

# Review of: "Knowledge, Attitudes, and Practice (KAP) Study for Reducing Invalid Vaccine Doses in Routine Immunization: A Cross-Sectional Study in Urban Slums of Bangladesh"

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Potential competing interests: No potential competing interests to declare.

## Reviewer report

This paper aims to assess the parental attitude, knowledge, and practice regarding valid vaccination schedules and identify the reason for providing invalid vaccine doses.

The authors need to justify why this study adopted a mixed method. By the look of the title, this study should only be a quantitative study. Unless the topic can be modified to accommodate a qualitative approach aspect.

**The introduction** of the study is relevant.

## Methodology

*"Assessing the knowledge, attitude, and practice (KAP) of parents regarding child immunization and service providers' perspectives."* This can be used to modify the title of the study.

## Sample Size Estimation

A household survey has been conducted in the selected slums. A minimum of 440 interviews were selected by using the following sample size estimation formula. - okay, but it appears that the respondents were more than this size, report the final sample size for this study.

## Data Collection Techniques

Data were collected by using a structured questionnaire – okay.

Qualitative data was also collected through the In-depth Investigation technique – add clarity to this meaning? Was any tool used?

## Data Analysis Technique

The analysis of quantitative data is not clear how the data was analyzed. Which statistical test is employed? How is the KAP analyzed?

## Qualitative part

Are the interviews conducted by the research assistants, and were they familiar with the content? Add a brief sentence to explain how you introduced them to the study prior to the interviews.

The 1st author analyzed the data thematically using the content analysis procedure. – okay. label as such in the result figure 1.

## Ethical Consideration

*Was this study not requiring permission and approval?* –check or add information where did you obtain permission to conduct this study.

## Results

*For this study, we conducted a household-level survey where 456 respondents participated and successfully completed the survey.*

I believe this is a quantitative design part. The following is my input that needs to be improved or clarified.

### Table 1.

n=456 should be next to percentage/proportion.

Change percentage/proportion to proportion/percentage.

According to this table no male respondents (see age category), but going down to education and occupation there are figures under the column of male counterpart.

Education = 460 males participated whereas females were 456, yielding a total of 916 respondents

Occupation = 456 males participated whereas females were 456, yielding a total of 912 respondents

Was this information of fathers captured in the demographic, but reported by mothers? Clarify or find a way of presenting this. It is confusing. It appears as the fathers were also the respondents. Though you have mentioned in the population that mothers were the ones to participate in this study.

### Table 2. Check and correct the following:

Condition of child's vaccine card

The card was given and still available	368 (81.24)
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The card was given but not available	85 (18.76)
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A vaccination card is available.

Yes	325 (71.74)
No	128 (28.26)

Confusing, especially the part of checking the availability of the cards. Not corresponding to each other (above)

**Table 3.** Write in detail: which, when, how, and where mean so that your narrative makes sense, the “how” is not reported.

Why is the reporting of measles 2, not 1?

*About 37% of respondents knew that the IPV was given to their child to avoid disability.*

The table did not show that you were referring to disability. Hence I am suggesting that this table should be improved.

**Table 5.** What is “n” to determine the percentages?

**Table 6.** Align the figures with the ones in Table 1. See age category and education status for example.

### For Qualitative part

How many participated?

Add a brief demographic characteristics.

Is Figure 1 represent the themes? Labelled as such/indicate.

My suggestion: improve this section, it sounds more like a discussion than reporting. Add quotes to support your narrative.

### Discussion

I am worried about the percentage in this section, it reflects a gap in knowledge and attitudes, and good practices. The authors need to revisit this area and see how best they can control their results.

*Statistical significance based on 95% confidence intervals and other standard significance tests*— it is not clearly why conducted, as they are not reported nor discussed.

The implication of the qualitative finding is missing in this section.

**This is a good study and interesting. Two manuscripts can emerge if qualitative and quantitative parts can be separated.**