, according to type theories, introverts and extroverts are two fundamentally different categories of people. When we talk about extroversion and introversion, we are distinguishing between the two worlds in which we live. That is, there is a world inside ourselves, and a world outside ourselves. When we are dealing with the world outside ourselves, we are 'extroverting' and when we are inside our minds, we are 'introverting.' This study sought to examine the relationship between the psychological adjustment of adolescents with Type A personality and their counterparts with Type B personality. Jones (2004) found out that individuals with Type A personality are impatient, achievement-oriented while those with Type B personality are easy-going and relaxed. People of different personality Types have developed various means of adjustment to the environment. It is then very important in a research of this nature to find out the relationship between the psychological adjustment of adolescents with hearing impairment and their personality types.

The adolescents with hearing impairment live in a society where they need to adjust to the challenges of their impairment and those of the conflicts of the stage of adolescence. These make psychological adjustment a great need for them. Hence, the need to examine the relationship among environmental and personality factors and their psychological adjustment. This study therefore, examined the relationship among environmental and personality factors as correlates of psychological adjustment of adolescents with hearing impairment in Oyo State, Nigeria.

1.2 Statement of the Problem

Many adolescents with hearing impairment often exhibit psychological maladjustment as a result of unfavourable home or school environment and personality problems. In view of that, school environment are not cordial to the adolescents with hearing impairment, to the

extent that, they feel inferior to their counterparts with normal hearing. Consequently, they find it difficult to develop good personality that could enhance their psychological adjustment

Furthermore, the peculiar nature of the period of adolescence has a way of contributing to the adjustment problem of adolescents with hearing impairment. The period no doubt is characterized by changes and crises biologically, emotionally and socially, such crises include problem in relating with people and accepting themselves as individuals with hearing impairment. All these factors could affect their psychological adjustment negatively.

Several studies on adolescents with hearing impairment have focused on the academic performance, but little attempt have been made to study the environmental and personality factors and psychological adjustment. This study therefore, examined the relationship among home environment, school environment, age of onset, degree of hearing loss, gender, personality types and psychological adjustment of adolescents with hearing impairment in Oyo State.

1.3 Purpose of the Study

This study investigated the relationship among home environment, school environment, age of onset, degree of hearing loss, gender, personality types and psychological adjustment of adolescents with hearing impairment.

Specifically, the study examined:

(1) The relationship between home environment and psychological adjustment of adolescents with hearing impairment.

(2) The relationship between school environment and psychological adjustment of adolescents with hearing impairment.

(3) The relationship between age of onset and psychological adjustment of the adolescents with hearing impairment

(4) The relationship between degree of hearing loss and psychological adjustment of adolescents with hearing impairment.

(5) The association between gender and psychological adjustment of adolescents with hearing impairment.

(6) The association between personality types and psychological adjustment of adolescents with hearing impairment.

1.4 Scope of the Study

The study was carried out in four senior secondary schools in Oyo State: Methodist Grammar School (Deaf unit), Bodija, Ibadan, Ijokodo High School, Ijokodo, Ibadan, Durbar Grammar School, Durbar, Oyo and Ogbomoso Grammar School, Ogbomoso.

The samples were drawn from senior secondary School one and two (SS I & II). The samples were limited to those with hearing impairment. The factors considered in the study are environmental factors (Home and School) and personality factors (personality types, age of onset, degree of hearing loss and gender).

1.5 Significance of the Study

The results of this study would be useful to parents, adolescents with hearing impairment, teachers, government, policy makers and professionals, who are involved in the rehabilitation of adolescents with hearing impairment.

The parents of the adolescents with hearing impairment would benefit from the findings of this study, in the sense that, they would identify the various factors that are related to the psychological adjustment of their children. This would enable them provide the kind of home environment that would enhance the psychological adjustment of their children, especially those with hearing impairment.

The findings of the study would equally help the adolescents with hearing impairment identify the relationship among home environment, school environment, degree of hearing impairment, age of onset, gender and personality types and psychological adjustment. These would enable them know the factors that could enhance their psychological adjustment.

Furthermore, the teachers and other professionals, such as, social workers and psychologists would find the results of the study very useful. In the sense that, the study will expose them to the relationship among age of onset, home environment , school environment, degree of hearing loss, personality types and psychological adjustment of the adolescents with hearing impairment. This would no doubt enhance the provision of quality services that would enhance the psychological adjustment of adolescents with hearing impairment.

Also, the government, policy makers, as well as, other stakeholders in the education and rehabilitation of adolescents with hearing impairment would find the results of the study useful, in the sense that, they would be able to formulate policies that would promote the psychological adjustment of adolescents with hearing impairment.

1.6. Research Questions

The following research questions were answered in the study:

(1) Are there significant relationships among the independent variables (home environment, school environment, age of onset and degree of hearing loss) and the dependent variable (psychological adjustment) of the adolescents with hearing impairment?

(2) What is the composite contribution of the independent variables to the dependent variable?

(3) What is the relative contribution of the independent variables to the dependent variable?

1.7 Hypotheses

The following hypotheses were tested at 0.05 level of significance:

(1) There is no significant relationship between home environment and psychological adjustment of adolescents with hearing impairment.

(2) There is no significant relationship between school environment and psychological adjustment of adolescents with hearing impairment.

(3) There is no significant association between personality types and psychological adjustment of adolescents with hearing impairment.

(4) There is no significant relationship between age of onset and psychological adjustment of adolescents with hearing impairment.

(5) There is no significant association between gender and psychological adjustment of adolescents with hearing impairment.

(6) There is no significant relationship between degree of hearing loss and psychological adjustment of adolescents with hearing impairment.

1.8 Operational Definition of Terms

The following terms are defined according to how they were used in the study:

Adjustment: The process by which adolescents with hearing impairment adapt to their environment despite their impairment.

Environmental Factor: Environmental factors in the study refers to the prevailing situations at home and school that could make or mar the psychological adjustment of the adolescents with hearing impairment.

Home Environment: The prevailing situation at the home of participants.

School Environment: This refers to the prevailing situation at the school.

Personality Factors: These are factors that are inherent in the participants. These are, degrees of hearing loss, gender, age of onset and personality types. They are the characteristics that are peculiar to the participants.

Pre-lingual Hearing Loss: Hearing loss before speech and language development or acquisition.

Post-Lingual Hearing Loss: Hearing loss that occurred after speech and language development or acquisition.

Psychological Adjustment: Psychological adjustment refers to the smooth relationship between adolescent with hearing impairment and their home and school environment as well as adjustment to their impairment.

Adolescents: Individuals who are transiting from childhood to adulthood. They are within 15 to 22 years old.

Adolescents with Hearing Impairment: Those who fall within mild and severe hearing loss.

Adolescence: It refers to the transition from childhood to adulthood.

Hearing Impairment: Hearing impairment in this study refers to mild and severe hearing loss.

Degree of Hearing Loss: This refers to level of hearing loss which ranges from mild to severe.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

In this chapter, related theoretical and empirical literature were reviewed and the study is based on five theories – psychoanalytical theory, sociogenic or cultural theory, socio-psychological theory, field theory and social learning theory. These theories are reviewed because of their relevance to the study. They emphasized the relationship between person and adjustment and the environment. The reviews are under the following sub-headings:

2.1 Related Concept

- Concept of Hearing Impairment
- Causes of Hearing Impairment
- Degree of Hearing Loss
- Characteristics of Individuals with Hearing Impairment
- Symptoms of Hearing Impairment
- Consequences of Hearing Impairment
- Concept of Psychological Adjustment
- Concept of Adolescence
- Hearing Impairment and Psychological Adjustment
- Home Environment and Psychological Adjustment
- School Environment and Psychological Adjustment
- Personality Types and Psychological Adjustment
- Gender Differences and Psychological Adjustment

2.2 Theoretical Background

- Psychoanalytical Theory
- Sociogenic or Cultural Theory
- Socio-Psychological Theory
- Field Theory
- Social Learning Theory

2.3 Empirical Studies

- Hearing Impairment and Psychological Adjustment
- Home Environment and Psychological Adjustment
- Personality Types and Psychological Adjustment
- Gender Differences and Psychological Adjustment

2.4 Appraisal of Reviewed Literature

2.5 Conceptual Model for the Study

2.1 Related Concept

2.1.1 The Concept of Hearing Impairment

Hearing impairment is a generic term that is used to describe all forms of hearing loss, such as, deafness and hard-of-hearing. Schneider (2002) defines hearing impairment as impairment in hearing, whether permanent or fluctuating that adversely affects a child's educational performance.

In addition, World Health Organization (2005), reported that hearing impairment is a broad term used to describe the loss of hearing in one or both ears. According to WHO (2005), hearing impairment refers to complete or partial loss of the ability to hear from one or both ears. It was also observed by WHO, (2005) that there are two types of hearing impairment defined according to where the problem occurs-conductive hearing impairment, which is a problem in the outer or middle ear. This type of hearing loss is often medically or surgically treatable. While the other one is sensorineural hearing loss. It is usually due to a problem with the inner ear, and occasionally with the hearing nerve going from there to the brain. This type of hearing problem is usually permanent and requires rehabilitation, such as with a hearing aid. The common causes of sensorineural hearing impairment are excessive noise and ageing (WHO, 2005).

WHO (2005) found out that 278 million people worldwide have from moderate to profound hearing loss in both ears and 80% of deaf and people with hearing impairment live in low and middle-income countries. Also, the number of people worldwide with all levels of hearing impairment is rising daily due to a growing global population and longer life expectancies. WHO (2005) also observed that in developing countries, fewer than 1 to 40 people who would benefit from hearing aid have one and current annual production of hearing aids is estimated to meet less than 10% of global need, because 50% hearing impairment is avoidable through prevention, early diagnosis and management.

World Health Organisation (2005) reported that hearing sensitivity is indicated by the quietest sound that an animal can detect, called the hearing thresholds. In the case of humans and some animals, this threshold can be accurately measured by a behavioural audiogram. A record is made of the quiet sound that consistently prompts a response from the listener. The test is carried out for sounds of different frequencies. There are also electro physiological tests that can be performed without requiring a behavioural response.

Normal hearing thresholds within any given species are not the same for all frequencies. If different frequencies of sound are played at the same amplitude, some will be

perceived as loud, and others quiet or even completely inaudible. Generally, if the gain or amplitude is increased, a sound is more likely or be perceived. Ordinarily, when animals use sound to communicate, hearing in that type of animal is most sensitive for the frequencies produced by calls, or ij the case of humans, speech. All levels of the auditory system contribute to this sensitivity toward certain frequencies, the outer ear's physical, from the outer ear's physical characteristics to the nerves and tracts that convey the nerve impulses of the auditory portion of the brain.

A hearing loss exists when an animal has diminished sensitivity to the sounds normally heard by its species. In humans, the term hearing impairment is usually reserved for people who have relative insensitivity to sound in the speech frequencies. The severity of a hearing loss is categorized according to the volume that must be made above the usual level before the listener can detect it. In profound deafness, even the loudest sounds that can be produced by an audiometer (an instrument used to measure hearing) may not be detected.

Another aspect to hearing involves the perceived clarity of a sound rather than its amplitude. In humans, that aspect is usually measured by tests of speech perception. These tests measure one's ability to understand speech, not to merely detect sound. There are very rare types of hearing impairments which affect speech understanding alone.

2.1.2 Age of Onset of Hearing Impairment

The age of onset of hearing impairment has to do with the time of occurrence of hearing impairment in an individual. Wentzel (2007) opined that the onset of hearing loss at different times in a student's development can have markedly different implications. He stressed that onset is usually identified as being either pre-lingual or post-lingual.

Pre-Lingual Hearing Loss

The pre-lingual hearing loss occurs before speech is formed. Strauss (1997) opined that pre-lingual hearing loss occurs before a student develops linguistic skills and the reliance on hearing to obtain information from the environment. He stressed further that, pre-lingual hearing loss makes the acquisition of speech and language a much more difficult process.

He therefore, identified the following causes of pre-lingual hearing loss: Maternal Rubella, Heredity, Prematurity and Complications during Pregnancy, Viral Infections and Congenital Cytomegalovirus.

Furthermore, pre-lingual hearing loss is sustained prior to the acquisition of language, which can occur as a result of a congenital condition or through hearing loss in early infancy. Pre-lingual deafness impairs an individual's ability to acquire a spoken language, but children born into signing families rarely have delays in language development. Most pre-lingual hearing impairment is acquired through either disease or trauma rather than genetically inherited, so families with deaf children nearly always lack previous experience with sign language.

Post-Lingual Hearing Loss

Those who have formed linguistic skills and the use of sound falls within the group of those with post-lingual hearing loss. Strauss (1997) opined that post-lingual hearing loss occurs after a student or adult has developed linguistic skills and learned to use sound for learning. He stressed further that the education treatment for post-lingual hearing loss usually centres on the maintenance of speech and learning skills that were developed prior to the onset of the hearing problem. He identified the following most prevalent causes of post-lingual hearing loss: Infection of all types, Side effects of medication, Noise induced hearing loss and Unknown causes.

Furthermore, post-lingual deafness is hearing impairment that is sustained after the acquisition of language, which can occur as a result of disease, trauma, or as a side-effect of a medicine. Typically, hearing loss is gradual and often detected by family and friends of affected individuals long before the patients themselves will acknowledge the disability. Common treatments include hearing aids and learning lip-reading. Post-lingual deafness is far more common than pre-lingual deafness.

2.1.3 Causes of Hearing Impairment

There are many causes of hearing impairment. For instance, Alade (2005) found out that the causes of hearing impairment can be classified into three sections namely: Causes occurring before birth, Causes occurring during birth and Causes occurring after birth.

She opined that the causes of hearing impairment can be classified into outer, middle and inner ear. According to her, these causes are:

Impairment of the Outer Ear

Alade (2005) opined that impairment of the outer ear, either pathological or resulting from accident or infections, can lead to conductive hearing loss. According to her, the following are the common impairments of the outer ear:

- Atresia – condition in which the external auditory canal does not form in some children.
- Presence of foreign objects in the external ear.
- External ottitis: This refers to a situation whereby the external auditory canal is infected.
- Pathological growth like tumor in the ear.
- Accumulation of cerumen or ear wax which can block the external auditory canal.
- The eardrum can become perforated as a result of clearing or scratching that canal, a blow to the head or excessive pressure in the middle ear.

Impairments of Middle Ear

Alade (2005) found out that the impairments in the middle ear are generally more serious than those of the external or outer ear. According to her, Otitis Media, an infection of the middle ear space and Non-supportive Otitis Media, disruption of the functioning of the eustachian tube, are the common causes of middle ear impairment.

Impairment of the Inner Ear

Alade (2005) identified the fact that the most causes of inner ear impairments are meningitis, a disease of the inner membrane covering the brain, maternal rubella and hereditary factors. In addition, she found out that the following are other causes of inner ear impairments: Premature birth, Viral infections, such as mumps and measles, Prenatal infections of mother, such as, congenital syphilis, Rh factor – that is, blood incompatibility between the mother and child, Unforseen and unwanted side-effect of some antibiotics, Blows to the head and Excessive noise levels

WHO (2008) found out that hearing impairment can be inherited, for instance, if one of both parents or a relative is born deaf, there is a high risk that a child will be born deaf. More so, WHO (2008) identified the following causes of hearing impairment:

- Premature birth
- Condition during birth in which a baby lacks enough oxygen to breathe

- Rubella, syphilis or certain other infections in a woman during pregnancy
- The use of ototoxic drugs – a group of 130 drugs (such as the antibiotic gentamicin) that can cause damage to the inner ear, if incorrectly given during pregnancy.
- Jaundice, which can damage the hearing nerve in a newborn baby.
- Head injury or injury to the ear can cause hearing impairment.
- Wax or foreign bodies blocking the ear canal can cause hearing loss at any age.
- Excessive noise, including working with noisy machinery, exposure to loud noises, such as gunfire or explosions, can damage the inner ear and weaken hearing ability.

WHO (2008) stated that as people age, accumulated exposure to noise and other factors may lead to hearing impairment or deafness.

WHO (2005) Reported that the following are some of the major causes of hearing loss:

Hearing Loss Associated with Age

Hearing loss could be as result of aging. This type of hearing lost is called Presbyscusis. This is the progressive loss of ability to hear high frequencies with increasing age, begins in early adulthood, but does not usually interfere with ability to understand conversation until much later. Although genetically variable, it is a normal concomitant of aging and is distinct from hearing losses caused by noise exposure, toxins or disease agents.

Noise-induced Hearing Loss

Population of people living near airport or freeways are exposed to levels of noise typically in the 65 to 75 dB(A) range. If lifestyles include significant outdoor or open windows conditions, these exposure overtime can degrade hearing. The U.S. EPA and various states have set noise standard to protect people from these adverse health risks. The EPA has identified the level of 70dB(A) for 24 hour exposure as the level necessary to protect the public from hearing loss and other disruptive effect from noise such as sleep disturbance, stress-related problems, learning detriment etc. (WHO, 2008).

Noise-induced hearing loss (NIHL) typically is centred at 3000, 4000, or 6000 Hz. As noise damage progresses, damage starts affecting lower and higher frequencies. On an audiogram, the resulting configuration has a distinctive notch, sometime referred to as a 'noise notch.' As aging and other effects contribute to higher frequency loss (6-8 kHz on an audiogram), this notch may be obscured and entirely disappeared.

Louder sounds cause damage in a shorter period of time. Estimation of a safe duration of exposure is possible using an exchange rate of 3dB. As 3dB represents a doubling of intensity of sound, duration of exposure must be cut in half to maintain the same energy dose. For example, the 'safe' daily exposure at 91 dB (A) is only 2 hours (National Institute for Occupational Safety and Health, 1998). According to the institute, for some people, sound may be damaging at even lower levels than 85 dB A. Exposures to other ototoxins (such as pesticides, some medications including chemotherapy, solvents, etc) can lead to greater susceptibility to noise damage, as well as causing their own damage. This is called a *synergistic interaction*.

Some American Health and Safety Agencies (such as OSHA-Occupation Safety and Health Administration) - Mine Safety and Health Administration (2010), use an exchange rate of 5 dB. While this exchange rate is simpler to use, it drastically underestimates the damage caused by very loud noise. For example, at 115 dB, a 3 dB exchange rate would limit exposure to about half a minute; the 5 dB exchange rate allows 5 minutes.

Many people are unaware of the presence of environmental sound at damaging levels, or of the level at which sound becomes harmful. Common sources of damaging noise levels include car stereos, children's toys, transportation, crowds, lawn and maintenance equipment, power tools, gun use, and even hair dryers. Noise damage is cumulative; all sources of damage must be considered to assess risk. If one is exposed to loud sound (including music) at high levels or for extended durations (85) dB A or greater), then hearing impairment will occur. Sound levels increase with proximity; as the source is brought closer to the ear, the sound level increases.

The National Institute for Occupational Safety (1998) identified the following causes of hearing impairment:

Genetic

Hearing loss can be inherited. Both dominants genes and recessive genes exist which can cause mild to profound impairment. If a family has a dominant gene for deafness it will persist across generations because it will manifest itself in the offspring even if it is inherited from only one parent. If a family had genetic hearing impairment caused by a recessive gene it will not always be apparent as it will have to be passed onto offspring from both parents. Dominant and recessive hearing impairment can be syndromic or nonsyndromic.

Disease or Illness

- Measles may result in auditory nerve damage.
- Meningitis may damage the auditory nerve or the cochlea.
- Autoimmune diseases has only recently been recognized been as a potential case for cochlear damage. Although probably rare, it is possible for autoimmune processes to target the cochlea autoimmune conditions that may precipitate hearing loss.
- Mumps (Epidemic parotitis) may result in profound sensorineural hearing loss (90 dB or more), unilateral (one ear) or bilateral (both ears).
- Presbycusis is a progressive hearing impairment accompanying age, typically affecting sensitivity to higher frequencies (above about 2 kHz).
- Adenoids that do not conductive hearing impairment and nasal infections that can spread to the middle ear.
- AIDS patients frequently experience auditory system anomalies.
- HIV (and subsequent opportunistic infections) may directly affect the cochlea and central auditory system.
- Chlamydia may cause hearing loss in new born to whom the disease has been passed at birth.
- Fetal alcohol syndrome is reported to cause hearing loss in up to 64% infant born to alcoholic mothers, from the excess alcohol intake
- Premature birth results in sensorineural hearing loss approximately 5% of the time.
- Syphilis is commonly transited from pregnant women to their fetuses, and about a third of the infected children will eventually become deaf.
- Otosclerosis is a hardening of the stapes (or stirrup) in the middle ear and causes conductive hearing loss.
- Superior canal dehiscence, a gap in the bone cover above the inner ear, can lead to low-frequency conductive hearing loss, autophony and vertigo.

Medications

Some medications cause irreversible damage to the ear, and are limited in their use for this reason. The most important group is the aminoglycosides (main member gentamicin) and platinum based chemotherapeutics such as cisplatin.

Various other medications may reversibly affect hearing. This includes some diuretics, aspirin and NSAIDs, and macrolide antibiotics. Extremely hydroquinone (Vicodin or Lorcet) abuse is known to cause hearing impairment.

Exposure to Chemicals

Hearing loss can also result from specific drugs; metals, such as lead; solvent, such as toluene (found in crude oil, gasoline and automobile exhaust, for example); and asphyxiates. Combined with noise, these ototoxic chemicals have an adverse effect on a person's hearing loss. Hearing loss due to chemical starts in the high frequency range and is irreversible. It damages the cochlea with lesion and degrades central portions of the auditory system. For some ototoxic chemical exposures, particularly styrene, the risk of hearing loss can be higher than being exposed to noise alone. Controlling noise and using hearing protectors are insufficient for preventing hearing loss from these chemicals. However, taking antioxidants helps prevent ototoxic hearing loss, at least to a degree. The following list provides an accurate catalogue of ototoxic chemicals:

Drugs, Antimalaria, antibiotics, anti-inflammatory (non-steroidal), Solvents, Carbon-monoxide, Metals Lead, Mercury, Pesticides/Herbicides

Physical Trauma

There can be damage either to the ear itself or to the brain centres that process the aural information conveyed by the ears. People who sustain head injury are especially vulnerable to hearing loss or tinnitus, either temporary or permanent.

Exposure to very loud noise (90dB or more, such as jet engines at close range) can cause progressive hearing loss. Exposure to a single event of extremely loud noise (such as explosions) can also cause temporary or permanent hearing loss. A typical source of acoustic trauma is an excessively loud music concept.

2.1.4 Degree of Hearing Loss

Hearing loss is measured in decibels (dB). Hence, through the measurement of threshold, professionals are able to describe the degree of the hearing loss of an individual. Silverman (1970) in Alade (2005) identified the following degree of hearing loss and their educational implications:

Table 2.1: Degree of Hearing Loss

Level of loss	Sound Intensity for perception	Educational Implications
Hard – of hearing mild	27 – 40 dB	May have difficult with distant sounds, may need preferential seating and speech therapy.
Moderate	41- 55 dB	Understands conversational speech, may miss class discussion, may require hearing aids and speech therapy.
Moderately severe	56 -70 dB	Requires hearing aids, auditory training and intensive speech and language training
Deaf severe	71 – 90 dB	Can only hear loud sounds close-up; sometimes considered deaf, needs intensive special education, hearing aids, and speech and language training
Profound	91 dB+	May be aware of loud sounds and vibrations; relies on vision rather than hearing for information processing. Considered deaf.

However, the international symbol for Deafness (ISD) (2009) identified the following classification of degree of hearing loss as shown in Table 2.2.

Table 2.2: International Symbol for Deafness, Degree of Hearing Loss

Sound intensity	Degree of hearing loss
10 - 15Db	Normal hearing
25 - 40dB	Mild hearing loss
40 -55dB	Moderate hearing loss
55 - 70dB	Severe hearing loss
71- 90dB	Profound hearing loss

Classification

Mine Safety and Health Administration (2010) discovered that hearing impairments are categorized by their type (conductive, sensorineural, or both), by their severity, and by the age of onset. Furthermore, a hearing impairment may exist in only one ear (unilateral) or in both ears (bilateral).

Sensorineural Hearing Impairments

A sensorineural hearing impairment is one resulting from dysfunction in the inner ear, especially the cochlea where sound vibrations are converted into neural signals, or in any part of the brain that subsequently processes these signals. The vast majority of human sensorineural hearing loss is associated with abnormalities in the hair cells of the organ of Corti in the cochlea. This dysfunction may be present from birth due to genetic or developmental abnormalities, or arise through trauma or disease during the lifetime of an individual. There are also very unusual sensorineural hearing impairments that involve the VIIIth cranial nerve, the Vestibulocochlear nerve or, in rare cases, auditory cortex. Damage to parts of the brain that process auditory signals can lead to a condition in which sounds may be heard at normal thresholds, but the quality of the sound perceived is so poor that speech cannot be understood. Sensorineural hearing loss associated with abnormalities of the auditory system in the brain is called *Central Hearing Impairment*.

Quantification of Hearing Loss

WHO (2005) observed that, severity of a hearing impairment is ranked according to the additional intensity above a nominal threshold that a sound must be before being detected

by an individual; it is (measured in decibels of hearing loss, or dB HL). Hearing impairment may be ranked as mild, moderate, moderately severe, severe or profound as defined below:

Mild: for adults: between 26 and 40 dB

for children between 20 and 40 dB HL

Moderate: between 41 and 55dB HL

Moderately severe: between 56 and 70 dB HL

Severe: between 71 and 90 dB HL

Profound: 90 dB HL or greater

Hearing sensitivity varies according to the frequency of sounds. To take this into account, hearing sensitivity can be measured for a range of frequencies and plotted on an audiogram.

Another method for quantifying hearing impairments is a speech-in-noise test. As the name implies, a speech in noise test gives an indication of how well one can understand speech in a noisy environment. A person with a hearing loss will often be less able to understand speech, especially in noisy conditions. This is especially true for people who have a sensorineural loss- which is by far the most common type of hearing loss. As such, speech–in-loss tests can provide valuable information about a person's hearing ability, and can be used to detect the presence of sensoneural hearing loss.

2.1.5 Characteristics of Adolescents with Hearing Impairment

The characteristics of Adolescents with hearing impairment show the problems that are associated with their impairment. In view of the above, Alade (2005) identified the following characteristics of adolescents with hearing impairment: Language and speech Development: Communication is the greatest area of difficulty for the deaf. According to her, this is more so for the prelingual deaf children. Also, Alade (2005) noted that infants born deaf enter babbling stage at the same time as hearing infants, but soon abandon it. Differences were also observed in the quality of babbling of hearing and deaf babies. These differences were said to occur because of lack of reinforcement created by inability of deaf infants to hear their own babblings and verbal responses of adults to their babbling.

In addition, Fry (1966) in Alade (2005) observed poor language development of children with hearing impairment as compared to hearing children. He also observed that hearing children learn to associate the sensations they receive when they move their jaws, mouth and tongue with the auditory sounds these movements produce. Deaf children

according to him, have difficult time hearing the sounds of adults' speech, which other children hear and initiate, so they are deprived of adequate adult model.

Social and Personal Adjustments: Alade (2005) found out that hearing impairment has negative effect on social and personal adjustment of the afflicted individual. This negative effect is closely connected with communication problems which contribute to social and behaviour difficulties. In the light of this, Alade (2005) found out a consistent adjustment problem among deaf children than their hearing counterparts. It is therefore, very important to make the school and home environment very conducive for the individuals with hearing impairment, in order to alleviate their adjustment problems

Academic Achievement: Alade (2005) opined that academic difficulties are by-products of hearing impairment. According to her, deaf children and to some extent, hard-of-hearing children have academic difficulties. Sometimes, academic achievement is closely related to intelligence and intelligence testing of the deaf has created problems from time immemorial, because of language problem. Deaf children have been seen as being low in intelligence. This is not surprising, considering the poor language development and lack of auditory exposure to their environment, resulting from the handicap of deafness. She also observed that other areas affected by hearing impairment include motor ability, peripheral vision, social maturity, visual perception and personality development.

2.1.6 Symptoms of Hearing Impairment

Scholars have been able to identify some symptoms of hearing impairment over the years. For instance, Alade (2005) suggested the following symptoms of hearing impairment:

- If a child complains of ear ache, popping ears, or he has a visible discharge from the ear.
- If a child appears to day-dream and drift off, or is more alert when positioned close to the teacher.
- If he watched the speaker's face for clues and has difficulty listening to a message where there are no situational or speaker clues, such as a tape recorded message.
- When a child misunderstands or gives inappropriate responses, particularly if a sequence of spoken instruction is given.
- If a child appears inattentive or restless or distracts others, and is much more responsive in quiet conditions or small groups.

- The child may not turn immediately when called by name, unless other visible signals are given etc.

2.1.7 Consequences of Hearing Impairment

Loss of hearing is a common health problem affecting millions of people. Therefore, defining the extent of loss globally loss of hearing and its possible effects on human behaviour involves many factors (Willey, 2000). According to him, the extent of hearing impairment is not the only factor determining the degree of impairment of language and other behaviour in the child. If hearing loss is present at birth, or occurs before language develops, the child's normal pattern of acquiring language is altered and behaviour is profoundly affected.

Furthermore, Lemse (1992) opined that severe or total deafness which does not develop until after language has been learned, though tragic, is not such a handicap as deafness at birth which prevents the normal development of language. According to him, severe hearing loss after the acquisition of language may produce severe emotional disturbances in the child struggling to adjust to a drastically altered world of silent lip movements. Also, serious acquired hearing loss will produce deterioration in speech sounds because the child can no longer perceive his sound production by listening.

Scholars have discovered the effect of the environment, intelligence and other physical handicaps on the adolescents with hearing impairment. For example, Wiley (2000) said that other factors that influence the amount of impairment related to hearing loss include environment, intelligence, and other physical impairments. According to him, interaction between intelligence and hearing loss has not been adequately defined, but it is generally agreed that slow learning or retarded child may be more impaired by a given degree of hearing loss on the other hand, the bright responsive child, in a supportive environment, may be able to compensate for part of his hearing loss.

Consequences of Hearing Impairment on Personality

The sense of hearing is very vital to the existence of man. Hence, loss of this essential organ may have a devastating effect on those concerns. One may not really appreciate the importance of the hearing organ until it is ineffective. Ademokoya (2005) opined that a normally hearing individual hardly appreciate the opportunity his hearing affords him in his daily interactions and transactions. According to him, a congenitally deaf individual can

hardly estimate the worth of joy he has lost because of his hearing deprivation. He hardly knows that there are unceasing sounds in his environment at all times and he has never experienced the excitement a melodious music can exert on his emotions. Except he is auditory stimulated by amplification, he may assume that the world is always as silent as a graveyard.

Hearing impairment is a serious handicapping condition that tends to isolate the child from normal living. He or she is cut off from many of the experiences and opportunities for learning that ordinary children enjoy and has to make constant and considerable efforts to achieve things that come relatively to normal hearing children (Akinpelu, 1998). She stressed that hearing impairment often brings with it communication problems which in turn can contribute to social and behavioural difficulties. In addition, according to her, deaf children have adjustment problems than their hearing counterparts. In other words, they exhibit characteristics of rigidity, egocentricity, absence of inner controls and impulsivity.

In addition, hearing impairment affect several aspects of the lives of those with the disability. Olubela, *et al* (2003) observed that hearing impairment, though an inconspicuous sensory disability, do affect the victim overtly. They opined that hearing impairment like any other disabilities, do hinder the normal capability expected of the victims in terms of age, sex and societal adjustment. Also, they added that, hearing impairment, no matter the age of onset, do affect the victim's psychosocial disposition, communication ability, adjustment capabilities and educational achievement.

Andrea (2007) observed that hearing impairment has its social, academic and psychological effects on the students with hearing impairment. These effects can be reduced if they can accept their disabilities by adjusting to their social, psychological and academic environment. According to him, it is important to counsel students with hearing impairment to accept their disability in order to adjust to the negative attitudes held by some communication partners. In addition, he identified the following psychosocial effects of hearing impairment: the person withdraws from his or her surroundings, conversations become shorter, less frequent, less spontaneous and less personal, the person becomes less attentive and/or avoids social gatherings and noisy surroundings, reduced social contact and less social or physical activity, loss of intimacy, problems at work and sexual problems.

The social environment of the adolescents with hearing impairment includes the school setting, where they have to interact with their peers (other students with hearing impairment and their hearing counterparts). Also, they have to interact with their siblings at

home as well as their parents and teachers. In a situation whereby the students are not socially and psychologically adjusted, maladjustment sets in.

Osiki & Nnwazuoke (1998) observed that the students with hearing impairment may be self blaming, blaming others and or God for their predicament, they are often psychologically traumatized when the thought of their physical malfunction get to pathological level. They stressed the fact that except with the advantageous use of some hearing aid, and where the cost is not prohibitive, students with hearing impairment are highly susceptible to adjustment problems.

Jones (2004) observed that individuals with hearing impairment, due to their poor interactive nature, strongly affect intimate relationship with others. He opined that in order to reduce the effects of hearing loss on the individuals with hearing impairment, their needs must be met by the social environment in terms of information and support from others. Apart from that, he observed that there is delay in social maturity, slow communication skills with their hearing counterparts among the adolescents with hearing impairment. He equally found out high rate of depression and anxiety disorders, particularly social phobias in deaf and hard-of-hearing adolescents.

Psychological Consequences of Hearing Impairment

Wiley (2000) discovered that by itself, a hearing loss lowers the quality of life, and for most adolescents and adults with hearing impairment, hearing loss has psychological, physical and social consequences. In some cases, however, hearing impairment may have more severe effects. According to him, for the adolescents with hearing impairment, trying to keep up in conversations and overcoming the anxiety of being in social settings may be so stressful that it may result in psychological disorders. The psychological effects of hearing loss vary from person to person, but according to Wiley (2000) a hearing loss may worsen a variety of disorders such as:

- Panic disorder-recurrent, unexpected panic attacks; can be situation induced.
- Social phobia-persistent fear of social or performance situations in which embarrassment may occur.
- Obsessive compulsive disorder and/or personality-recurrent behaviours severe enough to be time-consuming or caused marked distress or significant impairment.
- Post-traumatic stress disorder-development of characteristic symptoms following exposure to an extreme traumatic stressor.

- Anxiety in different forms-due to medical illness, psychological effects or general anxiety that does not meet criteria for any specific anxiety.

In the same vein, American Speech-Language Association (2007) identified the following psychological consequences of hearing impairment: shame, guilt and anger, embarrassment, lack of concentration, sadness or depression, worry and frustration, anxiety and suspiciousness, insecurity and self-criticism and low self confidence.

Consequently, according to the Association, the adolescents with hearing impairment need the help of professionals, such as special educators, counselling psychologists, rehabilitation counsellors, teachers as well as, parents, in order to alleviate the psychological effects of hearing impairment. This will enhance their psychological adjustment. In addition, the Association concluded that hearing impairment can make an individual irritable and less tolerant towards other people. Not only that, some may even become paranoid.

Consequences of Hearing Impairment on Language and Education

American Speech-Language Association (2007) found out that hearing is critical to speech and language development, communication and learning. Also, the Association observed that children with hearing difficulties due to hearing loss or auditory problems continue to be an unidentified and underserved population. The earlier hearing loss occurs in a child, the more serious the effect on the child's language and speech development. Similarly, the earlier the problem is identified and intervention begun, the less serious the ultimate impact.

ASHA (2007) identified the following major ways by which hearing impairment can affect children:

- It causes delay in the development of receptive and expressive communication skills (speech and language).
- The language deficit causes learning problems that result in reduced academic achievement.
- Communication difficulties often lead to social isolation and poor self concept and
- It may have an impact on vocational choices.

Hearing impairment has effects on several aspects of the lives of the adolescents with hearing impairment. Such areas include language and education. William (2003) opined that the effects of hearing impairment especially, if severe and present from birth – are so complex and pervasive that special techniques, materials and people are indeed called for. He stressed

that, children with hearing impairment – even those with superior intelligence and abilities are at a great disadvantage in acquiring language skills. Furthermore, when standard measures of achievement in reading and writing are used with deaf students, their vocabularies are smaller and their sentence structures are simple and more rigid than those of hearing children of the same age or grade level.

Language development is closely related to reading and academic achievement. Therefore, adolescents with hearing impairment, as a group, are significantly behind normally hearing children on standardized tests of reading and academic achievement (Moores, 2008). He stressed that few deaf children progress beyond a fourth grade reading level. Reading, according to him, is clearly central to educational achievement and to obtaining information throughout one's life.

Hearing impairment can equally affect the child's behaviour and socio-emotional development. Strauss (1997), added that the extent to which a child successfully interacts with family members, friends, and people in the community depends largely on the attitudes of others and the child's ability to communicate in some acceptable way. This is because, communication plays a major role in any person's adjustment. However, most adolescents with hearing impairment are fully capable of developing satisfying relationship with their hearing peers when they can develop a mutual acceptable means of communication (William, 2003).

2.1.8 The Concept of Psychological Adjustment

Richard (1993) posited that adjustment refers to the interaction of an individual with his environment. Stressed that the adjusted individual interacts in a harmonious way with the world in which he or she lives. According to him, adjustment could be within the family, work setting, school and larger society. The term social adjustment is often used to refer generally to harmony in the interpersonal realm. In the use of the term adjustment, attention is often focused on the mode of interaction. Alternatively, the emphasis may be on conditions within the individual. In other words, the term may be defined in terms of the extent to which the individual's needs are satisfied, usually with the implication that maximal or optimal need satisfaction depends on a satisfactory relationship with environment, since meeting needs usually entails interaction with our physical or surroundings.

Elegbeleye, (2001) opined that psychological factors are identifiable as those that explain the nature of interaction that exists between the individuals and the environment. She

stressed that, human environment in this respect includes, the individual's parents and the kind of child-rearing pattern and the eventual normative observances that underlie aspiration, need for achievement; choice between good and bad; interpersonal relationship and group belongingness.

Hemilin (1999) opined that it is very important that professionals, such as teachers, school counsellors, special educators and psychologists should be aware of the psychological issues like personal, social, behavioural or family problems relating to the adolescents with hearing impairment's adjustment, in order to assist them cope with such problems. According to him, those working with the adolescents with hearing impairment should be aware of and understand the issues they are facing in their daily lives, in and out of the school settings.

Zeizaika and Harris (1998) identified several issues as the most common psychological adjustment issues that face the adolescents with hearing impairment. These issues are: peer influence, decision making, self esteem, social relation, aggressive behaviours, communication, interactions with hearing people, career decisions, sexual abuse, suicide, withdrawal and gender issue.

Furthermore, Polat (2003) observed that language barrier may be a source of psychological problem to the adolescents with hearing impairment, especially those in mainstream school setting, since they prefer to use their official language, which is sign language. This may lead to breakdown of communication with their hearing counterparts. According to him, problems in communication ability are basic for understanding of a child's behaviour, emotional and social development, especially if the child has hearing impairment. Also, he emphasized the fact that lack of communication skill can affect a child's behaviour, along with his or her social and emotional development.

2.1.9 The Concept of Adolescence

Adolescence (from Latin: *adolescere* meaning "to grow up") is a transitional stage of physical and mental human development generally occurring between puberty and legal adulthood (age of majority), but largely characterized as beginning and ending with the teenage stage. According to Erik Erikson's stages of human development, for example, a young adult is generally a person between the ages of 20 and 40, whereas an adolescent is a person between the ages of 13 and 19. Scholars have found it incredibly difficult to agree upon a precise definition of adolescence, because it can be approached from so many angles. A thorough understanding of adolescence in today's society depends on information from

various perspectives, most importantly from the areas of psychology, biology, history, sociology, education, and anthropology. Within all of these perspectives, it is safe to say that adolescence is viewed as a transitional period whose chief purpose is the preparation of children for adult roles.[5] Historically, puberty has been heavily associated with teenagers and the onset of adolescent development.[6][7][8] However, the start of puberty has had somewhat of an increase in preadolescence (particularly females, as seen with early and precocious puberty), and adolescence has had an occasional extension beyond the teenage years (typically males) compared to previous generations. These changes have made it more difficult to rigidly define the time frame in which adolescence occurs.

The end of adolescence and the beginning of adulthood varies by country and by function, and furthermore even within a single nation-state or culture there can be different ages at which an individual is considered to be (chronologically and legally) mature enough to be entrusted by society with certain tasks. Such milestones include, but are not limited to, driving a vehicle, having legal sexual relations, serving in the armed forces or on a jury, purchasing and drinking alcohol, voting, entering into contracts, completing certain levels of education, and marrying. Adolescence is usually accompanied by an increased independence allowed by the parents or legal guardians and less supervision, contrary to the preadolescence stage.

In studying adolescent development, adolescence can be defined biologically, as the physical transition marked by the onset of puberty and the termination of physical growth; cognitively, as changes in the ability to think abstractly and multi-dimensionally; or socially, as a period of preparation for adult roles. Major pubertal and biological changes include changes to the sex organs, height, weight, and muscle mass, as well as major changes in brain structure and organization. Cognitive advances encompass both increases in knowledge and in the ability to think abstractly and to reason more effectively. The study of adolescent development often involves interdisciplinary collaborations. For example, researchers in neuroscience or bio-behavioral health might focus on pubertal changes in brain structure and its effects on cognition or social relations. Sociologists interested in adolescence might focus on the acquisition of social roles (e.g., worker or romantic partner) and how this varies across cultures or social conditions. Developmental psychologists might focus on changes in relations with parents and peers as a function of school structure and pubertal status. (Christie, 2005)

Furthermore, adolescence, according to Steinberg (1996) is derived from a Latin word, meaning to grow into adulthood. Steinberg (1996) in Abioye (2004) affirmed that adolescence is a transition period, biologically, psychologically and psychosocially. He said that it is the second decade of the life span.

Adolescence is a period that is characterized by instability and emotional conflict. To this end, Cole and Cole (1995) in Abioye (2004) observed that adolescence is a period of lightened instability and emotional conflict that is brought on by biological maturation.

Furthermore, during the period of adolescence, the adolescents experience certain changes. Steinberg (1996) identified three fundamental changes of adolescence - biological, cognitive and social transitions. Robinson (2001) in Abioye (2004) identified three developmental tasks of adolescence namely: search for identity, pursuit of social connections and desire for a sense of competence and accomplishment. In view of the above, Abioye (2004) found out that adolescence is a critical period in the self-perceptions of both boys and girls.

In the late 1880, according to Bamgbose (2004) the United States psychologist, Granville Stanley Hall, was credited with the discovery of adolescence. According to him, Hall applied the term storm and stress and that in the 21st century, the concern for adolescence is more of a political and social issue including employment, sexuality and delinquency. This has formed the greatest of publication and researches on adolescence. Much of these researches show that the adolescence period is problematic (Bamgbose, 2004).

Erickson, (1950) and Hilgar (1962) in Bamgbose (2004) opined that adolescence is a period of storm and stress, a period of ambivalence, conflict and explosion. Emeke (1996) in Bamgbose (2004) said that adolescence is a period when guidance and counselling an enriched family and social environment should be supportive of the adolescent to enable him or her successfully cross threshold of stress, conflict into wholesome adulthood. Bamgbose (2004) identified the World Health Organization's classification of adolescence and the National Adolescence Health Policy's classification of adolescence. According to him, the World Health Organization (WHO, 2005) classified adolescence to be between ages 10-19 (WHO, 2005). It is said to be the progression from appearance of secondary sex characteristics known as puberty to sexual and reproductive maturity. While on the other hand, the National Adolescence Health Policy (NAHP, 1995) classifies adolescence as

between 10-24 years. In view of the above, Bamgbose (2004) opined that considering the term adolescence from a sociological angle, it is the transition from total socio-economic dependence to relative independence. According to her, the definitions of adolescence from different perspectives vary widely, but workers in the field of adolescent studies have agreed on certain characteristics of the period of adolescence, irrespective of whether it is considered from biological or social perspective.

Oladele (1998) said that adolescence is a process of achieving the attitudes and beliefs needed for effective participation in the society. More so, it is the age of great ideals and the beginning of formulating theories as well as the time of adaptation of reality. He also found out that researchers do not agree on specific age at which adolescence begins and terminates. Chronological frequently cited age span of adolescence is between 12 and early 20s. The onset of adolescence is peculiar to the individual and may vary from one culture to another depending on how freely the society permits young people to accumulate knowledge and experience, especially that which might be contrary to the attitudes, beliefs and values of the adults.

The word "adolescence" derived from the Latin verb "adolescere" which means "to grow" or more specifically "to grow into maturity" has been considered from a variety of viewpoints. In the main these viewpoints have approached the question raised in this section from a consideration of physiological and hormonal development, social influences, economic determination, or emotional development. Often, the determination of what adolescence is has been considered from a combination of approaches, usually including physiological and hormonal maturation. We know, for example, that the age of puberty, the time when the young person is capable of reproducing his kind, usually occurs sometime between the tenth and the fifteenth year of the individual's life, which for many psychologists, has been considered the onset of adolescence, as it is most certainly a part of adolescent development.

Historically, however, one could make the case that adolescence, if it existed at all, has frequently been very short in duration. In past centuries, agrarian and urban cultures needed the contribution of their youth at a very early age. In such cultures children went straight from childhood to the responsibilities of adulthood with scarcely a purse for what we now call adolescence. The purse was usually unnoticeable as they mature their children into adults almost overnight and thus practically eliminate the adolescent period. Up to the very recent past in Nigeria for example, farmers married many wives purposely to have many children whose manual contribution on their farms dictated their wealth and popularity in the

society. Those children spent their childhood on the farms where they suddenly started performing adult roles without a 'marked' period of adolescence as we now know it. The short life spans of adults, as well as economic and social pressures, often forced the age of adult responsibility downward in those days.

But even at that time a young person had no difficulty in knowing when he passed from childhood to adulthood. There was almost always an event or ceremony that marked the event of coming of age. In many societies the transition was and still is marked by initiation or puberty rites. All of the ceremonies and status symbols stress the passing from the capricious childhood behaviour to the serious accountability of adulthood.

It is only within the last one hundred years or so that adolescence, as a focus of interest and study, has blossomed forth into the literature in great quantities, t the turn of the twentieth century, launched the increasing flood of research which has continued unabated to the present timed. The simplest explanation of why this happened, perhaps would be to note that as a function of increased life spans, technological and industrial developments, and exploding populations, we have much less need for our youth. It seems their contributions to society are no longer of significant economic importance. Also, it seems we do not need their sexual reproductive capacities for the world in general and Nigeria in particular is already overpopulated. Indeed, at least three of our present military governors are known advocates of three children (at the most) per married couple. This being the repression of their concern and efforts to minimize poverty and raise the quality rather than the quantity of our population, many people, in their public and private utterances, share these Governors' views and therefore preach compliance.

It seems we also do not need the economic contributions of the young to the world of work, since mechanization and automation, though still at a low level of development in Nigeria, and population have left us with vast reservoir of highly trained and qualified but unemployed workers. It seems we do not need their minds and intellects, to any degree, because, people tend to show that majority of us have become completely satisfied with the tradition of adult leadership. We have very effectively, through direct and indirect methods, communicated to our youth that their major contribution is to hang around, grow up, become educated, and stand in line until it is their turn to take over the reins from their elders. Many societies today have increased the amount of knowledge needed before an individual can be considered ready for adulthood. More education and training is required before an individual is ready for an advanced, technological society. Children no longer go into the job market at

the age of 12 or 14 or even 16 years as they are not ready for it. The result has been to ex tend the period between childhood and adulthood, giving the adolescent stage greater visibility. In short, we have, created a long period of adolescence which now usually covers a long drawn out span of years that has stimulated interest and research.

In the light of the above, adolescence, then can be defined, as a holding period in which education, maturation, and waiting are the major tasks to be faced. He qualified this by further explaining that at the time when the child begins to feel less need for the security of familial supervision and protection, at the time when psychological maturity moves the child in the direction of becoming responsible in society, adolescence has begun. This indicates that the period of adolescence is that of transition when the individual changes both physically and psychologically from a child to an adult.

It should be equally apparent that the termination of adolescence, for some, may never occur, though many authors believe that psychologically and chronologically, the adolescent period terminates with the attainment of a consistent and comparatively widespread level of maturity. Maturity defines as being a contributing, relatively self-sufficient member of society, is a major goal for which we will all strive. Some are more successful than others in reaching this goal. These variable years of developing are considered the adolescent years which Cole and Cole (1995) spelt out as:

Preadolescence or Late Childhood	11-12 years	(girls)
	12- 13 years	(boys)
Early adolescence	13-14 years	(girls)
	14-15 years	(boys)
Middle adolescence	15-17 years	(girls)
	16-18 years	(boys)
Late adolescence	18-20 years	(girls)
	19-20 years	(boys)

The point has to be re-emphasized here that no age lines separate the stages of growth at any age level because one level of development gradually dissolves into the next. Especially is this statement true when one works with narrow developmental divisions as in the table above. But divisions as shown above are necessary for academic and practical purposes as. The age limits as shown above differ for the two sexes because girls mature on an average of two years earlier than boys. Precisely therefore, the adolescent is the person whose chronological age is between 11 and 20 years. The individual's body matures-

approaching adult height and strength and becoming capable of producing his like- either fathering or giving birth to a baby.

As observed above, however, vast individual age differences for the onset and termination of adolescence may be expected. Isolated cases may spring surprises just as in the case of the nine year old Brazilian, Maria Elaine Jesus Mascaren who became the world's youngest mother in April 1986 when she gave birth to a baby girl. The birth, by Caesarean Section, confounded everybody including medical doctors (Ayeni, 1987).

An Overview of the Needs of Adolescents

The period of adolescence deserves a special attention and thorough study by all- parents, teachers, psychologists, school counsellors and the general public for many important reasons. Before we discuss some of such reasons, it is important to point out that the general principles of psychology as they relate to growth, learning and adjustment apply to the adolescent stage just as they apply to those in any other phase of development. But because each stage of life has special and unique problems of its own which must be understood to make the application of psychological principles appropriate, adequate emphasis on those of adolescence become essential here.

For example, the secondary school teacher who works in a system where the population is predominantly adolescent and the parents with whom the adolescents live need to understand, among other things, the nature of the transition period through which adolescents pass. They should know that physiologically, adolescence is initiated by puberty and procreative ability while chronologically, puberty occurs in girls (on average) between the 12th and 15th years with a +2 year range, in boys one to two years later. For most of the growth processes the rapid growth in infancy and early childhood is followed by a plateau (latent period) until just before the onset of puberty, when thee emerges a sudden growth spurt which then slows down considerably until middle or late adolescence. These changes are important in the development of self concept, which in effect, promote behaviours that may contrast sharply with those of earlier stages of the individual's development.

It is very important to know and understand the special needs, problems, characteristics and developmental tasks of adolescent that the necessary help be needs from us all may not elude him from all fronts.

1. One of the chief responsibilities of schools and teachers is to help young people to satisfy their biological and acquired needs in ways which will be socially and personally rewarding. Whatever behaviour the adolescent exhibits at a particular point in time depends upon which needs are active and how he goes about satisfying them because the adolescent, just like everyone else, spends most of his day satisfying or attempting to satisfy his physical, social and personal needs.

2. **Physical Needs:** All adolescents possess much the same biological and tissue needs biogenic needs. These include hunger, thirst, activity, sex, rest, temperature regulation, urination and defecation (evacuation), and of course avoidance of physical injury to any part of the body. How these needs are met vary greatly depending on the social surrounding of the adolescent e.g. the thirsty village adolescent would drink pot-stored cold spring water whereas his Ibadan, Kano or Lagos counterpart would prefer any iced liquid ranging from coke to beer. To satisfy the need for activity, a village adolescent might engage in gardening, fishing or wrestling, while his city counterpart would be much more interested in footballing or some other organized games.

   The sex need of adolescents is handled differently from place to place. In small villages for instance, young people, particularly those in school, are frowned upon when they engage in mixed social activities like dancing, but in cities elders feel it provides a very valuable outlet for both boys and girls and so they are connived at. Although teachers should understand the nature of the physical needs of adolescents, it is perhaps even more important that they thoroughly understand and always consider the social and personality needs of adolescents.

3. **Social and Personality Needs:** The adolescents do not want to be tied to the apron strings of any authority e.g. the teacher, the parents or elders, because they want unlimited freedom in many facets of life. They want to attain adult status, hence they tend to behave like adults. They want to be economically independent hence they seek employment even when they are least qualified. Adolescents cry always for the need to be important, to be recognized as persons of worth, to have standing in their group, asking various questions about life, truth, ideas and ideal. These are meant to fill the gap in the adolescents' knowledge about the purpose of life.

4. **The need for status:** This seems perhaps the most important for the adolescent. He craves to achieve adult status and leave behind all traits of childishness. Thus smoking, dating, and other activities which he thinks are exclusively reserved for the

adult are engaged in by the adolescent. Girls at this age want special dresses, they bleach their skin, use lipstick as well as high-heeled shoes and behave like adult women. Status in their peer group is more important to them than status as recognized by their parents or teachers, yet recognition from both of these sources is highly valued and cherished by adolescents. Because of this reason, teachers who direct the activities of adolescents should always ask themselves whether or not the experiences of the classroom are status-producing ones for each individual. The adolescent who keeps achieving his goals in school and is accorded appropriate recognition is rarely a disciplinary problem. Besides, he is in the best possible emotional state to continue to profit from the learning experiences being provided by the school. Otherwise, the adolescent is always rebellious against, most unpopular school activities and motives.

5. **The need for independence**: The adolescent no longer wants parental restrictions because he wants to become a self-directing individual. He wants his own room where he can be free to do his own thinking and plan his own activities. In short, he wants privacy but whether or not he gets it in our own setting here is another matter; and this accounts in part for the frequent quarrels between him and those with whom he shares rooms. He desires to run his life hence he objects to his parents or guardians going to his school to inquire about his progress a thing most admired by younger children. The adolescent wants to do things which show that he can handle successfully his own affairs.

   Teachers should not be overprotective of their adolescent students. For instance, students can contribute in the planning of their programmes of instruction, help set up rules and regulations for classroom conduct and produce and take another responsibilities in line with their increased abilities and levels of maturity. Teachers should, therefore, not spoon feed their students, scold them for minor misbehaviors, plan all their work for them, or even expect little from them in the way of responsible behaviour. Adolescents are really capable- through challenging situations of doing much more than the 'ordinary' teacher thinks of them.

6. **The need for achievement:** is another important personality need of the adolescent. This need is of paramount importance in learning. All leading learning theorists. Thorndike, Pavlov, Skinner, Hull, to mention just a few, believe that learning is most effectively accomplished when the efforts of the learner are followed by a sense of achievement (which they refer to as reinforcement). One very effective method of

getting pupils learn rapidly and to like their schoolwork is to take notice of every good work that they do. Every pupil at times does something commendable. This should be brought to the attention of the pupil and all other members of the class.

Threats and punishments have many bad side effects. Though a little bit of anxiety producing treat may be useful at times, yet when punishment is used, the learner may learn a little of the subject matter (say mathematics or physics), but at the same time he may learn to hate the teacher and the subject. Numerous experimental studies have shown the superiority of praise over censure or punishment as a motivating device in producing learning. To utilize the need for achievement, which is present in all adolescents, the teacher should gear the classroom activities to the current achievement level of each student. It is only in this way the classroom atmosphere can be truly conducive to learning.

The need for satisfying philosophy of life: The adolescent exhibits a persistent and driving concern about the meaning of life. He is concerned with questions about truth, religion, ideas and ideals. He wants to know many of the purposes of life. A satisfying set of beliefs or philosophy tend to provide him a lot of psychological security which he badly needs at this time. This is a well recognized period for attitude formation. He adopts various styles hair cut, dressing, etc of those he admires. The school has a very great responsibility in helping the adolescent find himself and develops necessary outlooks on life that will give him stability of character and a sense of security (Ayeni, 1987).

Adolescent Problems

It is both imaginable and unavoidable that young people will have many problems and worries as they make the difficult transition from childhood to adulthood. To master every developmental step is not easy and this is why adolescents need, and should be given great help to develop into stable and useful adults. Prominent among those who are in a strategic position to help adolescents solve their problems and alleviate their worries are secondary school teachers and school counsellors. Some of the problems that perpetually annoy adolescents and perplex the adults who deal and interact with them are:

Problems of maturation: Essentially because of individual differences there are early and late maturing adolescents. Early maturing girls suffer real handicaps, and early maturing boys are not always adversely affected but, in fact, are benefited by physical and sexual development. Early development makes girls feel conspicuous at a time when to be

conspicuous has no real value, if not actually risky, for them. Many find themselves embarrassingly tall and heavy and attention demanding. The early maturing girls are interested in boys, but those of her age or class, on the average, are three to four years behind her in physical development and are therefore unreceptive to her yearnings.

For the late maturing boy, a complete reversal is the case. He is too small to gain both acknowledgement and acceptance in social settings, too immature looking to get dates with girls of his own age. He frequently develops inferiority feelings that may persist for a lifetime. Many of such boys are, however, noisy, rude and aggressive- attention seeking mechanisms. School teachers should do everything in their power to always reassure late maturing boys that when they reach actual maturity they will be as tall as earlier maturing boys and that their rates of growth are perfectly in order. It is important that late maturing boys are not allowed to adjust by withdrawing from competition and becoming submissive and self-effacing. If late maturing boys can gain a sufficient feeling of security, many of them will also be less noisy and aggressive and less prone to seeking excessive attention.

Physical Deviations: Both early maturing girls and late maturing boys tend to suffer from worries and anxieties partly because their physiques vary from the assumed norms of their age mates. All adolescents, regardless of their rate of development, are very sensitive about physical defects and variations. They worry because they feel they are too thin or too heavy, too tall or too short or that their hips are too wide or their legs too big. Of great concern to the adolescents is their facial appearance- pimples, lack of beard, too heavy eyebrows, scars.

The teacher, psychologists or athletic coach is in the best position to offer sympathetic help and advice to adolescents who are distressed because of real or imagined physical defects or variations.

Sexual Maturity: The period of adolescence is that of emergence of sex drive. At this period the youth has very strong passion which he tends to gratify indiscriminately and at all costs. Of the bodily desires is at the sexual by which the adolescents are most swayed and in which they show complete absence or lack of self-control.

Rebellion: Piaget considers it a justifiable duty of the adolescents to revolt against all forms of imposed truths and to build up their intellectual and moral ideas as freely as they can. Theirs is the age of idealism. Generally, they revolt against parents and teaches as well as any authority figure because they perceive these figures as old fashioned and out of tune with modern times, whereas parents and teachers look at these teenagers as radical, rebellious and

at times too wild. This is the source of trouble most of the time at home and school because this is the period when the adolescents deliberately defy constituted authority.

Problems Related to Peer Groups: An adolescent finds his most helpful and reliable support and understanding among his peers. Here he discovers that people have the same problems as he has. So they understand one another as they share experiences. It is good so far. But it is common for boys to form gangs and at times these gangs exhibit tremendous influence on individual members. Acceptable methods should be adopted to dissuade and completely withdraw adolescents from gangs.

Problems of Independence: While adolescents still act as children, they also demand to be treated as adults, and while they want adult treatment, they are afraid of adulthood because of inexperience and financial status and inadequacy. To establish independence some of them may stay away from home and they may even refuse to explain their whereabouts on their return home. They may equally indulge themselves in smoking and drinking which they consider as signs of adulthood. This is why they run into trouble with teachers and parents and at times, with the law enforcement agents, who, in return treat them as lawless people who should be severely dealt with (Ayeni 1987).

Characteristics of Adolescents

There are some characteristics which are peculiar to the period of adolescence and some of them are considered here.

Physical Transformation: The average adolescent undergoes a growth spurt. He/She changes from a child, small and vulnerable to an adult in stature, shape and strength. He/She is capable of becoming of father/mother. These visible changes cause him/her to learn to perceive himself/herself quite differently. Adults, in turn, have to change their views toward him/her.

However, and as already mentioned above, not all children mature at the same rate hence individual differences play a great part in physical maturation. On the whole, when physical differences become prominent among groups members, in either of or both sexes, work out new measures to cope. The group then, will be faced with the choice of splitting up according to the sizes of members or working out new ways o having good times together. Such shifts, often times, create strong problems and complicate the search for ways of handling social relationships.

Increase in Tension: With physical transformation and the maturing of the reproductive system, sexuality now becomes a very potent psychological force within the emotional economy of the adolescent. Its power is something new, an addition, and the young person experiences and must cope with greater tension. This accounts for restlessness which in part, reflects physical growth. As legs grow longer, former sitting postures become uncomfortable.

The restlessness also shows up as inattention, toying with gadgets, and eagerness to be on the move all the time. There are rapid changes in mood the adolescent must blow off steam or explode, Psychological tension thus produce sensations of discomfort, and the bustle of activity enables the young folks to focus their attention on doing things instead of thinking about themselves.

When, sometimes (as in school situations) the adult tries to stop the excessive movements, there can be conflict. The random motion or the toying with objects which the inner tension of their students produce, is annoying to many uninformed teachers and can bring about needless disciplinary clashes in schools.

Shift in Emotional Ties: The constant rise in emotional tensions may be a response to more than increase in sexuality. It is the increase in sexuality combined with a massive redirecting of emotional allegiances and of expectations as to human sources of gratification that cause the tension.

Adolescence is the period when the individual becomes hungrier, greedier, more cruel and inconsiderate, more inquisitive, more boastful, more egocentric and showy than he/she ever has been before. The young person tends to turn away from the adults to form strong attachments with contemporaries of his/her own sex, and then shortly after, with those of the opposite sex. The initial intense interest in the opposite sex can look like its exact opposite. For an example, a girl who finds herself alone in a group of boys will quickly leave. Also, a boy who pays attention to girls is teased by other boys. Girls may engage in whispering to one another but become shy if boys are present. When a girl dances, she prefers dancing with another girl to dancing with a boy.

In schools and other situations where there is an understood routine and where tradition demands the compulsory attendance of both sexes under adult supervision, hostility between the sexes may temporarily disappear. But when and where actions are not well defined, and adult supervision not keen, it may flare quickly. A sign of what is beneath the surface is the fact that, even among known ‘girls-hating’ and ‘boy-hating’, evidence abound

to show that youngsters with a reputation for sex sophistication are rated most highly by their friends. Instead of accepting ignorance or inexperience, boys and girls make a brave but short-lived display by telling filthy stories, writing dirty slogans on walls and relating exploits which may or may not be true.

Uncertainty about Status: The position of the adolescent is unclear in our social order. On some issues and for some reasons and purposes they are considered and treated as children for instance, in decisions about schooling, dating, and treatment of their siblings. While on other issues they are expected to be adults e.g. in reasoning, supervision of siblings and the home in the absence of parents. This ambiguous status and its repercussion have a great impact on the adolescents because they are alternatively regarded as children and adults. This is capable of promoting indecision on the part of adolescents, but they are naturally sensitive to factors which reflect their status. Most of them will always admire and want the prestige and respect accorded adults to be extended to them too. This is a reason why, of all the things a teacher may do, the most serious in the view of adolescents is "to treat us like children" and even at home, we commonly hear the adolescent telling his/her parents to note the fact that "I am not a child any more".

This ambiguity in status used to be avoided in societies where ceremonials were perform to separate childhood from maturity. Before such initiation ceremonies, a youngster lived and functioned as a child. Afterward, he/she assumed the role, occupations and duties of the man or woman. In-between stages were kept to a minimum. But in most present-day societies, no clear-cut lines do exist. Rather, there is a vague no- man's land across which each young person struggles at his own pace.

It has been discovered that the absence or lack of a rite conferring adulthood makes the young person run after symbols which are regarded as grown up symbols. For example, many youngsters take their first drinks, smoke their first cigarette, sex for the first time or attach great importance to such things as having a driver's license particularly in the elite group. These symbolic actions vary widely in nature and quality but their significance to the adolescent cannot be over-emphasized. It is mainly that of giving them the feel of adulthood.

Age- Graded Groupings: Adherence to group by adolescents may be on the basis of age, school, class, locality, social class or interest or other minor uniformities. Adolescents keep searching for a sort of identification which in their own opinion does not let them down come what may in their struggle to feel real, to establish a personal identity, not to fit into an adult assigned role but to go through whatever they set for themselves.

Our highly graded schools promote this type of grading where the seniors (especially in the boarding houses) always want to lord it over their juniors. Those who are out of school seem to have attitudes close to the adults with whom they work. It is the youth who are in school who voice distinctive ideas particularly on issues that are of common interest and value not only to them but to the whole society. The fact remains that many young persons have less real life contact with adults who can serve as objects of identification to them.

Intellectual maturity: Piaget's final stage of cognitive development which begins with adolescence at 12+ years of age is the formal operations, that is, the ability to use abstract reasoning processes. He sees the adolescent as an individual who is capable (and this is where he reaches the level of the adult) of building or understanding ideas or abstract theories and concepts. This ability of the adolescent to reason in abstract terms, has the following two major effects:

a. Adolescents can contest bone-to-bone with adults when there are issues of interest to debate for instance, religion, politics, economy and morality.

b. They are capable of philosophizing, determining values for themselves, and thinking in terms of the future.

As these adolescents sense their new intellectual powers, many of them exercise such powers merely for the fun of doing so. They can use this ability in working out life plans. Here, the desire for a settled home, good and reliable vocation and having permanent friends is very high. In most cases, adolescents do not agree with adult views and opinions because they see such views and opinions as being outside their own frame of mind if not entirely outdated (Ayeni, 1987). Dorn & Biro (2011) identified the following characteristics of adolescents:

Biological Development

Puberty is a period of several years in which rapid physical growth and psychological changes occur, culminating in sexual maturity. The average onset of puberty is at 10 or 11 for girls and age 12 or 13 for boys. Every person's individual timetable for puberty is influenced primarily by heredity, although environmental factors, such as diet and exercise, also exert some influence. These factors can also contribute to precocious and delayed puberty.

Some of the most significant parts of pubertal development involve distinctive physiological changes in individuals' height, weight, body composition, and circulatory and respiratory systems. These changes are largely influenced by hormonal activity. Hormones play an organizational role, priming the body to behave in a certain way once puberty begins,

and an activational role, referring to changes in hormones during adolescence that trigger behavioral and physical changes.

Puberty begins with a surge in hormone production, which in turn causes a number of physical changes. It is also the stage of life in which a child develops secondary sex characteristics (for example, a deeper voice and larger Adam's apple in boys, and development of breasts and more curved and prominent hips in girls) as his or her hormonal balance shifts strongly towards an adult state. This is triggered by the pituitary gland, which secretes a surge of hormonal agents into the blood stream, initiating a chain reaction. The male and female gonads are subsequently activated, which puts them into a state of rapid growth and development; the triggered gonads now commence the mass production of the necessary chemicals. The testes primarily release testosterone, and the ovaries predominantly dispense estrogen. The production of these hormones increases gradually until sexual maturation is met. Some boys may develop gynecomastia due to an imbalance of sex hormones, tissue responsiveness or obesity.

Facial hair in males normally appears in a specific order during puberty: The first facial hair to appear tends to grow at the corners of the upper lip, typically between 14 to 16 years of age. It then spreads to form a moustache over the entire upper lip. This is followed by the appearance of hair on the upper part of the cheeks, and the area under the lower lip. The hair eventually spreads to the sides and lower border of the chin, and the rest of the lower face to form a full beard. As with most human biological processes, this specific order may vary among some individuals. Facial hair is often present in late adolescence, around ages 17 and 18, but may not appear until significantly later. Some men do not develop full facial hair for 10 years after puberty. Facial hair will continue to get coarser, darker and thicker for another 2–4 years after puberty.

The major landmark of puberty for males is the first ejaculation, which occurs, on average, at age 13. For females, it is menarche, the onset of menstruation, which occurs, on average, between ages 12 and 13. The age of menarche is influenced by heredity, but a girl's diet and lifestyle contribute as well. Regardless of genes, a girl must have certain proportion of body fat to attain menarche. Consequently, girls who have a high-fat diet and who are not physically active begin menstruating earlier, on average, than girls whose diet contains less fat and whose activities involve fat reducing exercise (e.g. ballet and gymnastics). Girls who experience malnutrition or are in societies in which children are expected to perform physical labor also begin menstruating at later ages.

The timing of puberty can have important psychological and social consequences. Early maturing boys are usually taller and stronger than their friends. They have the advantage in capturing the attention of potential partners and in becoming hand-picked for sports. Pubescent boys often tend to have a good body image, are more confident, secure, and more independent. Late maturing boys can be less confident because of poor body image when comparing themselves to already developed friends and peers. However, early puberty is not always positive for boys; early sexual maturation in boys can be accompanied by increased aggressiveness due to the surge of hormones that affect them. Because they appear older than their peers, pubescent boys may face increased social pressure to conform to adult norms; society may view them as more emotionally advanced, despite the fact that their cognitive and social development may lag behind their appearance. Studies have shown that early maturing boys are more likely to be sexually active and are more likely to participate in risky behaviors.

For girls early maturation can sometimes lead to increased self-consciousness, though a typical aspect in maturing females. Because of their bodies' developing in advance, pubescent girls can become more insecure. Consequently, girls that reach sexual maturation early are more likely than their peers to develop eating disorders. Nearly half of all American high school girls' diet is to lose weight. In addition, girls may have to deal with sexual advances from older boys before they are emotionally and mentally mature. In addition to having earlier sexual experiences and more unwanted pregnancies than late maturing girls, early maturing girls are more exposed to alcohol and drug abuse. Those who have had such experiences tend to perform less well in school than their "inexperienced" age peers.

Girls have usually reached full physical development by ages 15–17, while boys usually complete puberty by ages 16–18. Any increase in height beyond the post-pubertal age is uncommon. Girls attain reproductive maturity about 4 years after the first physical changes of puberty appear. In contrast, boys accelerate more slowly but continue to grow for about 6 years after the first visible pubertal changes.

Growth Spurt

The adolescent growth spurt is a rapid increase in individuals' height and weight during puberty resulting from the simultaneous release of growth hormones, thyroid hormones, and androgens. Males experience their growth spurt about two years later, on average, than females. During their peak height velocity (the time of most rapid growth),

adolescents grow at a growth rate nearly identical to that of a toddler—about 4 inches (10.3 cm) a year for males and 3.5 inches (9 cm) for females. In addition to changes in height, adolescents also experience a significant increase in weight (Marshall, 1978). The weight gained during adolescence constitutes nearly half of one's adult body weight. Teenage and early adult males may continue to gain natural muscle growth even after puberty.

The accelerated growth in different body parts happens at different times, but for all adolescents it has a fairly regular sequence. The first places to grow are the extremities – the head, hands and feet – followed by the arms and legs, then the torso and shoulders. This non-uniform growth is one reason why an adolescent body may seem to be out of proportion.

During puberty, bones become harder and more brittle. At the conclusion of puberty, the ends of the long bones close during the process called epiphysis. There are ethnic differences in these skeletal changes: bone density increases significantly more among African-American than white adolescents, which might account for decreased likelihood of African-American women developing osteoporosis and having fewer bone fractures.

Another set of significant physical changes during puberty happen in bodily distribution of fat and muscle. This process is different for females and males. Before puberty, there are nearly no sex differences in fat and muscle distribution; during puberty, boys grow muscle much faster than girls, although both sexes experience rapid muscle development. In contrast, though both sexes experience an increase in body fat, the increase much more significant for girls. Frequently, the increase in fat for girls happens in their years just before puberty. The ratio between muscle and fat among post-pubertal boys is around three to one, while for girls it is about five to four. This may help explain sex differences in athletic performance.

Pubertal development also affects circulatory and respiratory systems as an adolescents' heart and lungs increase in both size and capacity. These changes lead to increased strength and tolerance for exercise. Sex differences are apparent as males tend to develop "larger hearts and lungs, higher systolic blood pressure, a lower resting heart rate, a greater capacity for carrying oxygen to the blood, a greater power for neutralizing the chemical products of muscular exercise, higher blood hemoglobin and more red blood cells".

It is important to note that, despite some genetic sex differences, environmental factors play a large role in biological changes during adolescence. For example, girls tend to reduce their physical activity in preadolescence and may receive inadequate nutrition from diets that

often lack important nutrients, such as iron. These environmental influences in turn affect female physical development.

Reproduction-Related Changes

Primary Sex Characteristics

Primary sex characteristics are those directly related to the sex organs. In males, the first stages of puberty involve growth of the testes and scrotum, followed by growth of the penis. At the time that the penis develops, the seminal vesicles, the prostate, and the bilbo-urethral glands also enlarge and develop. The first ejaculation of seminal fluid generally occurs about one year after the beginning of accelerated penis growth, although this is often determined culturally rather than biologically, since for many boys first ejaculation occurs as a result of masturbation. Boys are generally fertile before they have an adult appearance.

In females, changes in the primary sex characteristics involve growth of the uterus, vagina, and other aspects of the reproductive system. Menarche, the beginning of menstruation, is a relatively late development which follows a long series of hormonal changes. Generally, a girl is not fully fertile until several years after menarche, as regular ovulation follows menarche by about two years. Unlike males, therefore, females usually appear physically mature before they are capable of becoming pregnant.

Secondary Sex Characteristics

Changes in secondary sex characteristics include every change that is not directly related to sexual reproduction. In males, these changes involve appearance of pubic, facial, and body hair, deepening of the voice, roughening of the skin around the upper arms and thighs, and increased development of the sweat glands. In females, secondary sex changes involve elevation of the breast, widening of the hips, development of pubic and underarm hair, widening of the areolae, and elevation of the nipples.

The changes in secondary sex characteristics that take place during puberty are often referred to in terms of five Tanner stages, named after the British pediatrician who devised the categorization system.

Changes in the Brain

The human brain is not fully developed by the time a person reaches puberty. Between the ages of 10 and 25, the brain undergoes changes that have important implications for behavior (see Cognitive development below).

The brain reaches 90% of its adult size by the time a person is six years of age. Thus, the brain does not grow in size much during adolescence. However, the creases in the brain continue to become more complex until the late teens. The biggest changes in the folds of the brain during this time occur in the parts of the cortex that process cognitive and emotional information.

Over the course of adolescence, the amount of white matter in the brain increases linearly, while the amount of grey matter in the brain follows an inverted-U pattern. Through a process called synaptic pruning, unnecessary neuronal connections in the brain are eliminated and the amount of grey matter is pared down. However, this does not mean that the brain loses functionality; rather, it becomes more efficient due to increased myelination (insulation of axons) and the reduction of unused pathways.

The first areas of the brain to be pruned are those involving primary functions, such as motor and sensory areas. The areas of the brain involved in more complex processes lose matter later in development. These include the lateral and prefrontal cortices, among other regions.

Some of the most developmentally significant changes in the brain occur in the prefrontal cortex, which is involved in decision-making and cognitive control, as well as other higher cognitive functions. During adolescence, myelination and synaptic pruning in the prefrontal cortex increases, improving the efficiency of information processing, and neural connections between the prefrontal cortex and other regions of the brain are strengthened. This leads to better evaluation of risks and rewards, as well as improved control over impulses. Specifically, developments in the dorsolateral prefrontal cortex are important for controlling impulses and planning ahead, while development in the ventromedial prefrontal cortex is important for decision making. Changes in the orbit frontal cortex are important for evaluating rewards and risks.

Two neurotransmitters that play important roles in adolescent brain development are glutamate and dopamine. Glutamate is an excitatory neurotransmitter. During the synaptic pruning that occurs during adolescence, most of the neural connections that are pruned

contain receptors for glutamate or other excitatory neurotransmitters. Because of this, by early adulthood the synaptic balance in the brain is more inhibitory than excitatory.

Dopamine is associated with pleasure and attuning to the environment during decision-making. During adolescence, dopamine levels in the limbic system increase and input of dopamine to the prefrontal cortex increases. The balance of excitatory to inhibitory neurotransmitters and increased dopamine activity in adolescence may have implications for adolescent risk-taking and vulnerability to boredom (see Cognitive development, below). Development in the limbic system plays an important role in determining rewards and punishments and processing emotional experience and social information. Changes in the levels of the neurotransmitters dopamine and serotonin in the limbic system make adolescents more emotional and more responsive to rewards and stress. The corresponding increase in emotional variability also can increase adolescents' vulnerability.

Cognitive Development

Adolescence is also a time for rapid cognitive development. Piaget describes adolescence as the stage of life in which the individual's thoughts start taking more of an abstract form and the egocentric thoughts decrease. This allows the individual to think and reason in a wider perspective. A combination of behavioural and fMRI studies have demonstrated development of executive functions, that is, cognitive skills that enable the control and coordination of thoughts and behaviour, which are generally associated with the prefrontal cortex. The thoughts, ideas and concepts developed at this period of life greatly influence one's future life, playing a major role in character and personality formation.

Biological changes in brain structure and connectivity within the brain interact with increased experience, knowledge, and changing social demands to produce rapid cognitive growth (see Changes in the brain above). The age at which particular changes take place will vary between individuals, but the changes discussed below generally begin at puberty or shortly thereafter and some skills continue to develop as the adolescent ages.

Theoretical perspectives

There are two perspectives on adolescent thinking. One is the constructivist view of cognitive development. Based on the work of Piaget, it takes a quantitative, state-theory approach, hypothesizing that adolescents' cognitive improvement is relatively sudden and drastic. The second is the information-processing perspective, which derives from the study of

artificial intelligence and attempts to explain cognitive development in terms of the growth of specific components of the thinking process.

Improvements in Cognitive Ability

By the time individuals have reached age 15 or so, their basic thinking abilities are comparable to those of adults. These improvements occur in five areas during adolescence:

1. Attention. Improvements are seen in selective attention, the process by which one focuses on one stimulus while tuning out another. Divided attention, the ability to pay attention to two or more stimuli at the same time, also improves.
2. Memory. Improvements are seen in both working memory and long-term memory.
3. Processing speed. Adolescents think more quickly than children. Processing speed improves sharply between age five and middle adolescence; it then begins to level off at age 15 and does not appear to change between late adolescence and adulthood.
4. Organization. Adolescents are more aware of their own thought processes and can use mnemonic devices and other strategies to think more efficiently.
5. Metacognition.

Hypothetical and Abstract Thinking

Adolescents' thinking is less bound to concrete events than that of children: they can contemplate possibilities outside the realm of what currently exists. One manifestation of the adolescent's increased facility with thinking about possibilities is the improvement of skill in deductive reasoning, which leads to the development of hypothetical thinking. This provides the ability to plan ahead, see the future consequences of an action and to provide alternative explanations of events. It also makes adolescents more skilled debaters, as they can reason against a friend's or parent's assumptions. Adolescents also develop a more sophisticated understanding of probability.

The appearance of more systematic, abstract thinking is another notable aspect of cognitive development during adolescence. For example, adolescents find it easier than children to comprehend the sorts of higher-order abstract logic inherent in puns, proverbs, metaphors, and analogies. Their increased facility permits them to appreciate the ways in which language can be used to convey multiple messages, such as satire, metaphor, and sarcasm. (Children younger than age nine often cannot comprehend sarcasm at all). This also permits the application of advanced reasoning and logical processes to social and ideological

matters such as interpersonal relationships, politics, philosophy, religion, morality, friendship, faith, democracy, fairness, and honesty.

Metacognition

A third gain in cognitive ability involves thinking about thinking itself, a process referred to as metacognition. It often involves monitoring one's own cognitive activity during the thinking process. Adolescents' improvements in knowledge of their own thinking patterns lead to better self-control and more effective studying. It is also relevant in social cognition, resulting in increased introspection, self-consciousness, and intellectualization (in the sense of thought about one's own thoughts, rather than the Freudian definition as a defense mechanism). Adolescents are much better able than children to understand that people do not have complete control over their mental activity. Being able to introspect may lead to two forms of adolescent egocentrism, which results in two distinct problems in thinking: the imaginary audience and the personal fable. These likely peak at age fifteen, along with self-consciousness in general.

Related to metacognition and abstract thought, perspective-taking involves a more sophisticated theory of mind. Adolescents reach a stage of social perspective-taking in which they can understand how the thoughts or actions of one person can influence those of another person, even if they personally are not involved.

Relativistic Thinking

Compared to children, adolescents are more likely to question others' assertions, and less likely to accept facts as absolute truths. Through experience outside the family circle, they learn that rules they were taught as absolute are in fact relativistic. They begin to differentiate between rules instituted out of common sense – not touching a hot stove – and those that are based on culturally-relative standards (codes of etiquette, not dating until a certain age), a delineation that younger children do not make. This can lead to a period of questioning authority in all domains.

Wisdom

Wisdom, or the capacity for insight and judgment that is developed through experience, increases between the ages of fourteen and twenty-five, then levels off. Thus, it is during the adolescence-adulthood transition that individuals acquire the type of wisdom that is

associated with age. Wisdom is not the same as intelligence: adolescents do not improve substantially on IQ tests since their scores are relative to others in their same age group, and relative standing usually does not change – everyone matures at approximately the same rate.

Risk-Taking

In light of the fact that most injuries sustained by adolescents are related to risky behavior (car crashes, alcohol, unprotected sex), much research has been done on adolescent risk-taking, particularly on whether and why adolescents are more likely to take risks than adults. Behavioral decision-making theory says that adolescents and adults both weigh the potential rewards and consequences of an action. However, research has shown that adolescents seem to give more weight to rewards, particularly social rewards, than do adults.

During adolescence, there is an extremely high emphasis on approval of peers as a reward due to adolescents' increased self-consciousness. There may be evolutionary benefits to an increased propensity for risk-taking in adolescence – without risk-taking, teenagers would not have the motivation or confidence necessary to make the change in society from childhood to adulthood. It may also have reproductive advantages: adolescents have a newfound priority in sexual attraction and dating, and risk-taking is required to impress potential mates. Research also indicates that baseline sensation seeking may affect risk-taking behavior throughout the lifespan.

Identity Development

Among the most common beliefs about adolescence is that it is the time when teens form their personal identities. Empirical studies suggest that this process might be more accurately described as identity development, rather than formation, but confirms a normative process of change in both content and structure of one's thoughts about the self. Researchers have used three general approaches to understanding identity development: self-concept, sense of identity, and self-esteem.

Self-Concept

Early in adolescence, cognitive developments result in greater self-awareness, greater awareness of others and their thoughts and judgments, the ability to think about abstract, future possibilities, and the ability to consider multiple possibilities at once. As a result,

adolescents experience a significant shift from the simple, concrete, and global self-descriptions typical of young children.

Adolescents can now conceptualize multiple "possible selves" they could become and long-term possibilities and consequences of their choices. Exploring these possibilities may result in abrupt changes in self-presentation as the adolescent chooses or rejects qualities and behaviors, trying to guide the actual self toward the ideal self (who the adolescent wishes to be) and away from the feared self (who the adolescent does not want to be). For many, these distinctions are uncomfortable, but they also appear to motivate achievement through behavior consistent with the ideal and distinct from the feared possible selves.

Further distinctions in self-concept, called "differentiation," occur as the adolescent recognizes the contextual influences on their own behavior and the perceptions of others, and begin to qualify their traits when asked to describe themselves. Differentiation appears to be fully developed by mid-adolescence. Peaking in the 7th-9th grades, the personality traits adolescents use to describe themselves refer to specific contexts, and therefore may contradict one another. The recognition of inconsistent content in the self-concept is a common source of distress in these years (see Cognitive dissonance), but this distress may benefit adolescents by encouraging structural development.

Differentiation results in organization and integration of the self-concept. The multifaceted self is understood to include several stable, if inconsistent, sets of traits applicable when the individual with different people and circumstances. This includes negative traits and weaknesses, which adolescents can now recognize and qualify: "consistent with this, adolescents who have more complex self-conceptions are less likely to be depressed." Moreover, although only true in some circumstances, differentiated traits are contrasted with "false-self behavior," which is not representative of the "real" self. Recognition of the inauthentic indicates that the adolescent is gaining a sense of continuous, overlapping, coherent sense of identity.

Sense of Identity

Unlike the conflicting aspects of self-concept, identity represents a coherent sense of self stable across circumstances and including past experiences and future goals. Everyone has a self-concept, whereas Erik Erikson argued that not everyone fully achieves identity. Erikson's theory of stages of development includes the identity crisis in which adolescents must explore different possibilities and integrate different parts of themselves before

committing to their beliefs. He described the resolution of this process as a stage of "identity achievement" (see Fig. 1) but also stressed that the identity challenge "is never fully resolved once and for all at one point in time." Adolescents begin by defining themselves based on their crowd membership.

Researcher James Marcia developed the current method for testing an individual's progress along these stages. His questions are divided into three categories: occupation, ideology, and interpersonal relationships. Answers are scored based on extent to which the individual has explored and the degree to which he has made commitments. The result is classification of the individual into a) Identity Diffusion in which all children begin, b) Identity Foreclosure in which commitments are made without the exploration of alternatives, c) Moratorium, or the process of exploration, or d) Identity Achievement in which Moratorium has occurred and resulted in commitments.

Research since reveals self-examination beginning early in adolescence, but identity achievement rarely occurring before age 18. The freshman year of college influences identity development significantly, but may actually prolong psychosocial moratorium by encouraging reexamination of previous commitments and further exploration of alternate possibilities without encouraging resolution. For the most part, evidence has supported Erikson's stages: each correlates with the personality traits he originally predicted. Studies also confirm the impermanence of the stages there is no final endpoint in Identity Development.

Self-Esteem

The final major aspect of identity formation is self-esteem, one's thoughts and feelings about one's self-concept and identity. Contrary to popular belief, there is no empirical evidence for a significant drop in self-esteem over the course of adolescence. 'Barometric self-esteem' fluctuates rapidly and can cause severe distress and anxiety, but baseline self-esteem remains highly stable across adolescence. The validity of global self-esteem scales has been questioned, and many suggest that more specific scales might reveal more about the adolescent experience. It is also important to note that the patterns of change in self-esteem differ significantly by gender.

Adolescent Relationships

The adolescents form their relationship through their interactions with their peer, parents, significant others and environment. The influences of these agencies go a long way to affect their psychological adjustment (Savage, & Scott 1998; Kelley, 2004; Markus & Nurius 1986).

Family

Adolescence marks a rapid change in one's role within a family. Young children tend to assert themselves forcefully, but are unable to demonstrate much influence over family decisions until early adolescence, when they are increasingly viewed by parents as equals. When children go through puberty, there is often a significant increase in parent-child conflict and a less cohesive familial bond. Arguments often concern minor issues of control, such as curfew, acceptable clothing, and the adolescent's right to privacy, which adolescents may have previously viewed as issues over which their parents had complete authority. Parent-adolescent disagreement also increases as friends demonstrate a greater impact on one another, new influences on the adolescent that may be in opposition to parents' values.

During childhood, siblings are a source of conflict and frustration as well as a support system. Adolescence may affect this relationship differently, depending on sibling gender. In same-sex sibling pairs, intimacy peaks during early adolescence, then steadily declines. Mixed-sex siblings pairs act in the opposite way; siblings drift apart during early adolescent years, but experience an increase in intimacy starting at middle adolescence. Sustaining positive sibling relations can assist adolescents in a number of ways. Siblings are able to act as peers, and may increase one another's sociability and feelings of self-worth. Older siblings can give guidance to younger siblings, although the impact of this can be either positive or negative depending on the activity of the older sibling.

Despite changing family roles during adolescence, the home environment and parents are still important for the behaviors and choices of adolescents. Adolescents who have a good relationship with their parents are less likely to engage in various risk behaviors, such as smoking, drinking, fighting, and/or unprotected sexual intercourse.

Peers

Peer groups are especially important during adolescence, a period of development characterized by a dramatic increase in time spent with peers and a decrease in adult

supervision. Adolescents also associate with friends of the opposite sex much more than in childhood and tend to identify with larger groups of peers based on shared characteristics.

Peer groups offer members the opportunity to develop various social skills, such as empathy, sharing and leadership. Peer groups can have positive influences on an individual, for instance on academic motivation and performance, but they can also have negative influences and lead to an increase in experimentation with drugs, drinking, vandalism, and stealing. Susceptibility to peer pressure increases during early adolescence, peaks around age 14, and declines thereafter.

During early adolescence, adolescents often associate in cliques, exclusive, single-sex groups of peers with whom they are particularly close. Towards late adolescence, cliques often merge into mixed-sex groups as teenagers begin romantically engaging with one another. Typically, in schools, the most popular boys would participate in achievement-oriented activities, which were highly competitive and aggressive such as, athletics. Likewise, the most popular girls would participate in the most interesting social activities, ranging from skiing to late-night parties. Of course, girls who engaged in these activities had to be physically attractive to compete for the opposite sex's attention. Thus, it became common to attribute competitiveness to boys and attractiveness with girls in clique groups. These small friend groups break down even further as socialization becomes more couple-oriented. Despite the common notion that cliques are an inherently negative influence, they may help adolescents become socially acclimated and form a stronger sense of identity.

On a larger scale, adolescents often associate with *crowds*, groups of individuals who share a common interest or activity. Often, crowd identities may be the basis for stereotyping young people, categorizing them as jocks, nerds, and so on. In large, multi-ethnic high schools, there are often ethnically-determined crowds as well. While crowds are very influential during early and middle adolescence, they lose salience during high school as students identify more individually.

While peers may facilitate social development for one another, they may also hinder it. Both physical and relational aggression are linked to a vast number of enduring psychological difficulties, especially depression, as is social rejection. Because of this, bullied adolescents often develop problems that lead to further victimization.

Romance and Sexual Activity

Adolescent Sexuality

Romantic relationships tend to increase in prevalence throughout adolescence. By age 15, 53% of adolescents have had a romantic relationship that lasted at least one month over the course of the previous 18 months. The typical duration of relationships increases throughout the teenage years as well. This constant increase in the likelihood of a long-term relationship can be explained by sexual maturation and the development of cognitive skills necessary to maintain a romantic bond (e.g. caregiving, appropriate attachment), although these skills are not strongly developed until late adolescence. Long-term relationships allow adolescents to gain the skills necessary for high-quality relationships later in life [126] and develop feelings of self-worth. Overall, positive romantic relationships among adolescents can result in long-term benefits. High-quality romantic relationships are associated with higher commitment in early adulthood and are positively associated with self-esteem, self-confidence, and social competence.

Adolescents often date within their demographic in regards to race, ethnicity, popularity, and physical attractiveness. However, there are traits in which certain individuals, particularly adolescent girls, seek diversity. While most adolescents date people approximately their own age, boys typically date partners the same age or younger; girls typically date partners the same age or older.

Dating violence is fairly prevalent within adolescent relationships. When surveyed, 10-45% of adolescents reported having experiencing physical violence in the context of a relationship while one-third to a quarter of adolescents reported having experiencing psychological aggression. This reported aggression includes hitting, throwing things, or slaps, although most of this physical aggression does not result in a medical visit. Physical aggression in relationships tends to decline from high school through college and young adulthood. By their early twenties, many fewer romantic couple engages in physical aggression, and aggressors tend to be much more deviant. In heterosexual couples, there is no significant difference between the rates of male and female aggressors, a surprising finding considering the common assumption that males are more aggressive overall. Despite these jarring statistics, nurturant parenting style is associated with lower rates of relationship violence.

Adolescence marks a time of sexual maturation, which manifests in social interactions as well. While adolescents may engage in casual sexual encounters (often referred to as

hookups), most sexual experience during this period of development takes place within romantic relationships. Kissing, hand holding, and hugging signify satisfaction and commitment. Among young adolescents, "heavy" sexual activity, marked by genital stimulation, is often associated with violence, depression, and poor relationship quality. This effect does not hold true for sexual activity in late adolescence that takes place within a romantic relationship.

Adolescent sexuality refers to sexual feelings, behavior and development in adolescents and is a stage of human sexuality. Sexuality and sexual desire usually begins to intensify along with the onset of puberty. The expression of sexual desire among adolescents (or anyone, for that matter), might be influenced by family values and the culture and religion they have grown up in (or as a backlash to such), social engineering, social control, taboos, and other kinds of social mores.

In contemporary society, adolescents also face some risks as their sexuality begins to transform. Whilst some of these such as emotional distress (fear of abuse or exploitation) and sexually transmitted diseases (including HIV/AIDS) are not necessarily inherent to adolescence, others such as pregnancy (through non-use or failure of contraceptives) are seen as social problems in most western societies. In terms of sexual identity, while all sexual orientations found in adults are also represented among adolescents, statistically the suicide rate amongst LGBT adolescents is up to four times higher than that of their heterosexual peers.

According to anthropologist Margaret Mead and psychologist Albert Bandura, the turmoil found in adolescence in Western society has a cultural rather than a physical cause; they reported that societies where young women engaged in free sexual activity had no such adolescent turmoil.

Simmons & Blyth (2008) found out that 20% of 14−17-year-olds surveyed revealed that they had their first sexual experience at 13 or under in the United Kingdom. A 2002 American study found that those aged 15–44 reported that the average age of first sexual intercourse was 17.0 for males and 17.3 for females.

The age of consent to sexual activity varies widely among international jurisdictions, ranging from 12 to 21 years.

Sexuality

There are many cultural and socio-economic differences which influence how adolescents' sexuality develops. Menarche (the first menstrual period of a female-bodied person's life) is, for many cultures, the defining point for the beginning of a transition into adulthood. The age of menarche varies from culture to culture. Girls from countries where menarche/menstruation is seen as an important event, or where there is an ambivalence towards it, tend to have more negative opinions about it. An adolescent's sexual socialization is highly dependent upon the society they live in, and how restrictive or permissive that society is when it comes to sexual activity.

Restrictive societies "pressure youngsters to refrain from sexual activity until they either have undergone a formal rite of passage or have married." Therefore the sexual transition of adolescence is highly discontinuous because there is little preparation for an adult sexuality. These cultures either control adolescence by separating the males and females throughout their development, or they restrict sexual activity through public shaming and physical punishment.

In semi-restrictive societies, adults do not condone sexual activity however often do not take strong steps towards restricting it. "Premarital promiscuity is common, and the parents do not object as long as the love affairs are kept secret." While some media portrays the United States as a permissive society, adults frequently try to discourage sexually activity among adolescence. This is most obvious among adolescence women because it is premarital pregnancy, rather than premarital sex that is highly objectionable in the United States. It is also common for adults to lecture women about sex and the importance of virginity by telling them that females do not need sex as much as males do. Despite these attempts to reduce sexual promiscuity, parents in the United States and other semi-restrictive societies do no prohibit young men and women from interacting both in social and private settings.

In permissive societies, the transition into sexual adulthood is highly continuous and begins at an early age. Some examples of sexually permissive societies are the Pukapukans of Polynesia and Trobiand girls and boys. In the Pukapukans society, parent simply ignore any sexual activity among children even when they are masturbating freely and openly in public. In the Trobiand society, young girls and boys participate in oral stimulation as a means of amusement and are encourage to participate in sexual activity with other young girls and boys at any time, they are encouraged to go into any hut or hide behind any bush.

Autonomy

Another way to define the development of adolescents is their strive for autonomy. According to McElhaney et al., there are three ways in which autonomy can be described. The first being emotional autonomy which is stated as being the development of more adult-like close relationship with adults and peers. The second form of autonomy is behavioral autonomy, which is the ability to be able to make independent decisions and follow through with them. The third is known as cognitive autonomy and is characterized as the manifestation of an independent set of beliefs, values and opinions. Most of the cultural differences however tend to be visible in behavioral autonomy as this is based on when adolescence are allowed to go on dates, or go out with friends.

One way in which the cultural differences in behavioral autonomy is by comparing the "teen timetables" of parents and adolescents of different cultures. The "teen timetable" is "a questionnaire that asks at what age adolescents should be permitted to engage in various behaviors that signal autonomy." When comparing the timetables of White and Asian families across the world, it can be concluded that in general, White parents and adolescents tend to expect autonomy earlier than their Asian counterparts, disregarding whether the families lived in America, Australia, or Hong Kong. It is also the case that an adolescent's mental health is best when their feelings of autonomy match closely with their parents. It is for this reason, recent emigrants that move from a culture that normally grants autonomy at a later age to a culture with a younger age at which autonomy is granted, often experience family stress. Since adolescence generally become accustomed to the novel culture quicker than adults, they learn to expect autonomy earlier than their parents.

Time Use

American teenagers spend more time on leisure than many other countries. The average American adolescent spends about five hours a week on homework, while Indian, Taiwanese, and Japanese students spend an average of five hours a day. This is most likely due to the amount of emphasis and pressure that is placed on adolescents' education in those countries. Americans tend to spend more time playing sports, socializing, caring for their appearance, and working after-school jobs (an American phenomenon). Differences in how American teens use their leisure time tend to be influenced by their amount of involvement in various activities rather than ethnicity or socioeconomic background. Busier, more well-

rounded teens tend to be better-adjusted and more goal-oriented than their peers who engage in only one activity (such as sports) or none.

Work

In many developing countries, it is common for adolescents to drop out of high school and start working. These adolescents generally receive full-time positions by the age of 15-16 and they often stay in the same jobs for the remainder of their lifetime. It is the case though that the rate of adolescents in the workforce today is decreasing. One example of this is China, where as the accessibility of education has increased, the amount of adolescents in the workforce has dropped drastically. Half of all 16-year-olds were employed in 1980 however in 1990, only fewer than one quarter were in workforce. When comparing more industrialized countries, American adolescents are far more likely to hold jobs than both Asian and European countries. Two thirds of American high school juniors hold jobs during the school year where as only one quarter of Taiwanese and Japanese juniors do. In many European countries such as France, Hungary and Switzerland adolescents do not work at all and if they do hold jobs, then they are informal, only last for a few hours a week, and most commonly jobs such as babysitting.

Transitions into Adulthood

A broad way of defining adolescence is the transition from child-to-adulthood which happens to vary drastically in time between cultures. In some countries, such as the United States, adolescence can last nearly a decade, but in others, the transition – often in the form of a ceremony – can last for only a few days.

In the U.S., while there are no marked ceremonies, there are popular social and religious traditions that tend to mark this transition, such as Bar Mitzvahs, Quinceañeras, cotillions, and débutante balls. In other countries, initiation ceremonies play an important role, marking the transition into adulthood or the entrance into adolescence. The transition is usually accompanied by obvious physical changes, which can vary from a change in clothing to tattoos and scarification.

Media

Stereotypes

The mass media greatly exaggerates adolescent problem behaviors. Media portrayals of drug use, sexual encounters, and psychological and behavioral disorders are rarely accurate. For example, though television often portrays scenarios such as these, a romantic breakup does not necessarily lead to heavy depression or suicide, and one drink at a party does not often end in a lifetime of addiction or a fatal car crash. Because people view these negative stereotypes about adolescents so often in the media, they are led to believe that adolescence is always a very problematic time of development. Adolescence is a period of development in which it is very normal to seek independence, explore personal identities, and pursue relationships, and thus it is expected that some of the experimentation that adolescents engage in is risky. It is extremely important to distinguish between occasional experimentation during adolescence and long-term problem behaviors. For example, although many teenagers will commit an act that is against the law during their adolescent years, relatively few adolescents continue on to commit criminal acts in their later lives.

Further, it is very important to distinguish between problems that first occur during adolescence and those that may have developed during childhood. The majority of adolescents who have continuous problems with the law during adolescence also had problems at an early age, even as early as preschool. Thus, even if a problem is displayed during adolescence, it may not be a problem related to adolescence. What's more, what the media neglects to mention is that most problems that adolescents experience are resolved by the time they reach adulthood. For example, delinquency, drug use, and eating disorders are all experienced more by the adolescent population than the adult population. The adolescents that take part in these behaviors often abandon them as they reach the beginning of adulthood. Oftentimes, the adults that do continue with these behaviors from adolescence often had problematic childhoods, which in turn led to problematic adolescent and adult years. Thus, though the media often proclaims that the problem behaviors of adolescents are causing the downfall of civilization, it is important to remember that most of these behaviors fade over time.

Finally, delinquent or problem behaviors that occur during adolescence are hardly ever a direct result of adolescence. For example, media theories that blame problem behaviors, rebellions, and identity crises of adolescents on their hormones actually have no scientific support. In fact, hormonal changes during adolescence only have a very small impact on

adolescent behavior. Thus, contrary to the suggestions of the popular media, when an adolescent experiences a very serious psychological problem, this behavior is usually not normative and is most likely a sign that something is not right.

Media Profusion

Because access to media has increased so quickly through a vast number of mediums such as computers, cell phones, stereos and televisions, adolescents' use of media has skyrocketed in the past decade. Almost all American households have at least one television, more than three quarters of all adolescents' homes have access to Internet, and more than 90% of American adolescents use the Internet at least occasionally. As a result of the amount of time adolescents spend using these devices, their total media exposure is extremely high - the average adolescent uses one of the mass media more than 6 hours a day. What's more, when multitasking with more than one media device is taken into account, every day, adolescents are exposed to media for between 8 and 9 hours. In the last decade, the amount of time that adolescents spend on the computer has greatly increased. Online activities with the highest rates of use among adolescents are video games (78% of adolescents), email (73%), instant messaging (68%), social networking sites (65%), news sources (63%), music (59%), and videos (57%). In fact, because adolescents spend so much time playing video games, some research has suggested that 10% of preadolescents and adolescents are "pathological". However, better academic performance has been associated with moderate Internet use.

Theories on Media Impact

There is much debate over the impact that media has on adolescents' development and behavior. However, because adolescents choose which media they're exposed to, it is very difficult for researchers to distinguish cause and effect. For example, though one could argue that violent video games and films may spur aggression, it is just as likely that aggressive adolescents are more likely to choose to watch these violent images. There are three widely known theories regarding the impact of media on adolescent development and behavior. The first, referred to as the cultivation theory, argues that adolescents' beliefs are very much shaped by the media. An example of cultivation theory would be believing that if adolescents watch beer commercials during the Super Bowl, they would then be influenced to drink beer. The second theory, the uses and gratifications theory, suggests that adolescents choose which media they are exposed to. According to this theory, adolescents choose media that is

consistent with their interests, and thus adolescents who drink beer are more likely to watch football and be exposed to and influenced by beer commercials. The last theory regarding media influence is the media practice model. This model revolves around the idea that adolescents' preferences and their media exposure are reciprocal, and that adolescents choose what media they're exposed to, as well as interpret the media in ways that influence how much impact it has on them.

Exposure to Controversial Media Content

Most research has focused on the impact of television on development. Because of this, little is known about the effects of other media on adolescent development. The topics most focused on by researchers are drugs, violence, and sex, though researchers disagree about the magnitude of the effects of adolescents' exposure to these concepts in the media. However, there is no doubt that exposure to these topics in the media is vast.

Of the television shows popular among adolescents, more than 70% display sexual content and images, and there are approximately seven sexual scenes per hour of television. However, with the increases in reality television shows, sexual content has declined since 2000. Usually sex portrayed in television shows and music videos is casual and untroubled, with humorous or suggestive undertones. What's more, sexual messages most often involve men seeking out women as sex objects, men seeking sex to define their masculinity, sex portrayed as a competition, and sex as exhilarating. Furthermore, television most often portrays men as aggressive and dominant, while women are portrayed as the submissive and obedient sex objects. Unfortunately, there is a lack of messages regarding the consequences of sex, physically and mentally.

Violent imagery is highly depicted in film, music, and video games, all of which adolescents are exposed to. Because more than 60% of television shows contain violence, adolescents view approximately 10,000 media violence acts every year. According to some research, adolescents who play a lot of violent video games also are involved in more fights and get into more arguments than peers who do not play these games. Furthermore, studies have shown that violent lyrics to songs increase the aggressive thoughts of individuals. However, it is highly debated whether these violent games or lyrics actually cause adolescents to commit serious acts of violence such as school shootings, especially because violence among adolescents has declined in the past decade even though the sale of violent video games has increased.

In the mass media, alcohol, tobacco, and illicit drugs are extremely frequent. The three substances are displayed in about 75% of television shows, almost all movies, and around 50% of music videos. What's more, approximately 10% of all television commercials are for alcoholic beverages. Also, advertisements for liquor and tobacco are becoming ever-present on the Internet, with their companies sponsoring websites and chat rooms. Research has found that adolescents are much more likely to smoke if their favorite film star is a smoker. Unfortunately, adolescents who are less likely to smoke are more likely to be affected by seeing smoking in movies. This finding reaffirms worries that smoking in movies actually influences adolescents to start smoking. Because of this research, anti-smoking ads are now often on the DVDs of films that contains smoking.

Deceiving Media Messages

Studies that suggest a link between exposure to messages about violence and actual violence are more consistent than those relating to sex and drugs. Though studies have not found a conclusive answer about whether exposure to media messages about sex affects the behavior of adolescents, studies have shown that repeated media exposure to these messages affects at least the attitudes and beliefs of adolescents. However, anti-drinking and anti-smoking ads have been shown to be effective in changing the beliefs and attitudes of adolescents about drinking and smoking.

Electronic Media Influence

Because it is becoming increasingly easier to communicate via electronic communication, the way adolescents socialize has changed. The effects of adolescents' online socialization are very controversial and intriguing. Many are concerned over whether electronic communication versus in-person communication negatively effects the development of adolescents, and there are also worries over whether strangers who intend to harm adolescents, like sexual predators, are easily able to contact and develop relationships with adolescents through publicly posted information on social websites.

Internet Impact

A large number of adolescents' parents worry that electronic communication has negatively affected their social development, replaced face-to-face communication, ruined their relationships, negatively affected their social skills, has led to unsafe communication

with strangers, and has replaced more valuable activities. Though research is relatively inconclusive, it suggests that the effects of Internet use are very small. However, Internet use most definitely has a negative effect on the physical health of adolescents, as time spent using the Internet replaces time doing physical activities. For example, a typical 15 year old American adolescent spends approximately 6 hours a day sitting in front of screens, but less than 1 hour doing physical activity. This inactivity is strongly thought to contribute to obesity among American teens. However, the Internet can be extremely useful in educating teens about accurate health information, though the usefulness depends on the quality and content of the websites' material. Studies have found that it depends on what teens are doing online that determines whether high Internet use is harmful to their development. Research suggests that Internet communication brings friends closer and is beneficial for socially anxious teens, who find it easier to interact socially online. Alternatively, getting to know strangers online and developing friendships with them actually lowers the quality of relationships with one's friends. Though many parents worry about their adolescents becoming addicted to their computers, Internet use addiction rates among adolescents are extremely low, as is electronic bullying (or cyber bullying) though the popular media often suggests otherwise.

Every year, approximately 13% of adolescents are sexually solicited online, and about 4% of the solicitations are also followed with solicitation for contact not through a computer medium. Most of the adolescents at risk for solicitation are females of high school age and boys who identify themselves as gay. Studies show that posting personal information on social networking sites such as Myspace or Facebook does not pose risks for sexual solicitation - instead, it is the way that adolescents interact with others online that places them at risk for unwanted sexual solicitation. Also, though parents often are concerned about adolescents viewing pornography on the Internet, most pornography that adolescents view is unwanted and unsought. In fact, most teens spend their time on the Internet visiting entertainment websites and websites that are most frequented by adults rather than visiting pornographic websites.

The impact of Internet use on cognitive development has not been widely studied. However, there isn't any evidence that Internet use benefits or has any negative effects on the school performance of adolescents. What's more, there are a few studies that have shown that playing video games may improve reaction times, hand-eye coordination, and improve visual skills.

Mass Media Effect on Adolescent Girl Body Image

Because of concerns over body dissatisfaction among teenage girls, research has been conducted on the effects of the messages aimed toward adolescent females in the mass media. Most magazine advertisements emphasize the necessity of physical attractiveness and advocate thinness. Research has shown that adolescent females who read fashion magazines on a regular basis are much more dissatisfied with their bodies than their peers who do not read the magazines as often or at all. What's more, adolescent girls who read magazines featuring articles and advertisements about dieting and weight loss partake in more unhealthy behaviors for weight control, such as taking laxatives and vomiting to lose or maintain weight.

Consumption

Adolescents are a very attractive target for many businesses because of their population size, their lack of savings habits, and the prevalence of their employment. An average adolescent spends nearly all of their approximately $400 in spending money per month. This money is often spent on leisure activities such as food, clothes, cosmetics, cars, and stereo equipment. Though some believe that advertising aimed at adolescents takes advantage of their impulsiveness and self-consciousness, proponents of adolescent consumerism argue that it is not only advertising, but the strong influences that teens have on each other regarding their purchases that drives adolescent consumerism. This peer influence has become known as viral marketing, in which products are promoted by encouraging individuals to pass information on to others. The adolescent market also extends into the adult market (often because of teens' influences on their parents' purchases), with adult clothing and music often exhibiting the same trends as adolescents'

2.1.10 The Developmental Tasks of the Adolescents

The adolescents need to perform certain developmental tasks in order to enable them adjust favourably to their environment. Oladele (1998) opined that adolescents can only achieve meaningful social and psychological maturity, if they are able to master successfully roles expected of individuals at different stages of life. The process of growing to fulfill such roles has been termed developmental tasks. The ability of an individual to perform these developmental tasks makes him happy and become a contributory member of the society. Havinghurst (1953) in Oladele (1998) said that a developmental is task which arises at or

about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness and difficulty with later tasks.

Erickson (1965) in Oladele (1998) said that those who succeed will establish a sense of identity and those who fail will suffer role confusion. The adolescent is therefore, faced with the task of developing an acceptable, functional and stable self-concept. Akinboye (1982) cited in Oladele (1998) argued that successful solution of such tasks leads to improve confidence, self-concept and satisfaction. If an individual fails to solve the problems, he may experience some social sanctions be unhappy or face greater problems later in life.

According, Oladele (1998), the major developmental tasks facing the adolescents in our society today can be summarized as follows:

- making friends and group contacts.
- being accepted by and gaining the approval of one's peers, adolescents want as friends those who are dependable.
- making adjustments to the family.
- planning for marriage and family responsibility.
- establishing relations with the opposite sex.
- sexual maturation.
- developing a personal identity.
- gaining independence from the family, attaining adults status, and developing a unique human being.
- formulating values acceptable to one's own group, to parents and cultural beliefs.
- securing money for spending and buying personal necessities.
- establishing relations with teachers and adjusting to school life and its demands.
- choosing and buying clothes and other goods and services.
- choosing a vocation and getting a job and
- planning what to do with regard to further education.

A closer look at the above developmental tasks, it is obvious that achieving most of them by adolescents with hearing impairment may be a bit difficult because their impairment may impose some difficulties on them.

2.1.11 Developmental Tasks and the Adolescents with Hearing Impairment

Scholars have discovered that hearing impairment could have a great interruption on the successful accomplishment of developmental tasks by adolescents with hearing impairment. Goldberg (1981) opined that disability may interrupt the adolescent's normal working through of developmental tasks, but it does not totally obliterate the direction and pace of adolescents' development. He observed that, genetic inheritance as well as cultural, environmental, and familial factors plays great roles in determining the course of adolescents' development. The development of the child within the family and the varying responses of family to children with disability provide a complex set of interactions that cannot be explained by the severity of disabling condition (Harper, 1991). He opined that the progress of developmental tasks of adolescents with disabilities is somehow slow. According to him, adolescents with hearing impairment do not always progress through successive phases of development, if they do; they score an average of two years below their peers in age and educational grade.

Harper (1991) opined that all adolescents have problems coping with the developmental tasks commensurate with their age and educational grade. This is true of the adolescents with hearing impairment, because their disability impose certain limitations on them. Such limitations include sensory deprivation, poor language (expressive and receptive) and development of poor understanding of their environment. He therefore, declared that, adolescents need to develop strategies for individuation and segregation from their biological families, for coming to term with their sexual needs and sexual identity, for choice of an educational and career objective, and for learning techniques that will make them independent, self-reliant, self-reliant and productive members of the community.

2.1.12 Personal Adjustment and Adolescents with Hearing Impairment

Need satisfaction may be defined in terms of certain fulfilling behaviours or in terms of a relationship between actions and stimulus conditions. It is also possible to define it in subjective or phenomenological terms. In this case, the well-adjusted person is one who experiences a relatively high degree of happiness, contentment, serenity and joy.

Igiri (2004) observed that adjustment in psychological term refers to both an achievement as well as a process. As an achievement, it connotes mental health, behaviourally, it connotes an individual's achievement of an adaptive, flexible and culturally appropriate behavioural repertoires. According to him, as a process, adjustment connotes the

adaptation of individual to keep pace with the changes in his environment. It helps the individual to cope with the demands and pressures of the outside world as well as the needs, desires and conflicts he experiences within. Furthermore, he said that adjustment is a life long process, and it is a factor in everything one does, hence it can be summarized that adjustment indicates an individual's wholistic and interpersonal behaviour. For one to achieve adequate personal adjustment, one should avoid events that have more of negative connotations than positive or should be able to cope with them adequately as the need arises in life. He identified the following widely accepted aspects of personal adjustment: self-acceptance, freedom from unreasonable fear and compulsion, deriving satisfaction from one's job, living in harmony with one's family, neighbours and colleagues, being kind and helpful to others, taking reasonable care of one's health, reasonably meeting one's basic needs, being interested in the welfare of others, assuming social responsibilities, being able to give and receive love and being able to make decisions and face their consequences

Looking at the issue of personal adjustment as a process with which an individual keep pace with his environment, the adolescents with hearing impairment need to adjust to the home and the school environment as well as the immediate environment. As earlier mentioned, Adjustment is one of the greatest needs of the adolescents generally; this need becomes more pressing with the adolescents with hearing impairment, because they have to come to term with the demand of their impairment and that of their environment.

Self Concept and Adjustment

Alphonse (2005) opined that self-concept is altogether a reflection of the opinions and attitudes communicated by significant others. According to him, the society provides a looking glass in which people discover their image or self-concept. Self concept is the basis for personality development and is affected by the following factors: Parental attitude, Parental expectation, Family economic problem, Biological maturation, Intellectual maturation, Peer influence, Significant other and Self-acceptance.

Self-concept refers to the set of feelings and cognition about one self. The growth of the self or self-concept takes place out of the socialization process of behaviour interactions of individuals. Mukherije (2002) opined that we look at the reaction of others to find what we are. The adolescents with hearing impairment will form good self concept, if the attitude or reactions of the people – hearing counterparts, teachers, siblings or parents to them are favourable. This means that, the environment should be friendly to them.

Olubela, Alade and Adeniran (2003) shed more light to the meaning and importance of self-concept. They opined that self-concept is the sum total of what an individual conceives about his worth (self picture or self image). According to them, what an individual perceives of himself and what he feels others think about him, instinctly controls the self and individual level of self-actualization. They further opined that the self is unique to every individual and if the adolescents with hearing impairment realizes this early in life his will power will be more dynamic toward attainment of positive self-actualization.

In addition, adolescents with hearing impairment should be helped to form a high self-concept, in order to adjust psychologically and socially to their environment. This should be done right from a tender age because the self-concept they form at such period, will affect them later in life. In the light of the above, Olubela *et al*., (2003) observed that, the concept a child forms about himself at very tender age, tends to be transitory through childhood to adulthood. They added that, if a child believes that he is a failure, this may linger on his mind and may affect all his actions, attitudes, perceptions and acceptance of ideals and realities of life even at adulthood. It is very evident that adolescents with poor or negative self-concept may have adjustment problems at home, school or the larger society.

Self Esteem and Adjustment

Alphonse (2005) observed that the deeply rooted desire in every person is to be considered worthwhile. He defined self-esteem as the realization and the recognition of one's personal worth. He stressed further that, modern psychologist's claim that self-esteem is essential to develop a mature and balanced personality. According to him, if self-esteem is not realized, the individual may develop a mental illness or some inadequacy and an inferiority complex. Also, for the development of mental as well as physical well-being, self-esteem is very essential. Apart from the above, he also identified two types of esteem needs – the need for esteem derived from others and self-esteem derived from self.

In addition, Davis (2005) opined that those who possess self-esteem have the following characteristics: Calm, Hopeful, Enthusiastic, Find their environment interesting

However, he identified the following characteristics of low self-esteem person: Hostility, Feeling guilty, Getting irritated, Appear tensed, Finding fault with everyone and everything around, Feels weak and helpless, Feels unlovable, Feeling of inferiority complex, Bender and Peterson (1995) gave the following helpful strategies for increasing self-esteem,

Identify the causes of low self esteem, Get emotional and social approval, Set achievable goals and Learn to cope with life challenges

The above strategies can be used to help boost the self-esteem of the adolescents with hearing impairment. Low self-esteem could arise as a result of low grade or poor social relationship.

Also, emotional support and social approval from friends, family, classmates, a counsellor, a mentor, or other people will increase their self-esteem. In the light of the above, Bender & Peterson (1995) said that when people are warm and friendly to us, sensitive to our needs, and give us approval, our self-esteem improve.

A high sense of self-esteem is very important as far as the psychological adjustment of the adolescents with hearing impairment is concerned. Researchers have identified the importance of self esteem in the adjustment of students to school, home and the environment generally. To this end, Jones (2004) observed that each child needs to maintain a sense of self-esteem as he moves away from the security of early childhood into the world outside the family. He stressed that the way a child learns to think of himself during these periods depends in large measure upon how parents have treated their children and what their (the children) friends think about them. To this end, Ojekunle (2003) observed that the child who starts off with advantages of intelligence, good physical appearances, high social skills and self confidence will definitely find that those good points are reinforced by the popularity in peer groups and so his self-esteem grows. He also found out that, self-esteem plays an important role in the adjustment pattern of the individual.

In view of the above, Ojekunle (2003) opined that, in general, those individuals who are self-accepting are seen to be accepting of others, they can also withstand aggression and discouragement from others, their personal psychological security grant them objective view of the behaviour of others and the understanding of the bases for their behaviour. According to him, such individuals can also sustain adversity than the self-rejecting person.

Based on the above, there is no doubt that, the adolescents with hearing impairment who have high self esteem will adjust to their environment better than their counterparts with low self-esteem. Russell (1990) Olukotun (1992) and Eniola (1996) are of the opinion that, the low self-esteem person is seen as disliking, devaluing himself and in general perceiving himself as not competent to deal effectively with his environment.

Adjustment Mechanism and the Adolescents with Hearing Impairment

One has to learn the various ways of adjustment in order to lead a healthy and satisfying life, that is, coping with one's environment as effectively as possible. Also, one has to safeguard one's self against turning into a maladjusted and abnormal personality, by looking for different ways of coping with one's environmental conflicts, anxieties, pressures and stresses of life.(Jones, 2004). The methods, according to him, used for keeping and restoring harmony between the individual and his environment can be grouped into two categories, direct methods and indirect methods as follows:.

Direct Method: Direct methods are those methods which are employed by the individual intentionally at the conscious level. They are rational and logical and help in getting permanent solution of die problem faced by the individual in a particular situation. These methods include the following- increasing trials or improving efforts. When one finds it difficult to solve a problem of faces obstacles in the path. He can attempt with a new zeal by increasing his efforts and improving his behavioural process Adopting compromising means. For maintaining harmony between his self and the environment one may adopt the following compromising postures:

He may altogether change his direction of efforts by changing the original goals, that is, an aspirant for as may direct his energies to become a probation officer in a nationalized bank,

He may satisfy himself by an apparent substitute for the real thing, for example, in the case of a child, by a toy car in place of a real car and in the case of a young boy desirous of getting named by a doll in his arms, withdrawal and submissiveness. One may learn to cope with one's environment by just accepting defeat and surrendering oneself to the powerful forces of environment or circumstances and making proper choices and decisions. A person adapts himself to and seeks harmony with, his environment by making use of his intelligence for the properly choices and wise decisions particularly when faced with conflicting situations and stressful moments.

Indirect Method of Achieving Adjustment: Indirect methods are those methods by which a person tries to seek temporary adjustment to protect him for the time being against a psychological danger. These are purely psychic or mental devices ways of perceiving situations he wants to see them and imagining that things would happen according to his wishes. That is why these are called defense or mental mechanisms employed in the process

of one's adjustment to one's self and the environment. A few important adjustment mechanisms are:

Repression: Repression is a mechanism in which painful experiences, conflicts and unfulfilled desires are pushed down into our unconscious. In this way, one unconsciously to forget the things that might make him anxious or uncomfortable (tries to get temporary relief from the tension or anxiety by believing that the tension producing situation does not exist).

Repression is a mechanism which is fundamental in Freudian theory of personality (Richard 2004). According to him, repression is motivated forgetting. In other words, repression means the forgetting or ejecting from awareness impulses in oneself that might have objectionable consequences. It is an attempt by the individual to push into the unconscious those experiences and thoughts which are in conflict with his moral standard or which are painful to contemplate. Repression is caused due to forces active within ourselves. We try to forget what makes us feel inferior, ashamed, guilty and anxious (Pius 2003). He said that through the process of repression, the individual forgets sad and painful experiences in order to escape from his troubles and conflicts. Repression could be used by the adolescents with hearing impairment as a defense against the adverse effect disabilities on them. This could be done by repressing the negative attitude of the society, feeling of inferiority complex and poor self-acceptance.

Regression: Regression means going backward or returning to the past in this process, an individual tends to regress to his early childhood or infantile responses in order to save himself from mental conflicts and tensions. A man failing in his love affair resorts to regression when he exhibits his love for dolls. Similarly an elder child may regress and start behaving like an infant when a new sibling is born and he feels neglected.

Regression has been defined as "unconscious back tracking" either in memory or in behaviour which might have been successful in the past. Chauhan (2000) opined that some regression is normal for maintaining mental balance in the social environment. According to him, ability to regress is asset to teachers and leaders of youth groups to enjoy youthful jokes and similar times of juvenile quickly. They can establish good rapport with youth by the mechanism of regression. However, regression can pose a serious problem for those who use it habitually to all problems and its extreme form may indicate severe form of mental ill health (Adejoke, 2008)

Compensation: This is a mechanism by which an individual tries to balance to cover up his deficiency in one field by exhibiting his strength in another field. For example, a girl

who becomes a bookworm to secure a position in the class is making use of such mechanism in order to attract attention from the teacher or members of her class.

Compensation is the tendency of every person to make up deficiency of one trait or area of development in another area. When a person feels weak and fails in one area, he compensates in another field. He works hard to become strong and successful. Needs which are frustrated and unmet are gratified in order to release tension and conflict. According to Pius (2003), the person may compensate in the areas of biological, psychological and social weaknesses. For instance, the use of sign language is a kind of compensation for persons with hearing impairment. It compensates their inability to use speech like their counterparts without hearing impairment.

Rationalization: This is a defense mechanism in which one justifies his otherwise unjustified behavior by giving socially acceptable reasons for it and thus attempts to defend himself by inventing plausible excuses explain his conduct. A child makes use of rationalization when he tries to extend lame excuses for his failure, he may blame the teacher or his poor health and thus try to disguise his own weakness or deficiency.

Rationalization according to Chauhan (2000) is an adjustment mechanism by which the individual justifies his beliefs and actions by giving reasons other than those which activated or motivated him. He further explained that rationalization is the most popular adjustment mechanism which is used, almost by all persons in daily life. It is a reality that falsifies circumstances. The aim of rationalization is to lessen frustration by giving sound and worthy reasons for an action which is frustrating. In rationalization, we try to give socially acceptable reasons for our failures.

Projection: Through projection one tries to see or attribute one's own inferior impulses and tails in other persons or objects. An awkward person sees and criticizes awkwardness in others. Similarly, a student who has been caught in the examination for cheating may satisfy himself by saying that other students had also cheated. A person with unsatisfied sexual impulses may denounce others for their sexual aims or may try to think in terms of sex for every thing in the world around him. In this way, one tries to overlook or defend one's shortcomings and inadequacies by emphasizing that others are worse than he is.

Chauhan (2000) opined that projection is the most common adjustment mechanism which is used by all people in daily life. According to him, Freud used projection as a process by which we ascribe to the external world the rejected impulses of the id. Furthermore, we defend ourselves against our repressed guilt feelings by projecting them in other things and

people. It is the adjustment mechanism which relieves frustration from the individual. He further said that projection provides unsatisfactory solution to frustration and can cause harm to the person because it involves distorting an important part of the world.

Every individual has device various means of escaping from environmental pressure. These ways are referred to adjustment mechanism. Pius (2003) said that adjustment mechanism may be defined as any habitual methods of overcoming blocks, reaching goals, stripling motives, relieving frustrations and maintaining equilibrium. In view of the above, Chauhan (2000) opined that every individual uses his own mechanism to maintain the balance of his personality in the society, but psychologists have listed certain adjustment mechanisms which are used by majority of the people in the constant struggle for survival in their environment.

Adjustment mechanism is almost used by all people. They are constructing which are inferred from the behaviour of the individuals. They have protective orientation. All mechanisms are used to protect or enhance the person's self esteem against dangers. They defend the person against anxiety, frustration and increase satisfaction and help in the process of adjustment if used they are within limit.

Invariably in all adjustment mechanisms, the individual distorts reality in one way or the other, because the method of protection against dangerous inner impulses or escaping from anxiety involves some kind of distortion of the conscious representation of the person's implies.

Furthermore, the overall effect of adjustment mechanisms is to cripple the individual's functioning and development through falsifying some aspects of his impulses, so that he is deprived of accurate self-knowledge as a basis of action. There is self-deception underlying all adjustment mechanisms. Sometime, deny and disguise the real cause of our behaviour in order to maintain the balance of our personality.

Pius (2003) identified the following common adjustment mechanisms:

Simple Denial

He discovered that the easiest way to maintain the balance of personality is to deny the fact which could create conflict in the mind. When children are busy in play activities, if parents call them, the children will say they heard nothing. In fact, what was said was not allowed to penetrate into their consciousness. In adults, the percentage of denial is higher than

children. Adults are not always prepared to admit failures in their daily life. Denial helps to postpone facing a problem or a failure.

Aggression

The meaning of the word aggression has been interpreted in several ways. Pius (2003) refers to a vigorous person as aggressive. A person who tries to gain something from other is called aggressive. Also the person who tries to dominate is also called aggressive. It is a typical adjustment mechanism used as an attempt to hurt or destroy the source of frustration. This mechanism is mostly used by persons with hearing impairment. They are aggressive at times because they do not understand the language used in their environment.

Sublimation

Sublimation is a substitute reaction which may be classified as compensation. Richard (2000) opined that sublimation is the most advanced, highly developed and a constructive mechanism. Through the use of its operation, the energy of personally and socially intolerable impulses and drives is successfully directed into consciously acceptable channels. Their direction and aims thus become deflected and redirected towards substitute goals. It contributes to character and personality development and play an important role in the prevention and resolution of emotional conflicts, anxiety and in the maintenance of emotional and mental health. Richard (2000) further explained that sublimation can be defined as a major mental mechanism operating outside conscious awareness, through which instinctual drives which are consciously unacceptable or blocked and unobtainable, are diverted so as to secure their disguised external expression and utilization in channels of personal and social acceptability. Moreover, he said that sublimation plays a major role in moulding personality and in the development of specific character traits. In other words, sublimation, is healthful. It is the mechanism in which all divisions of the psyche, the id. Ego and the superego work in concert with each other.

Identification

Identification, according Richard (2000) may be identified as a mental mechanism operating outside and beyond conscious awareness through which an individual, in varying degree, makes himself like someone else he identifies himself with another person. This result in the unconscious taking over and transfer to oneself of various elements. Such elements,

according to, Pius (2003) may include thoughts, tasks, behaviour mechanism or character traits and emotional feelings. He said that the adolescents identify themselves with some political leaders, youth leaders or actors and cateresses and attempt to acquire their characteristics. Identification may be a conscious process, the person seems to be aware of his attempts to make himself similar to a model who has the characteristics that are supposed to reduce his anxiety.

Reaction Formation

Reaction formation, according to Chauhan (2000) is also called reversal formation. It is to substitute opposite reaction which causes anxiety. It refers to the exhibition of behaviour that is directly opposite the behaviour that is repressed. For instance, Adejoke (2003) said that adolescents with hearing impairment may as a result of intension to repress the effect of his impairment, resort to aggressive behaviour.

Negativism

Gallahan (1995) opined that negativism is a mechanism by which an individual draws the attention of other persons. It is partly a defense and partly an escape mechanism. According to him, the person develops strong and irrational resistance in accepting the suggestions of others. Negative feelings do not serve some useful purpose but they hinder the achievement of goal. In view of the above, the negative feeling that the adolescents with hearing impairment might have as a result of their hearing loss will not do them any good rather it might lead to maladjustment or inability to adjust to their social or psychological environment.

Fantasy

Fantasy is an adjustment mechanism that aims at removing or reducing our frustrations Chauhan (2000). According to him, our thoughts can be realistic efforts to remove the obstacles that make us anxious. They can also provide an escape from frustration by giving an individual imaginary satisfaction. For instance, Pius (2003) opined that fantasy is a mechanism of wishful feeling. Fantasy is important for creative thinking provided it is followed by action. A world without fantasy would be one without music, painting, literature, drama or new idea. Pius (2003) concluded that excessive fantasy without action may be

harmful for the individual. Those who feel they dream too much can help themselves most by conducting a more successful attack on the obstacles which are blocking them.

Most adolescents with hearing impairment use fantasy as adjustment mechanism, but the rehabilitation counsellors should be of assistance to them so that could set more realistic goals about their education, career and psychological as well as social well being.

2.1.13 School Environment and Adolescents with Hearing Impairment

Educating the students with hearing impairment along side their counterparts with normal hearing is gaining support from professionals. Obi (1998) opined that, the National Policy of Education supports integration as most realistic form of special education since handicapped children with disabilities are eventually expected to live in the society.

He defined integration as a process of increasing children's participation in the educational and social life of comprehensive primary and secondary schools. In addition, the philosophy behind the integration of the students with hearing impairment with their hearing counterparts is to enhance their participation in social life, since they will be interacting with the hearing community after living school. Integration aims at normalization, which could be seen as preparing a child to function as a member of the society.

Integration is an attempt to desegregate the children with special needs from special schools and educate them along with their counterparts in the regular school system. Moreover, flexible curriculum and enabling environment must be put in place, before any meaningful integration of the students with hearing impairment can take place. Obi (1998) observed that integration calls for flexibility in the school curriculum, learning environment and equipment. According to her, flexibility means that the society should be able to provide alternatives that will benefit a child maximally after placement in school.

The importance of integration cannot be underestimated in the education of adolescents with hearing impairment. They will find integration highly rewarding, in the sense that, they will participate fully in social life with their hearing peers. Those who were enrolled in special schools are cut off from the mainstream of the society and such children are labeled as "never-to-do-well" because of their disability.

Segregation should not be encouraged as far as the education of the students with hearing impairment is concerned. Evan (1989) said that segregation is an injustice that needs to be challenged in our society. Furthermore, Obi (1998) was in support of the above

statement. She said that separating the special needs children from their non-handicapped peers denies them the opportunity of making friends among the non handicapped children.

The success of the integration of the students with hearing impairment depends largely on several factor such as parental and community involvement. In view of this, Evan (1989) identified the following factors as the ingredients of successful integration programme:

- Positive and optimistic attitude by both the operations of the system, parents, the general populace and exceptional children themselves.
- The necessary level of expertise to meet the pupil's need. This will include the training and retraining of teachers and related staff.
- The resources necessary to support the pupils effectively. These include financial, material and human resources.
- Parental involvement at all levels.
- Every member of the society should be willing to pool ideas and share them with others and
- Every child despite his disability should be respected.

However, the new trend of educating the students with hearing impairment is called inclusive education. William (2003) defined inclusion as a commitment that all children, regardless of their differences, shall receive support and accommodation to ensure their success, and to preserve their right to learn among their peers.

In addition, Staub and Peck (1995) defined inclusive education as the full-time placement of children with mild, moderate and severe disabilities in regular classrooms. They opined that the regular class placement is a good educational strategy for all children irrespective of the degree or severity of their disabilities.

The students with hearing impairment need to interact with their hearing counterparts, in order to equip them for full inclusion to their community. Haberman (2000) opined that inclusion is an attempt to remove the barriers that have segregated children and adolescents with special needs from the mainstream of the society. He further expressed that the teaching strategies that are effective with regular school students are just as effective with children with disabilities; only a few procedure are needed in addition. However, for too long; a large percentage of the special needs children and adults have been segregated not only from the mainstream schooling but from the society as well.

A good school environment is very important for the psychological growth of the adolescents with hearing impairment. Such environment will provide all the necessary

facilities and materials that could enhance learning as well as cordial relationship among all the people that constitute the school community. This will no doubt make the adolescents with hearing impairment have a sense of belonging.

Educators, psychologists and social workers are generally concerned with the influence of the home and school environment on the psychological adjustment of the child. In the light of the above, Umani & Suleiman (2001) opined that there must be steady encouragement for the child in an enabling environment in the home, school and the society. They reported that the school environment must be an enabling one, which comprises the teachers, non-teaching staff and the physical surrounding. Also, good relationships among teachers, students, non-teaching staff and the general surrounding will enhance adequate psychological adjustment of the students.

To this end, the adolescents with hearing impairment will adjust favourably if their interaction with the school environment is a cordial or enabling one. An enabling environment is very vital in the psychological adjustment of the adolescents with hearing impairment. More so, Johnstone (2008) said that there are a variety of personal, social and environmental barriers that can prevent the full participation of persons with disability in the society. In addition, Shonibare (1998) observed that one of the important factors in service delivery to the exceptional child is the quality of environment. He identified the following factors as dimensions of quality environment for the exceptional child: degree of segregation, supportive services, parental participation, sensory stimulation, peers interaction, social interaction and community involvement.

The students with hearing impairment should be accepted into the mainstream of the society. In other words, they should be accepted by members of the society, this would enhance their sense of belonging. Such enabling environment should allow the students with hearing impairment to participate in social activities like sports, drama and literary and debating club.

In view of the above, the students with hearing impairment would adjust to their environment, if they are not segregated from their hearing counterparts. Also, the support they receive from their peers, parents, teachers and the community as a whole, would help in their psychological adjustment.

2.1.14 Home Environment and Psychological Adjustment

The influence of the home in the psychological adjustment of the adolescents with hearing impairment is very enormous. The home should be a place where a child with hearing impairment is accepted despite his disability, so that he can have a sense of belonging. Obani (2006) observed that all children needs to be loved, valued and cared for by parents, in order to have good learning experiences, and develop a sense of security and a positive self-image early in life. According to him, children who are unloved may become shy and timid, lack self-confidence, lose confidence in adult and develop a negative view of the world. He also stressed that; they may react by becoming withdrawn or aggressive, or in other negative ways to show their disenchantment.

In a home where there is frequent quarrel between the parents their children will pay dearly for it as far as their psychological adjustment is concerned. In view of the above, Obani (2002) found out that stressful condition in the family such as homelessness, joblessness of the parents and poverty, frequent violent quarrels between parents and possibility of a separation, prolonged parental illnesses, early loss of parent(s) and frequent changes of parental figures may affect the adjustment of the child to home and society generally. He concluded that, in all these situations, the child does not get the needed care and attention. In other words, the child who finds himself in all or any of the negative situations mentioned above will be socially, emotionally and psychologically maladjusted.

Winter (1999) observed that aspects of family functioning are also believed to influence children school environment indirectly by facilitating the development of cognitive and social skills necessary for school success. Also, the home environment experienced by the adolescents with hearing impairment will greatly affect their psychological adjustment negatively or positively. Lopex and Campbell (2000) found out that marital conflict in the family has great negative effect on college students' psychological adjustment.

The role of the parents in socializing the adolescents with hearing impairment cannot be underestimated. Peter (2000) said that the parents are often the go-betweens with the school and home. He stressed that this function should be valued and that their involvement in the communication process will help all those who are involved in the education of their children to be as aware and informed as possible and will also enhance psychological adjustment of their children.

Shonibare (1998) said the place of the parents in the upbringing of their children among other factors is paramount. According to him, the child's fate for early identification,

care or neglect all at the prerogative of the level of acceptance of the disability, based on the information, education and counselling available to parents.

Furthermore, Obilor (1997) identified seven major roles of the parents of exceptional children. They are: teaching, counselling, managing behaviour, parenting non-handicapped siblings, maintaining the parent to child relationship, educating significant others and relating to the school and community.

These roles must be played effectively by the parents of the adolescents with hearing impairment so that they would adjust to their environment.

More so, Gbegin (1999) opined that parents remain the first contact of the child despite any form of disabilities. He observed that the role of nurturing the child has no substitute. Hence, parents should not exclude their children with disability from enjoining care, security, sense of belonging, confidence and support required to succeed in life. All these factors will contribute meaningfully to the psychological adjustment of the child.

2.1.15 Concept of Personality Types

Personality could be classified in many ways. Psychologist has come out with two types of classifications, namely Type A and type B personality.

Strauss (1997) said that personality type describes a pattern of behaviours that were once considered to be risk factor for coronary heart disease. Type A and Type B personality are described as follows:

Type A Personality

Strauss, (1997) opined that, Type A individuals can be described as impatient, time conscious, time, highly competitive, ambitious, business-like, aggressive, having difficulty relaxing, and are sometimes disliked by individuals with Type B personality for the way they are always rushing. They stressed further that, they are often high-achieving workaholics who multi-task drive themselves with deadlines, and are unhappy about delays. Consequently, Type A individuals are often described as 'stress junked.'

Health Report Weekly (2008) reported that according to scientific literature, Type A behaviour is characterized by an intense and sustained drive to achieve goals and an eagerness to compete. Personalities categorized as Type A tend to have a persistent desire for external recognition and advancement. They are involved in various functions that bring about time restrictions. Such personalities have a tendency to speed up mental and physical tasks with

extraordinary mental and physical alertness. These characteristics make for super-achievers and high-powered people.

Type A individuals can get a lot done and have the potential to really move ahead in the world. But there is a high price to pay. Certain components of such a personality can inhibit happiness and even threaten health. For example, the goals that Type A folks set are often poorly defined and therefore hard to achieve a perfect recipe for misery.

Type A individual is also characterized by a general discontentedness and the impulse to be overly critical and demanding, even contemptuous of imperfection, in the self and others. This focus on negative aspects and the accompanying bursts of hostility and impatience result in guilty, remorse and anxiety. Also, type A personalities are motivated by external sources (instead of by inner motivation), such as material reward and appreciation from others. Type A folks experience a constant sense of opposition, wariness, and apprehension they are always ready for battle. Anyone can imagine how this constant and very exhausting existence would deplete reserves of contemned and happiness and disrupt personal equilibrium.

Although the literature is somewhat inconsistent because of problems with the conceptualization and definition of Type A behaviour pattern, it has been linked to higher risks of cardiovascular diseases. The risks seemed to be reduced with intervention aimed at reducing Type A behaviour. Indeed, those with a high type A score would be happier and healthier, if they were to file down the jagged edges of their personality. By learning how to control the negative behaviour patterns while preserving their drive, Type A people can be successful without sacrificing their emotional well-being.

Type B Personality

Lemse (1992) opined that the Type B individuals have an inward of focus and aren't usually the life of the party. Conscious around other people making or walking into a crowded room a little nerve-wracking. Introverts have a hard time being goofy in front of the camera and telling jokes to more than a couple of people at a time, but they can be extremely witty. They're less "Larry, Curly, and Moe" and more Woody Allen- but that doesn't mean introverts' personality traits are neurotic. According to him, Introverts process their emotions, thoughts and observations internally. They can be social people, but reveal less about themselves than extroverts do. Introverts are more private, and less public. Introverts need

time to think before responding to a situation, and develop their ideas by reflecting privately. Introverts' personality traits can be passionate, but not usually aggressive.

Oladele (1998) observed that the Type B personality generally lives at a lower stress level. According to him the individuals with type B personality often demonstrate the following characteristics: They work steadily, enjoying achievements but not becoming stressed when they are not achieved.

- When faced with competition, they do not mind losing and either enjoy the game or back down.
- They may be creative and enjoy exploring ideas and concepts.
- They are often reflective, thinking about the outer and inner worlds.

Generally, the type B individuals have the following characteristics: easy going, calm, patient, hardly stressed, reflective, do not mind losing (Chauhan, 2000).

2.2 Theoretical Review

2.2.1 Model of Adjustment

Psycho Analytical Model

This model owes its origin to the theory of psychoanalysis propagated by Sigmund Freud (1938) and supported by psychologist like Adler Jung and other neo Freudians. According to Freud, the human mind consists of three layers, the conscious, the sub-conscious and unconscious. The unconscious is the key to our behaviour. It decides the individual's adjustment and maladjustment to his self and to his environment. It contains all the repressed wishes, desires, feelings, drives and motives, many of which are related to sex and aggression. One is adjusted or maladjusted to the degree, extent or the ways in which these are kept dormant or under control.

According to Freud, man is a pleasure seeking animal by nature. He wants to seek pleasure and avoids pain or anything which is not keeping with his pleasure loving nature. The social restrictions imposed by the norms of society and his own moral standards dictated by his superego come in conflict with the undesignated and unbridled desires of his basic pleasure seeking nature. These pleasures are mostly sexual in nature. One remains adjusted to the extent that these are satisfied. An individual drifts towards malfunctioning of behaviour and maladjustment in case such satisfaction is threatened or denied. Freud postulated the imaginary concepts of 'id'. And 'superego' for the adjustive and non-adjustive behaviour patterns and formulated the following conclusion: A person's behaviour remains normal and

in harmony with his self and environment to the extent that his ego is able to maintain the balance between the evil designs of his id and the moral ethical standard dictated by his superego. In case the ego is not enough to exercise proper casual over one's ego and superego, malfunction of behaviour would result. Two different situations could then arise: If the superego dominates, then there is no acceptable outlet for expression of the repressed wishes, impulses and appetites of the id. Such a situation gives birth to neurotic tendencies in the individual. If the id dominates, then the individual pursues his unbridled pleasure seeking impulses, without care for the social and moral norms. In such a situation the individual may be seen to be engaging in unlawful or immoral activities resulting in maladaptive, problem or delinquent behaviour.

Freud also uses the concept of libido, that is., a flow of energy related to sex gratification. He equates it with a flowing river and maintains that: If its flow is outward causing sex gratification and pleasurable from outside objects, the individual remains quite normal and adjusted to his self and the environment.

Psycho-Analytical Theory and Adolescents with Hearing Impairment

The adolescents with hearing impairment are pleasure seeking being, like their counterparts without hearing impairment. Whenever their pleasures are threatened, they tend to become maladjustment. Psychoanalytical theory is relevant to this study in the sense that, a person's behavior remains normal and in harmony with his self and environment to the extent that his ego is able to maintain the balance between evil designs of his id and the moral ethical standard dictated by his superego. Furthermore, the adolescents with hearing impairment should be helped by the parents and professionals to have good sense of self and the environment should be least restrictive, in order to make then have a sense of belonging at home, school and the society as a whole.

Sociogenic or Cultural Model

Johnstone (2008) posited that the society in general and culture in particular affects one's ways of behaviour like the shape of adaptive or non-adaptive behaviour turn one into an adjusted or maladjusted personality. The society and culture to which one belongs does not only influence or shape one's behaviour, it also sets a standard for its adherent to behave in the way it desires. Individual behaving in the manner that society desires are labeled as normal and adjusted individual while deviation from social norms and violation of the role

expectancy is regarded as the sign of maladjustment and abnormality. Although, society or culture plays a significant role in shaping and influencing human behaviour, yet it should not be regarded as the only factor in the adjustment process. It is not proper, therefore, to depend solely on the cultural model for the labeling of one's behaviour as adjusted or maladaptive.

Sociogenic or Cultural Model and Adolescents with Hearing Impairment

This model is relevant to the adolescents with hearing impairment, because the attitude of the society towards individuals with hearing impairment will determine whether they (adolescents with hearing impairment) will be maladjusted or not. Negative attitudes towards them will definitely affect their psychological adjustment. This is confirmed by Johnstone (2008). According to him, the society and culture to which one belongs does not only influence or shape one's behavior, it is also sets a standard for its adherent to behave in the way it desires. Furthermore, the theory emphasized the importance of the society (environment) in enhancing the adjustment of an individual. This is the trust of this study.

Socio-psychological or Behaviourist Model

This model in general emphasizes that behaviour is not inherited. Competencies required for successful living are largely acquired or learned through social experience by the individual himself. The environmental influences provided by the cultural and social institutions are important, but it is the interaction of one's psychological self with one's physical as well as social environment which plays the decisive role in determining adjustive success or failure. Behaviour, whether normal or abnormal is learned by obeying the same set of learning principles or laws. Generally, every type of behaviour is learned or required as an after-effect of its consequences. The behaviour, if reinforced, may be leaned by the individual as normal as a result, one may learn to consider responses which are labeled normal as abnormal. Not only is normal and abnormal behaviour learned, the labeling of behaviour as normal or abnormal is learned. Whether or not an individual is considered abnormal or maladjusted for a particular type of behaviour, depends upon the observer of the behaviour and also upon the social context of the behaviour.

Strength of Socio-Psychological Theory

A main strength of social psychology is the attempt to use real life situations when studying behaviour. Because social psychology is interested in human interaction this is best

studied in real situations where participants have the opportunity to interact such as with the field experiment method used by Piliavin. Another strength of the social approach is the contributions it makes about understanding social behaviour. Social psychology makes useful applications because it can explain and even offer solutions to problems in the real world.

Weaknesses of Socio-Psychological Theory

A problem which arises when studying social behaviour relates to ethics. It is difficult to study social behaviour without negatively affecting the participants in the study. Nowadays psychologists have strict ethical guidelines which they should follow when conducting studies. Socio-psychologists are often criticised for the way in which participants may have been harmed in their studies. For example, it can be argued that they do not take adequate measures to protect their participants from the stress and emotional conflict they experienced. A further problem with the social approach is related to the generalisability of the findings. The social approach attempts to make generalisations about social behaviour but often the samples used are very restricted.

The theory emphasized the fact that behaviours are not inherited. All behaviours are learnt from the environment. Therefore, the adolescents with hearing impairment interaction with their environment is a crucial factor in their psychological adjustment. For instance, Johnstone (2008) stated that environmental influences provided by the cultural and social institutions are important, but it is the interaction of one's psychological self with one's physical as well as social environment which plays the decisive role in determining adjustive success or failure.

2.2.2 Field Theory Lewin (1951)

Lewin (1951) propounded field theory with the awareness of the influence that the environment can have for good or bad on the thought and behaviour. He came up with the holistic view of the person and environment. In addition, his perspective was premised on the idea that each person exists in a field of forces that act simultaneously to push or pull the person in various directions. In view of the above, some of these forces stem from within – they are the person's own desires, goals and abilities. Interacting with these are social forces that stem from the environment, but must be interpreted by the person in order to exert their influence.

The field theory is pointing to the fact that the person and the environment cannot be separated in terms of social interaction. In other word, as thinking, social beings, we are sensitive to the pressures of our social world (environment) (Peter, 2000). According to him, we are sensitive to the real and imagined demands, requests, expectations, judgments and examples that seem to flow constantly in our direction from other people.

Every human need arises from an imbalance or dis-equilibrium between what human nature deems necessary for the health of a person, and a person's environment provides. When the environment provides people with what they need, homeostasis or equilibrium occurs. Oladele, (1998) opined that the five types of human needs proposed by Maslow in a hierarchy reflects the sequence in which needs must be fulfilled. He concluded that, the hierarchy has been utilized as the basic motivational framework for a number of generalized consideration of human functioning, such as, mental health, general adjustment, classroom dynamic and mental bahaviour.

Lewin, as a neo-gestaltist, transferred the Gestalt model to everyday situations. He was greatly influenced by Einstein and applied the idea of Einsteinian field physics to psychology. He proposed that human behavior is a function of both the person and the environment in which the behavior takes place, including the social parameters. He postulated that needs organize perception of the field and acting within the field. He understood a dynamic interaction of elements in the field. He believed behavior was purposeful and visualized the individual as existing in a field of forces which included +valence forces which attract people, and -valence forces which repel people. The blending of these fields produced and approach/avoidance dynamic. According to Lewin's theory, learning is essential to coping with these opposing force fields. Changes in valences and values are important to the learner's ability to deal with ongoing situations. Lewin also believed that a holistic investigation of human behavior and learning must include the environment in which the learning is taking place, including the psychological

The strength of the theory is in the fact that the importance of the environment of an individual is emphasized, while critics of the theory pointed out that factors such as genetic, are not emphasized by Lewin in his field theory. Also, controversy has centered on whether action research is truly scientific research. With this work Lewin was more interested in practical applications than in conducting pure scientific research. (Daniels 2003). Lewin action research involved studies in real life situations that encountered a wide variety of social

problems. Such studies were conducted in factories or housing projects, and lead to community studies and further research on minority groups.

Field theory emphasized person and the environment. The psychological adjustment of an individual is subject to good sense of self and a cordial environment. This theory is relevant to the adolescents with hearing impairment in the sense that, they need to accept themselves and the environment should be least restrictive. These conditions should be met for their psychological adjustment.

2.2.3 Social Learning Theory

The social learning theory according to Bandura (1977) posited that all human behaviours are learnt from the environment with or without reinforcement. Bandura believes that the behaviours of children are the true reflection of the happenings in their environment. According to Bandura (1977) human behaviour is learnt through observational learning. Children observe the people around them behaving in different ways. The individuals that are observed are called models. His view of children is that they are surrounded by many influential models, such as, parents within the family, characters on children's TV, friends within their peer group and teachers at school. These models provide examples of masculine and feminine behaviour to observe and imitate.

Bandura (1977) posited that the children pay attention to some of these people (models) and encode their behaviour. At a later time they may imitate or copy the behaviour they have observed. They may do this regardless of whether the behaviour is 'gender appropriate' or not but there are a number of processes that make it more likely that a child will reproduce the behaviour that its society deems appropriate for its sex. According to him, the child's observation has some implications on his behaviour. Firstly, the child is more likely to attend to and imitate those people it perceives as similar to itself. Consequently, it is more likely to imitate behaviour modelled by people of the same sex as it is. Secondly, the people around the child will respond to the behaviour it imitates with either reinforcement or punishment. If a child imitates a model's behaviour and the consequences are rewarding, the child is likely to continue performing the behaviour. If parent see a little girl consoling her teddy bear and says 'what a kind girl you are', this is rewarding for the child and makes it more likely that she will repeat the behaviour. Her behaviour has been reinforced, that is, strengthened.

To this end, reinforcement can be external or internal and can be positive or negative. If a child wants approval from parents or peers, for example, this approval is an external reinforcement, but feeling happy about being approved of is an internal reinforcement. A child will behave in way which it believes will earn approval because it desires approval. However, positive or negative reinforcement will have little impact if the reinforcement offered externally does not match with an individual's needs. Reinforcement can be positive or negative, but the important factor is that it will usually lead to a change in a person's behaviour. Thirdly, the child will also take an account of what happens to other people when deciding whether or not to copy someone's actions. This is known as vicarious reinforcement.

In view of the above, Ogbeba (2009) observed that most behaviour that adults in the society exhibit like fighting, cheating, quarreling, tribalism, favoritism, discrimination are directly copied by the child who sees adults as his model.

In our contemporary society, the attitude of the people towards individuals with hearing loss is sometimes negative. This makes them feel that the society is not disability friendly. As a result, Ogbeba (2009) feels that their self-image is threatened. He stressed further that it is the belief of social learning theorists that when an individual experiences extreme situation and punishment, he recoils, becomes maladjusted. This kind of situation could be the reason why individuals with hearing impairment lack good interpersonal relationship (Andrea, 2007).

The Strength of Social Learning Theory

Social learning theory encompasses attention, memory and motivation, it spans both cognitive and behavioural frameworks. It has been applied extensively to the understanding of aggression and psychological disorders, particularly in the context of behaviour modification. Furthermore, it is also the theoretical foundation for the technique of behaviour modelling which is widely used in training programmes. In addition, the social learning theory focused on the concept of self-efficacy (Bandura, 1977).

Adjustment Implications of Social Learning Theory to Adolescents with Hearing Implications

Social learning theory has adjustment implications for adolescents with hearing impairment in the sense that those of who adapt to their hearing loss learn it through the attitude of members of the society. This is because maladjustment could be as a result of bad

model in the environment. This is corroborated by Bandura (1977). He identifies the following implications of social learning theory:

- Students often learn a great deal simply by observing other people.
- Describing the consequences of behaviour an effectively increase the appropriate behaviours and decrease inappropriate ones. This can involve discussing with learners about the rewards and consequences of various behaviours.

Social learning theory emphasized the fact that all human behaviours are learnt from the environment. This implies that there should be good models in the environment for the adolescents with hearing impairment. This will enhance their psychological adjustment. Children are likely to be maladjusted in an environment where there are maladjusted adults.

Application of the Theories to the Study

This study is based on five theories – psycho-analytical theory, sociogenic or cultural model, socio-psychological theory, field theory and social learning theory. These theories are relevant to the study, because they have one thing in common person and the environment, which is the thrust of this study.

2.3 EMPIRICAL STUDIES

2.3.1 Home Environment and Psychological Adjustment

Serika & Neetu (2007) carried out a research titled 'a study of certain selected variables – family environment and social adjustment, related to the adolescents with hearing impairment. They found out negative social response to them. Also, the study revealed that the participants who received social support from their parents, teachers, siblings and peers are better adjusted than their hearing counterparts.

Vaughan-Cole (1999) examined the effect of socio-economic status of parents on the psychological adjustment of their school age children. He found out that adjustment was worse for children living in low socio-economic families.

Denis (2004) carried out a research titled relating parent and family functioning to the psychological adjustment of children with hearing impairment. They discovered that more adaptive family relationships and parental psychological adjustment were associated with positive psychological adjustment, while less adaptive family relationships like quarrel, consistently predicted problematic adjustment.

Furthermore, various studies found out the relationship between parents functioning and their children's psychological adjustment. For instance, Winter (1999), Wentzel (1992) and William (2003) found out that parent and family functioning have been identified as primary influences on children's psychological outcomes. In other words, family and parental factors significantly related to children's psychological adjustment.

Denis (2004) conducted a study on the impact of family environment on the psychological adjustment of 50 adolescents with mild hearing loss. The finding of the study revealed that measures of family and parental functioning that reflected supportive family relationships, for example, family cohesion, predicted fewer behavioural symptoms and more competent psychological functioning. In contrast, measures of problematic family qualities, like conflict, generally predicted less competent psychological adjustment and/ or higher levels of behavioural symptoms. More frequent psychological adjustment problems like distress were typically identified among maladjusted children with chronic health conditions compared with those who had age appropriate psychological functioning.

It is evident from the above findings that family problems represent a unique but category of adjustment difficulty that cause people to seek psychological treatment. Franklin (2009) found out that problems can develop in a couple relationship because of a medical or psychological problem in either person, or in one of their children. Parent child problems can also create distress within a family. Poor communication and discipline problems have significant relationship with psychological adjustment of children and adolescents. Johnstone (2008) found out that 85% of the adolescents who were at risk of psychological adjustment problem reported that sometime there are constant battles between siblings and the parents cannot seem to resolve the conflicts. They also reported that divorce, and the creation of step families, can create difficulties in a family sometimes for all members of the family. Johnstone (2008) discovered that the above problems could lead to adjustment problems in one or more members of the family.

2.3.2 Personality Type and Psychological Adjustment

Davis (2005) conducted a study titled, behaviour patterns, sex role orientation and psychological adjustment. The study investigated whether Type A or B coronary prone behaviour patterns interfere with successful interpersonal functioning among persons who lack a highly masculine sex role orientation. The study discovered that a Type A behavioural style and a sex role orientation low in masculinity were associated with low social self-

esteem, high social anxiety and depression. The study also discovered that maladjustment was pronounced among female with type B behaviour pattern than their male counterparts due to cultural expectations that female are more socially adapted than males.

Marjan (2008) conducted a study titled impact of personality on psychological adjustment of male and female adolescents with hearing impairment . The participants of the study comprised 35 male and female adolescents with hearing impairment, 15 male and 20 female with average age of 19. The study discovered that the participants who were described as energetic, outgoing, flexible and self confident adjusted to the environment than their counterparts who were moody, withdrawn and socially isolated. These set of people according to Marjan (2008) are vulnerable to maladjustment.

Judith (1999) studied the relationship between personality type and psychological adjustment among adolescents with hearing impairment. He discovered that those who were extroverts better adjusted than their counterparts who were introverts.

2.3.3 Hearing Impairment and Psychological Adjustment

Kent (2003) examined identity issues and aspects of health behaviours of mainstreamed hard-of-hearing (HOH) aged 11, 13 and 15 compared with their peers. In the study, samples of 52 HOH students were matched with 470 peers of the same age, gender and ethnicity. The study revealed that there were indications that HOH students more often experienced a sense of loneliness than their hearing peers did. Also, the majority of the HOH students (55.8%) did not have self-identity as having a hearing disability. He concluded that, these findings support the view that the school environment of a significant number of mainstreamed HOH students is not supportive. He stressed that, those students who do not have self-identify are physically and psychologically more at risk and that the reluctance to self-identity may reflect the prevalence of negative stigma.

Murray (2008) examined the effects of hearing impairment on the conversation of the children with hearing impairment. The participants in the study included one hundred and eighty-one children with significant hearing loss and twenty-four normal hearing children. The result of the study showed that children who have significant hearing loss often experience difficulty in engaging in everyday conversation. He concluded that the children with hearing impairment may spend an inordinate amount of time in communication breakdown or in silence. The study also showed psychological adjustment problem among children with significant hearing loss.

Kathleen & Michael (1996) conducted a research of the self-perceptions of social relationship in adolescents with hearing impairment. A social activity scale was administered to 220 mainstreamed adolescents with hearing impairment. The result of the study showed that the students reported participating in school activities more frequently than those with their hearing peers. Other research work, such as Eldredge, Greenberg & Davis (1996) found out those adolescents with hearing impairment often experience difficulty in social relationship. Also, they found out that the adolescents with hearing impairment experienced loneliness, rejection, and social isolation. Their findings also revealed that the adolescents with hearing impairment in the mainstreamed school setting have difficulty relating to hearing peers, because they interacted more frequently with their teachers and Adolescents with hearing impairment than with hearing ones. In essence, the above studies suggest that adolescents with hearing impairment had negative social experience in the inclusive setting.

Osiki & Nwazuoke (1998) conducted a research among the students with hearing impairment and their hearing counterparts. They found out that the hearing participants expressed less psychological problems than their counterparts with hearing impairment. Also, they found out that the students with normal hearing indicated less physical adjustment problems that their counterparts with hearing impairment. They therefore, concluded that the students with hearing impairment need to be assisted in order to maximize their potentials in a learning environment.

In another study, Osiki (1998), studied the psychological adjustment of students with hearing impairment and their counterparts with normal hearing. The participants for the study were drawn from secondary school students with hearing impairment and those with normal hearing in Oyo State, Nigeria. The participants were 232 in number. They comprised 107 students with hearing impairment and 125 students with normal hearing. The study found out that the psychological adjustment of both the hearing and the participants with hearing impairment are basically not the same. Osiki (1998) concluded that though most human beings necessarily have problems, in terms of their severity, according to him, the normal hearing would usually be expected to tolerate psychological problems than the individuals with hearing impairment. He cited Lemse (1992) who found that the individuals with hearing impairment easily present a phenomenon of altered self-image and at times also could exhibit fatalistic behaviour of attributory tendencies. He stressed the fact that, he or she (the individual with hearing impairment) might endlessly question the creator and or other

environmental causation for his or her predicament. The study further revealed that the students with hearing impairment have difficulty in associating with others.

The result of the above study was in agreement with the finding of Owolawi (1998). He found out, in his study, titled psychological effect of 'hearing impairment in young Nigeria Adolescent, that the adolescents with hearing impairment have poor self-concept in comparison to their hearing counterparts.

Akinpelu (1998) studied the psychological needs of the students with hearing impairment in a regular university setting. Her participants comprised of students with hearing impairment and their counterparts with normal hearing. The study revealed that there was poor social relationship among students with hearing impairment and their counterparts with normal hearing. Also, the study showed that the students with hearing impairment are aggressive. In other word, the study showed that the students with hearing impairment are psychologically maladjusted.

Ross (2008) found out in a study titled Hearing screening and diagnostic evaluation of children with unilateral and mild bilateral hearing loss, that hearing loss of any degree appeared to affect psycho-educational development adversely, leading to the conclusion that even 'minimal loss places children at risk for language and learning problems.

Netu (2007) found out in a study titled, the social stigma of hearing impairment, that hearing impairment is a threat to social identity. The study was carried out among 100 male and female adolescents with hearing impairment. The study further revealed that, the stigma attached to hearing loss can be understood in the broader conceptual framework of 'shaming'. He therefore, concluded that, generating stigma also needs to be understood at the micro (interpersonal) and macro (social levels).

2.3.4 Gender and Psychological Adjustment

Biologically or culturally, the roles or problems of male and female are dictated in every society. Richard (2000) posited that it appears that both culture and biology dictate that the experiences and problems confronted by the members of either sex will differ in many ways from those confronted by members of the other sex. He further stressed that in every child, there is a sense of biological identity. That is, every child knows, which group or sex he or she belongs and that there is every tendency, for that child to play the role of that group.

Steward (2000) found out that there is no good evidence of a sex difference in overall intellectual ability or psychological adjustment, though girls seem to have a slight advantage

over boys during the first seven years. He added that, women tend to do better than men on most verbal tasks, while men tend to do better than women on tasks that involve visual-spatial ability or mathematical operations.

Thome (2000) found out in a study that men were more creative than women. That is, they produce more novel ideas and products in many spheres of activity. Researchers have found out that in the affective domain, boys are more aggressive than girls. Thome (2000) reported that the sex difference that has been demonstrated most frequently in research is one involving a greater tendency toward aggression on the part of the male sex. He stressed that it has often been observed that while boys are likely to display problems of aggressive conduct in the early school years, girls are more likely to display problems suggesting emotional disturbance, such as, timidity and fears. According to him, on questionnaire scales used with adolescents and adults, it is usually found that women report more anxiety, more self-dissatisfaction, and more neurotic psychological adjustment.

However, there is no clear evidence that male adjust more than the female, but based on the literature reviewed, the presence of anxiety and fear in female may make them not to adjust well as their male counterparts (Chauhan, 2000).

2.4 Appraisal of Reviewed Literature

In this chapter related theoretical and empirical literature were reviewed on General concepts of hearing impairment, adolescence, home environment, school environment, personality types, gender, psychology adjustment, models and theories of adjustment.

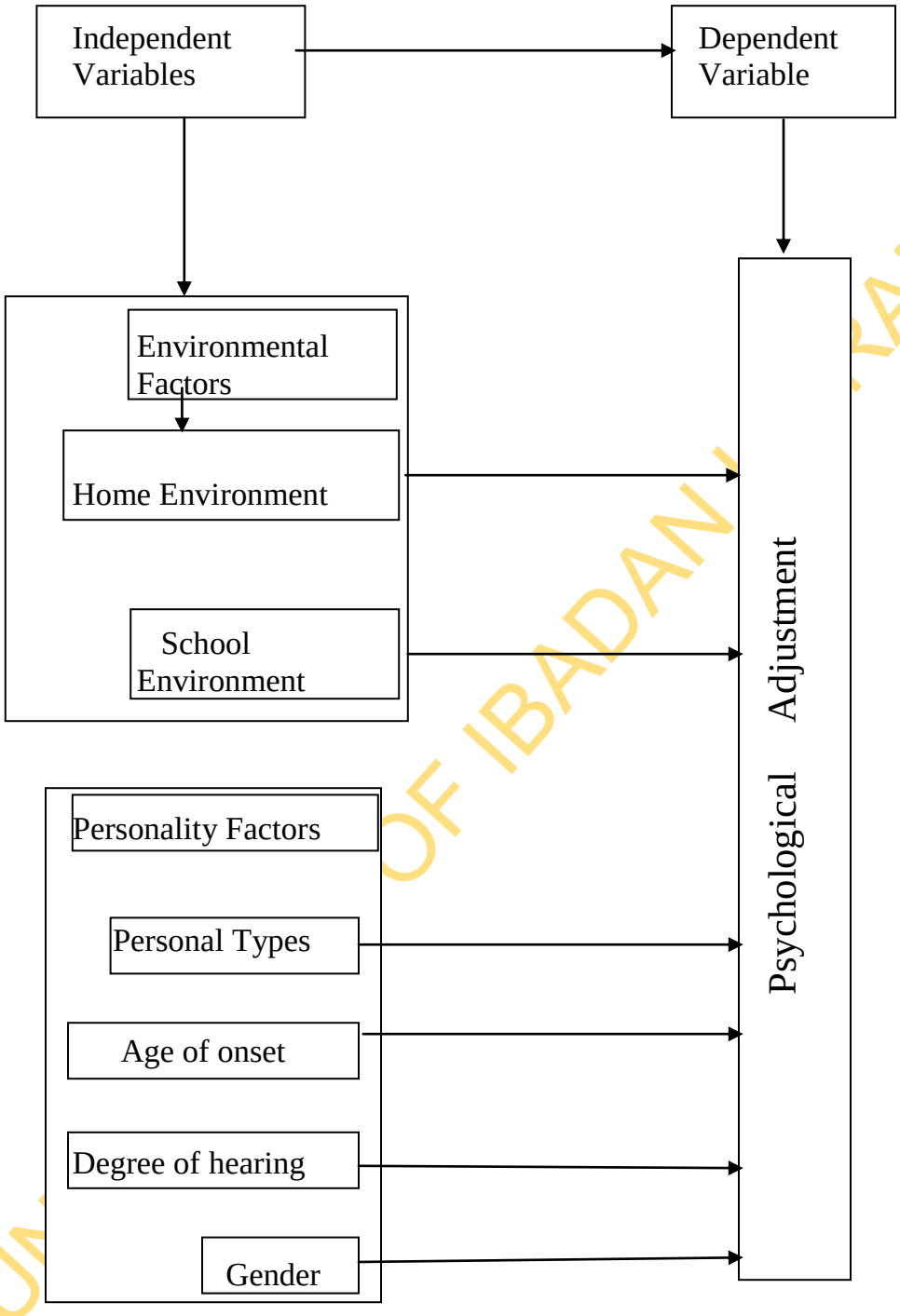
Most of the studies reviewed that psychological adjustment is a major need of the adolescents with hearing impairment. However, there seems to be paucity of empirical evidence on the relationship among environmental (home and school environment) and personality factors, (personality types, age of onset, degree of hearing loss and gender) and psychological adjustment.

This study attempted to find out a combination of environmental and personality factors as they relate to psychological and adjustment of adolescents with hearing impairment.

2.5 Conceptual Framework for the Study

The independent variables in the study are home environment, school environment, personality types, age of onset, degree of hearing loss and gender, while the dependent variable is psychological adjustment of the adolescent with hearing impairment. In The study none of the variables of interests were manipulated.

Fig 1: **CONCEPTUAL FRAMEWORK FOR THE STUDY**



Key:

Environmental and Personality Factors- Independent variables.

Psychological Adjustment- Dependent Variable.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter is concerned with the methodology used in carrying out the study. It is discussed under the following sub-headings: research design, variables in the study, population, sample and sampling technique, instrumentation, validity and reliability of instrument, procedure for Data Collection and method of Data Analysis

3.1 Research Design

The survey research design was adopted in carrying out the study. Survey design, according to Nworgu (1991) is a research design in which a group of people or items is studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group. In this study, the survey research design was adopted in order to examine the relationship and association among the variables of interest in the study. Also, the researcher did not manipulate the variables of interest in the study.

3.2 Variables in the Study

The following are the variables in the study:

1. **Independent variables are**:
   - (a) Home environment
   - (b) School environment
   - (c) Personality Types
   - (d) Age of onset
   - (e) Degree of hearing loss
   - (f) Gender (male and female)

2. **Dependent Variable:**

   Psychological Adjustment

3.3 Population

The target population comprises all the adolescents with hearing impairment in senior secondary I and II of the four integrated secondary schools in Oyo State.

3.4 Sample and Sampling Technique

The participants in the study comprised two hundred and thirty three (233) adolescents with hearing impairment from the four integrated Secondary Schools in Oyo State as shown on the table. They included 123 male and 110 female.

Table 3.1: Selection of Sample for the Study

	Schools	**Number of participants**
i.	Methodist Grammar School (Deaf unit), Bodija, Ibadan.	72
ii.	Ijokodo High School, Ijokodo, Ibadan	55
iii.	Durbar Grammar School, Durbar, Oyo	52
iv.	Ogbomoso Grammar School, Ogbomoso.	54
	Total	**233**

The purposive sampling technique was used to select the participants for the study. This sampling technique is also known as judgemental, selective or subjective sampling. Purposive sampling relies on the judgement of the researcher when it comes to selecting the participants for the study. The main goal of purposive sampling is to focus on particular characteristics of the population that are of interest to the researcher.

Criteria for Selection

(1) Students in SSI and II were selected for the study.

(2) They were selected because they could comprehend the items on the instrument for data collection.

(3) Only the students who fell within mild and severe hearing loss were selected in the study.

(4) The SSIII students were not included in the study, because they were preparing for their Senior Secondary Certificate Examination (SSCE).

3.5 Instrumentation

The following instruments were used for data collection in the study.

(1) Adolescents' Home and School Adjustment Questionnaire (AHSAQ)

(2) Personality Type Questionnaire (PTQ)

(3) Adjustment to Hearing Loss Questionnaire (AHLQ)

(4) Psychological Adjustment Inventory (PAI)

Adolescents' Home and School Adjustment Questionnaire (AHSAQ)

The Adolescents' Home and School Adjustment Questionnaire was a self-designed instrument. It was designed to examine the relationships among home and school environment and psychological adjustment of the adolescents with hearing impairment. The instrument has two sections, that is, section A and B. Section A has to do with the personal data of the respondents, they include, gender, age, schools, class, age of on set, degree of hearing loss, parents educational background and occupation, while section B has 40 items on home and school environment. Also, section B is sub-divided into two parts. The first part has 20 items on home environment, while the second part of section B has 20 items on school environment. The instrument was structured in the modified Likert Point Scale that is, Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD).

Psychometric Properties of Adolescents Home and School Adjustment Questionnaire

The instrument was structured in modified Likert Scale, that is, Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The scoring pattern of the instrument is 1 – 4 points as follows: Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2 and Strongly Disagree = 1.

Furthermore, any participant whose scores are high in items 1 – 10 in the section for home environment of the instrument was experiencing favourable home environment, while those with very low scores were experiencing unfavourable home environment. Similarly, those with high scores in items 11 – 10 were experiencing unfavourable home environment and vice versa.

Moreover, the scoring for items 21 – 30 is similar to those on the items on school environment. High scores on items 21 – 30 indicated favourable school environment, while high scores on items 31 – 40 indicated unfavourable school environment.

Validity and Reliability of the Instrument

Validity means the extent by which an instrument measured what it claimed to measure. While reliability of an instrument means the degree of consistency with which it measures whatever it is measuring.

Validation of Adolescents' Home and School Adjustment Questionnaire

The instrument was validated through the corrections of experts in the field of psychometry, psychology and special education. It was pilot-tested on 60 adolescents that were not included in the study. The data collected were subjected to statistical analysis using Cronbach Alpha and it yielded 0.86 reliability coefficient. The high coefficient alpha indicated acceptable degree of internal consistency reliability of the instrument.

Personality Type Questionnaire (PTQ)

The Personality Type Questionnaire (PTQ) was a self-designed instrument. It was designed to examine the association between personality types and psychological adjustment of adolescents with hearing impairment. The instrument has two sections, that is, sections A and B. Section A has to do with the personal data of the respondents. They include, gender, age, school, class, age of onset, degree of hearing loss, parents educational background and occupation, while section B has 30 items on personality types. Also, the instrument was structured in modified Likert Scale, that is, Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD).

Psychometric Properties of Personality Types Questionnaire

The instrument was structured in modified Likert Scale, that is, Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The scoring pattern of the instrument is 1 – 4 points as follows: Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2 and Strongly Disagree (SD) = 1.

Furthermore, any participant whose scores are high in items 1–15 means introversion, while high scores in items 16–30 means extroversion and vice versa.

Validation of Personality Types Questionnaire

The instrument was validated through the corrections of experts in the field of psychometry, psychology and special education. Furthermore, it was pilot-tested on 60 adolescents that were not included in the study. The data collected were subjected to statistical analysis using Cronbach Alpha and it yielded 0.84 reliability coefficient. The high coefficient indicated acceptable degree of internal consistency reliability of the instrument.

Adjustment to Hearing Loss Questionnaire (AHLQ)

The adjustment to hearing questionnaire was a self-designed instrument. It was designed to examine the relationship between degree of hearing loss and psychological adjustment of adolescents. The instrument has two sections, that is sections A and B. Section A has to do with the personal data of the respondents. They include, gender, age, school, class, age of onset, degree of hearing loss, parents' educational background and occupation.

Also, the instrument was structured in modified Likert Scale, that is, Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD).

Psychometric Properties of Adjustment to Hearing Loss Questionnaire

The instrument was structured in modified Likert Scale, that is, Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The scoring pattern of the instrument is 1 – 4 points as follows: Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2 and Strongly Disagree (SD) = 1. Furthermore, any participant with high scores in item 1 – 10 indicated adjustment to hearing loss and those with high scores in items 11 – 20 indicated maladjustment.

Validation of Adjustment to Hearing Loss Questionnaire

The instrument was validated through the corrections of experts in the field of psychometry, psychology and special education. Furthermore, it was pilot-tested on 60 adolescents that were not included in the study. The data collected were subjected to statistical analysis using Cronbach Alpha and it yielded 0.83 reliability coefficient. The high coefficient indicated acceptable degree of internal consistency. This shows that the instrument was reliable.

Psychological Adjustment Inventory (PAI)

The psychological Adjustment Inventory was adapted from Bell Psychological Adjustment Inventory (2003). The Bell Psychological Inventory was designed to assess individual's psychological adjustment in a variety of situations: Like home, health, social and emotional. The Inventory is expressed in terms of satisfaction or dissatisfaction with life or the environment. The inventory covered areas like health adjustment in terms of shyness, submissiveness, introversion and emotional adjustment in terms of depression or nervousness.

The adapted inventory has twenty items reflecting the areas covered by the original Bell psychological Adjustment inventory.

The instrument has two sections that is, Sections A and B. section A has to do with the personal data of the respondents, while section B has twenty three items on psychological adjustment.

Again, the instrument was structured in four modified Likert Scale. That is, strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The scoring pattern is 1-20. High scores on the inventory signify poor adjustment and low scores signifies better adjustment.

The Psychometric Properties of Psychological Adjustment Inventory

The instrument was validated by the use of internal consistency method. The data from the pilot study were subjected to statistical analysis using Cronbach Alpha and the reliability coefficient was 0.64. The high reliability coefficient indicated that the instrument was reliable.

3.6 Procedure for Data Collection

The researcher visited the schools where the study was carried out in order to familiarize the staff and students with the purpose of the exercise. The administration of the instruments took six weeks. Permission was taken from the principals of each school, before the instruments were administered on the participants. During the selection of the participants they were duly instructed about the purpose of the exercise. In other words, the researcher established rapport with the participants. This enhanced the objectivity of the study. Research assistants were briefed and used in administering the instruments. Screening Audiometer was used to screen the degree of hearing loss of the participants through the assistance of a

specialist and only those with mild and severe hearing loss were selected for the study. Their hearing loss fell within 26 – 40dB (mild) and 71 – 90dB (severe).

3.7 Method of Data Analysis

The data collected were analyzed with descriptive statistics, Pearson Product Moment Correlation, Chi Square and Multiple Regression Analysis.

CHAPTER FOUR

PRESENTATION OF RESULTS

4.0 Introduction

This chapter presents the findings of the study based on the three research questions and six hypotheses raised to guide the conduct of the study. The results are presented in form of tables and references are made to each research question and hypothesis.

4.1 Presentation of Results

4.1.1 Research Question One

Research question one states that, are there significant relationships among the independent variables (home environment, school environment, age of onset, and degree of hearing loss) and the dependent variable (psychological adjustment) of the adolescents with hearing impairment in Oyo State?

Table 4.1 is presented in order to provide the detailed results of the relationship among four of the independent variables.

Table 4.1: Summary of Test of Significant Correlation among Home Environment, School Environment, Age of Onset, Degree of Hearing Loss and Psychological Adjustment of Adolescents with Hearing Impairment.

	Home environment	**School environment**	**Age of onset**	**Degree of hearing loss**	**Psychological Adjustment**
Home environment	1.000				
School environment	0.328**	1.000			
Age of onset	-0.011	-0.046	1.000		
Degree of hearing loss	-0.029	-0.149*	0.044	1.000	
Psychological adjustment	0.812**	0.773**	-0.037	-.0101	1.000

*Correlation is Significant at the 0.05 level (2-tailed)

**Correlation is Significant at the 0.01 level (2-tailed)

The result from Table 4.1 depicts the test of significant correlations among the independent variables (home environment, school environment, age of onset and degree of hearing loss) and dependent variable (psychological adjustment) of the adolescents with hearing impairment.

The result shows that two independent variables, namely: home environment (r = 0.812, p<0.05) and school environment (r= 0.773, p<0.05) had significant correlations with psychological adjustment of adolescents with hearing impairment. However, age of onset (r = -0.037, p> 0.05) and degree of hearing loss (-0101, P> 0.05) of the respondents are not correlated with psychological adjustment of adolescents with hearing impairment.

4.1.2 Research Question Two

Research question two states that what is the composite contribution of the independent variables to the dependent variables?

Table 4.2 is presented in order to provide the detailed results of the composite contribution of the independent variables to the dependent variables.

Table 4.2: Summary of Regression Analysis of the Combined Prediction of Psychological Adjustment by four Independent Variables (Home Environment, School Environment, Age of Onset and Degree of Hearing Loss).

R	R-Square	Adjusted R-Square	Std. Error of the Estimate
0.973	0.947	0.946	5.85332

Analysis of Variance

Source of Variation	Sum of Square	Df	Mean square	F	Sig.
Regression	139037.226	4	34759.31	1014.54	0.000*
Residual	7743.058	226	34.261		
Total	146780.283	230			

*Significant at p<0.05

Table 4.2 shows the prediction of four independent variables to the dependent variable. That is, home environment, school environment, age of onset and degree of hearing loss correlated positively with psychological adjustment of adolescents with hearing impairment. The table also shows a coefficient of multiple correlations (R) of 0.973, and a multiple R square of 0.947. This means that 94.7% of the variance in the psychological

adjustment is accounted for by four predictor variables, when taken together. The significance of the composite contribution or the prediction was tested at $p< 0.05$ using the F- ratio at the degrees of freedom (df = 4, 226). The table also shows that the analysis of variance for the regression yielded a F-ratio of 1014.54 (significant at 0.05 level). This implies that the joint contribution of the independent variables to the dependent variable was significant and that other variables not included in this model may have accounted for the remaining variance.

4.1.3 Research Question Three

Research question three states that, what is the relative contribution of the independent variables to the dependent variables?

Table 4.3 is presented in order to provide detailed results of the relative contributions of the independent variables to the dependent variable.

Table 4.3: Relative Contributions of the Independent Variables to the Dependent Variable (Test of Significance of the Regression Coefficients)

	Unstandardized coefficient		**Standardized coefficient**		
	B	Std. Error	Beta	T	Sig.
Constant	-2.390	2.843		0.841	0.401
Home environment	1.480	0.039	0.624	37.632	0.000
School environment	1.576	0.050	0.570	31.487	0.000
Age of onset	-0.126	0.442	-0.004	0.285	0.776
Degree of hearing loss	0.00	0.522	0.000	0.005	0.996

Table 4.3 reveals the relative contribution of four independent variables to the dependent variable, expressed as beta weights. The positive value of the effects of home environment, school environment, degree of hearing loss and age of onset implies that the psychological adjustment of adolescents with hearing impairment is actually determined by the four variables. Using the standardized regression coefficients to determine the relative

contributions of the independent variables to the explanation of the dependent variable (psychological adjustment). The relative contributions of the independent variables to the dependent variable are as follows: home environment (β = 0.624, t=37.487, P>0.05), school environment (β = 0.570, t= 31.487 P<0.05), age of onset (β = -0.004, t= 0.285, P< 0.05) and degree of hearing loss (β =0.000, t= 0.005, P<0.05).

4.1.4 Hypotheses One

There is no significant relationship between home environment and psychological adjustment of adolescents with hearing impairment.

Table 4.4: Relationship between Home Environment and Psychological Adjustment of Adolescents with Hearing Impairment

Variable	N	$\overline{X}$	SD	Df	R	P	Remark
Home environment	233	44.49	11.49	462	0.812	<0.05	Sig.
Psychological adjustment	233	31.81	25.81				

Table 4.4 reveals that the correlation coefficient "r" between home environment and psychological adjustment of adolescents with hearing impairment is 0.812 and P<0.05. Since P<0.05, it implies that there is significant relationship between home environment and psychological adjustment of adolescents. The null hypothesis is therefore rejected.

4.1.5 Hypothesis Two

There is no significant relationship between school environment and psychological adjustment of adolescents with hearing impairment.

Table 4.5: Relationship between School Environment and Psychological Adjustment of Adolescents with Hearing Impairment

Variable	N	$\overline{X}$	SD	Df	R	P	Remark
School environment	233	35.26	2.45	462	0.773	<0.05	Sig.
Psychological adjustment	233	31.81	05.81				

Table 4.5 reveals that the correlation coefficient "r" between school environment and psychological adjustment of adolescents with hearing impairment is 0.773 and P<0.05 Since P<0.05, it implies that there is a significant relationship between school environment and psychological adjustment of adolescents. The null hypothesis is therefore rejected.

4.1.6 Hypothesis Three

There is no significant association between personality types and psychological adjustment of adolescents with hearing impairment.

Table 4.6: Chi-Square Showing the Association between Personality Type and Psychological Adjustment

Variables		Psychological Adjustment			df	χ^2	P	Remark
		1.00	2.00	3.00				
Personality type	Introversion	22	26	4	2	2.308	0.315	NS
	Extroversion	26	43	12				
Total		48	69	16				

The result from Table 4.6 shows that the chi-square value is 2.308, df = 2 and P = 0.315, since P = 0.315>0.05, it implies that there is no significant association between personality type and psychological adjustment. Therefore, the null hypothesis is accepted.

4.1.7 Hypothesis Four

There is no significant relationship between age of onset and psychological adjustment of adolescents with hearing impairment.

Table 4.7: Relationship between Age of Onset and Psychological Adjustment of Adolescents with Hearing Impairment

Variables	N	$\overline{X}$	SD	df	R	P	Remark
Age of Onset	233	11.55	2.15	462	0.037	>0.05	N.S
Psychological adjustment	233	31.81	5.81				

Table 4.7 reveals that the correlation coefficient "r" between age of onset and psychological adjustment of adolescents with hearing impairment is 0.037 and P>0.05 Since P<0.05, it implies that there is no significant relationship between age of onset and psychological adjustment of adolescents with hearing impairment. Based on this the null hypothesis is accepted.

4.1.8 Hypothesis Five

There is no significant association between gender and psychological adjustment of the participants.

Table 4.8: Chi-Square Showing the Association between Gender and Psychological Adjustment of the Participants

Variables		Psychological Adjustment			df	χ^2	P	Remark
		1.00	2.00	3.00				
Gender	Introversion	30	35	5	2	4.910	0.086	NS
	Extroversion	18	34	11				
Total		48	69	16				

The result from Table 4.8 shows that the chi-square value is 4.910, df = 2 and P = 0.086, since P = 0.086>0.05, it implies that there is no significant association between gender and psychological adjustment of the participants. Therefore the null hypothesis is accepted.

4.1.9 Hypothesis Six

There is no significant relationship between degree of hearing loss and psychological adjustment of adolescents with hearing impairment.

Table 4.9: Relationship between Degree of Hearing Loss and Psychological Adjustment of Adolescents with Hearing Impairment

Variable	N	$\overline{X}$	SD	df	R	P	Remark
Degree of hearing loss	233	1.75	0.93	462	0.101	>0.05	NS.
Psychological adjustment	233	31.81	5.81				

Table 4.9 reveals that the correlation coefficient "r" between degree of hearing loss and psychological adjustment of adolescents with hearing impairment is 0.101 and P>0.05 Since P>0.05, it implies that there is no significant relationship between degree of hearing loss and psychological adjustment of adolescents with hearing impairment. Based on this the null hypothesis is accepted.

4.2 SUMMARY OF FINDINGS

The findings of the study are summarized below:

(1) Home environment and school environment correlated with psychological adjustment, while age of onset and degree of hearing loss are not significantly correlated with psychological adjustment.

(2) The study revealed combined prediction of psychological adjustment of adolescents with hearing impairment by the independent variables.

(3) The study revealed that Home adjustment and school adjustment have relative contributions to the dependent variable (psychological adjustment) while the contributions of age of onset was very little and degree of hearing loss do not contribute to psychological adjustment.

(4) There was no association between gender and psychological adjustment of the participants.

(5) There was no association between personality types and the psychological adjustment of the participants.

CHAPTER FIVE

5.0 DISCUSSION OF FINDINGS AND RECOMMENDATIONS

In this chapter, the discussion of findings with respect to each research question and hypothesis, educational implications, recommendations, suggestions for further research and conclusion are presented.

5.1 Discussion of Findings

Research Question One

Are there significant relationships among the independent variables (home environment, school environment, age of onset, and degree of hearing loss) and the dependent variable (psychological adjustment)?

The result from table 1 shows that two independent variables, namely: home environment ($r=0.812$, $P<0.05$) and school environment ($r=0.773$, $P<0.05$) had significant correlations with psychological adjustment of adolescents with hearing impairment. However, age of onset ($r = -0.037$, $P>0.05$) and degree of hearing loss (-0101, $p>0.05$) of the respondents are not correlated with psychological adjustment. This is evident from the result of the multiple regression analysis.

The result corroborated those of other researchers which showed that children's home environment was significant with their psychological adjustment (Dennis, 2004 and Wallander, 1995). This implication of this result is that the home environment of adolescents with hearing impairment should be cordial in order to enhance their psychological adjustment.

Furthermore, the result of the study showed that school environment was significantly related to the psychological adjustment of adolescents with hearing impairment. The result corroborated that of Robinson (2001), which revealed that school environment, in terms of social interaction, provision of assistive learning devices, correlated with psychological adjustment of students with hearing impairment.

The implication of the result of this study is that adequate arrangement should be made to include adolescents with hearing impairment into the schools with least restriction. This will eventually enhance their psychological adjustment.

Research Question Two

What is the composite contribution of the independent variables to the dependent variable?

The findings of the study showed that psychological adjustment correlated positively with four of the independent variables, that is, home environment, school environment, age of onset, and degree of hearing loss of adolescents with hearing impairment. The result shows a coefficient of multiple correlations (R) of 0.973 and a multiple R square 0.947. This means that 94.7% of the variance in the psychological adjustment of adolescents with hearing impairment is accounted for by four predictor variables when taken together. The significance of the composite contribution or the prediction was tested at $P<0.05$ using the F- ratio at the degrees of freedom (df=4,226). Also, the study indicated that the analysis of variance for the regression yielded a F-ratio of 1014.54 (significant at 0.05 level). This means that the joint contributions of the independent variables to the dependent variable were significant and other variables not included in this model may have accounted for the remaining variance.

The results of the study showed that four independent variables (home environment, school environment, age of onset and degree of hearing loss) correlated with psychological adjustment of adolescents with hearing impairment.

Te results confirmed those of other researchers. Kwei (2003), which revealed that home and school environment are related to psychological adjustment of adolescents with hearing impairment. Also, Kent (2003) revealed that age of onset and degree of hearing loss are related to psychological adjustment of adolescents with hearing impairment.

The implication of the results is that home environment and school environment should be special needs friendly in terms of meeting the psychological needs of adolescents with hearing impairment should be promptly attended to, in order to enhance their psychological adjustment.

Again, the contribution of the degree of hearing loss to psychological adjustments of adolescents with hearing impairment is supported by Kent (2003). He found out that students with hearing impairment were at risk of psychological maladjustment.

Research Question Three

What is the relative contribution of the independent variables to the Dependent variable?

The relative contributions of the independent variables to the dependent variable are as follows: home environment (B = 0.624, t=37.487, P>0.05), school environment (B= 0.570, t= 31.487 P<0.05), age of onset (B = -0.004, t= 0.285, P< 0.05), and degree of hearing loss (B=0.000, t= 0.005, P<0.05).

From the above, the results show that the relative contributions of the independent variables to the dependent variable are: home environment 62.4%, school environment 57.0%, the age of onset, 5% and degree of hearing loss 19 %. This result confirmed that of Greenman (2005) which revealed the relative contributions of school and home to the psychological adjustment of adolescents with hearing impairment. This implies that the school and home have vital roles to play in the psychological adjustment of adolescents with hearing impairment. According to his findings female adolescents with hearing impairment were psychologically maladjusted than their male counterparts, while the extroverts were better adjusted psychologically than their introvert counterparts.

Again, the study corroborated those of Akinpelu (1998) and Ross (2008). They revealed that degree of hearing loss and age of on set contributed to the psychological adjustment of adolescents with hearing impairment. Ross (2008) revealed that adolescents with severe hearing loss were psychologically maladjusted and those with pre-lingual hearing loss, that were not identified early enough, were at risk of adjustment problems.

Hypothesis One

Hypothesis one stated that there is no significant relationship between home environment and psychological adjustment of adolescents with hearing impairment.

The result on table 4.4 revealed that there is significant relationship between home environment and psychological adjustment of adolescents with hearing impairment. The implication of this finding is that caring and loving homes would enhance the psychological adjustment of adolescents with hearing impairment.

This result confirmed those of earlier researchers, Denis (2004), Serika and Netu (2007). They revealed that more adaptive family relationship and parental psychological adjustment were associated with positive psychological adjustment, while less adaptive home environment like quarrel consistently predicted problematic adjustment.

Hypothesis Two

Hypothesis two stated that there is no significant relationship between school environment and psychological adjustment of adolescents with hearing impairment.

The result on table 4.5 reveals that there is significant relationship between school environment and psychological adjustment of adolescents with hearing impairment. This implies that hypothesis two is rejected. This result corroborated that of Alphonse (2005) who investigated relationship between type of school, placement and psychological adjustment of students with hearing impairment. He reported that students who attended schools with adequate learning materials, social interaction with teachers, students and significant others, adjusted psychologically than their counterparts who attended schools where their social, psychological and academic needs are not met. The result of this study also confirmed that of Adeola (2000) which revealed that school environment is significant with the overall development social, academic and psychological adjustment of students with hearing impairment. The implication of this finding is that the school environment, that is, the prevailing situations of the school in terms of availability of learning materials, effective communication with the adolescents with hearing impairment, through total communication, social interaction with teachers, students with hearing impairment and their hearing counterparts, will enhance the psychological adjustment of the adolescents with hearing impairment. There is no doubt that if they are psychologically adjusted, they will have a sense of belonging both in the school and society at large.

Hypothesis Three

Hypothesis three stated that, there is no significant association between personality types and psychological adjustment of adolescents with hearing impairment. Although, earlier researchers like Marjan (1998) and Judith (1999) revealed association between personality types and psychological adjustment. Marjan (1998) revealed that, participants with Type A personality (those who were energetic, outgoing, flexible and self-confident) adjusted psychologically their counterparts who were moody, withdrawn and socially isolated. Furthermore, Judith (1999) revealed that extroverts adjusted psychologically than the introverts.

The implication of the result of this study is that the parents, teachers and the members of the society should make the environment special needs friendly in order to enhance the

personality development of adolescents with hearing impairment. This will enable them to be psychological adjusted.

Hypothesis Four

Hypothesis four stated that there is no significant relationship between age of onset of hearing loss of adolescents with hearing impairment. The result on table 4.7 reveals that there is no significant relationship between age of onset and psychological adjustment of adolescents with hearing impairment. Although, Andrea (2007), revealed that the pre-lingual deaf individuals are maladjusted in the environment while their post lingual deaf individuals adjusted to their environment. Also, Staub (1995) revealed that children with early hearing loss were maladjusted than those who acquired hearing loss later in life.

The implication of the finding is that there should be early intervention programmes for children with hearing impairment in order to enhance their psychological adjustment later in life.

Hypothesis Five

Hypothesis five stated that there is no significant association between gender and psychological adjustment of adolescents with hearing impairment. The result on table 4.8 reveals that there is no significant association between gender and psychological adjustment of adolescents with hearing impairment. This result confirmed that of Steward (2000) which revealed that there is no evidence of gender difference in psychological adjustment of adolescents with hearing impairment, though girls seem to have a slight advantage over boys during the first seven years. Furthermore, Chauhan (2000) reported that there is no clear evidence that male adjusted more than female, but based on the literature reviewed the presence of anxiety and fear in female might result in maladjustment in female than their male counterparts.

The implication of this finding is that both male of female adolescents with hearing impairment can have equal level of adjustment, if they are both given opportunities to develop their personality and the environment is friendly to them, while on the other hand, they may also be maladjusted if they are not given the opportunities to develop their personality and the environment is hostile to them.

Hypothesis Six

Hypothesis six stated that there is no significant relationship between degree of hearing loss and psychological adjustment of adolescents with hearing impairment. The result on table 4.9 revealed that there is no significant relationship between degree of hearing loss and psychological adjustment of adolescents with hearing impairment. This finding does not confirm Andrea (2007) which revealed that individuals with mild hearing loss were psychologically adjusted than their counterparts with severe hearing loss. However, the result confirmed that of Staub (1995). He revealed that there was no significant relationship between degree of hearing loss and psychological adjustment of adolescents with hearing impairment.

The implication of the finding of this study is that no matter the degree of hearing loss, an individual with hearing loss can be psychologically adjusted, if he is rehabilitated early enough and his environment is special needs friendly.

5.2 Educational Implication of the Study

The study has been able to show the various contributions of the independent variables to the dependent variable.

The study therefore, has some implications for the government, school administrators, teachers, psychologists, Guidance and counsellors, parents and adolescents with hearing impairment.

The school administrators should ensure that the school environment for adolescents with hearing impairment are disability friendly. All the barriers that could affect their psychological adjustment should be removed. Such barriers include communication problems, stigmatization and lack of assistive learning resources or materials.

Also, the implication of this study for parents of adolescents with hearing impairment is that they should make their children have sense of belonging at home. That is, they should be accepted, despite their hearing impairment. Furthermore, parents should ensure stability in their marriages because broken homes will definitely have adverse effect on the psychological adjustment of their children with hearing impairment.

The government should formulate policy that would enhance the integration of individuals with hearing impairment into the mainstream of the society.

Guidance and counsellors should be employed in the schools in order to help the adolescents with hearing impairment adjust better in the schools, home and the society at large.

5.3 Limitations of the Study

This study has some limitations. The dependent variables were limited to environmental and personality factors of the adolescents as correlates of psychological adjustment, whereas, other variables such as parents' demographic variables, parental socio economic background and age of the participants could be included. Also, the study was limited by the number of state, schools and participants used, because the participants were adolescents with special needs. Another limitation of the study was that, it was not easy to get the cooperation of the participants for the study.

5.4 Suggestions for Further Research

The findings of this study indicated some of the variables had significant relationship with the dependent variables. Therefore, it is suggested that further researchers should include other variables that were not included in this study in order to ascertain other things that could predict the psychological adjustment of adolescents with hearing impairment. Also, more participants could be used in order to ensure adequate representation of the population.

5.5 Contributions to Knowledge

This study has contributed to the existing knowledge in the following ways.

- The study indicated that home environment and school environment have significant correlation with psychological adjustment of the participants, while the other variables are not significantly correlated with psychological adjustment.
- The study also revealed that home and school environment are the most potent contributors to psychological adjustment of adolescents with hearing impairment.
- The study is also an addition to the existing literature on the psychological adjustment of adolescent with hearing impairment.
- Developed an instrument for measuring the relationship between degree of hearing loss and psychological adjustment of adolescents with hearing impairment.
- Provided information about the association of personality types and psychological adjustment of adolescents with hearing impairment.

5.6 Recommendations

Based on the findings of this study the following recommendations are given:

The home environment should be made cordial for adolescents with hearing impairment in order to enhance their psychological adjustment. In other words, the parents and their siblings should show love to them, so that they (the adolescents with hearing impairment) could have sense of belonging.

The school environment should be special needs friendly. Adequate learning materials should be made available for the adolescents with hearing impairment.

There should be cordial relationship among the adolescents with hearing impairment and the members of the school community. There should be early identification of hearing loss among individuals with hearing impairment for treatment referral services and rehabilitation, in order to reduce the effect of hearing loss on them.

Lastly, there should be guidance and counsellors and school psychologists in our schools, in order to enhance the psychological adjustment of the adolescents with hearing impairment or render assistance to those who are psychologically maladjusted or those who are at risk of maladjustment.

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APPENDIX I

UNIVERSITY OF IBADAN

DEPARTMENT OF SPECIAL EDUCATION

Adolescents' Home and School Adjustment Questionnaire (AHSAQ)

Dear Respondent,

This inventory is designed to elicit your responses on the following issues as they relate to you.

Kindly respond to all the items. This exercise is mainly for research purpose and your response will be treated with utmost confidentiality. There are two sections in the inventory, that is, sections A and B. kindly respond according to the specified instructions.

Thanks you for your anticipated cooperation.

SECTION A

Personal Data

Kindly tick (✓) the appropriate spaces in the following items:

1. Sex: (i) Male ( ) (ii) Female ( )
2. Age: (i) 10-15 ( ) (ii) 16-20 ( ) (iii) 21-above ( )
3. Name of school: _____
4. Class: _____
5. Age at which you developed hearing loss
   - i. from birth ( )
   - ii. immediately after birth ( )
   - iii. Later in life as result of sickness or accident ( )
6. Parents' Educational Background.
   - i. No formal Education ( )
   - ii. Primary School leaving Certificate ( )
   - iii. NCE/Diploma ( )
   - iv. B.Ed/B.Sc/HND ( )
   - v. Master Degree and above ( )
   - vi. Others specify ( )
7. Parents' occupation

   Father's occupation _____

Mother's occupation _____

8. How can you describe your hearing loss

i. Mild ( )

ii. Severe ( )

SECTION B

Please tick (✓) the portion that best describe you as follows:

SA = Strongly Agree

A = Agree

D = Disagree

SD = Strongly disagree

S/N	ITEMS	SA	A	D	SD
	HOME ENVIRONMENT				
1.	My parents are happily married				
2.	I am accepted in my family, despite my hearing impairment.				
3.	My siblings are friendly with me.				
4.	I always receive fair treatment as any other member of my family.				
5.	My parents always make provision for my education despite my impairment.				
6.	I always feel on top of the world because of the way I am treated in my family.				
7.	My parents are proud of me.				
8.	Hearing Impairment is not a barrier to me, because my parents and siblings do not see it as a barrier				
9.	Communicating with my parents and siblings is not a problem to me because, they understand sign language.				
10.	My parents are making effort to bring the best out of me in life, despite my disability				
11.	My parents are very hostile to me				
12.	My siblings do not want to associate with me because of my hearing loss.				

13.	My parents do not love me.				
14.	Communicating with my parents and siblings is a problem, because they do not understand sign language				
15.	The frequent fight between my Daddy and Mummy is affecting my education.				
16.	My parents prefer to provide for the education of my siblings who do not have any disability				
17.	I always feel rejected in my family.				
18.	My parents are not proud of me				
19.	Sometimes I feel that I can not excel in anything, because of the way I am treated in the family				
20.	I am like an outcast in my family				
	SCHOOL ENVIRONMENT				
21.	My teachers are very friendly with me				
22.	My teachers are very sensitive to my needs.				
23.	The environment of my school is disability friendly.				
24.	There are adequate learning facilities in my school				
25.	The interaction between my hearing counterparts and me is cordial				
26.	I am being encouraged to learn in my school				
27.	The teaching method by my teachers always enhance my learning				
28.	There is no segregation between the hearing and those with hearing impairment in my school				
29.	The communication method in my school is not appropriate for me.				
30.	My school encourages me to participate in all activities with my hearing counterparts.				
31.	I get bored at school most times				
32.	I am like an outcast in my school				
33.	My teachers are very hostile to me				

34.	I only make friends with my counterparts with hearing impairment.				
35.	The facilities in my school are not adequate for learning.				
36.	My school is not disability friendly.				
37.	There is nothing interesting about my school.				
38.	The location of my school is very noisy				
39.	Sometimes I do not feel like going to school.				
40.	My performance is poor because my school does not encourage excellent performance.				

APPENDIX II

UNIVERSITY OF IBADAN

DEPARTMENT OF SPECIAL EDUCATION

Personality Type Questionnaire (PTQ)

Dear Respondent

This inventory is designed to get information on how you would respond to the following items.

Kindly respond to all the items. This exercise is mainly for research purpose and your response will be treated with utmost confidentiality. There are two sections in the inventory, that is, section A and B. kindly respond according to the specified instructions.

Thank you for your anticipated cooperation.

SECTION A

Instruction

Kindly tick (✓) the appropriate spaces in the following items.

1. Sex: (a) Male ( ) (b) Female ( )
2. Age (a) 10-15 ( ) (b) 16-20 ( ) (c) 21-25 ( )
3. School: _____
4. Class _____
5. Age at which you developed hearing impairment.
   - i. From birth ( )
   - ii. After birth ( )
   - iii. Later in life as a result of sickness or accident. ( )
6. What is the degree of your hearing loss
   - i. Mild hearing loss ( )
   - ii. Severe hearing loss ( )
7. Parents' Educational Qualification
   - i. No formal Education ( )
   - ii. Primary School leaving certificate ( )
   - iii. NCE/OND ( )
   - iv. B.Ed.B.Sc (Hons)/HND ( )
   - v. M.Ed/M.Sc ( )
   - vi. Ph.D ( )

8. Parents Occupation

i. Father's occupation _____

ii. Mother's occupation _____

SECTION B

Instruction

Please tick (✓) the items that best describe you as follows:

SA = Strongly Agree

A = Agree

D = Disagree

SD = Strongly Disagree

S/N	Items on Introversion (Type A personality)	SA	A	D	SD
1.	I am a tough and aggressive person.				
2.	I am extremely sensitive to any sign of rejection and unfriendliness from other people.				
3.	I am a person of worth and dignity.				
4.	Obeying rules and regulations is a problem to me.				
5.	I have a number of good qualities				
6.	A lot of people say I am not easy going				
7.	I do not enjoy any dull moment				
8.	I enjoy working in groups.				
9.	I always aspire to be an achiever in everything I do				
10.	I always see opportunity to excel around me.				
11.	I enjoy making new friends				
12.	When I take any decision I always accept the consequence				
13.	I am a carefree person				
14.	Most of my friends are tough people like me.				
15.	I do not like breaking rules and regulations				
	Extroversion (Type B Personality)				
16.	I enjoy being alone rather than working in a groups				
17.	I sometimes feel that the environment is hostile to me				
18.	I don't like making friends				

19.	Most people complain that I don't interact with others.				
20.	I am a quiet and reserved person				
21.	I hate to be in a noisy environment				
22.	I easily get bored with long conversations				
23.	I always try as much as possible to avoid being the center of attraction to others				
24.	I try to avoid those people that I am meeting for the first time				
25.	I always try as much as possible to avoid stepping on the toes of others.				
26.	I always do things according to the laid down principles and acceptable ways.				
27.	I love responsible people				
28.	I can excel without the contribution of anybody.				
29	I hate cheating				
30	I always fight for my right.				

APPENDIX III

UNIVERSITY OF IBADAN

DEPARTMENT OF SPECIAL EDUCATION

Adjustment to Hearing Loss Questionnaire (AHLQ)

Dear Respondent

This questionnaire is designed to find out the relationship between the degree of your hearing impairment and your adjustment to your environment (home and school).

This exercise is mainly for research purpose and your responses would be treated with confidentiality.

There are two sections in the questionnaire, that is, section A and B. kindly respond according to the specified instructions.

Thank you for your anticipated cooperation.

SECTION A

Personal Data

Kindly tick (✓) the appropriate spaces in the following items.

1. Sex: (i) Male ( ) (ii) Female ( )
2. Age: (i) 10-15 ( ) (ii) 16-20 ( ) (iii) 21 above ( )
3. Name of School _____
4. Class _____
5. Age at which you developed hearing loss
   (i) from birth ( ) (ii) Immediately after birth ( )
   (iii) Later in life as a result of sickness/accident ( )
6. How would you describe the degree of your hearing loss: (a) mild ( ) (b) severe ( )
7. Parents Educational background
   (i) No formal education ( ) (ii) Primary School Leaving Certificate ( ) (iii) NCE/Diploma ( ) (iv) B.Sc./HND ( ) (v) Master Degree and above ( )
8. Parent occupation
   (i) Father _____
   (ii) Mother _____

SECTION B

Instruction

Kindly tick (✓) the portion that best describe you as follows

SA = Strongly Agree

A = Agree

D = Disagree

SD = Strongly Disagree.

S/N	Items	SA	A	D	SD
1.	I am completely lost to the world of sound				
2.	Hearing loss makes me hostile				
3.	My poor performance in school subjects is as a result of my hearing loss				
4.	I find it difficult to relate with people around me, because of hearing loss.				
5.	My hearing loss makes me feel miserable all the time				
6.	I am very unfortunate in life because of my hearing loss				
7.	Nothing can compensate my haring loss				
8.	Hearing loss has placed some limitations on my education and social activities				
9.	Hearing loss makes life very difficult for me				
10.	I don't think that people with hearing loss can succeed in life				
11.	Hearing loss is not a hindrance to my academic pursuit				
12.	I relate very well with the people around me, despite my hearing loss				
13.	I compete favourably with my hearing counterparts despite my hearing loss.				
14.	Coping with hearing loss is not a problem to me				
15.	Hearing loss does not prevent me from achieving my goals in lie				

16.	Hearing loss does not prevent me from benefiting from the communication of other people in my environment.				
17.	Hearing loss does not make me miserable in the midst of my normal hearing counterparts				
18.	I feel that I can succeed in my chosen career despite my hearing loss				
19.	I can still cope with my hearing loss with the help of amplification device, like hearing aids.				
20.	If my environment is disability friendly, my hearing loss can't prevent me from contributing my quota to the scheme of things in my society.				

APPENDIX IV

UNIVERSITY OF IBADAN

DEPARTMENT OF SPECIAL EDUCATION

Psychological Adjustment Inventory (PAI)

Dear Respondent,

This questionnaire is designed to find out your responses to the following items.

The exercise is mainly for research purpose and your responses would be treated with confidentiality.

There are two sections in the questionnaire, that is sections A and B. kindly respond according to the specified instructions.

Thank you for your anticipated cooperation.

SECTION A

Personal Data

Kindly tick (✓) the appropriate spaces in the following items.

1. Sex: (i) Male ( ) (ii) Female ( )
2. Age: (i) 10-15 ( ) (ii) 16-20 ( ) (iii) 21 above ( )
3. Name of School _____
4. Class _____
5. Age at which you developed hearing loss

   (i) from birth ( ) (ii) Immediately after birth ( ), (iii) Later in life as a result of sickness/accident ( )
6. How would you describe the degree of your hearing loss: (a) mild ( ) (b) severe ( )
7. Parents Educational background

   (i) No formal education ( )

   (ii) Primary School Leaving Certificate ( )

   (iii) NCE/Diploma ( ) (iv) B.Sc./HND ( )

   (v) Master Degree and above ( )
8. Parent occupation

   a. Father _____

   b. Mother _____

SECTION B

Instruction

Kindly tick (✓) the portion that best describe you as follows

SA = Strongly Agree

A = Agree

D = Disagree

SD = Strongly Disagree.

S/N	Items	SA	A	D	SD
1.	I am not a happy person				
2.	I always find it difficult to make friends				
3.	I sometime hate everybody in my environment				
4.	Everybody in my environment don't love me				
5.	There is a force within me that is making me to feel inadequate in whatever I do.				
6.	I feel I am not capable of achieving success as my hearing peers.				
7.	I am always worried about something that I can't explain.				
8.	I seem to feel depressed most of the time				
9.	I feel moody most of the time				
10.	Sometimes I feel that I can't cope with life				
11.	Life is not worth living				
12.	I am not worried over anything				
13.	People always avoid me like a plague because of my disability.				
14.	Some evil forces are behind my predicaments in life				
15.	Nothing is interesting about life				
16.	The world is a pleasant place				
17.	I am always dissatisfied with life				
18.	I am always proud of myself				

19.	Life is a place of many opportunities				
20.	Support by my family members gives me hope and encouragement.				
21.	I have an ambition to become great in life.				
22.	I can make it no matter the odds.				
23.	Disability does not indicate inability as far as I am concerned.				