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INTEGRATING MEASLES, MUMPS, AND RUBELLA BIOLOGICAL

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ABSTRACT

As the pandemic proceeds, it is possible that the provision of scientific data indicating that live attenuated vaccines have the capacity to prevent infection and/or minimise the severity of COVID-19 might have an influence on the regulations that govern public health. It is crucial, therefore, to determine whether or whether a live attenuated vaccine might be utilised to protect against infection with SARS-CoV-2 and hospitalisation for COVID-19, especially in children. Since 2018, the percentage of people in France receiving the MMR vaccination has gone up. By examining the impact of the live attenuated MMR vaccination on the risk of being hospitalised for COVID-19 in children using the countrywide French National Health Data System, we tested the hypothesis that this vaccine provides non-specific main protection against COVID-19 (SNDS).

keywords: Measles, Rubella, Biological

INTRODUCTION

In December of 2019, significant instances of pneumonia were found in the province of Hubei in the city of Wuhan (india). These instances were linked to a newly discovered virus known as severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). The virus quickly spread over the globe, and by the 31st of December 2021, it had infected more than 200 million individuals (ECDC COVID-19 situation update worldwide). During the same time period, France reported more than 10 million instances of the disease. Adults and the elderly with susceptibility characteristics are the most at risk for contracting the condition, and they also have a higher likelihood of developing severe forms of the illness. Children have always been the demographic that has been afflicted the least by severe forms of the disease, in comparison to adults.

The increased expression of the ACE2 gene (cellular receptors to which the coronavirus binds via protein S) with age is one biological reason that has been considered in the research that has been done on this topic. One such possibility is the cross-protection that was afforded by the use of earlier live attenuated vaccines. Research and clinical trials have been conducted to evaluate the protective efficacy of the Bilié Calmette–Guerin (BCG) and measles, mumps, and rubella (MMR) vaccinations against SARS-CoV-2 infection. These vaccines have been the topic of a number of studies and clinical trials. The potential of these vaccines to induce innate immunity, an immune response that is not disease-specific, has led to their consideration as potential treatments for a variety of illnesses. In groups that had received the MMR vaccine, both the severity of COVID-19 and the death rate were found to be lower than expected. MMR vaccinations have only been shown to provide protection against SARS-CoV-2 infection among male healthcare workers, according to the findings of a trial that was conducted more recently in Sweden.

As the pandemic proceeds, it is possible that the provision of scientific data indicating that live attenuated vaccines have the capacity to prevent infection and/or minimise the severity of COVID-19 might have an influence on the regulations that govern public health. It is crucial, therefore, to determine whether or whether a live attenuated vaccine might be utilised to protect against infection with SARS-CoV-2 and hospitalisation for COVID-19, especially in children. Since 2018, the percentage of people in France receiving the MMR vaccination has gone up. By examining the impact of the live attenuated MMR vaccination on the risk of being hospitalised for COVID-19 in children using the countrywide French National Health Data System, we tested the hypothesis that this vaccine provides non-specific main protection against COVID-19 (SNDS).

Despite the fact that vaccines against measles, mumps, and rubella (including trivalent vaccines), are widely used and effective, the main challenges to controlling these diseases are primarily related to insufficient immunisation coverage and changing vaccination needs as a result of the new global environment (e.g. traveling, migration, population density). Vaccine strategies need to be optimised and vaccination coverage has to be increased, both of which were severely affected further by the COVID-19 pandemic. This may be accomplished by gaining better knowledge of the particulars of disease transmission in each scenario. In addition to this, there should be a greater understanding of the potential severity of illnesses and the role that immunisations play. Improvements should be made to reminder systems, vaccination of disadvantaged, high-risk, and difficult-to-reach groups, accessibility of vaccination, healthcare infrastructure, and management of vaccination services. The preparation to deal with outbreaks should be increased, including the establishment of monitoring systems of a high enough quality to monitor epidemiology. Although these public health activities to boost vaccination coverage should be the primary emphasis, small improvements in already available vaccines may result in somewhat more positive outcomes.

Measles, mumps, and rubella (abbreviated as MMR) are highly infectious viral illnesses that place a considerable burden not only on those who get them but also on the healthcare systems that serve them. The measles is one of the most contagious illnesses that affect humans and

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may lead to severe sickness, consequences that last a lifetime, and even death. Although the death rate associated with mumps is lower than that associated with measles, the condition may still lead to complications such as orchitis, meningitis, encephalitis, and deafness. Infections with rubella may result in an illness that is generally mild in children; however, infections that occur in women during the early stages of pregnancy can have a negative impact on the baby and lead to either a miscarriage, the death of the foetus, or congenital rubella syndrome.

RESEARCH METHODOLOGY

It is well known that TBK is a rare and delicate substance that is mostly accessible orally. The study into the causes and treatments of various diseases is not only done by scientists and physicians, but also by LISc. Professionals who help the aforementioned users by giving the right information to the right user at the right time find it incredibly challenging, if not impossible, to obtain this information. It's similar to looking for a needle in a haystack. As a result, there is also no one scientific technique for gathering, processing, and analysing the data. The researcher devised a methodical strategy to execute the study TBK (MMR) with the aid of the guide, keeping these concepts in mind and the aim described in Chapter 1 in order to achieve the aforementioned objective and test the hypotheses. The following sections detail the methodology used, as well as the tools and technologies used for the investigation.

DESIGN OF RESEARCH METHODS

In order to develop the current research study, a number of books and journals were consulted, and then there was a conversation with the supervisors, traditional healers, and LISc. experts in the field. Busha & Halter (1980), Mahajan (2002), Savanur (2008), and Kothari are some of the books studied (2013). To gather the data for the majority of the aforementioned investigations on TBK, a mixed strategy is necessary (MMR). Consequently, a mixed strategy has been used. The study's approach was developed based on the goal and assumptions of the current work.

To gather first-hand information on TBK (MMR), a stratified sample survey approach was the primary methodology utilised in the qualitative research project. Questionnaires, scheduled interviews, observation, and desk research were also used as the primary data collection tools. However, in order to improve and reinforce its dependability in relation to TBK, descriptive, historical, and analytical methodologies were applied (MMR). Case studies, phenomenology, grounded theory, and ethnography are some examples of qualitative methods that were utilised to support the findings. Observational research, resampling, randomised controlled trials, regression analysis, multilevel modelling, and high dimensional data analysis are a few examples of quantitative approaches. "Bridging Traditional Biomedical Knowledge of Measles, Mumps, and Rubella and Modern Science in India: A Critical Paper" is the title of the study. To gather the data, a thorough survey of traditional healers (THs) and organisations associated to TBK (MMR), traditional healers (THs) of different regions, as well as certain patients/guardians of patients, was conducted between 2013 and June, 2015. Even certain tribal

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territories were attempted to be directly covered by personal visits, the dispatch of messengers, or the use of translators. The questionnaire was the primary instrument, but additional recorded, semi-recorded, and unrecorded or spoken information from several sources was also used to support it. Wherever practicable, the questionnaire was distributed by mail, then followed by emails and personal visits to the respondents. To gather information for the study, in-person interviews with tribes and people were conducted as well. It was also determined to gather data for the study from the TBK's registered sources (MMR). The table provides information on the respondents, including their age, sex, level of education, experiences, etc.

DATA ANALYSIS

The data was verified, processed, and validated, including editing, coding, categorising, and tabulating it, in accordance with the design and outline of the research study and to achieve the purpose of the study as stated in the outline established at the time of generating the research plan. To get the desired outcomes, questions were created which aid in the organisation and presentation of the data in tabular and graphical forms. The data were gathered from 500 traditional healers and other sources using a stratified sample survey approach, a questionnaire schedule, and interviews as a tool for the study. Each question was answered based on the results of the analysis and computation of the data. Table-9. The raw data gathered from healers and other recorded sources is also correlated with other questionnaire-provided characteristics. Below are specifics of the findings (main findings), observations, and their analyis and interpretations.:

PERSONAL INFORMATION OF THE RESPONDENTS

To enable the researcher to correlate with the other variables formulated in chapter 1 and the questionnaire, the respondents were asked (QN.1-QN.12) for their personal consent and information regarding their knowledge of languages, age, sex (gender), marital status, total experience (TBK), educational background, occupation, and TBK-based treatment of MMR. Tables 14 through 20 provide a summary of the comments that were submitted. The aforementioned details are necessary to tie TBK (MMR) to other criteria, including knowledge base, regional names for MMR, treatment, and plants and their components. Numerous drug formulations and dosage forms, traditional knowledge held by traditional healers (THs), suppliers of herbal plants used in the treatment of TBK (MMR), the location of the plants, the time of year they are harvested, scientific indigenous diagnostic methods, spiritual sources of medicine, associations with TBK (MMR), other purposes for TBK (MMR), the specific costs associated with TBK, the commercial value of TBK, and the number of students (shishaya's/disciple) Below is a summary of the responses' specifics:

Consent and Name Address (QN.1-3)

Traditional knowledge is private information that usually belongs to a person or family. It resembles their private property. The researcher has obtained the agreement of each and every respondent in order to avoid further issues. The participants in this study are just

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those who agreed to share their information.

TBK and languages Known to THs (QN.4-5)

Respondents were asked to identify their understanding of the many languages they were familiar with because language is the main barrier to effective data collection and communication in the TBK. Because their TBK needs to be communicated at the national and international levels and needs transformation, this question was explicitly posed to the various THs to get as much information as possible regarding research work that is currently available in their local language(s) or dialect(s). A question with many choices was posed. Table-.1 lists the respondents' comments that were submitted**.**

Table 1 Language Wise Respondents

Sr.No	Languages	No. Of Respondents	Percentage (%)
1.	ENGLISH	172	34.4
2.	GUJRATI	15	3.0
3.	HINDI	271	54.2
4.	MARATHI	47	9.4
4.	MALAYALAM	30	6.0
6.	KANNADA	15	3.0
7.	SANSKRIT	42	8.4
8.	TAMIL	25	4.
9.	TELUGU	23	4.6
10.	URDU	19	3.8
11.	PUNJABI	17	3.4
12.	ASSAMESE	13	2.6
13.	KASHMERI	10	2.0
14.	MANIPURI	9	1.8
14.	ODIA	10	2.0

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16.	NEPALI	13	2.6
17.	SANTALI	22	4.4
18.	KONKANI	18	3.6
19.	MIZO	7	1.4
20.	MAITHILI	39	7.8

According to Table-1, more than half (maximum) of the 271 respondents (54.2%) were fluent in Hindi. It might be a result of the national language being English 172 (34.4%), followed. Additionally, some respondents knew some Hindi. Few people have admitted that they are unable to read, write, or speak Hindi. Since the majority of the respondents were literate and had left their home country for a variety of reasons, However, the minimum reported Mizo 7 (1.4%) and Manipuri 9 (1.8%) respondents. It can be because of the tiny population, the lack of migration, or other geographical factors. The majority of people have knowledge in multiple languages. India is a multi-ethnic nation in terms of language, to sum it up. Therefore, the major hurdles for researchers to gather, compile, translate, and preserve TBK-MMR in India for the current study are owing to language problems and literature available in local but restricted language.

TBK-MMR and Sex-wise Respondents (QN.6)

Since the majority of infectious child ailments in India, including MMR, are treated by grandmothers, despite the fact that it is known as a country where men predominate, this knowledge cannot be limited to any sex (DADI MAA). In order to correlate data with other criteria, the respondents were additionally asked (QN.6) to indicate their sexual orientation. The response's specifics have been condensed in Table-2**.**

Table 2 Sex wise Respondents

Sr. No	Sex	No. of Respondents	%
1	Male	385	77
2	Female	115	23
3	Others (Third Gender)	0	0
	TOTAL	500	100

None of the respondents, according to Table-4.2, were of the third gender. No explanation

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has been given. The bulk of responses, 385 (77%) were men, and the remaining 115 (23%) were women. It can be a result of India's patriarchal society. Additional correlations between this data and the questionnaire's other factors have been made.

Familiarity: With Plants/Herbs among the Traditional Healers (QN.18)

In order to TBK-MMR in India, there are many different ways and techniques to acquire knowledge. The input received has been compiled in Table-4.18. Respondents were asked to express their opinions regarding the familiarity, collecting, harvesting, and supply of knowledge of TBK-MMR.

Table 3 Familiarity with Plants / Herbs among the Traditional Healers

Sr. No	Means of Familiarity	Total Respondent	Percentage (%)
1	Read during study	126	24.2
2	Know through family	150	30
3	Know through Guru	87	17.4
4	Know through society	117	23.4
5	Others	20	4

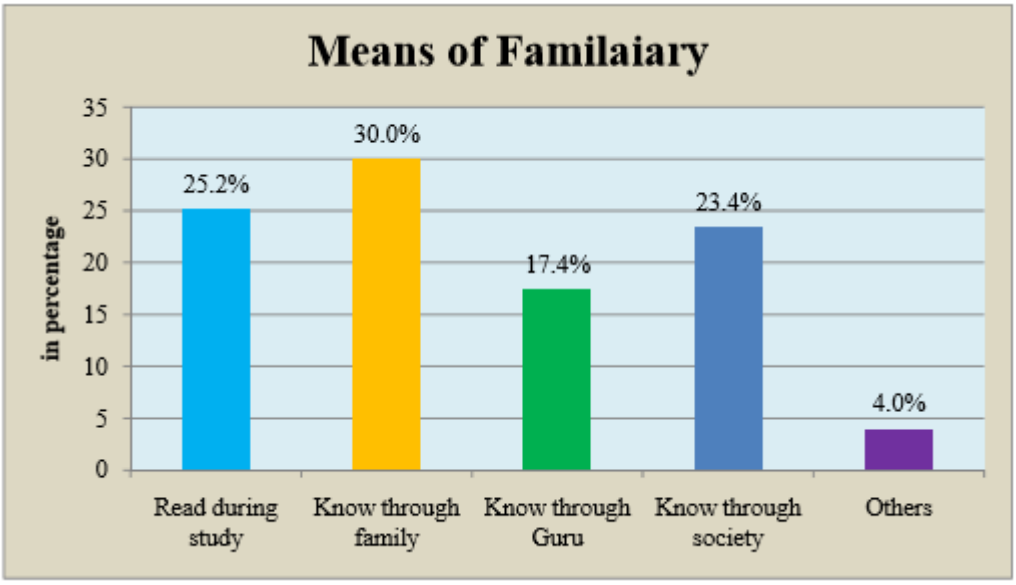

Figure 1 Familiarity with Plants/ Herbs among the Traditional Healers

Table 1 and Figure 1. plainly show that the majority of respondents (30%) answered that

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they were familiar through family, followed by (25%) read while studies, and the minority (4%) suggested others. It can be inferred that there are various ways to contract TBK-MMR.

CONCLUSIONS

The biological variety and traditional knowledge (TBK) resources that India possesses are immense. The current survey is being carried out with the intention of enhancing TBK-MMR in India. The research presents a one-of-a-kind illustration of the TBK-MMR. In countries like India, where only TBK is accessible as a source of healthcare, 65 percent of the population relies on it (253). It is not just accessible financially, but it is also deeply rooted in the customs and beliefs of the people there. Many fascinating and helpful facts concerning TBK-MMR have been uncovered as a consequence of the present study and previous studies that were conducted in the past that were based on the literature. On the basis of the aforementioned findings and observations the following recommendations and proposals are given to increase the use of TBK-MMR in India and internationally in the benefit of human beings. This chapter discusses the academic importance and ramifications of this research. The study also includes a discussion of its academic and research usefulness for further research.

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