## Personality, Coping, Quality of Life, and Distress in Persons with Hearing Loss: A Cross-Sectional Study of Patients Referred to an Audiological Service

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Abstract: Background: Hearing Loss (HL) is a condition that may affect people in all stages of life, but the prevalence increases with age, mostly because of age-related HL, generally referred to as presbyacusis. As human speech is related to relatively high frequencies, even a limited hearing loss at high frequencies may cause impaired speech intelligibility. Being diagnosed with, treated for and living with a chronic condition such as HL, must for many be a disabling and stressful condition that put ones coping resources to test. Stress is a natural part of life and most people will experience stressful events or periods. Chronic diseases, such as HL, are risk factor for distress in individuals, causing anxiety and lowered mood. How an individual cope with HL may be closely connected to the level of distress he or she is experiencing and to personality, which can be defined as those characteristics of a person that account for consistent patterns of feelings, thinking, and behavior. Thus, as to distress in life, such as illness or disease, available coping strategies may be more important than the challenge itself. The same line of arguments applies to level of experienced health-related quality of life (HRQoL). Aim: The aim of this study was to investigate the relationship between distress, HRQoL, reported hearing loss, personality and coping in patients with HL. Method: 158 adult (aged 18-78 years) patients with HL, referred for hearing aid (HA) fitting at Haukeland University Hospital in western Norway, participated in the study. Both first-time users, as well as patients referred for HA renewals were included. First-time users had been pre-examined by an ENT-specialist. The questionnaires were answered before the actual HA fitting procedure. The pure-tone average (PTA; frequencies 0.5, 1, 2, and 4 kHz) was determined for each ear. The Eysenck personality inventory, neuroticism and lie scales, the Theoretically Originated Measure of the Cognitive Activation Theory of Stress (TOMCATS) measuring active coping, hopelessness and helplessness, as well as distress (General Health Questionnaire (GHQ) - 12 items) and the EORTC Quality of Life Questionnaire general part were answered. In addition, we used a revised and shortened version of the Abbreviated Profile of Hearing Aid Benefit (APHAB) as a measure of patient-reported hearing loss. Results: Significant correlations were determined between APHAB (weak), HRQoL scores (strong), distress scores (strong) on the one side and personality and choice of coping scores on the other side. As measured by stepwise regression analyses, the distress and HROoL scores were scored secondary to the obtained personality and coping scores. The APHAB scores were as determined by regression analyses scored secondary to PTA (best ear), level of neuroticism and lie score. Conclusion: We found that reported employed coping style, distress/HRQoL and personality are closely connected to each other in this patient group. Patient-reported HL was associated to hearing level and personality. There is need for further investigations on these questions, and how these associations may influence the clinical context.

**Keywords:** coping, distress, hearing loss, personality

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