Awareness on Nipah Virus Infection: A Cross-sectional Survey in Sri Lanka

A.A.S. Abdeen[1]*, K.I. Fazil[1], S.R.M. Shihab[2], R.A.S.B. Randeni[1], A.W. Kalupahana[3], K.A.D.S.K. Kathriarachchi[4]

[1]Dept. of Biomedical Science, ICBT, Kandy, 20000, Sri Lanka
.[2]Dept. of Microbiology, Faculty of Medicine, University of Peradeniya, Peradeniya
[3]Dept. of Veterinary Pathobiology, Faculty of Veterinary Medicine and Animal Science, University of Peradeniya, Peradeniya, 20400, Sri Lanka
[4]Masaharu Nakamura Laboratory, International Research Center for Elements Science, Institute of Chemical Research, Kyoto University, Japan
**aadhilahamed40@gmail.lk*

Nipah virus (NiV) outbreaks are reported predominantly in South and Southeast Asia. Despite its high mortality rate and potential for widespread transmission, public awareness regarding NiV infection remains understudied. This study assessed the awareness of NiV infection among the Sri Lankan population, focusing on prevalence, transmission, clinical features and prevention. An online self-reported questionnaire in English, Sinhala and Tamil was distributed via social media. It covered five sections; demographics, prevalence, transmission, symptoms and prevention with 27 questions. Responses were scored using a 5-point Likert scale from "Not at all aware" (1) to "Extremely Aware" (5). The questionnaire was partially validated through expert review (content validity index = 0.82, 10 experts) and pilot-tested among 30 individuals. Descriptive statistics was used to summarize the data. Awareness scores were calculated and compared between demographic characteristics using one-way ANOVA with Games–Howell post hoc test. Data were dichotomised into 'good' and 'poor' knowledge based on the cut-off awareness score. Binary logistic regression analysis was performed to assess the predictors of awareness. All analyses were done using MS Excel and MiniTab 21, considering $p < 0.05$ statistically significant. Among 425 participants, most were females (57%), employed (44%), aged 18–29 (67%), degree holders (45%) and residents of Central Province of Sri Lanka (42%). The overall awareness on NiV infection was significantly higher among females, participants aged 50 and above and those with postgraduate education ($p = 0.012$, < 0.001 and < 0.001, respectively). Prevention was the most understood topic, followed by transmission, prevalence and symptoms ($p < 0.001$). Participants aged 50 and above ($p = 0.132$) and with postgraduate education ($p = 0.236$) demonstrated moderate or better awareness across all categories tested. Higher education, older age and female gender had high likelihood for greater awareness on NiV infection. This study identified gaps in NiV awareness in Sri Lanka, with significant disparities across demographic groups. Higher education levels, older age and female gender were associated with better awareness. The findings emphasized the need for tailored educational initiatives, such as school-based health education, social media campaigns and collaboration with public health authorities, to improve understanding about NiV, particularly among younger and less-educated populations.

Keywords: Nipah, awareness, Sri Lankan, virus, spillover