### PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (http://bmjopen.bmj.com/site/about/resources/checklist.pdf) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

#### ARTICLE DETAILS

TITLE (PROVISIONAL)	Vaccine hesitancy from parents and healthcare providers perspectives in Hadhramout governorate, Yemen: a mixed-methods study protocol
AUTHORS	SUTAN, ROSNAH BINTI; Batarfi, Suha; Ismail, Halim; Bin-Ghouth, Abdulla

#### **VERSION 1 – REVIEW**

REVIEWER	H Basaleem
	University of Aden
REVIEW RETURNED	15-Sep-2021

GENERAL COMMENTS	English language and use of abbreviation need revision
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REVIEWER	Amen Bawazir King Saud bin Abdulaziz University for Health Sciences College of Public Health and Medical Informatics, Community and Environmental Health
<b>REVIEW RETURNED</b>	01-Dec-2021

<b>GENERAL COMMENTS</b> 1-Method section: line 28: It is important to determine the administrative marks of the coastal Hadhramout to be covered (regarding districts) 2- table 2. List of Independent variables, page 15, line 20: It is bett to make it open to facilitate calculating the median. However, the analysis part could be categorized into these categories
<ul> <li>3- Table 2. page 15, line 23: This needs4- to be used according to the actual amount equal to the Dollar US, on the day of the survey 4-Table 2. page 15, line 36: Immunization-related knowledge: Why use the range of 50% for the calculation of goodness in assessing the knowledge level. Is that based on the WHO classification for example, or just because it was used in a previous study? Sometimes you can use the 75 percentile to assess the level of knowledge. Also, why not use the median of the giving percentage resulting from the summative calculation?"</li> <li>5- Table 2, page 15, line 48: Confidence "How to be divided by 3. It the result of the summing the result of the respondents, it should take into consideration the total number of answers were 7 (1=strongly disagree to 7 = strongly agree) multiplied for 3 items=2</li> </ul>

## **VERSION 1 – AUTHOR RESPONSE**

Reviewer:	1	1	English language and use of abbreviation	Thanks for this comment.
			need revision.	We sent the manuscript to a professional

			English editor to improve English
			throughout the manuscript.
			- Abbreviation was revised and we added:
			1- World Health Organization (WHO) (line 68).
			2- United Nations International Children's Emergency Fund (UNICEF) (line 117)
			3. Vaccine preventable diseases (VPDs) (line 103)
			4. Questionnaire on vaccine hesitancy perceptions (VHP) (line 218)
			5. pentavalent (DPT,Hep B, Hib) (line 109)
			6. Confidence, complacency, constraints, calculation and collective (5C Scale) (line 254)
Reviewer: 2	1	Method section: It is important to	Thanks for the comment.
		determine the administrative marks of the coastal Hadhramout to be covered (regarding districts).	All 12 administrative districts covered in
			the study were listed in the method
			section (page 6, line 170-172).
	2	table 2. List of Independent variables,	Thanks for the comment.
		page 11, It is better to make it open to facilitate calculating the median. However,	The family size is defined as the total
		the analysis part could be categorized into	number of persons living in the
			number of persons living in the
		these categories.	household. We remove the
			household. We remove the categorization, and we treat it as continuous data (table 2: family
			household. We remove the categorization, and we treat it as
	3	these categories. Table 2: This needs to be used according	household. We remove the categorization, and we treat it as continuous data (table 2: family
	3	these categories. Table 2: This needs to be used according to the actual amount equal to the Dollar	household. We remove the categorization, and we treat it as continuous data (table 2: family size).(page 11, table 2,line 303)
	3	these categories. Table 2: This needs to be used according	household. We remove the categorization, and we treat it as continuous data (table 2: family size).(page 11, table 2,line 303) Thanks for your comment. We remove the sentence (1 US \$ = 600 YR) and then in the analysis, we will
	3	these categories. Table 2: This needs to be used according to the actual amount equal to the Dollar	household. We remove the categorization, and we treat it as continuous data (table 2: family size).(page 11, table 2,line 303) Thanks for your comment. We remove the sentence (1 US \$ = 600 YR) and then in the analysis, we will calculate it according to an actual
	3	these categories. Table 2: This needs to be used according to the actual amount equal to the Dollar	household. We remove the categorization, and we treat it as continuous data (table 2: family size).(page 11, table 2,line 303) Thanks for your comment. We remove the sentence (1 US \$ = 600 YR) and then in the analysis, we will
	3	these categories. Table 2: This needs to be used according to the actual amount equal to the Dollar	household. We remove the categorization, and we treat it as continuous data (table 2: family size).(page 11, table 2,line 303) Thanks for your comment. We remove the sentence (1 US \$ = 600 YR) and then in the analysis, we will calculate it according to an actual amount equal to the Dollar US, on the
	3	these categories. Table 2: This needs to be used according to the actual amount equal to the Dollar US, on the day of the survey. Table 2: Immunization-related knowledge:	household. We remove the categorization, and we treat it as continuous data (table 2: family size).(page 11, table 2,line 303) Thanks for your comment. We remove the sentence (1 US \$ = 600 YR) and then in the analysis, we will calculate it according to an actual amount equal to the Dollar US, on the day of the survey as recommended.(table 2, page 11, line
		these categories. Table 2: This needs to be used according to the actual amount equal to the Dollar US, on the day of the survey.	household. We remove the categorization, and we treat it as continuous data (table 2: family size).(page 11, table 2,line 303) Thanks for your comment. We remove the sentence (1 US \$ = 600 YR) and then in the analysis, we will calculate it according to an actual amount equal to the Dollar US, on the day of the survey as recommended.(table 2, page 11, line 303)

	WHO classification for example, or just because it was used in a previous study? Sometimes you can use the 75 percentile to assess the level of knowledge. Also, why not use the median of the giving percentage resulting from the summative calculation?	Immunization-related knowledge: analysis: the median will be used as the cutoff point. 0= For poor knowledge (less than the median score), 1= For good knowledge (equal and more than the median score) (table 2, page 11, line 303).
5	Table 2: Confidence "How to be divided by 3. If the result of the summing the result of the respondents, it should take into consideration the total number of answers were 7 (1=strongly disagree to 7 = strongly agree) multiplied for 3 items=21	Thanks for your comment, The 3 question items in confidence subscale are based on the original questionnaire 5C Scale. The analysis is following the original questionnaire analysis method that we will adopted. The mean score will be calculated based on the sum of each item question response for the 3 items and divided by 3 as the original questionnaire used ((Betsch et al. 2018).

# **VERSION 2 – REVIEW**

REVIEWER	Amen Bawazir King Saud bin Abdulaziz University for Health Sciences College of Public Health and Medical Informatics, Community and Environmental Health
REVIEW RETURNED	17-Jan-2022
GENERAL COMMENTS	This project is of importance for a low-income country under political conflict. It will address the barriers to vaccine hesitancy among this population and findings could be supportive for similar studies to be conducted in other communities. However, I would suggest that the third phase could be switched with the second one. As the findings from the qualitative phase could be also used to enrich the elements of the qualitative phase.