Analysis of Factors Related to Stigma of Health Worker and Medical Personnel Towards Hepatitis B at Rsudza Banda Aceh

Azzaki Abubakar,**, Fauzi Yusuf*,**, Teuku Renaldi***, Liza Salawati***, Pocut Diva Mahesa****, Meutia Nailan Edward*****

*Gastroenterohepatology Division, Department of Internal Medicine, Faculty of Medicine, Syiah Kuala University, Banda Aceh, Aceh, 23111, Indonesia
**Gastroenterohepatology Division, Departemen of Interna Medicine, General Hospital dr. Zainoel Abidin, Banda Aceh, Aceh, 23111, Indonesia
***Departemen of Public Health and Community Medicine, School of Medicine, Syiah Kuala University, Banda Aceh, Aceh, 23111, Indonesia
****School of Medicine, Syiah Kuala University, Banda Aceh, Aceh, 23111, Indonesia
*****School of Medicine, Department of Internal Medicine, Syiah Kuala University, Banda Aceh, Aceh, 23111, Indonesia;

Corresponding author:
Azzaki Abubakar. Gastroenterohepatology Division, Department Of Interna Medicine, Syiah Kuala University / General Hospital dr. Zainoel Abidin, Jl. Teuku Moh. Daud Beureueh No.108, Bandar Baru, Kec. Kuta Alam, Kota Banda Aceh, Aceh 24415. Email : azzaki.abubakar@usk.ac.id

ABSTRACT

***Background**: Hepatitis B is one of the infection disease that attacks liver and is often accompanied by stigma including among health worker and medical personnel. This research aiming for analyze related factors with the stigma of health worker and medical personnel towards Hepatitis B at RSUDZA Banda Aceh.*

***Methods**: This study was an observational analytics with design cross sectional. Data collection was conducted on November 19-29 at RSUDZA. The sample consisted of from 452 health workers and medical personnel at RSUDZA Banda Aceh which was selected use method accidental sampling.*

***Results**: Research results shows 49.6% health worker and medical personnel at RSUDZA Banda Aceh has high (i.e.: negative or discriminatory) stigma towards Hepatitis B. The results of data analysis using the Chi-square test with 95% CI and α 0.05 showed level of knowledge, profession and services have significant relationship with stigma towards hepatitis B, while age, gender, length of service, and training did not show a significant relationship.*

***Conclusion**: It can be concluded that there is a relationship between the level of knowledge, profession, and service with the stigma of health workers and medical personnel towards Hepatitis B. And there is no relationship between factors of age, gender, length of service and training with stigma towards Hepatitis B.*

***Keywords:** Health services, health workers, hepatitis B, knowledge, stigma*

ABSTRAK

***Latar belakang:** Hepatitis B adalah salah satu penyakit infeksi yang menyerang hati dan sering kali diikuti oleh stigma, termasuk di kalangan tenaga medis dan tenaga kesehatan. Penelitian ini bertujuan untuk menganalisis faktor-faktor yang berhubungan dengan stigma tenaga medis dan tenaga kesehatan terhadap Hepatitis B di RSUDZA Banda Aceh.*

Metode: *Penelitian ini merupakan penelitian analitik observasional dengan desain cross sectional. Pengambilan data dilakukan pada November di RSUDZA. Sampel terdiri dari 452 tenaga medis dan tenaga kesehatan di RSUDZA Banda Aceh yang dipilih menggunakan metode accidental sampling.*

Hasil: *Hasil penelitian menunjukkan 49,6% tenaga kesehatan dan tenaga medis di RSUDZA Banda Aceh memiliki stigma tinggi (negatif atau diskriminatif) terhadap Hepatitis B. Hasil analisis data menggunakan uji Chi-square dengan CI 95% dan α 0,05 menunjukkan Tingkat pengetahuan, profesi, dan pelayanan memiliki hubungan yang signifikan dengan stigma terhadap hepatitis B, sedangkan usia, jenis kelamin, lama bekerja, dan pelatihan tidak menunjukkan hubungan yang signifikan.*

Kesimpulan: *Dapat disimpulkan bahwa terdapat hubungan antara tingkat pengetahuan, profesi, dan pelayanan kepada penderita Hepatitis B dengan stigma tenaga kesehatan dan tenaga medis terhadap Hepatitis B. Sebaliknya, tidak terdapat hubungan antara faktor usia, jenis kelamin, lama bekerja, dan pelatihan dengan stigma terhadap Hepatitis B.*

Kata Kunci*: Layanan kesehatan, tenaga kesehatan, hepatitis B, pengetahuan, stigma*

INTRODUCTION

Hepatitis is an inflammation of the liver. The hepatitis virus is the most frequent cause of hepatitis worldwide including in Indonesia.[1] Hepatitis B is an infectious disease that affect the liver. It can cause acute or chronic hepatitis and it can lead to cirrhosis and liver cancer.[2] According to data from the World Health Organization (WHO), the Asia Pacific Region has the highest number of case of Hepatitis B virus infections in the world in 2018.[3] As many as 74% of all liver cancer death occur in Asia, including Indonesia. Indonesia is ranked third in the Asian region after China and India in terms of the number of people with Hepatitis B.

Patients with blood-borne infectious infection such as Hepatitis B Virus (HBV), Hepatitis C Virus, and *Human Immunodeficiency Virus* (HIV) are often facing stigma and discrimination in many countries.[4] HBV-related stigma is less explored than HIV, despite the higher prevalence of HBV globally.[5]

According to research conducted by Charles et al., Hepatitis B is regarded as extremely dangerous and highly contagious in Ghana. Health workers treat Hepatitis B patients with different way because they fear the possibility of infection. The three principal assumption that underlie stigma are: (1) The belief that Hepatitis B is highly contagious; (2) the assumption that Hepatitis B is very severe and (3) the assumption that Hepatitis B is caused by a curse. Stigmatization often manifested in form avoidance and social isolation (discrimination). In healthcare, stigmatization is manifested in the form of excessive caution, delay or avoidance of procedures, task shifting, and breach of confidentiality.[6] According to a different study by Scheun et al in India found the majority of health workers had a positive view of Hepatitis B patients. Health workers did not feel that this affected their work although it could have an impact on the way they treat patients. Health workers and medical personnel behave more carefully when treating a patient by taking extra precautions to keep themsafety.[7]

Research that discusses about the stigma toward Hepatitis B patients from various perspective has not been widely conducted in Indonesia. Therefore, based on the data above, the author is interested in conducting research related to "Stigma of Health Workers and Medical Personnel towards Hepatitis B Disease"

METHODS

This study is observational analytics, which is research that aims to observe a situation objectively and look for significant relationship between variable dependent and independent. This study uses *cross sectional* design, that is variable data collection dependent and independent is carried out at the same time. Inclusion criteria are all health workers and medical personnel working at RSUDZA who are eligible to participate and exclusion criteria are health workers and medical personnel who are not yet eligible to participate and are not willing to participate in this study. This research was conducted from February to December in 2024, where data collection was carried out in November at RSUDZA. We would like to thank our institute for giving ethical permission and allowing us to collect the data with number of ethical permission 264/ETHIC-RSUDZA/2024.

The population in this study were all health workers and medical personnel who served at RSUDZA in 2024 totaling 1,434 people. The sample in the study were health worker and medical personnel at RSUDZA who met inclusion and exclusion criteria, totaling 452 people. The sampling method sample used in this study

was *accidental sampling* technique. The data collection period from 19 to 29 November 2024, amounted to 452 people, with details of 85 general physician and 367 other health workers, including nurses, pharmacists, and officers.

The Independent variables in this study were knowledge about Hepatitis B and respondent's characteristics (age, gender, type of profession, length of work, service experience, training). The dependent variables in this study was stigma towards Hepatitis B patients. The instruments used in study is questionnaire, which contains question about Hepatitis B to measure the knowledge health workers and medical personnel about Hepatitis B and assess whether there is a stigma against Hepatitis B patients at RSUDZA. The questionnaire used in this study was adapted from the Toronto Chinese HBV Stigma Scale developed by a team of expert Epidemiology, Social and Cultural Hepatology at the University of Toronto.

The validity test is to determine the amount to which the measuring instrument can measure what should be measured. Test results of validity testing on each item of knowledge questionnaire statement and the stigma of health worker and medical personnel towards Hepatitis B are said to be valid because they have correlation (*r count*)> 0,312 (*r table*) with the lowest *r count* value of 0.323 and the highest of 0.759.

The number of healthcare personnel was obtained as secondary data from the official website of RSUDZA. primary data collection was carried out with disseminate e- questionnaire links to health worker and medical personnel. Analysis univariate used for describe each variable. The data that has been collected will recorded and collected then served in form table distribution frequency. Data analysis was conducted using bivariate analysis, which examines the relationship or correlation between two variables. To assess the association between the independent and dependent variables, the Chi-Square (χ^2) statistical test was employed at a significance level of $\alpha = 0.05$.

As the result, the stigma will be differentiated into two, high and low stigma. High stigma means that health worker or medical personnel show a strong level of discrimination or negative attitude toward Hepatitis B patients, while low stigma means that health worker or medical personnel have a more inclusive, more understanding, and more supportive view of people with hepatitis B.

RESULTS

Based on research that has been conducted at RSUDZA on 19-29 November 2024, a total sample of 452 respondents was obtained who fit the inclusion and exclusion criteria. Data collection was carried out by disseminating the e- questionnaire links to health worker and medical personnel.

Table 1. Baseline Characteristics of the Health Workers and Medical Personnel

Category	Frequency (n)	Percentage (%)
Gender		
Male	111	24,6 %
Female	341	75,4 %
Age		
18–25 year-old	60	13,3 %
26–35 year-old	239	52,9 %
36–45 year-old	125	27,7 %
46–55 year-old	23	5,1 %
56–65 year-old	5	1 %
Profession		
Dentist	23	5,1 %
General physician	62	13,7 %
Nurse	367	81,2 %
Length of service		
<1 year	55	12,2 %
1–5 years	124	27,4 %
6–10 years	165	36,5 %
11–20 years	85	18,8 %
>20 years	23	5,1 %
Has Attended Hepatitis B Training		
Yes	58	12,8 %
No	394	87,2 %
Has Provided Care to Hepatitis B Patient		
Yes	342	75,7 %
No	110	24,3 %

As seen in **table 1,** the data shows that based on gender distribution, the most respondents are woman (75.4%). Most respondents were in the age group 26–35 years (52.9%), and the most dominant profession was Nurse (81.2%). Most respondents had 6–10-year work experience as many (36.5%). Only (12.8%) had attended training on Hepatitis B and the majority of respondent (75.7%) had experience providing services to Hepatitis patients.

Table 2. Frequency Distribution of Stigma Toward Hepatitis B

Stigma	Frequency (n)	Percentage (%)
High	224	49.6 %
Low	228	50,4 %
Total	**452**	**100 %**

It can be seen in **table 2** that out of a total of 452 respondents (50.4%), show a low level of stigma, while 224 (49.6%) showed high stigma .

Table 3. Relationship Between Gender, Age, and Length of Service of Health Workers and Medical Personnel and Stigma Towards Hepatitis B

Category	Stigma		Total n %	P value
	Low	High		
	n %	n %		
Gender				
Male	54 (48.6%)	57 (51.4%)	111 (100%)	0.663
Female	174 (51%)	167 (49%)	341 (100%)	
Age				
18–25 year-old	33 (55%)	27 (45%)	60 (100%)	0.724
26–35 year-old	116 (48.5%)	123 (51.5%)	239 (100%)	
36–45 year-old	63 (50.4%)	62 (49.6%)	125 (100%)	
46–55 year-old	14 (60.9%)	9 (39.1%)	23 (100%)	
56–65 year-old	2 (40%)	3 (60%)	5 (100%)	
Length of Service				
<1 Year	24 (43.6%)	31 (56.4%)	55 (100%)	0.824
1–5 Years	63 (50.8%)	61 (49.2%)	124 (100%)	
6–10 years	83 (50.3%)	82 (49.7%)	165 (100%)	
11–20 years	46 (54.1%)	39 (45.9%)	85 (100%)	
>20 years	12 (52.2%)	11 (47.8%)	23 (100%)	

Based on data (table 3) it is known that health worker and medical personnel who are man have a high stigma toward Hepatitis B with a total of 51.4% while woman only 49%. The results of statistical tests using Chi-square showing *P value* = 0.663, which means there is no significant relationship between the gender variable and stigma towards Hepatitis B.

Data shows that health worker and medical personnel aged 46–55 years (60.9%) have low stigma. While group 56–65 years old (40%) also had low stigma. The results of statistical test using Chi-square at 95% CI and α 0.05 show *P value* = 0.724 which means *P value* > α that there is no significant relationship between the age variable and stigma towards Hepatitis B.

The table shows that health worker and medical personnel who work <1 year have a high stigma that is (56.4%) while those who work for 11-20 years (45.9%). Statistical test results using Chi-square show *P value* = 0.824, which means there is no significant relationship between the length of work with stigma towards Hepatitis B.

Table 4. Relationship Between Medical Profession, Training, and Service of Health Workers and Medical Personnel and Stigma Towards Hepatitis B

Category	Stigma		Total n %	P value
	Low	High		
	n %	n %		
Profession				
Dentist	11 (47.8%)	12 (52.2%)	23 (100%)	0.029
General Physician	41 (66.1%)	21 (33.9%)	62 (100%)	
Nurse	176 (48%)	167 (49%)	367 (100%)	
Has Attended Hepatitis B Training				
Yes	28 (48.3%)	30 (51.7%)	58 (100%)	0.724
No	200 (50.8%)	194 (49.2%)	394 (100%)	
Has Provided Care to Hepatitis B Patient				
Yes	190 (55.5%)	152 (44.5%)	342 (100%)	< 0.001
No	38 (34.5%)	72 (65.5%)	110 (100%)	
Knowledge About Hepatitis B				
Good	108 (59.7%)	73 (40.3%)	181 (100%)	0.001
Not good	120 (44.3%)	151 (55.5%)	271 (100%)	

Based on the data **(table 4)** it is showed that health worker and medical personnel profession who work as general physician have low stigma towards Hepatitis B (66.1%) compared to dentists (52.2%) and nurses (52%). The results of the statistical test using Chi-square at showing *P value* = 0.029 which means significant relationship between the professional and stigma towards Hepatitis B. The correlation coefficient value is -0.131 which means the higher the intensity or professionalism of health workers or medical personnel, the lower the stigma against Hepatitis B.

The table shows that health worker and medical personnel who have attended Hepatitis B training have a high stigma, (51.7%). While those who have not attended Hepatitis B training (49.2%). The results of statistical test using Chi-square at showing *P value* = 0.724 which means the means there is no significant relationship between the variable participation Hepatitis B training with stigma against towards Hepatitis B.

The table shows that most health worker and medical personnel that has not provided services to Hepatitis B tend to have a high stigma (65.5%). While (44.5%) who have provided service to people with Hepatitis B also have a high stigma. The results of statistical tests using Chi-square show *P value* < 0.001 the mean so that there is a significant relationship between the variables of service for Hepatitis B patients with stigma towards Hepatitis B.

Table 5. Relationship Between Knowledge About Hepatitis B of Health Workers and Medical Personnel and Stigma Towards Hepatitis B

Category	Stigma		Total n %	P value
	Low	High		
	n %	n %		
Knowledge About Hepatitis B				
Good	108 (59.7%)	73 (40.3%)	181 (100%)	0.001
Not good	120 (44.3%)	151 (55.5%)	271 (100%)	

Based on the **table 5**, it is known that health worker and medical personnel with good knowledge tend to have low stigma (59.7%), while those with poor knowledge (44.3%). The results of statistical test using Chi-square *P value* = 0.001 which mean there is a significant relationship between the knowledge variable and the stigma towards Hepatitis B. The negative correlation coefficient value indicates that the higher knowledge of health worker and medical personnel about Hepatitis B, the lower their stigma level towards Hepatitis B.

DISCUSSION

The results showed that the levels of stigma among healthcare and medical personnel toward hepatitis B at RSUDZA Banda Aceh were relatively varied, with an approximately equal distribution between low and high stigma scores.

The analysis showed no significant association between age and stigma toward hepatitis B. Information about the disease and its transmission is now widely accessible through media, health campaigns, and formal education. Consequently, individuals across age groups may have similar levels of knowledge, which can reduce stigma.[18,19] Stigma is more often driven by misinformation and misconceptions rather than by age.

Likewise, no significant relationship was found between gender and stigma. Stigma is typically influenced by an individual's knowledge, understanding, and experience rather than by gender. Misunderstandings about transmission and disease risk are key contributors. This may explain why levels of stigma are similar between men and women.[19]

The analysis showed a significant relationship between professional background and stigma toward hepatitis B. General physicians demonstrated lower levels of stigma compared to dentists and nurses, likely due to their broader education in infectious diseases, including hepatitis B. This greater knowledge may help reduce misconceptions and fears that contribute to stigma.[20]

Conversely, no significant association was found between length of employment and stigma. Years of experience do not necessarily reflect adequate knowledge or understanding of hepatitis B. Even experienced health workers may hold misconceptions if they have not received proper education or training.[21] This highlights the importance of ongoing education to address knowledge gaps and reduce stigma.

The analysis showed no significant relationship between hepatitis B training and stigma. While training may improve knowledge, it does not necessarily alter deeply held beliefs or attitudes. However, a significant relationship was found between providing care to hepatitis B patients and stigma. Healthcare personnel with such experience tended to show higher levels of stigma, suggesting that clinical exposure alone may reinforce misconceptions if not accompanied by adequate education and reflection.

Stigma toward hepatitis B is often linked to a lack of understanding among healthcare and medical personnel about its modes of transmission. The analysis showed a significant relationship between knowledge level and stigma, with misconceptions contributing substantially.

This is reflected in several low-scoring questionnaire items, particularly the statement: *"Hepatitis B can be transmitted by sharing a glass or plate with an infected person,"* which is false. Only 124 out of 452 respondents (27.4%) answered this correctly, indicating a common misconception.

Such misunderstandings highlight knowledge gaps that may reinforce negative perceptions and stigma toward individuals living with hepatitis B.[22]

This study found that knowledge is a key factor associated with stigma among healthcare and medical personnel toward hepatitis B. Misunderstandings about transmission can reinforce negative perceptions. Improving knowledge of transmission routes is essential to reduce stigma and improve the quality of care for people living with hepatitis B.[23]

However, the study has limitations. The nursing sample was limited to respondents from inpatient wards and the emergency department, excluding nurses from other units. Additionally, the medical personnel sample included only general practitioners and dentists, without specialists, limiting the generalizability of the findings.

CONCLUSION

This study found that stigma toward hepatitis B among healthcare and medical staff at RSUDZA Banda Aceh is generally low. There was no significant link between stigma and factors such as age, gender, or work experience. However, knowledge level and direct care for hepatitis B patients were associated with stigma. Training did not reduce stigma, but professional roles were significantly related to it. The study also suggests that future research should cover a broader scope to gain more diverse data and a better understanding of the issue.

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