

# The Level Of Community Behaviour Towards Hearing Loss In Indonesia

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## The Level Of Community Behaviour Towards Hearing Loss In Indonesia

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### Abstract

Hearing loss is the most common disability in the world, with a prevalence of 5% of the world's population of 466 million people.<sup>1</sup> Knowledge about noise exposure and hearing protection equipment is related to hearing loss.<sup>2</sup> Health is associated with a person's healthy lifestyle behaviour. This study aims to determine the level of community behaviour towards hearing loss. This type of research is descriptive-analytic with a cross-sectional study design. The population in this study is Indonesian people who are non-health workers who are 17 years old. The sample inclusion criteria are non-health workers such as doctors, nurses, midwives, etc., aged 17 years and over, and willing to participate in the study. The sampling technique in this study was consecutive sampling. Based on the distribution of patients, the female gender was more than male, namely 1484 people (61.6%). The most education is Diploma-3 (D3) as many as 1095 people (45.4%), while the lowest education is not in school as many as 8 people (0.3%). Most professions are employees of 509 people (21.1%), while the lowest is TNI/Polri 20 people (0.8%). There is a significant relationship between the respondent's knowledge and the respondent's action and respondents' knowledge and respondents' attitudes about hearing loss regarding hearing loss ( $p = 0.000$ ). Conclusion: There is a significant relationship between the respondent's knowledge and the respondent's actions about hearing loss and the respondent's knowledge and attitude, while there is no significant relationship between the respondent's attitude and the respondent's actions regarding hearing loss.

### Keywords

Behaviour, knowledge, attitude, action, hearing loss

## Introduction

According to the Big Indonesian Dictionary, behaviour is an individual's response or reaction to a stimulus or environment (according to the Big Indonesian Dictionary). The behaviour of a person's life, including health, is influenced by many factors. These factors can come from the person himself, influence others who encourage good or bad behaviour, and environmental conditions supporting behaviour change. For example, a psychologist, Skinner (1938), formulated that behaviour is a person's response or reaction to a stimulus (external stimulus). Because this behaviour occurs through the process of a stimulus to someone, and then that person responds. Behaviour that is carried out continuously will become a person's attitude, namely actions and based on convictions and beliefs [3-5].

WHO estimates that 1.1 billion young people worldwide could be at risk of hearing loss due to unsafe listening practices—nearly half of all teenagers and young adults (12–35 years old). In middle- and high-income countries, they are exposed to unsafe levels of sound from personal audio devices. Some 40% of them are exposed to potentially damaging sound levels at clubs, discotheques, and bars [6].

Noise-induced hearing loss (NIHL) has been gaining significant attention in recent years and contributes 16% of hearing loss worldwide in adults (based on 4 million DALYs). Noise exposure can lead to auditory and non-auditory effects. The auditory effects are evident when exposed to sounds louder than 85dBA [7].

Based on the above, behaviour can affect a person's action against hearing loss, which is price by his knowledge of hearing loss. For example, his attitude when there is a recommendation or prohibition against hearing loss and ends by action, the Central Management (PP) Perhati KL surveys to determine the level of behaviour community against hearing loss.

The World Health Organization (WHO) states that there are 5 causes of preventable hearing loss: impacted cerumen, presbycusis, congenital deafness, noise-induced deafness, and chronic suppurative otitis media. With a good level of behaviour. Starting from public knowledge about hearing loss, public attitudes towards recommendations or prohibitions on hearing loss and ending with actions taken against hearing loss, it is hoped that the five hearing disorders can prevent so that the number of hearing loss in Indonesia decreases.

## Methods

This type of research is descriptive-analytic by collecting respondent's data and then analyzing the respondent's behaviour towards hearing loss. This research design is a cross-sectional study. This research was conducted in all places/locations of residents in the territory of Republic Indonesia within three months (January-March 2021). Lokasi penelitian berada di Rs.

Zainul Abidin Aceh, RS. H Adam Malik Medan, RS Sardjito, Jogjakarta, RSUPN. Cipto Mangunkusumo Jakarta, RS. dr. Wahidin Sudirohusodo Makasar.

The population in this study is Indonesian people who are non-health workers who are 17 years old, and the sample inclusion criteria are non-health workers such as doctors, nurses, midwives, etc., aged 17 years and over, and willing to participate in the study. The sampling technique in this study was consecutive sampling.

The independent variable is the community's action on hearing loss. The dependent variable in this study is people's knowledge about hearing loss and people's attitudes towards recommendations or prohibitions against hearing loss in respondents. Data collection in this study used the interview method using a questionnaire based on the google form link provided.

The data processing process is checking data (editing), coding (coding) and compiling data (tabulating) and data entry. The analysis for descriptive data with a categorical scale (nominal and ordinal) carry out by presenting it in the form of a percentage (proportion).

This research has received Ethical Approval from the Health Research Ethics Committee, Faculty of Medicine, University of Indonesia-RSUPN Dr Cipto Mangunkusumo with Ethical Eligibility Number: KET-884/UN2.F1/ETIK/PPM.00.02/2021.

## Results

Respondents who took part in this study were 2410 people following the research inclusion criteria.

Sex	Frequency	Percent
Male	926	38.4
Female	1484	61.6
Total	2410	100.0
<b>Graduation</b>		
No graduation	8	.3
Elementary school	65	2.7
Junior high school	557	23.1
Senior high school	208	8.6
Diploma 3	1095	45.4
S1	416	17.3
S2	61	2.5
S3	0	0.0
Total	2410	100.0
<b>Profession</b>		
No worker/housewife	477	19.8
Employee	509	21.1
farmer/trader/fisherman	74	3.1
State civil apparatus	196	8.1
Police	20	.8
Student	337	14.0
Teacher /lecture	289	12.0
Etc	508	21.1
Total	2410	100.0

Based on the distribution of patients, the female gender was more than the male, namely 1484 people (61.6%). The most education is Diploma-3 (D3) as many as 1095 people (45.4%), while the lowest education is not in school as many as eight people (0.3%). Most professions are employees of 509 people (21.1%), while the lowest is TNI/Polri 20 people (0.8%) (Table 3.1).

**Table 3.2 Distribution of Frequency Knowledge, Attitudes, Action and behavior**

	Knowledge		Attitudes		Action		Behavior	
	n	%	n	%	n	%	n	%
Good	108	4.5	98	41.	68	28	22	9.3
Current	69	29.	11	48.	14	60	17	73.
ly	9	0	75	8	49	.1	78	8
Not	16	66.	24	10.	27	11	40	16.
enough	03	5	6	2	6	.5	8	9
<b>Total</b>								
	24	10	24	10	24	10	24	10
	10	0.0	10	0.0	10	0.	10	0.0
						0		

Based on the frequency distribution of knowledge, attitudes, actions and behaviour based on a scale of good, moderate and more minor about hearing loss. In the knowledge variable, the distribution of the most on a small scale is 1603 people (66.5%), the most attitude variable on a medium scale is 1175 people (48.8%), the most action variable on a medium scale is 1449 people (60.1%). On a medium scale, the most behaviour variable is 1778 people (73.8%) (Table 3.2).

**Table 3.3 Relationship Knowledge and action about hearing loss**

Variable	action about hearing Loss		
	Value	Asymp. Sig (2 sided)	
knowledge	115.161 <sup>a</sup>	.000	

Based on the table 3.3, there is a significant relationship between the respondent's knowledge and the respondent's action regarding hearing loss (p = 0.000). Based on the table 3.4, there is no significant relationship between the respondent's attitude and the respondent's action regarding hearing loss (p = 0.224). Based on the table 3.5, there is a significant relationship between respondents' knowledge and respondents' attitudes about hearing loss (p = 0.000).

**Table 3.4 Relationship Attitude and action about hearing Loss**

Variable	action about hearing Loss		
	Value	Asymp. Sig (2 sided)	
Attitude	5.688 <sup>a</sup>	.224	

**Table 3.5 Relationship Knowledge and Attitude about hearing loss**

Variable	action about hearing Loss		
	Value	Asymp. Sig (2 sided)	
Knowledge	28.949 <sup>a</sup>	.000	

**Discussion**

The lack of healthy living behaviour and protecting the environment invites unhealthy habits in society. These habits tend to ignore the safety of oneself and the environment to facilitate disease transmission. The behaviour of a person's life, including health, is influenced by many factors. These factors can come from the person himself, influence others who encourage excellent or bad behaviour, and environmental conditions that can support behaviour change (3).

Knowledge is the result of knowing, and this occurs after the person senses a particular object. Sensing occurs through the five human senses, namely sight, hearing, smell, taste and touch—most of the human knowledge is obtained through the eyes and ears. Knowledge of cognition is a fundamental domain in shaping one's actions (overt behaviour) (2,3,4).

Attitude is a reaction or response that is still closed from a person to a stimulus or object. Attitudes clearly show the connotation of appropriate reactions to certain stimuli, which are emotional reactions to social stimuli in everyday life. For example, Neustromb, one of the experts in social psychology, stated that attitude is a readiness or willingness to act and not an implementation of certain motives. Attitude is not yet an action or activity but is a predisposition to the action of behaviour. That attitude is still a closed reaction, not an open reaction or open behaviour. Attitude is a readiness to react to objects in a particular environment to appreciate the thing (3,4).

The factors that influence the formation and change of a person's attitude are internal factors and external factors. Internal factors come from the individual himself, while external factors come from outside the individual in a stimulus to change and shape attitudes. Meanwhile, according to other literature, the factors that influence the formation of attitudes are personal experience, the influence of other people who are considered necessary, and culture (6,3).

Future research should focus on gender similarities and differences to better indicate differences in attitudes and perceptions of NIHL across various demographic characteristics (8). Previous research on hearing loss knowledge conducted in India found that most respondents were aware that hearing loss could be congenital (63%), noise exposure (62%), or discharge from the ear (61%) (9). The present study investigated adults' knowledge, behaviours, and attitudes concerning the factors that contribute to noise-induced hearing loss and the use of hearing protection

(10). Signs to suggest NIHL include difficulty understanding spoken words in a noisy environment. It needs to be near or look at the person speaking to help understand terms; familiar sounds, complaints that people do not speak clearly and ringing noise in the ears (11). Our study generally showed a low level of knowledge and attitude towards NIHL. Comparable results were reported in other studies (12,13).

## Conclusions

There is a significant relationship between the respondent's knowledge and the respondent's actions about hearing loss, and there is also an important relationship between the respondent's knowledge and the respondent's attitude about hearing loss. At the same time, there is no significant relationship between the respondent's attitude and the respondent's actions regarding hearing loss.

### Author Contributions:

Funding:-

**Institutional Review Board Statement:** The study was approved by Ethics Committee of Dr Soetomo Academic Medical Center.

**Conflicts of Interest:** The authors declare no conflict of interest.

### Underlying Data

[10.6084/m9.figshare.19076255](https://doi.org/10.6084/m9.figshare.19076255)

### Questionnaire

<https://doi.org/10.6084/m9.figshare.19185338.v1>

## References

1. WHO. The world health organization's message for world hearing day 2018. 2018. Available from: <http://www.who.int/deafness/world-hearing-day/whd2018/en/>. Accessed September 30, 2021
2. Crandell c. Mills. Terry L., Gauthier.Ricardo. Knowledge, Behaviour, and Attitudes about Hearing loss and hearing protection among racial/ethnically diverse young adults. Journal of The National Medical Association. 2004, 96
3. Notoatmodjo S. Promosi Kesehatan dan Perilaku Kesehatan. Jakarta, PT. Rineka Cipta, 2020, hal, 131-144.
4. Notoatmodjo S. Ilmu dan seni kesehatan masyarakat. Jakarta PT Rineka Cipta. 2007
5. Azwar S. Sikap Manusia dan Pengukurannya, edisi 2. Pustaka Pelajar, Yogyakarta. 2016
6. WHO. Hearing Loss due to recreational exposure to loud sounds: a review. 2015. WHO Library Cataloguing in Publication Data (online access in 15-11-2021)
7. National Institute for Occupational Safety and Health. Criteria for a recommended standard: occupational noise exposure: revised criteria 1998. US Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention. 1998
8. Ravi R, Yerraguntla K, Gunjawate DR, Rajashekhar B, Lewis LE, Guddattu V. Knowledge and attitude (KA) survey regarding infant hearing loss in Kamataka, India. Int J Pediatr Otorhinolaryngol. 2016; 85:1-4
9. Selvarajan H, Rajendran A, Ninan B, Rajagopalan R. Grandmothers' perspective on hearing loss in children and newborn hearing screening. Indian J Otol. 2014;20(1):20.
10. Raed A.M. Alzahrani, Abdulrazaq O.S Alzahrani, et al. Knowledge, Behaviors, and Attitudes about Noise-induced Hearing Loss among Adults in Albaha Region: A Cross-sectional Study. The Egyptian Journal of Hospital Medicine. 2018;70(5), 824-827
11. Dobie RA (2017): Cost-Effective Hearing Conservation: Regulatory and Research Priorities. Ear and Hearing, <https://insights.ovid.com/pubmed?pmid=29251690>
12. Rus RM, Daud A, Musa KI et al. (2008): Knowledge, attitude and practice of sawmill workers towards noise-induced hearing loss in Kota Bharu, Kelantan. Malays. J. Med. Sci., 15(4):28-34
13. Ismail AF, Daud A, Ismail Z et al. (2013): Noise-induced hearing loss among quarry workers in a northeastern state of Malaysia: a study on knowledge, attitude and practice. Oman Med. J., 28(5):331-336

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