بسم الله الرحمن الرحيم

SHENDI UNIVERSITY

Faculty of Medicine — Master of Public

Health Programme

RESEARCH PROPOSAL

Knowledge, Attitude and Practice towards Hepatitis B Virus Infection among Healthcare Workers in Dongola Locality Hospitals

Study Period: August 2026– November 2026

Candidate:

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Master of Public Health

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PhD in puplic health

Submitted to the Research Committee of the Faculty of Medicine, Shendi

University, in partial fulfillment of the requirements for the Master of

Public Health degree

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RESEARCH OBJECTIVES

1 General Objective

To assess knowledge, attitude, and practice (KAP) towards Hepatitis B virus infection among healthcare workers in Dongola locality hospitals during the period November 2025 – April 2026.

2 Specific Objectives

1. To assess the level of knowledge about HBV transmission, clinical manifestations, complications, prevention, and vaccination among healthcare workers in Dongola locality hospitals.
2. To determine the attitudes of healthcare workers towards HBV prevention and control, including perceived occupational risk, vaccine beliefs, and willingness to be vaccinated.
3. To determine the practices of healthcare workers regarding HBV infection prevention and control, including standard precautions, use of personal protective equipment, safe handling of sharps, and post-exposure behaviour.
4. To determine the HBV vaccination status of healthcare workers, including the number of doses received and the principal barriers to vaccination.
5. To identify socio-demographic and occupational factors associated with knowledge, attitudes, practices, and vaccination status among the healthcare workers.

VARIABLES OF THE STUDY

1 Dependent Variables

Variable	Operational Definition / Examples
Knowledge	Knowledge score regarding HBV, measured as the proportion of correct answers on items covering modes of transmission, clinical manifestations, complications, vaccine availability and schedule, and

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	post-exposure management; classified as good (≥75% correct), moderate (50–74%), or poor (<50%)
Attitude.	Attitude score towards HBV prevention, including perception of occupational risk, belief in vaccine efficacy and safety, and sense of personal responsibility to be vaccinated, measured on a fivepoint Likert scale
Practice.	Infection control practice, including routine hand hygiene, use of gloves and other personal protective equipment, safe handling and disposal of sharps, and post-exposure prophylaxis seeking behaviour
Vaccination status	Self-reported HBV vaccination status: unvaccinated, partially vaccinated (1–2 doses), or fully vaccinated (3 doses), with documentation requested where available

2 Independent Variables

Socio-demographic characteristics (age, sex, marital status, educational level), occupational characteristics (job title/professional category, years of experience, department or ward), previous training in infection control, history of occupational exposure to blood or body fluids (needle-stick injury or splash), and awareness of HBV vaccination availability

DATA COLLECTION

QUESTIONNAIRE

Knowledge, Attitude and Practice towards Hepatitis B Virus Infection among Healthcare Workers in Dongola Locality Hospitals

Interviewer ID: _____ Questionnaire ID: _____ Date: ____ / ____ /

2026 Hospital: _____

Introduction to the participant: Good day. I am a postgraduate student of the Master of Public Health programme at Shendi University. This questionnaire is part of a research study on hepatitis B virus infection among healthcare workers. Your participation is voluntary, your answers are confidential, and they will be used for research purposes only. You may stop at any time. Thank you.

Consent: I have read/explained the purpose of this study and I agree to

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participate. [ ] Yes [ ] No

SECTION A: Socio-Demographic and Occupational

Characteristics

A1. Age (years): [ ]Less Than 30 , [ ] From 30_ 45 ,[ ]More than 45

A2. Sex: [ ] Male [ ] Female

A3. Marital status: [ ] Single [ ] Married [ ] Divorced [ ] Widowed

A4. Highest educational level: [ ] Diploma [ ] Bachelor's degree [ ]

Master's degree or above [ ] Other: _____

A5. Monthly income:

[] Less than 300

[] From 300 to 600

[] More than 600

A6. Job title / professional category: [ ] Physician (including dentist)

[ ] Nurse [ ] Midwife [ ] Laboratory technician [ ] Pharmacist [ ] Other

allied health worker: _____

A7. Department/ward of work: _____

A8. Years of work experience: [ ] < 1 year [ ] 1–4 years [ ] 5–10 years

[ ] > 10 years

A9. Have you ever received training in infection prevention and

control? [ ] Yes [ ] No If yes, how many times in the last 2 years? _____

A10. In the last 12 months, have you experienced a needle-stick

injury or splash of blood/body fluids onto your eyes, mouth, or

broken skin? [ ] Yes [ ] No If yes, how many times? _____

SECTION B: Knowledge about Hepatitis B Virus (Score 1

for each correct answer; 0 for incorrect/"don't know")

B1. Hepatitis B is caused by: [ ] Bacteria [ ] Virus [ ] Parasite [ ] Fungus

[ ] Don't know

B2. Which of the following are ways HBV can be transmitted? (tick

all that apply) [ ] Contact with infected blood [ ] Sexual contact [ ]

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Sharing needles/syringes [ ] Mother to baby at birth [ ] Shaking hands/

hugging [ ] Sharing food or water [ ] Mosquito bite [ ] Don't know

B3. HBV is more infectious than HIV after a needle-stick injury. [ ]

True [ ] False [ ] Don't know

B4. Which of the following are signs/symptoms of hepatitis B? (tick

all that apply) [ ] Jaundice (yellowing of eyes/skin) [ ] Fatigue [ ] Dark

urine [ ] Abdominal pain [ ] Skin rash [ ] Runny nose [ ] Don't know

B5. Chronic hepatitis B infection can lead to: [ ] Liver cirrhosis [ ]

Hepatocellular carcinoma (liver cancer) [ ] Kidney stones [ ] Heart

disease [ ] Don't know

B6. A safe and effective vaccine against hepatitis B exists. [ ] True [ ]

False [ ] Don't know

B7. The recommended HBV vaccine schedule for adults is: [ ] One

dose [ ] Two doses [ ] Three doses [ ] Four doses [ ] Don't know

B8. After completing the full vaccine series, protection against HBV

is about: [ ] Less than 50% [ ] 50–75% [ ] More than 95% [ ] Don't know

B9. The HBV vaccine is available free of charge for healthcare workers at this hospital. [ ] True [ ] False [ ] Don't know

B10. If you are accidentally exposed to blood of a patient (needlestick injury), what should you do first? [ ] Wash the site immediately with soap and water [ ] Squeeze the wound to bleed [ ] Ignore it [ ] Apply alcohol only [ ] Don't know

B11. After a needle-stick injury, HBV post-exposure prophylaxis (vaccine and/or immunoglobulin) should be given: [ ] As soon as possible, ideally within 24–48 hours [ ] Within one month [ ] Only if symptoms appear [ ] Not needed [ ] Don't know

B12. All healthcare workers should be vaccinated against HBV before starting clinical work. [ ] Agree [ ] Disagree [ ] Don't know

B13. HBV can survive outside the body (on surfaces) for at least 7 days and remain infectious. [ ] True [ ] False [ ] Don't know

B14. Wearing gloves prevents needle-stick injuries completely. [ ] True [ ] False [ ] Don't know

B15. A person infected with HBV can transmit the virus to others even without symptoms. [ ] True [ ] False [ ] Don't know

Total knowledge score: _____ / 15 (Good ≥75% = ≥11; Moderate 50–74% = 8–10; Poor <50% = 0–7)

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SECTION C: Attitude towards Hepatitis B Prevention (Circle one response per item)

#	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
C1	I am at risk of contracting hepatitis. B in my daily work.	5	4	3	2	1
C2	Hepatitis B is a serious public health problem in Sudan.	5	4	3	2	1
C3	The hepatitis B vaccine is safe.	5	4	3	2	1
C4	The hepatitis B vaccine is effective in preventing infection.	5	4	3	2	1
C5	Every healthcare worker. has a responsibility to be vaccinated against HBV.	5	4	3	2	1
C6	Using personal protective equipment. (gloves, goggles, gowns) protects	5	4	3	2	1

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me from HBV.

C7 I would like to receive the HBV vaccine if it were available 5 4 3 2 1

C8 My hospital should provide the HBV vaccine free of charge to all staff. 5 4 3 2 1

C9 Infection prevention and control rules at my workplace are important. 5 4 3 2. 1

C10 Reporting a needle-stick injury to my supervisor is important. 5 4 3 2 1

Attitude classification (5-point Likert scale, 10 items, maximum score 50): Positive attitude ≥ 37.5 (75% of maximum); Neutral 25–37; Negative attitude < 25.

SECTION D: Practice regarding Hepatitis B Prevention

D1. Do you routinely wash your hands (or use hand sanitizer) before and after patient contact? [ ] Always [ ] Often [ ] Sometimes [ ] Rarely/Never

D2. Do you wear gloves when there is a risk of contact with blood or body fluids? [ ] Always [ ] Often [ ] Sometimes [ ] Rarely/Never

D3. Do you recap needles after use? [ ] Always [ ] Sometimes [ ] Never

D4. Do you dispose of used needles and sharps immediately in a puncture-proof sharps container? [ ] Always [ ] Sometimes [ ] Never

D5. Are sharps containers available in your work area? [ ] Yes, always [ ] Yes, sometimes [ ] No

D6. Do you wear eye/face protection when splashes of blood are likely? [ ] Always [ ] Sometimes [ ] Never

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D7. If a needle-stick injury or splash occurs, do you report it to your supervisor? [ ] Always [ ] Sometimes [ ] Never

D8. If exposed, do you seek post-exposure management (washing, reporting, PEP, laboratory testing) within 24–48 hours? [ ] Always [ ] Sometimes [ ] Never [ ] Not applicable (never exposed)

D9. Have you checked your HBV immunity status (anti-HBs blood test) after vaccination? [ ] Yes [ ] No [ ] Don't know

Practice classification: Adequate if ≥80% of applicable practices reported as "Always"; Partial if 50–79%; Poor if <50%.

SECTION E: Vaccination Status and Barriers

E1. Have you ever received the hepatitis B vaccine? [ ] Yes [ ] No

E2. If yes, how many doses have you received? [ ] 1 dose [ ] 2 doses [ ] 3 doses (complete) [ ] Don't know

E3. Where did you receive the vaccine? [ ] This hospital [ ] Another hospital/health centre [ ] During university/medical school [ ] Private clinic [ ] Don't know

E4. If NO or incomplete, what is the main reason? (tick all that apply) [ ] Vaccine not available at my facility [ ] Cost too high [ ] No time / too busy [ ] Fear of side effects [ ] Not offered / not required by employer [ ] Did not know it was important [ ] Believed I am already immune [ ] Other: _____

E5. Do you know whether HBV post-exposure prophylaxis (PEP) is available at your hospital? [ ] Yes [ ] No [ ] Don't know

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