The Relationship between Vaccine Information Seeking and Vaccine Confidence

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Abstract

Vaccine hesitancy has been a complex, dynamic yet interesting topic of discussion. Vaccine information seeking has been on to observe because it doesn't just give us an insight as to why people sought vaccine information, it also helps provide clarity as to what they may be looking for. Therefore, it will be interesting to examine the relationship between vaccine information seeking, and vaccine confidence. This paper will employ the use of quantitative research using the survey method. Using a sample size of n =100. The findings showed that there was significant relationship between the content of vaccine information and vaccine confidence and that the source of vaccine information does not really affect vaccine confidence.

Keywords: *Vaccine hesitancy, Health Information seeking, source of information, Vaccine confidence demography and Parents.*

Introduction

Vaccine confidence can be defined as the belief or faith in the safety of the healthcare system and effectiveness in vaccines. Public vaccine confidence can also be explained as the total acceptance and trust that vaccination is in the best interest of the public/parents[1]. Jody[7] explained that childhood vaccination have brought about significant benefits in terms of socio-economical, communial and to the indiviual. However, there has been lots of failed vaccination agendas due to one reason or the other. The chioce or accpetance of vaccination can be measrued by the level of confidence parents have in vaccination. Jody et al continued that, some parents tend to see vaccination as some pharemacetical/government properganda 7. Politi[2], reported that an unvaccinated French boy caused the frist measles case in Costa-Rica in five years. The report stated that the parents of the boy admitted to have never vaccinated the boy. Stories like this could explain why the WHO enlisted "Vaccine hesitancy" as one of the top 10 global health isseues of 2019[2].

A study by Larson HJ,[5] shwoed that, parents in the United Kingdom (UK) showed more confidence in vaccination when cmopared to parents in countries like Nigeria, Pakistan and india. Glanz et al.,[9] reported that parents who have a lower level of confidence or trust in their pediatrician's advice (70%) will mostly refuse or delay vaccination. These parents also believe pediatricians also report or advise them on only the benefits of vaccines and not the risk or side effects if any, so this makes them question the of the information received[9]. While for some parents, it was the Adverse events following immunization (AEFI). According to[10] AEFI such as mild fever and a sore arm, these effects can settle without treatment and don't have a long-term consequence[10]. On a very rear occasion would a

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serious adverse reaction occur. In countries around all the globe from Europe, to a few Asian and African countries AEFI is one of the perceived causes for loss of public trust in vaccination process the resurgence of vaccine-preventable diseases (VPD) and change in health policies[10].

Chaudhuri et al.[11] in their study, stated that people or parents reaction to vaccination maybe from the kind and source of health information they consume. Chaudhuri et al continued that the health seeking behavior of older adults, made used of sociodemographic as a barrier to understand information seeking and how it controls information retrievals. These items were included to get a better understanding as to what prevents adults from retrieving information and understanding it.Wilson defines 'information behavior' or 'information seeking behavior' as a need that arises in order to fill a knowledge quest or to satisfy an information need. This information sought begins with an ideology of the content of information the seeker has in mind[13].Wilson [13] information seeking model, has two propositions (a) information is a secondary need that arises out of a basic need to satisfy an information thirst,

This means that if there is no quest or need for a particular knowledge a person might and won't probably seek out information. Basically the content of information determines or drives the quest for information sought. The context of vaccine information search as explained by [12]were vaccine efficacy (vaccine effectiveness over time and rate), vaccine availability (if vaccines can be obtained in a variety of locations, and the minimum time to wait in line for it. Vaccine affordability (if vaccines were affordable for and were worth the money been paid for). Vaccine trust (zero tolerance is given to vaccine ineffectiveness, so parents were on the lookout for vaccines without side effects). Vaccine dosage (the amount of vaccine to be collected, if such dosage is too much for the immune system) [12]. Similarly, [14]examined parental vaccine information sources, results show internet (41%) is the most used source of information by parents, followed by Doctors (26%), nurses (23%), family (21%), friends (18%). Among parents who used the internet (49%) of them check for information on health sites and vaccine-related pages, while others (29%) search Google. Irene et al, also stated that vaccine information choices might influence vaccine beliefs, some parents likely said that they would like to receive and be informed about vaccination either during pregnancy or childbirth. This brings us to the main purpose or objectives of the study,

A. To examine the relationship between of source of information and vaccine confidence

B. To examine the relationship between content of information need and vaccine confidence.

Hypotheses:

H1- There is a relationship between source of information and vaccine confidence.

H2- There is a relationship between content of information and vaccine confidence.

Method

A purposive sampling method was used in the Survey method of the quantitative research, with the use of a questionnaire as an instrument for data collection. The research instrument for this study was developed on a Likert-scale of five. The Likert-scale consist of a measuring scale of 1-5 namely 'strongly agree, agree, neutral, disagree and strongly disagree. According to [3] the Likert-scale is the most commonly used scale in survey research because after the respondents were assessed from their answers it makes it possible for the get a level of agreement with the subjects[3]. The instrument was designed using the proposed measuring instrument developed by the World Health Organization in conjunction with the Strategic Advisory Group of experts on vaccine hesitancy[4]. However the researcher also adopts and adapt from previous studies on vaccine hesitancy studies such as [9, 12, 13, 15]. The survey instrument will consist of 3 sections; a) Demographics, this section will contain questions such as age, gender, level of income, level of education, religion and ethnicity.

b. Information seeking, this section will measure variables under the concept of information seeking, it will look at items such as the source of information.

c. Vaccine confidence, that identifies vaccine confidence identifiers. Data collection in Malacca and Kedah consisted of 100 respondents. The data was analysed using both descriptive (demography and mean representation) and inferential (Pearson correlation) statistics.

Results

The test was conducted in Malacca/Kedah. A total of 100 respondents were used in conducting the test. A response rate of a 100% was achieved in the self-administrated questionnaire.

In order to measure the reliability of the instrument the Cronbach's alpha was used. Hair et al. [18] explained that the consistency and stability of the instrument help to assess the "goodness" of a measure. The Cronbach's alpha is a popular statics tool used to measure coefficient based reliability consistency. This coefficient ranges from 0.00 to 1.00. literature suggested that a coefficient of 0.70 is of a high value and such questions or constructs were reliable [18]. The table below shows the constructs have a high coefficient Thus, we can say this instrument is good enough and reliable for the intended study.

Table 1: Cronbach Alpha

Variables	No. of Items	Cronbach's Alpha
Source of vaccine information	11	.825
Content of Vaccine information	7	.867
VH Confidence	16	.900

The table below showed that the highest respondents were female (74), and male (26). The age distribution was 30-35 (34), 36-41 (25), 24-29 (20), 42-47 (13), 18-23 (5), 48-53 (3). There were 39 Masters/PhD candidates, 30-degree students, 22 PhD holders, 5 STPM/Diploma and 4 STP holders. A good number of the respondents (46) lived within RM 1,000- RM 3,000, (39) RM 3, 001- RM 5,000, (6) RM 7,001- RM 9,000, (4) 5, 001 – RM 7,000, (3) Less than RM 1,000 (2) RM 9,000 and above. A total number of (68) represented the Malay ethnic group, (17) the Chinese ethnic group, (15) Indian ethnic group. Subsequently, (74) per cent of the respondents are Islamic, (12) are Christians, (7) Buddhist (6) Hinduism, and (1) no religion respectively in the demographic data shown in table 2.

Table 2: Demography of respondents

Profile	Item	Frequency	Percentage
Age	30-35	34	34
	36-41	25	25
	24-29	20	20
	42-47	13	13
	18-23	5	5
	48-53	3	3
	Total	**100**	**100**
Gender	Female	74	74
	Male	26	26
	Total	**100**	**100**
Income	RM 1,000 - RM 3,000	46	46
	RM 3,001 - RM 5,000	39	39
	RM 7001 - RM 9000	6	6
	RM 5,001 - RM 7,000	4	4
	Less than RM 1,000	3	3
	RM 9,000 AND ABOVE	2	2
	Total	**100**	**100**
Education	Master/PhD	39	39
	Degree	30	30
	PhD	22	22
	STPM/Diploma	5	5
	STD	4	4
	Total	**100**	**100**

Profile	Item	Frequency	Percentage
Religion	Islam	74	74
	Christian	12	12
	Buddhism	7	7
	Hinduism	6	6
	No Religion	1	1
	Total	**100**	**100**
Ethnicity	Malay	68	68
	Chinese	17	17
	Indian	15	15
	Total	**100**	**100**

The regression table below shows that there source of information does not correlates with vaccine confident level of parents with a Sig value of 0.630. Therefore the first hypothesis of the study is rejected.

H1- There is a relationship between source of information and vaccine confidence.

However, there seems to be a correlated relationship between the content of information sough and vaccine confidence. The Sig value is at .000 therefore the second hypothesis of the study is accepted.

H2- There is a relationship between content of information and vaccine confidence.

Table 3: Pearson correlation

	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
(Constant)	30.536	5.654		5.401	.000	19.314	41.758
ADDSOVI	.062	.127	.043	.484	.630	-.191	.314
ADDCOV	.952	.175	.487	5.431	.000	.604	1.300

Discussion

The first objective of this study was to examine the relationship between source of information and vaccine confidence. In order to examine this relationship, respondents were asked what was there preferred source of vaccine information. The respondents majorly agreed to seeking vaccine information on from a television station (M=3.15, n=100). When compared to other sources like family, friends, internet, magazines, doctors, newspapers and a radio station. However, results from the correlation showed that there were no relationship between source of vaccine information and vaccine confidence. The source of vaccine information does not affect how the (respondents) parents feel about vaccination. They parents don't really believe that what they see on television were convincing enough to make them think vaccines are reliable or if vaccinating will help increase the immune system of their children. These results are similar with studies by [5], why they illustrated that vaccines confidence level are dependent on a lot of factors like dosage, effect and timing and method of administration. However, studies by Moran et al.,[14] found a relationship between source of vaccine information and vaccine complacency. Vaccine complacency as defined by World Health Organization (WHO) in conjunction with Report of the SAGE (Strategic Advisory Group of Expects) as when a parent or an individual's perceived risks of Vaccine-preventable diseases (VPD) is low, leading such individual to erroneously conclude that vaccination was not necessary. This attitude could be

towards a certain vaccine or vaccines. The ability of an individual or parents to make a call on whether to vaccinate or not depending on the risk gives a degree to which complacency can cause hesitancy[4].

The second objective of the study was to examine the relationship between content of information need and vaccine confidence. Respondents (parents) agreed to sought out information about vaccine content (M3.44, n=100), when compared to vaccine frequency, cost and method of administration. However, there was a significant relationship between the content of information and vaccine confidence. The content of a particular vaccine thus affect the confidence parents have towards such vaccines. For example, [6] explained that some parents skip vaccination in Malaysia because it contains Pigdeoxyribonucleic acid(DNA).

Conclusion

The content of vaccines have proven to be one of the key parametric of vaccine hesitancy. Parents pay a lot of attention to things like dosage, cost, ingredients, effects and method administration. Moreover, because vaccination is such a sensitive topic, it is always difficult to pin point what triggers refusal. We can only continue to build assumptions on results of studies like this. It is really not surprising that the source of vaccine information does not affect vaccine confidence because, parents actually use that as a means to satisfy their urge for vaccine information. However as stated above, some studies have found the relationship between source of information and vaccine complacency. Future studies might want to try to further examine that effect to great lengths.

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