Despite the high job-related risk of exposure to sexually-transmitted diseases including HBV and HCV among the military, there is paucity of data regarding Hepatitis B and C viruses' prevalence among military personnel in Nigeria. The aim of this present study therefore was to determine the prevalence of HBV and HCV among military personnel in the Niger Delta of Nigeria. In this cross-sectional case study, a total of One hundred and fifty military personnel aged 20 and 55 years attending the Nigerian Army Hospital, Air Force Clinic and Police Clinic in Port-Harcourt in the Niger Delta of Nigeria were consecutively recruited for the study. Samples were tested for HBV and HCV using Acon Diagnostics (USA) HBsAg and anti-HCV kits. Results of the study showed an overall HBV and HCV prevalence rate of 4% and 0% respectively. The prevalence of HBV was significantly higher among subjects in the 20-39 years age group (4%) compared to 40-55 (3.85%) (p = 0.05). The HBV prevalence was investigated based on gender of subjects. The HBV prevalence was concentrated among male subjects (4.76%) compared to female (0%) military personnel (p = 0.001). There is need for the development of a strategic plan that integrates STIs into existing prevention and control programme particularly among the military to foster behavior change through information dissemination. Policies should be instituted to make condoms regularly available and freely distributed among military personnel to reduce the risk of HBV and other sexually transmitted infections. There is the need for an effective voluntary counseling and testing (VCT) and sentinel surveillance survey among military personnel. A fully integrated and comprehensive care and support system including provision of universal access to hepatitis B vaccination, treatment and support for military personnel should be establishment.