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QUALITY OF LIFE OF ADULTS WITH HEARING IMPAIRMENT IN THE REPUBLIC OF KAZAKHSTAN

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Abstract

Relevance. Hearing loss is one of the leading causes of reduced quality of life and disability among adults. In post-Soviet countries, including Kazakhstan, hearing disability is primarily determined by medical criteria, which may lead to an underestimation of the social and psychological consequences of even mild or moderate hearing loss.

Objective. To assess the quality of life of adults with hearing loss in the Republic of Kazakhstan using hearing-specific instruments – the Hearing Handicap Inventory for the Elderly and the Hearing Handicap Inventory for Adults – and to analyze the relationship between audiometric hearing loss severity and subjectively perceived hearing-related limitations.

Materials and Methods. A cross-sectional study was conducted involving 48 respondents aged ≥18 years with audiometrically confirmed hearing loss. QoL was assessed using the Hearing Handicap Inventory for Adults and the Elderly. Descriptive statistics and correlation analysis were applied.

Results. The mean total Hearing Handicap Inventory for Adults and the Elderly score of 62.4 ± 15.3 indicated a severe perceived functional limitation. More than 65 % of participants demonstrated a marked reduction in QoL (≥43 points), including individuals with mild and moderate hearing loss. A statistically significant correlation was found between hearing loss severity and the total Hearing Handicap Inventory for Adults and the Elderly score ($\rho = 0.74$; $p < 0.001$), as well as between age and the degree of hearing handicap ($\rho = 0.49$; $p < 0.001$).

Conclusion. Hearing loss has a significant negative impact on the QoL of adults in Kazakhstan, regardless of official disability status. The use of hearing-specific questionnaires allows identification of the hidden burden of the condition and should be integrated into clinical and medico-social practice.

Keywords: *hearing loss, quality of life (QoL), disability, Hearing Handicap Inventory for Adults (HHIA), Hearing Handicap Inventory for the Elderly (HHIE), adults, Kazakhstan.*

Introduction

Hearing impairment is one of the most prevalent chronic sensory disorders and represents a major cause of reduced quality of life (hereinafter – QoL) and disability in adult and older populations. According to estimates by the World Health Organization, more than 430 million people worldwide live with disabling hearing loss, and this number is expected to increase substantially in the coming decades due to population ageing, urbanization, and increasing exposure to environmental and occupational noise [1].

Evidence from recent studies indicates that the consequences of hearing impairment extend far beyond a purely sensory deficit. Hearing loss has been associated with cognitive decline, an increased risk of depression and anxiety disorders, social isolation, reduced educational attainment and employment opportunities, and decreased overall QoL and life expectancy [2-6]. Within the framework of the Global Burden of Disease (hereinafter – GBD) study, hearing loss ranks among the leading causes of years lived with disability (hereinafter – YLD) and contributes substantially to disability-adjusted

life years (hereinafter – DALYs), highlighting its significance as a major public health concern [7-8].

Approaches to defining hearing-related disability vary considerably across countries. In many post-Soviet states, disability status has traditionally been determined primarily based on medical criteria and the degree of work capacity loss. In clinical practice, this often results in disability status being granted only in cases of severe or profound hearing impairment: in children with bilateral grade III-IV hearing loss and in adults with grade IV hearing loss or complete deafness [9]. Such an approach effectively excludes a large proportion of individuals with mild and moderate hearing loss from official statistics and social support systems, despite the presence of clinically and socially significant functional limitations.

In contrast, high-income countries increasingly apply a functional and biopsychosocial model that considers not only the audiometric severity of hearing loss but also its impact on daily functioning, social participation, and QoL.

These differences in conceptual approaches to disability complicate international comparisons of the prevalence and impact of hearing impairment. In the Republic of Kazakhstan, official statistics report approximately 35,000 individuals with hearing-related disabilities [10]. However, these data largely reflect severe forms of hearing pathology and may underestimate the broader population affected by hearing impairment.

Recent regulatory changes in Kazakhstan have expanded access to hearing rehabilitation services, including the provision of hearing aids to individuals with chronic hearing impairment regardless of their officially established disability status. These policy changes indicate a gradual shift toward a more functionally oriented model of hearing healthcare [11].

Given the persistent gap between objective audiometric measures and the subjective experience of functional limitations, the use of hearing-specific QoL assessment tools is particularly important. Validated instruments such as the Hearing Handicap Inventory for Adults (hereinafter – HHIA) and the Hearing Handicap Inventory for the Elderly (hereinafter – HHIE) allow for the identification of social and emotional consequences of hearing loss that conventional clinical assessments may not capture.

Objective. To assess the quality of life of adults with hearing loss in the Republic of Kazakhstan using hearing-specific instruments – the Hearing Handicap Inventory for the Elderly and the Hearing Handicap Inventory for Adults – and to analyze the relationship between audiometric hearing loss severity and subjectively perceived hearing-related limitations.

Materials and methods

Study Design. A cross-sectional study was conducted.

Sample Characteristics. The study included 48 respondents aged 18 years and older with audiometrically confirmed hearing impairment.

Data collection was conducted at the Altay Clinic, a private medical facility, and the «Audiolog» audiological center in Astana. The study procedures complied with ethical standards outlined in the Declaration of Helsinki and the *Ethical Principles for Medical Research Involving Human Subjects* (2000 revision). The study protocol was approved by the Ethics Committee of Astana Medical University (Protocol No. 4 dated June 16, 2023).

Inclusion Criteria. Participants were eligible for inclusion if they:

– were aged 18 years or older;

– had objectively confirmed hearing loss based on audiometric assessment;

– had no acute somatic or inflammatory diseases at the time of examination;

– demonstrated preserved cognitive and mental status;

– provided written informed consent to participate in the study.

Exclusion Criteria. Exclusion criteria were:

– age under 18 years;

– absence of audiometrically confirmed hearing impairment;

– diagnosed psychiatric disorders;

– acute inflammation of the external or middle ear at the time of assessment;

– failure to provide informed consent.

Examination Procedure

All participants independently completed the HHIE/HHIA questionnaires. The completion time ranged from 10 to 15 minutes. No difficulties in reading or understanding the questionnaire items were reported, and no assistance from medical staff was required.

Following the survey, each participant underwent an otorhinolaryngological examination, followed by pure-tone audiometry (hereinafter – PTA), considered the gold standard for assessing hearing function. The examination was performed using a clinical audiometer (Maico MA-28) in a soundproof booth with air- and bone-conduction transducers (AC DD65 v2 and BC B71).

Standard pure-tone audiometry included the determination of air- and bone-conduction hearing thresholds at frequencies ranging from 250 to 8000 Hz, with intensity increments of 5 dB. The hearing threshold at each frequency was defined as the lowest sound level detected by the participant in at least 50 % of presentations.

General Characteristics of the Hearing Handicap Inventory for Adults and the Elderly

The HHIE questionnaire was developed in 1982 by Ventry and Weinstein to identify the subjectively perceived hearing handicap among older adults and to assess the impact of hearing loss on everyday functioning [12]. Subsequently, a modified version, the HHIA, was developed for the working-age adult population [13]. Both questionnaires share identical structures and methodological frameworks, allowing them to be used as complementary instruments in clinical and epidemiological studies. In the present study, participants aged ≥65 years completed the HHIE questionnaire, whereas respondents younger than 65 years completed the HHIA questionnaire.

The HHIA/HHIE questionnaire is a hearing-specific QoL assessment tool that focuses on the impact of hearing impairment on social functioning and emotional well-being. This distinguishes it from generic QoL instruments (such as the SF-36 or WHOQOL), which are often insufficiently sensitive to the consequences of hearing disorders.

The questionnaire consists of 25 items grouped into two main subscales:

Social (Situational) subscale – 12 items assessing the impact of hearing impairment on communication abilities, participation in social life, professional activities, and everyday communication situations (e.g., conversations in groups, communication in noisy environments, telephone conversations, and participation in social events).

Emotional subscale – 13 items evaluating emotional reactions associated with hearing loss, including feelings of irritation, frustration, anxiety, embarrassment, loneliness, reduced self-esteem, and psychological discomfort.

Responses are scored as follows: «Yes» – 4 points; «Sometimes» – 2 points; «No» – 0 points.

The total score ranges from 0 to 100.

Scores are interpreted as follows: 0-16 – no or minimal hearing handicap; 18-42 – mild handicap; 44-100 – moderate to severe handicap. Higher scores indicate a greater negative impact on QoL.

The questionnaire has demonstrated high reliability (Cronbach's $\alpha = 0.90$-0.95) and established validity, showing significant correlations with audiometric measures and other QoL scales [12-15]. The HHIA/HHIE has been translated and culturally adapted into multiple languages and is widely used in clinical and population-based studies, as well as for evaluating the effectiveness of hearing rehabilitation interventions [14-17].

The use of HHIA/HHIE allows the identification of the hidden burden of disease among individuals with mild and moderate hearing loss, in whom audiometric findings may not fully reflect the extent of subjectively perceived limitations. This supports its use for assessing the social and psychological consequences of hearing impairment among the adult population of the Republic of Kazakhstan.

Statistical Analysis

The descriptive statistical analysis included calculating the absolute and relative frequencies. Correlation analysis was conducted to assess associations between variables. The level of statistical significance was set at 0.05. All statistical analyses were performed using Stata (version 16.0).

Results

Demographic Characteristics of the Study Population

A total of 48 respondents with audiometrically confirmed hearing impairment were included in the study. The sample size was determined by the number of patients who met the inclusion criteria and visited participating medical institutions during the study period. Due to the exploratory nature of the study, a formal sample size calculation was not performed. The participants' ages ranged from 21 to 89 years, with a median of 55 years and a mean of 53.6 ± 15.2 years. Women accounted for 54.2 % (n = 26) of the sample, while men represented 45.8 % (n = 22) (Table 1).

The largest proportion of participants was observed in the 48–70-year age group, which corresponds to the age-related increase in hearing loss prevalence.

Table 1. Demographic Characteristics of the Study Population (n = 48)

Variable	Value
Age, years (M ± SD)	53.6 ± 15.2
Median age (min–max)	55 (21–89)
Women, n (%)	26 (54.2)
Men, n (%)	22 (45.8)

Source: compiled by the authors

Audiometric Characteristics of the Sample

According to pure-tone audiometry, hearing impairment was identified at grades I-IV, including mixed hearing loss.

The most frequently observed were grade I and grade II hearing loss, which together accounted for 52 % (n = 25) of the sample. Grade III hearing loss was detected in 22.9 % (n = 11) of respondents, while grade IV hearing loss was identified in 12.5 % (n = 6) of the participants.

Mixed degrees of hearing loss (I-II, II-III, II-IV, and I-IV) were observed in 14.6 % (n = 7) of cases, reflecting the clinical heterogeneity of hearing impairment severity in the real patient population. The results are presented in Table 2.

Table 2. Distribution of Participants by Degree of Hearing Loss

Degree of Hearing Loss	Participants	
	n	%
Grade I	13	27.1
Grade I–II	1	2.1
Grade I–IV	1	2.1
Grade II	11	22.9
Grade II–III	2	4.2
Grade II–IV	3	6.3
Grade III	11	22.9
Grade IV	6	12.5
Total	**48**	**100**

Source: compiled by the authors

Overall, more than half of the participants (58.3 %) had moderate to severe hearing loss (Grades II–IV), which may have a greater impact on QoL.

Results of Quality-of-Life Assessment According to HHIA/HHIE

The total HHIA/HHIE score ranged from 8 to 96, indicating substantial variability in the severity of subjective limitations associated with hearing impairment.

The mean total score was 62.4 ± 15.3, corresponding to a moderate to severe impact of hearing loss on QoL.

The mean scores for the subscales were as follows:

Social subscale – 33.1 ± 8.7

Emotional subscale – 29.3 ± 7.1

Minimal manifestations of hearing-related handicap were observed in 20.8 % (n = 10) of participants. In approximately 65 % of respondents, the total score exceeded 43, indicating a pronounced impact of hearing impairment on everyday life. Scores in the 80–96 range were recorded in 16.7 % of respondents, reflecting a very high level of perceived hearing-related limitations.

Gender Differences in HHIA/HHIE Scores

Women demonstrated slightly higher scores on the emotional subscale (30.2 vs 28.3), whereas men showed somewhat higher scores on the social subscale (33.8 vs 32.4). However, these differences were not statistically significant (p = 0.067).

Association Between Age and HHIA/HHIE Scores

Correlation analysis demonstrated that the

severity of socio-emotional consequences of hearing impairment increased with age. A statistically significant positive correlation was identified between age and the total HHIA/HHIE score (Spearman's ρ = 0.49; p = 0.00045) (Table 3).

Table 3. Correlation Between Age and HHIA/HHIE Scores

Parameter	Spearman's ρ	p-value
Age – total HHIA/HHIE score	0.49	0.00045

Source: compiled by the authors

Association Between Degree of Hearing Loss and Quality of Life

The strongest association was observed between the degree of hearing loss and the total HHIA/HHIE score (Table 4).

Spearman's correlation coefficient was ρ = 0.74, indicating a strong positive correlation. The result was statistically significant (p < 0.001).

Patients with Grade III–IV hearing loss demonstrated significantly higher total scores, reflecting a pronounced negative impact of auditory decline on QoL.

Table 4. Correlation Between Degree of Hearing Loss and Quality-of-Life Indicators

Parameter	Spearman's ρ	p-value
Degree of hearing loss – total HHIA/HHIE score	0.74	<0.001

Source: compiled by the authors

Social and Emotional Consequences of Hearing Impairment

Social limitations were reported by 95.8 % of respondents, compared with 91.7 % reporting emotional limitations. Common difficulties included communication problems–particularly in group conversations and noisy environments–as well as reduced social activity and a tendency to avoid social interactions.

Emotional manifestations included frustration, anxiety, reduced self-esteem, and feelings of isolation. Notably, these limitations were observed even among individuals without officially recognized disability status and did not always correspond strictly to the audiometric severity of hearing loss.

Discussion

The findings of the present study indicate that the audiometric severity of hearing loss does not fully reflect the actual burden of hearing impairment, particularly in individuals with mild and moderate hearing loss. Despite the absence of formal criteria for disability status, a substantial proportion of participants reported significant social and emotional limitations according to the HHIA/HHIE questionnaires. This suggests the presence of a «hidden» psychosocial burden of hearing impairment that remains undetected when assessment relies solely on objective audiometric measures.

Our results are consistent with international evidence demonstrating that the subjective impact of hearing loss is not determined exclusively by audiometric thresholds. Perceived communication difficulties are strongly influenced by contextual and psychosocial factors, including communication demands, social environment, and coping strategies [18-20]. Previous studies have shown that hearing-related QoL measures are often more closely associated with levels of social participation, occupational engagement, and emotional well-being than with pure-tone audiometry results [9, 18, 19]. These findings highlight the limitations of traditional clinical approaches that focus primarily on physiological measures while underestimating functional and psychosocial consequences.

The sociocultural context of Kazakhstan and other Central Asian countries may further amplify the impact of hearing impairment. Strong family ties and frequent multigenerational interaction characterize social life in these societies. Participation in family discussions, social gatherings, and collective decision-making is central to everyday life. Under such circumstances, communication difficulties associated with hearing loss may disproportionately affect social inclusion. Difficulties participating in group conversations or communicating in noisy environments increase listening effort and fatigue, which may gradually lead to

withdrawal from social interaction. Importantly, the presence of family members does not necessarily ensure effective communication or psychological inclusion, which may contribute to feelings of isolation even within close social networks.

Another important finding of this study is the positive association between age and the total HHIA/HHIE score, indicating a greater perceived hearing handicap among older participants. This observation is consistent with existing literature linking age-related hearing loss to increased social isolation, cognitive decline, reduced participation in community activities, and a higher risk of depressive symptoms [2-6]. Age-related changes in auditory processing, combined with cumulative social and health factors, may therefore exacerbate the functional consequences of hearing impairment.

Findings from international research also support the gender differences observed in the present study. Women reported a greater perceived impact of hearing impairment on QoL than men did. This may reflect greater sensitivity to changes in health-related QoL, as well as differences in social roles that involve more frequent communication. It is also possible that women are more likely to acknowledge and report experienced difficulties, which may contribute to higher questionnaire scores [21-22].

A particularly important observation is the discrepancy between audiometric severity and the degree of perceived functional limitation. Social and emotional difficulties were reported across nearly all categories of hearing loss severity. This finding reinforces the need to adopt a biopsychosocial framework when assessing hearing impairment. Within the International Classification of Functioning, Disability and Health (hereinafter – ICF), hearing loss is conceptualized not only as a sensory deficit but also as a condition that may restrict participation in social and professional activities. Our results support the relevance of this framework for understanding the broader consequences of hearing impairment [23; 24].

The interpretation of these findings should also consider the structure of disability assessment and social support systems in the Republic of Kazakhstan. Current support mechanisms–including disability benefits, hearing aid provision, cochlear implantation, assistive technologies, and individualized rehabilitation programs – are primarily available to individuals with officially recognized disability status [9; 25; 26]. Consequently, many individuals with mild or moderate hearing loss remain outside the formal system of support despite experiencing meaningful functional limitations.

In addition, the process of obtaining disability status through the medical and social expertise system is complex and involves multiple stages, including periodic reassessment. These administrative and psychological barriers may discourage individuals from seeking official disability recognition, further contributing to the underestimation of the societal burden of hearing impairment.

At the same time, recent policy developments in Kazakhstan suggest a gradual shift toward a more functionally oriented approach to hearing healthcare. In particular, expanding access to hearing aids for individuals with chronic hearing loss grades I-IV, regardless of disability status, represents an important step toward addressing unmet rehabilitation needs [11]. However, the effectiveness of such policy changes will depend on their implementation within clinical practice and public health programs.

The broader public health implications of hearing impairment are well documented. Untreated hearing loss has been associated with communication difficulties, cognitive decline, social isolation, stigmatization, reduced educational and employment opportunities, and adverse economic outcomes. At the population level, hearing impairment contributes substantially to years lived with disability and disability-adjusted life years, highlighting its significance as a global health challenge [7; 8].

Another factor contributing to the underrecognition of hearing impairment is the limited attention to hearing health within primary healthcare systems. Studies have shown that primary care physicians often underprioritize hearing loss. For example, a national survey in the United States reported that only 1 % of primary care physicians considered hearing loss a primary management concern, fewer than half routinely recommended hearing screening, and only 28 % were familiar with the concept of «20/20 hearing» [27]. Nevertheless, even simple screening approaches – such as including a single hearing-related question during preventive consultations – have been shown to significantly improve detection rates [28].

Finally, the limited availability of national epidemiological data should be acknowledged. Although several studies have been conducted in Kazakhstan [29; 30], large-scale population-based research assessing the impact of hearing impairment on QoL remains scarce. This highlights the need for further epidemiological investigations to understand the broader social and health consequences of hearing loss in the region.

In summary, this study's findings demonstrate that hearing impairment is not only a clinical condition but also a significant social and public health challenge. The use of validated instruments such as HHIA/HHIE provides an important tool for assessing the functional and psychosocial impact of hearing loss and may support more comprehensive approaches to hearing rehabilitation and health policy development.

Study Limitations

Several limitations should be considered when interpreting the results of this study.

First, the cross-sectional design does not allow for establishing causal relationships between the degree of hearing impairment and reductions in QoL. The findings reflect associations observed at a single time point and do not permit assessment of the temporal dynamics of hearing handicap or the potential effects of rehabilitation interventions.

Second, the relatively small sample size (n = 48) limits the study's statistical power and restricts the generalizability of the findings to the broader adult population with hearing impairment in the Republic of Kazakhstan. Nevertheless, the trends identified in this study are consistent with findings reported in international research.

Third, the study relied on the hearing-specific HHIA/HHIE questionnaire, which is based on self-reported perceptions. Despite this instrument's high validity and reliability, participants' psychological characteristics, awareness of hearing impairment, sociocultural factors, and emotional state may influence their subjective assessments.

Fourth, the analysis did not account for several potentially important modifying factors, including the duration of hearing impairment, the use of hearing aids, levels of social support, occupational status, and comorbid conditions, all of which may influence the perception of hearing-related limitations and overall QoL.

In addition, the study was conducted within a limited geographical and institutional setting, which may further reduce the generalizability of the results.

Notwithstanding these limitations, the study provides valuable insights into the psychosocial consequences of hearing impairment among adults in the Republic of Kazakhstan and highlights the need for larger, multicenter, longitudinal studies that incorporate comprehensive assessments of hearing-related QoL.

Conclusion

The present study demonstrated that hearing impairment among the adult population of the Republic of Kazakhstan significantly reduces QoL, primarily affecting social and emotional functioning. Notably, substantial subjective limitations were observed not only among individuals with severe hearing loss but also among those with mild and moderate impairment, most of whom do not have officially recognized disability status. This indicates the presence of a considerable «hidden» burden of disease that is not captured by audiometric criteria alone.

The discrepancy between audiometrically measured hearing loss and the severity of subjective hearing handicap highlights the limitations of a purely medical approach to disability assessment. Systems focused mainly on loss of work capacity may overlook individuals who experience meaningful social and emotional restrictions, thereby excluding them from support and rehabilitation services.

The use of the validated HHIA/HHIE questionnaire proved effective in identifying the subjective consequences of hearing impairment and demonstrated the importance of incorporating QoL assessment tools into clinical practice, epidemiological research, and medico-social disability evaluation.

These findings are consistent with international evidence and support the need for a comprehensive, function-oriented approach to hearing impairment assessment based on the biopsychosocial model of health. In Kazakhstan, initial steps in this direction have already been taken, including amendments introduced by Order of the Minister of Health No. 92 (September 12, 2025), which expanded access to audiological care and rehabilitation services for individuals with chronic hearing loss regardless of disability status.

Further development of this approach should include early detection programs, integration of QoL assessment tools, large-scale population studies, and the creation of a national hearing loss registry to improve monitoring of patient care pathways and planning of audiological services.

Overall, a comprehensive approach to the diagnosis and rehabilitation of hearing impairment is essential to reduce its «invisible» burden, improve patients' quality of life, and align national practice with international standards.

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ҚАЗАҚСТАН РЕСПУБЛИКАСЫНДА ЕСТУ ҚАБІЛЕТІ БҰЗЫЛҒАН ЕРЕСЕК ХАЛЫҚТЫҢ ӨМІР СҮРУ САПАСЫ

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Аңдатпа

Өзектілігі. Есту қабілетінің бұзылуы ересек халықтың өмір сапасының төмендеуіне және мүгедектікке әкелетін негізгі себептердің бірі болып табылады. Посткеңестік елдерде, соның ішінде Қазақстанда, есту қабілеті бойынша мүгедектік көбіне медициналық критерийлер негізінде

анықталады. Бұл жеңіл және орташа дәрежедегі есту төмендеуі кезінде де әлеуметтік-психологиялық салдардың жеткілікті бағаланбауына алып келуі мүмкін.

Зерттеудің мақсаты. Қазақстан Республикасындағы ересек адамдардың есту қабілетінің бұзылуына байланысты өмір сапасын «Егде жастағы адамдардағы есту кемістігін бағалау сауалнамасы» (ағылш.: *Hearing Handicap Inventory for the Elderly*, HHIE) және «Ересектердегі есту кемістігін бағалау сауалнамасы» (ағылш.: *Hearing Handicap Inventory for Adults*, HHIA) арқылы бағалау, сондай-ақ естудің аудиометриялық төмендеу дәрежесі мен есту бұзылысына байланысты субъективті қабылданатын шектеулер арасындағы байланысты талдау.

Материалдар мен әдістер. Зерттеу көлденең (cross-sectional) дизайнда жүргізілді. Оған ≥18 жастағы, аудиометриялық түрде расталған есту қабілетінің бұзылысы бар 48 респондент қатысты. Өмір сапасын бағалау үшін егде жастағы адамдардағы есту кемістігін бағалау сауалнамасы және ересектердегі есту кемістігін бағалау сауалнамасы қолданылды. Деректерді талдау барысында сипаттамалық статистика және корреляциялық талдау әдістері пайдаланылды.

Нәтижелер. Ересектер және егде жастағы адамдардағы есту кемістігін бағалау сауалнамалар бойынша орташа жиынтық балл 62,4 ± 15,3 болды, бұл субъективті функционалдық шектеулердің айқын деңгейін көрсетеді. Қатысушылардың 65 %-дан астамында өмір сапасының айқын төмендеуі (≥43 балл) анықталды, оның ішінде жеңіл және орташа дәрежедегі есту төмендеуі бар адамдар да бар. Есту қабілетінің төмендеу дәрежесі мен егде жастағы адамдардағы есту кемістігін бағалау сауалнамасы және ересектердегі есту кемістігін бағалау сауалнамасы бойынша жиынтық балы арасында статистикалық тұрғыдан мәнді корреляция анықталды ($\rho = 0,74$; $p < 0,001$). Сонымен қатар жас пен есту кемістігінің айқындылығы арасында да мәнді байланыс байқалды ($\rho = 0,49$; $p < 0,001$).

Қорытынды. Есту қабілетінің бұзылуы Қазақстандағы ересек адамдардың өмір сапасына мүгедектіктің ресми мәртебесіне қарамастан елеулі теріс әсер етеді. Есту кемістігін бағалауға арналған сауалнамаларды қолдану аурудың жасырын ауыртпалығын анықтауға мүмкіндік береді және оларды клиникалық және медициналық-әлеуметтік практикаға енгізу қажет.

Түйін сөздер: *есту қабілетінің бұзылуы, өмір сапасы, мүгедектік*, *Hearing Handicap Inventory for Adults (HHIA), Hearing Handicap Inventory for the Elderly (HHIE), ересек халық, Қазақстан.*

КАЧЕСТВО ЖИЗНИ ВЗРОСЛОГО НАСЕЛЕНИЯ С НАРУШЕНИЕМ СЛУХА В РЕСПУБЛИКЕ КАЗАХСТАН

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Аннотация

Актуальность. Нарушение слуха является одной из ведущих причин снижения качества жизни и инвалидизации взрослого населения. В странах постсоветского пространства, включая Казахстан, инвалидность по слуху определяется преимущественно на основании медицинских критериев, что может приводить к недооценке социально-психологических последствий даже лёгкой и умеренной тугоухости.

Цель исследования. Оценить качество жизни взрослых людей с нарушением слуха в Республике Казахстан с использованием слухоспецифического инструмента «Опросник оценки слухового дефицита у пожилых людей» (англ. Hearing Handicap Inventory for the Elderly, HHIE) и «Опросник оценки слухового дефицита у взрослых» (англ. Hearing Handicap Inventory for Adults, HHIA) и проанализировать связь между аудиометрической степенью снижения слуха и субъективно воспринимаемыми ограничениями, связанными с нарушением слуха.

Материалы и методы. Проведено поперечное исследование с участием 48 респондентов ≥18 лет с аудиометрически подтверждённым нарушением слуха. Для оценки качества жизни применялся опросник оценки слухового дефицита у пожилых людей/опросник оценки слухового дефицита у взрослых. Использовались методы описательной статистики и корреляционного анализа.

Результаты. Средний суммарный балл опросник оценки слухового дефицита у пожилых людей/опросник оценки слухового дефицита у взрослых составил 62,4 ± 15,3, что соответствует выраженному уровню субъективных функциональных ограничений. Более 65 % участников имели выраженное снижение качества жизни (≥43 баллов), включая лиц с лёгкой и умеренной тугоухостью. Выявлена статистически значимая корреляция между степенью снижения слуха и суммарным баллом опросник оценки слухового дефицита у пожилых людей/опросник оценки слухового дефицита у взрослых ($\rho = 0,74$; $p < 0,001$), а также между возрастом и выраженностью нарушения слуха ($\rho = 0,49$; $p < 0,001$).

Выводы. Нарушение слуха оказывает значимое негативное влияние на качество жизни взрослых лиц в Казахстане независимо от наличия официального статуса инвалидности. Использование слухоспецифических опросников позволяет выявить скрытое бремя заболевания и должно быть интегрировано в клиническую и медико-социальную практику.

Ключевые слова: *нарушение слуха, качество жизни, инвалидность, опросник оценки слухового дефицита у пожилых людей (HHIE), опросник оценки слухового дефицита у взрослых (HHIA), взрослое население, Казахстан.*

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