

PSYCHOSOCIAL EFFECTS OF HEARING LOSS AMONG ADULTS

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1 INTRODUCTION

At present around one in seven people in the UK have some form of hearing impairment, It is generally agreed that the prevalence of hearing loss will increase significantly over the next two to three decades. Reasons for the predicted increase include genetic disposition, the increasingly ageing population, exposure to noise at work and increased exposure to environmental and leisure noise. Davis predicts that there will be approximately 100 million hearing impaired adults in Europe by the year 2025¹.

In addition to direct effects upon hearing, ranging from mild to profound hearing loss and/or tinnitus, hearing impairment has been found to cause various psychological and social difficulties. A wide ranging review of the literature concerning the psychosocial impact of hearing loss and the wearing of hearing aids has recently been carried out². This paper reports some of the most commonly occurring effects and also briefly comments on the use of hearing aids to ameliorate some of these effects.

2 STUDIES OF PSYCHOSOCIAL IMPACT OF HEARING LOSS

The studies reviewed here were mostly concerned with the effects of acquired, rather than congenital, hearing loss. The effects described therefore mainly result from mild to severe hearing impairment that develops in adolescence or adulthood.

Very little research on the psychological and social impact of hearing loss was undertaken before the mid 1970s. Since then there has been a large body of research into the psychosocial effects of hearing loss; however much of it is concerned with the impact of hearing impairment on the quality of life of elderly people. There is still a noticeable gap in the literature concerning the impact of hearing loss on the lives of young adults and people under the age of 50.

The studies reviewed have been carried out in different countries using many different methods and measures to assess the impact of hearing impairment. Some studies use qualitative data obtained from interviews or questionnaires, while others are of a more quantitative nature in which subjects are 'scored' in various dimensions of personality or activity. Some of the quantitative studies compare results for hearing impaired people with a control group of normal hearing individuals, while others have looked at the effects of increasing degrees of hearing impairment. However, whatever methods are used, with few exceptions, the results are very consistent and provide conclusive evidence of the negative psychosocial impact of hearing loss.

3 EFFECTS OF HEARING LOSS ON OVERALL QUALITY OF LIFE

In 1979 Oyer and Oyer published a review into the effects of hearing loss among elderly people³. This paper was the first to discuss in detail the social consequences of hearing impairment and its impact on the quality of life of older people. The authors listed several consequences of auditory deprivation including embarrassment, fatigue, increased tension and irritability, social rejection and depression.

This review was followed by the publication in 1980 of the results of the first major study, by Thomas and Herbst, to specifically consider the social and psychological implications of acquired deafness⁴. This was a significant piece of work, focusing on people of employment age, and is cited in many of the later publications. The authors examined relationships between hearing impairment and a number of factors such as psychiatric disturbance, general health and well being, social and family life and employment. Results for a group of hearing impaired people were compared with those of a matched (hearing) control group. Significant differences between the hearing impaired and control groups were found for many of the factors, thereby providing the first real evidence that hearing impairment has a significant detrimental effect upon the quality of life.

Other studies carried out in the US in the 1980s found that progressive hearing loss in elderly patients was associated with progressive physical and psychosocial dysfunction; the greater the hearing loss the greater the functional disability⁵⁻⁷. Severe handicaps in social, emotional and communication aspects of life were found even among people with mild to moderate hearing loss⁶. Another study of elderly people in Italy found that both visual and hearing impairment independently have a detrimental effect upon most quality of life measures⁸.

Studies into the impact of hearing loss on the quality of life of other age groups have found similar detrimental effects. For example, Lalande *et al* found that noise induced hearing loss affected the quality of life of workers both at home and at work⁹. Hallberg also found that noise induced hearing loss results in a decreased quality of life¹⁰. Another study in Sweden found that the impact of tinnitus (which is often accompanied by hearing loss) on health-related quality of life of adults of all ages was greater the more severe the hearing loss¹¹.

Similarly, analysis of data from the 1992 US Health and Retirement Study of people aged 51 to 62 showed that adults in this age group with hearing loss were less satisfied with life in general than those without¹².

However, some studies disagree with these findings. For example, studies of elderly people in Denmark have found no correlation between hearing disability and general satisfaction with life^{13,14,15}. Two studies in Sweden have similarly found little impact of hearing impairment upon quality of life of the subjects involved^{16,17}. However the subjects in these Scandinavian subjects were either in full time work (highly motivated and well adapted to their hearing loss) or were relatively affluent town dwellers with a high standard of living, so may not be typical of the general population of hearing impaired people.

4 MAJOR PSYCHOLOGICAL EFFECTS

Table 1 shows many of the individual psychosocial effects of hearing loss which have been reported in the various studies. This section discusses some of the major effects which have been identified as contributing to a decreased quality of life.

Table 1. Reported psychosocial effects of hearing loss

Loneliness/social isolation
Psychiatric disturbance and depression
Stigma and low self esteem
Denial
Family/intimate relationships
Education
Employment
Difficulties in particular environments
General health/visiting the doctor
Cognitive skills and dementia
Memory loss
Prejudice and abuse

4.1 Loneliness and social isolation

Loneliness and social isolation are the consequences of hearing loss cited most frequently in the literature. These effects appear to occur among hearing impaired subjects of all ages, regardless of the extent of the hearing loss. Uncorrected hearing loss, which causes difficulties in communication, can give rise to isolation, reduced social activity and the feeling of being excluded, all of which may lead to depression¹⁸. This is especially true of postlingually deaf patients who lost their hearing in adolescence or adulthood¹⁹. Some reports suggest that the elderly have the greatest risk of social isolation^{3,20}; however other studies have found that loneliness is also common among younger age groups^{4,12,21}.

Possible reasons for the high incidence of loneliness and isolation are fear of being stigmatised, or of being misunderstood⁴, or a general wish to avoid demanding auditory situations¹⁰. Studies by the Royal National Institute for Deaf and Hard of Hearing People (RNID) in the UK²², and in the US^{12, 23}, have found that hearing impaired people are less likely to participate in social activities than those with good hearing. Even among well adjusted groups such as those studied by Grimby and Ringdahl¹⁶ social isolation was a factor.

There is conflicting evidence as to whether or not the extent of loneliness is related to the severity of the hearing loss. Thomas and Herbst concluded that social isolation was not related to the degree of impairment⁴, whereas Weinstein and Ventry found that the greater the hearing handicap the greater the sense of isolation, loneliness and inferiority²⁴. However, in contrast to these findings Joore *et al* found that moderate hearing loss caused little impediment in social relationships²⁵.

Obviously, to experience social isolation or loneliness can have a devastating impact upon one's happiness and quality of life, and lead to other effects such as depression or loss of self esteem, as discussed below.

4.2 Psychiatric disturbance and depression

Much has been written about possible links between hearing impairment and psychiatric disorders or depression, research into this area predating that into other psychosocial effects of hearing loss. It has been recognised for many years that hearing impairment may be associated with depression, which may be a consequence of social isolation and withdrawal¹⁹. However, the evidence for a statistically significant relationship between hearing loss and depression or psychiatric illness is conflicting.

Much of the literature on this topic has either established a relationship between hearing loss and depression through comparison of hearing impaired subjects with a control group of hearing people, or with the general population, or has provided anecdotal evidence of such a relationship. However, in some studies which found incidence of depression among hearing impaired subjects, when the data were controlled for confounding factors no significant relationship was established.

The early study by Thomas and Herbst⁴ found that 19% of their hearing impaired subjects suffered symptoms of psychiatric disturbance, compared with 5% of the general population. Severe hearing loss combined with poor speech discrimination led to increased incidence of disturbance. The authors concluded that a severe hearing loss constitutes as much of a psychiatric problem as does a severely restricting physical disability. McKenna²⁶ similarly reports findings of significant psychological problems among people with hearing loss. However he considers that overall there is conflicting evidence on the association of hearing loss and emotional disturbance. Nevertheless, the presence of multiple symptoms, for example hearing loss with tinnitus, leads to a greater likelihood that a person will suffer significant psychological distress.

Some studies have provided evidence that depression may be related to the degree of hearing loss²⁷. However others have found that the relationship between hearing loss and depression is not significant when other factors such as age and visual acuity are taken into account⁶.

The study by O'Neill¹² of elderly respondents to a health questionnaire in the US also found that the incidence of depression was twice as high among hearing impaired subjects as among the non-hearing group. It is likely among elderly subjects that the loss of independence and reliance on others, plus less social activity, are contributory factors to depression.

Another cause of depression among people with acquired hearing loss is the associated sense of loss and deprivation. Rutman¹⁹ quotes the British former Member of Parliament Jack Ashley who was suddenly profoundly deafened: *'I was painfully and permanently aware of what I had lost. My perception of that loss is a lifelong burden.'*

4.3 Stigma and low self esteem

One of the main problems associated with hearing loss, affecting both how hearing impaired people see themselves and how others see them, is the stigma attached to hearing impairment. For centuries hearing loss and deafness were associated with stupidity and with old age, that is with frailty of body and mind^{26,28}. The connotation with stupidity may be compounded by someone who cannot hear not responding immediately, and this being interpreted as being due to rudeness, slowness or stupidity.

The stigma attached to hearing impairment and the attitudes of others, together with one's own perceptions, can lead to low self esteem among hearing impaired persons. Oyer and Oyer suggest that low feelings of self worth are a particular problem among elderly people³. This was confirmed by the work of Mulrow *et al* in their study of the quality of life of older people⁶.

However younger people are also significantly affected by the stigma attached to hearing loss. Symptoms of stigma and low self esteem have been strongly identified in studies of men and women with noise induced hearing loss^{9,28-30}. People feel stigmatised by colleagues, families and friends, causing embarrassment, lack of confidence, a sense of inferiority, and shame³¹.

The stigma attached to hearing loss often leads to denial that there is a problem and to a consequent delay in seeking help^{28,31,32}. It is easier to deny existence of hearing impairment than of many other disabilities as it is an invisible impairment. Denial occurs among all age groups. Adolescents deny their hearing problems so as not to appear different from their peers; working adults because of the impact on employment and career aspirations; and the elderly because of connotations with senility¹⁹.

The period of denial can last from days to many years, up to 20 years being reported in one study⁴. This period of denial may delay a person from seeking help and therefore exacerbate the negative effects of hearing loss.

4.4 Family and other relationships

Hearing loss can have a devastating impact upon family and emotional relationships, often caused by difficulties in communication. Many people with hearing loss feel they have no-one to turn to for support in daily life, and that they get left out of family discussions and decision making⁴. It has also been found that noise induced hearing loss can lead to frequent misunderstandings and irritation within a family¹⁰.

However there is conflicting evidence regarding the impact of hearing loss on young people within a family. Gregory found predominantly positive relationships between hearing and hearing impaired siblings²¹, while other studies have reported the reverse³³. However, young people who are hearing impaired are more dependent on their families than their hearing peers, both financially and socially. They also find it difficult to establish and maintain relationships with the opposite sex²¹. Marriages and partnerships also come under strain when one of the couple is hearing impaired^{4,10,19,34}.

4.5 Other psychosocial factors

Other factors related to hearing loss which are less frequently reported but are nevertheless significant include general health effects^{12,21,22}, memory loss²⁷, and prejudice and abuse^{22,28,31}. Several studies have attempted to determine whether or not hearing loss has any effect upon cognitive skills or dementia, but results are inconclusive^{5,7,20,26,30,31}. There is a large body of literature concerning the effects of hearing loss on the education of children but this is beyond the scope of this paper. Several studies have examined the impact of hearing loss on employment and the resulting economic impact on both the individual and the state, but this again is beyond the scope of the present paper.

5 HEARING AIDS

5.1 Benefits of hearing aids

Over the years there have been many studies into the benefits provided by hearing aids, in terms of both improvements to listening and hearing, and more general quality of life issues. Some studies have investigated overall satisfaction with aids, whereas more recent studies have assessed the impact of hearing aids on various physical, social and psychological factors which contribute to overall quality of life^{6,7,13,25,27,35-42}. The results and conclusions of the various studies are remarkably consistent, showing that in addition to benefiting hearing the use of hearing aids has a positive effect upon a wearer's social, emotional, psychological and physical well being, and many of their day to day activities. In most areas the benefits occur early on in the wearing of aids, in some cases within a few weeks of fitting, and are then sustained throughout the period of wear. However, the majority of these studies have been conducted in the US and have mainly concerned elderly hearing aid wearers; as before, there is a notable lack of research concerning the use and impact of hearing aids on younger age groups.

5.2 Use of hearing aids in the UK

Despite the reported benefits of hearing aids on many aspects of life, the numbers of people who use a hearing aid is relatively small. In England and Wales it is estimated that approximately 8.1 million of the population have a hearing impairment, of whom around 90% have a sensorineural

hearing loss and would benefit from a hearing aid. However, only approximately 1.4 million, or 3.4% of the population, have a hearing aid^{43,44}. Thus only around one in three of those who could benefit from a hearing aid own one. This ratio has not changed for many years despite technical improvements, including the application of digital technology, and changes in the appearance and size of aids².

Studies investigating the reasons why some people do not seek help for hearing loss suggest that stigma, as discussed above, is a major reason⁴⁵⁻⁴⁷. Denial of the deterioration in hearing can lead to delays of several years in seeking help; average delays of eight or ten years are quoted⁴⁸ and in some studies delays of up to 20 years⁴ are common.

Not only are far too few people fitted with hearing aids but, of those prescribed, many remain unworn. In the UK it is generally accepted that around one third of hearing aids prescribed on the National Health Service are never used⁴³. This may be due to problems of fitting, problems with the performance of the aid itself, and difficulties in handling the aid. The figures for ownership and use of aids are higher in the US and Australia than in the UK, probably as a result of different prescribing, fitting and financing procedures.

6 CONCLUSIONS

A wide ranging review of literature concerning the psychosocial impact of hearing impairment has shown that, in addition to hearing problems, hearing loss causes many psychological and social problems and has a significant impact upon a hearing impaired person's quality of life. Despite the evidence concerning beneficial effects of hearing aids on both hearing and these psychosocial factors, comparatively few hearing impaired people in the UK wear an aid.

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