Knowledge, Attitude and Practice of Village Midwives Regarding Hepatitis B Virus in Khartoum State, Sudan- 2014

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Abstract

**Background:** Hepatitis B Virus (HBV) infection is a serious health problem and a leading cause of morbidity and mortality.

**Objective:** To determine the level of knowledge, attitude and practice of village midwives regarding Hepatitis B Virus in Khartoum state, Sudan, 2014.

**Method:** This was an observational study. A total of 335 village midwives were interviewed. Variables of knowledge were computed and compiled by SPSS version 20. The 25th percentile was used as a cut-off point to identify adequate and inadequate knowledge, positive attitude from negative ones and knowledge about positive practice from negative ones. Chi Square test and multivariate analysis were carried to identify the association of age, education and working duration.

**Result:** Most of village midwives 207 (61.8%) were in the age group of 35–50 years, and 207 (61.80%) of total midwives were married. Illiterate were 91 (27.2%) and 268 (80.0%) had working duration more than 10 years. Only 178 (53.1%) of village midwives had heard about Hepatitis B virus, out of whom 142 (79.8%) were have ever been vaccinated for Hepatitis B virus. Village midwives with adequate general knowledge accounted for 55 (30.9%), 123 (69.1%) were having positive attitude and 136 (76.4%) had knowledge about positive practices. The mean scores showed significant association between age, education and the general knowledge, attitude and knowledge of positive practices regarding Hepatitis B virus among village midwives.

**Conclusion:** Half of the village midwives heard about Hepatitis B virus. Three quarters of those midwives have never been vaccinated for Hepatitis B virus. One third of village midwives were having adequate level of general knowledge, two thirds had positive attitude and three quarters were having adequate knowledge about positive practices. Age and education were significantly related factors. Capacity building of village midwives regarding Hepatitis B virus was recommended.

**Keywords:** Hepatitis B virus; Knowledge; Attitude; Practice; Village Midwives; Khartoum state; Sudan

Introduction

Worldwide, the total carriers of Hepatitis B virus are about 400 million. A contributing factor for the transmission of Hepatitis B virus in developing countries is poor awareness of the population [1]. Almost all types of health care workers are at the risk of having Hepatitis B virus and they must acquire a higher level of knowledge for protection. Awareness about modes of transmission of Hepatitis B virus and vaccination is essential for universal precautions among the health care workers, where it was found that the knowledge is correlated positively with the behavior [2,3]. Globally, the attribute fractions of risk among health care workers to acquire blood borne diseases due to percutaneous injuries are 37% for Hepatitis B virus, 39% for Hepatitis C virus, and 4.4% for Human Immunodeficiency Virus [4]. Sudan is a pioneer in midwifery services at community level since early 1921 when the first midwifery school was established and opened in Omdurman City, Khartoum state [5]. There are a total of 40 midwifery schools in Sudan help graduate a considerable number of village midwives each year to serve their communities. In the past, most of the recruited women were illiterate and trained on midwifery skills and competencies for one year in midwifery schools [5]. The graduated midwives were provided with an official midwifery certificate and gifted a complete midwifery kits. Ministry of Health had set a target of one village midwife to each village in the national strategic plan up to 2015. The plan included an improved criterion of recruitment by choosing female holders of Sudanese secondary school certificates who will complete four years Bachelor degree in science of midwifery [6]. The village midwives are usually in contact with human blood and fluids. It is useful to study their knowledge, attitude and practices regarding Hepatitis B virus. To the best of our knowledge there are very limited unpublished studies in Sudan among village midwives regarding blood borne diseases. The study objective was to determine the level of knowledge, attitude and knowledge about practices regarding Hepatitis B virus among village midwives in Khartoum state, Sudan 2014.

Materials and Methods

This was an observational cross section study carried out in Khartoum State, the capital of Sudan. Khartoum State has seven localities within an area of 22,000 km² and approximately 6,430,000 inhabitants according to 2008 census of Sudan. The study populations were village midwives. They provide antenatal care at community level, home deliveries and postnatal care. The home deliveries in Sudan accounted to 80% and the coverage of villages by midwives in 2009 was 54.6% [7]. The number of village midwives in Khartoum State is 1,848, derived from the reports in the State Ministry of Health in Khartoum [7].

Sample Size

The sample frame was the total number of village midwives (1,848) providing midwifery services in the seven localities of Khartoum State during one year prior to the study.

The sample size was estimated as 335 with the formula:

\[ n = \left( \frac{N}{N-1} \right) \times \left( \frac{d^2}{1 + 0.05} \right) \]  

Where:

\( n \) = the sample size

\( N \) = total village midwives

\( d \) = marginal error (0.05)
Results and Discussion

In this study, the village midwives who heard about Hepatitis B virus are inconsistent with a study carried in Nigeria that showed 81% of hospital staff heard about Hepatitis B virus [9]. The study showed 55 (30.9%) were having adequate level of general knowledge, 123 (69.1%) were having positive attitude and 136 (76.4%) were having adequate knowledge about positive practices.

![Figure 1: Number of village midwives who heard about Hepatitis B virus in Khartoum State, Sudan; 2014.](image1)

![Figure 2: Number of village midwives voluntary and involuntary received vaccination of Hepatitis B virus in Khartoum State, Sudan 2014.](image2)

<table>
<thead>
<tr>
<th>Characteristics of the Village Midwives</th>
<th>Frequency (%)</th>
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</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>&lt; 35 Years</td>
<td>57 (17.0%)</td>
</tr>
<tr>
<td>35 – 50 Years</td>
<td>207 (61.8%)</td>
</tr>
<tr>
<td>&gt; 50 Years</td>
<td>71 (21.2%)</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>207 (61.8%)</td>
</tr>
<tr>
<td>Single</td>
<td>128 (38.2%)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Illiterate</td>
<td>97 (29.0%)</td>
</tr>
<tr>
<td>General education</td>
<td>204 (60.0%)</td>
</tr>
<tr>
<td>Higher education</td>
<td>34 (10.1%)</td>
</tr>
<tr>
<td>Working duration</td>
<td></td>
</tr>
<tr>
<td>Less than 5 year</td>
<td>34 (10.1%)</td>
</tr>
<tr>
<td>5 – 10 year</td>
<td>33 (9.9%)</td>
</tr>
<tr>
<td>More than 10 year</td>
<td>268 (80.0%)</td>
</tr>
</tbody>
</table>

Table 1: Characteristics of the village midwives, Khartoum State- Sudan; 2014 (n = 335). (Two hundred and seven (61.8%) of village midwives were in the age group 35 – 50 years and 207 (61.8%) of them were married Table1). It was shown that 97 (29.0%) of village midwives were illiterate and 268 (80.0%) have working duration more than 10 years.

Table 2: showed 55 (30.9%) were having adequate level of general knowledge, 123 (69.1%) were having positive attitude and 136 (76.4%) were having adequate knowledge about positive practices.

in Nigeria targeted distinct types of professional and educated health care workers including physicians, pharmacists, nurses and laboratory technicians. In our study, almost one third of the village midwives were illiterate that affect their access to adequate information regarding Hepatitis B virus. The proportion of village midwives with adequate general knowledge about Hepatitis B virus was 30.9%, including the knowledge about all modes of transmission, the seriousness of the virus and its complications, carriers and preventive measures among pregnant women. Trained health care workers in China showed low scores regarding knowledge about the seriousness of Hepatitis B virus as asymptomatic, its risk of liver cirrhosis, liver cancer and death [10]. In our study the computation of general knowledge questions gave an overall estimate rather than scoring each question. The general knowledge of the village midwives was in lines with the level of knowledge among Cambodian Americans [11] but much lower than the knowledge of hairdressers [12]. The medical and other health and non-health students showed various low levels of knowledge about Hepatitis B virus [13–18]. This study result has a clear significance association between illiteracy of village midwives and general knowledge and attitude regarding Hepatitis B virus. Usually knowledge, attitude and practices regarding health subjects are associated with literacy [19,20]. A study in Sudan among health care workers reflected that educated health care workers have adequate level of knowledge about Hepatitis B virus, while the illiterate labors have very low level of knowledge [21]. Our study is unique in Sudan; it reflects that the satisfactory basic training for illiterate village midwives to provide midwifery services and home deliveries. The basic midwifery curriculum covered all health aspects including control of infectious diseases beside the midwifery skills. Although they were illiterate and usually exposed to human blood and fluids but they were significantly have shown the knowledge about positive practices for protection. This is supported by study in Nigeria among health care workers where exposure to blood and body fluids predicted the practices of standard precautions at health facilities [22]. Village midwives with age more than 35 years were significantly had general knowledge, attitude and knowledge about practices regarding Hepatitis B virus. It was found that age significantly associated with knowledge, attitude and practices and health care workers experiences low incidence of needle stick-sharp injuries when their age is more than 40 years [23,24]. The duration of working in years for the midwives was not significantly associated with the general knowledge, attitude and knowledge of positive practices regarding Hepatitis B virus. In a study carried in Ghana, the knowledge score of health care workers about Hepatitis B virus was significantly associated with the age of the health care workers and the duration of working years [24].
Almost half of the village midwives heard about Hepatitis B virus. Three quarters of village midwives have ever been vaccinated for Hepatitis B virus. One third of village midwives had adequate level of general knowledge, two thirds were having positive attitude and three quarters had adequate knowledge about positive practices. On the other hand, illiterate village midwives had significant mean scores in comparison to those with general education and advanced ones).

Conclusion and Recommendations

Almost half of the village midwives heard about Hepatitis B virus. Three quarters of village midwives have ever been vaccinated for Hepatitis B virus. One third of village midwives had adequate level of general knowledge, two thirds were having positive attitude and three quarters had adequate knowledge about positive practices. Association of age, education and working duration were not significantly associated with knowledge, attitude and practice among barbers and clients in Gharbia governorate, Egypt.  

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