

SYNOPSIS

TITLE

From addressing Hesitancy to ensuring Confidence: Investigating the Effects of the International Pediatric Association's Vaccine Trust (VTP) Course.

INTRODUCTION

Despite the fact that vaccination rates have gone up globally, childhood vaccine-preventable diseases may be on the rise as a result of the growth of non-medical vaccination exemptions.

The World Health Organization ranks vaccine hesitancy as one of the top ten worldwide threats to public health, and it contributes significantly to the declining immunization rates. (Renee Garrett, 2021). Despite significant advancements, a projected 23 million children—3.7 million more than in 2019—did not receive their recommended vaccinations in 2020. The WHO Southeast Asian and Eastern Mediterranean Regions were most severely hit by vaccination service disruptions in 2020. In all locations, the number of children who did not receive even their initial immunizations grew when access to health care and immunization outreach were tightened. 3 million more children missed their first dose of measles and 3.5 million more children missed their first dose of the DTP-1 vaccination, respectively, compared to 2019 (1)

To ensure vaccine uptake, communities and people must be aware of and accept vaccinations. Vaccine availability and accessibility to immunization services are also critical. Many communities and nations have different reasons why people choose not to get vaccinated. These reasons can include things like not having access to high-quality healthcare or vaccination services, being in conflict or being uprooted, holding onto traditional cultural beliefs, low disease salience, misinformation about vaccines, mistrust of vaccination providers, and concerns about the safety or efficacy of vaccines(2).

Reluctance or reluctance to receive vaccinations may be influenced by communication difficulties among healthcare workers (HWs). Unfounded rumors and false information can spread quickly in communities when trustworthy information on vaccinations is not shared. Such false information and misinformation regarding vaccinations and diseases that can be prevented by vaccinations can have a negative effect on vaccination acceptance. As such, it must be handled carefully and promptly, adhering to the fundamentals of misinformation management (3). The fact that pediatricians and other health workers are frequently untrained in vaccine communication is a significant underlying issue. They are unsure about how to approach, identify, and then address particular problems in a cooperative way that would foster trust in order to convey the right messages to boost confidence and come up with solutions to deal with reluctance. Their pre-service or training curricula frequently did not include vaccination communication training and One of the suggestions made by the WHO Strategic Advisory Group of Experts (SAGE) on vaccination was supported by these insights: HWs should be given the authority to deal with patients' and parents' concerns about vaccine hesitancy both inside and outside of the immunization program(4).

Phase I of the International Pediatric Association's (IPA) Vaccine Hesitancy Study 164 professional societies of pediatricians from over 149 countries are represented by the IPA, the only global organization of its kind. Assisting in the promotion of children's physical, mental, and social well-being is the goal of the International Pediatric Association (IPA), which aims to raise global standards of health for infants, kids, and teens. Routine childhood immunization is essential for the health and well-being of newborns, kids, and teenagers, as was previously mentioned.

Under academic grants from Sanofi Vaccine Division and Serum Institute of India, IPA launched the Vaccine Hesitancy Project in December 2018 with support from the United Nations Children's Fund (UNICEF), International Vaccine Access Center (IVAC), and Global Health Strategies (GHS). The project's objectives are to decrease vaccine hesitancy in communities, increase demand for immunization, and help achieve the targets of the Global Vaccine Action Plan (GVAP) and the Sustainable Development Goals (SDGs). The first International Training of Trainers (ToT) workshop was held by IPA from December 14–16, 2018, in New Delhi, India, while the second workshop took place from March 16–17, 2019, in Panama City. IPA developed a pool of Master Trainers through these workshops, and these trainers were assigned to lead a series of seminars on vaccination hesitancy in their home nations. It was recommended that these trainers routinely discuss vaccination hesitancy in their nation and area and pool their knowledge and expertise. (5)

Phase II of the IPA Vaccine Trust Project

As a result of the program's success, the project's second phase, which aims to increase resilient public faith in immunization across the globe, was renamed the "IPA Vaccine Trust Project" in 2019. The United States and Canada, Latin America, Sub-Saharan Africa, Middle East and North Africa, Central Asia, Europe, and the Asia Pacific were the seven regions of IPA where IPA intended to perform ToTs in Phase II.

Nevertheless, the COVID-19 epidemic stepped in and encouraged the creation of a significant training program modification. In 2020, the IPA changed the course curriculum and methods with the help of the Project Advisory Group (PAG). The curriculum changed from in-person instruction to a self-paced online course. IPA provides HWs who provide or promote vaccines and immunization with free online training, the Vaccine Trust Course, using the IPA Learning Management System (LMS) in seven languages: English, Spanish, French, Portuguese, Turkish, Arabic, and Russian. This report details the outcomes, relevance, efficacy, and participation of the 12-month online Vaccine Trust Course from October 2022 to October 2021.

RESEARCH QUESTION

How does the vaccination knowledge level among participants change before and after training, and what are the perceptions of participants regarding the quality of delivery, including speaker quality, accessibility, and timeliness, in each module?

OBJECTIVES

1. To compare the pre-and post-training knowledge levels regarding vaccination among the participants of the course.
2. To determine the participation rates.
3. To assess participant feedback on the quality of the delivery of each module, including speaker quality, accessibility, and timeliness.

HYPOTHESIS

Health workers who complete the International Pediatric Association's Online Vaccine Trust Course will demonstrate a statistically significant increase in effective communication strategies regarding immunization, which in turn will correlate with increased vaccine acceptance and uptake in their respective communities, compared to health workers who have not completed the course.

This hypothesis establishes an expected relationship between the independent variable (completion of the Online Vaccine Trust Course) and dependent variables (effective communication strategies, vaccine acceptance, and vaccine uptake). It poses that the course has a direct effect on health workers' abilities, which will be reflected in measurable changes in community vaccination rates.

MATERIAL AND METHODS

STUDY DESIGN: The research will adopt a mixed-method study design which would include Secondary Data Analysis.

SETTING: The research will be conducted in a diverse range of healthcare settings internationally, focusing on locations where health workers are active participants in delivering vaccination programs. These settings may include urban and rural healthcare centers, hospitals, and community clinics. Health workers in these settings who have completed the International Pediatric Association's Online Vaccine Trust Course will be the primary subjects of the study.

STUDY POPULATION

Inclusion criteria

Health workers from various disciplines who have completed the International Paediatric Association's Online Vaccine Trust Course.

1. Participants who consent to be part of the study.
2. Health workers actively engaged in delivering vaccination services.
3. Participants from diverse geographical locations to ensure a broad representation.

Exclusion criteria

1. Those who have not enrolled in the course.

STUDY TOOLS

Surveys: Pre-training and post-training surveys will assess changes in health workers' attitudes towards vaccines, communication skills, and confidence in addressing vaccine hesitancy among caregivers and patients. These surveys aim to provide insights into the impact of the Online Vaccine Trust Course on participants' perceptions and practices.

Assessments: Pre-test and post-test assessments will evaluate health workers' knowledge levels regarding vaccination. This quantitative data will measure knowledge improvement among course participants, indicating the effectiveness of the training in enhancing understanding of vaccination-related topics.

Module-specific Evaluations: Evaluations will be conducted for each course module to measure their impact on vaccine advocacy and communication strategies. These assessments will identify the most effective aspects of the training program in equipping health workers with skills to promote vaccine acceptance and uptake.

Likert Scale Questionnaires: Participants will provide feedback on course content, delivery, and relevance using Likert scale questionnaires. This qualitative data will complement quantitative assessments, capturing participants' perspectives on the training program's effectiveness and areas for improvement.

Data Analysis: Statistical software will be used to analyze collected data, employing descriptive statistics, inferential analyses, and correlation assessments. This analysis will determine the relationship between health workers' participation in the Online Vaccine Trust Course and changes in vaccine acceptance and uptake within their communities.

DURATION OF STUDY: 3 Months.

SAMPLE SIZE: 1527 Participants

SAMPLING TECHNIQUE

The study will employ convenience sampling to recruit participants for the Online Vaccine Trust Course who enrolled between October 2021 to October 2022. Participants will be recruited globally through the International Pediatric Association's course database. The course will be promoted primarily through IPA's networks, national member associations, and individuals who have completed the course to encourage enrollment. This sampling technique allows for easy access to a broad cadre of healthcare workers, including pediatricians, nurses, midwives, public health professionals, and program managers, who are interested in enhancing their vaccine communication and advocacy skills. Additionally, the study will include all participants who enroll for the self-paced online course and complete it within the specified timeframe, ensuring a comprehensive representation of healthcare workers from various countries and backgrounds.

DATA COLLECTION PROCEDURE

The data collection procedure will primarily involve conducting secondary data analysis, wherein existing datasets pertinent to the research objectives will be identified and analyzed. The variables will be measured through systematic review and extraction from reliable sources, ensuring adherence to established methodologies and criteria.

OPERATIONAL DEFINITIONS

Attitudes towards Vaccines: Participants' beliefs and perceptions regarding the importance and efficacy of vaccines in preventing diseases and promoting public health.

Communication Skills: The ability of participants to effectively convey information about vaccines, address concerns, and engage with caregivers and patients in discussions about immunization.

Vaccine Hesitancy: The reluctance or refusal to vaccinate despite the availability of vaccines, influenced by factors such as safety concerns, misinformation, and lack of trust in healthcare providers.

Knowledge Improvement: The increase in participants' understanding of vaccination-related topics, including vaccine safety, efficacy, and importance, was measured through pre-and post-test assessments.

Vaccine Advocacy: Participants' efforts to promote the value of vaccination, increase demand for immunization, and address vaccine hesitancy within their communities.

DATA ANALYSIS PLAN

Software: The data collected for the study will be analyzed using SPSS software.

Descriptive Statistics: Descriptive statistics will be used to summarize the characteristics of the study participants, including gender, age group, cadre of health workers, and country of origin.

Tests of Significance

- **Univariate Analysis:** Univariate analysis will be conducted to examine the distribution and characteristics of individual variables, such as attitudes towards vaccines, knowledge improvement, and vaccine advocacy.
- **Bivariate Analysis:** Bivariate analysis may be employed to explore relationships between two variables, such as the impact of the course on participants' attitudes and behaviors towards vaccination.
- **Multivariate Analysis:** Multivariate analysis may be utilized to assess the combined effect of multiple variables on outcomes related to vaccine acceptance and uptake.

Level of Significance: The level of significance for statistical tests will be set at $p < 0.05$.

ETHICAL CONSIDERATIONS

Confidentiality: Participant data will be treated with strict confidentiality, and only authorized personnel involved in the study will have access to the collected information. Data will be used for research purposes only and will not be shared with third parties without consent. Participant information will be anonymized and stored securely to prevent unauthorized access or disclosure.

IMPLICATIONS OF RESEARCH

- **Population Impact:** The research findings from the study on the Online Vaccine Trust Course can contribute to enhancing healthcare workers' knowledge, skills, and attitudes towards vaccination. This, in turn, may lead to improved vaccine acceptance and uptake rates among communities, ultimately benefiting public health outcomes.
- **Industry Relevance:** The insights gained from the study can inform the development of future training programs and educational initiatives aimed at addressing vaccine hesitancy and promoting immunization advocacy among healthcare workers globally. The findings may also guide policy decisions and strategies to strengthen vaccination efforts and combat misinformation in the healthcare industry.

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