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REVIEW PAPER

Knowledge, attitudes, and practices regarding vaccination among caregivers of children under five years: a review

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ABSTRACT

Immunisation is one of the most effective, affordable, and highly beneficial healthcare initiatives for preventing, controlling, and eradicating diseases, particularly in children, sparing millions of lives yearly. Despite tremendous efforts over the years by the government and other health organisations, complete immunisation coverage has not yet been reached, and many infants and children are still deprived of its benefits. This is mostly because of insufficient community involvement in routine immunisations and inadequate IEC campaigns and advertising. The extent of knowledge, attitudes, and practices (KAP) among the caregivers of children towards Immunisation plays an important role in boosting vaccination rates, preventing vaccine-preventable diseases in children and minimising potential errors regarding vaccination and their adherence to the guidelines established by the Ministry of Health and Family Welfare, India. This review paper aims to provide a valuable, informative, and critical summary of the important aspects of knowledge, attitudes, and practices regarding vaccination among caregivers of children under five.

Key-words: Immunisation; Universal Immunization Programme; Caregiver; infectious diseases

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INTRODUCTION

Vaccination is one of the most efficient, economical, and highly advantageous public health measures worldwide for preventing, controlling, and eliminating diseases, particularly in children, saving millions of lives annually. In addition to reducing the overall incidence of infectious diseases, vaccinations improve community health by fostering herd immunity; hence, universal coverage is now being advocated, primarily for the underprivileged and isolated populations.

When it comes to routine vaccinations, the most susceptible demographics in the

community is pregnant women, young adults and children under five. Approximately onefourth of all under-five mortality in India between 2000 and 2015 was caused by vaccine-preventable diseases, such as measles, pneumonia, and diarrhoea.¹ While the global drop in the under-5 mortality rate since 1990 has been 60%, India has seen a greater decline of 75%.² This is a major attainment of vaccination, which continues to be a key emphasis area in India's incredible journey to reach universal Immunisation. Despite the devastating and unexpected effects of the recent COVID-19 outbreak, many parents and

other caregivers of children are still hesitant to receive vaccines, despite the government's and the media's concerted efforts to make vaccinations universal.³

Caregivers' KAP regarding vaccination are the most crucial factors that could contribute towards the Immunisation of their children and adhere to full compliance with the guidelines laid down by the Ministry of Health and Family Welfare, Government of India, thus enhancing the rates of Immunisation, countering vaccinepreventable diseases in children and other beneficiaries and preventing possible errors of vaccination. This review paper explains the importance of KAP regarding vaccination among caregivers of children under five years.

IMPORTANCE OF IMMUNISATION

Immunisation is administering a vaccine to a person to create immunity against a disease. Children receiving vaccinations are protected against dangerous diseases like whooping cough, tetanus, polio, measles, and diphtheria. Vaccines are a tried-and-true method of preventing these potentially fatal diseases. Vaccinations significantly reduce child mortality rates. Illness prevention helps to ensure children's health and enable them to develop fully. Immunisation is essential for fundamental health care, an unassailable human right, and one of the best financial investments in one's health. Additionally, vaccinations are essential for stopping and managing infectious disease epidemics. They are a key weapon in the fight against antimicrobial resistance while promoting global health safety.

UNIVERSAL IMMUNIZATION PROGRAMME IN INDIA

The **Universal Immunization Programme** (**UIP**) is India's extensive vaccination program. Established in 1985, it is among the world's biggest public health initiatives. The UIP offers free vaccinations against vaccine-preventable illnesses like polio, measles, rubella, hepatitis B, diphtheria, pertussis, and tetanus. The initiative aims to reach over 2.67 crore babies and 2.9 crore expectant mothers annually. Along with reaching important milestones like the eradication of polio in 2014 and maternal and neonatal tetanus in 2015, it has played a key role in lowering the under-5 mortality rate.⁴

As of fiscal year 2023-24, India's countrywide complete immunisation coverage is 93.5%.⁵ This high coverage is the product of the Universal Immunization Program (UIP) and special catch-up efforts like Mission Indradhanush and Intensified Mission Indradhanush, which aim to vaccinate left-out and dropped-out children and pregnant women in areas with poor immunisation coverage.⁵ This is a noteworthy achievement, but there are still pockets where coverage is lower, and efforts are ongoing to ensure that every child receives the necessary vaccines. Immunisation rates are considerably greater in urban India than in rural India. This increasing coverage is ascribed to improved healthcare infrastructure, more knowledge, and easier access to vaccination services in metropolitan areas. In Assam, the full immunisation coverage for the financial year 2023- 24 is 85.4%, far below the national average of 93.5%.⁵

COMPLETE IMMUNISATION: NOT TOO FAR YET NOT REACHED

Vaccination is one of the most effective public health interventions, significantly reducing morbidity and mortality amongst under-five children associated with infectious diseases which are otherwise vaccinepreventable. It is reported that more than 20% of under-five mortality is due to vaccinepreventable diseases.⁶ As per WHO reports, globally, 14.5 million children did not receive vaccinations in 2023, and another 6.5 million were just partially vaccinated.7 Complacency, convenience, and confidence are some of the characteristics that contribute to vaccine hesitancy, which can have a significant effect on child development, morbidity, and mortality.8 Recently, the COVID-19 pandemic has posed severe threats to the global health scenario and brought unprecedented challenges to humanity's continued well-being, claiming

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0.534 million lives in the Indian subcontinent and 7.1 million lives globally.⁹ India had significant drops in childhood immunisation rates in the early phases of the COVID-19 epidemic.³ During this period, children in India had decreased regular immunisation coverage and faced longer vaccine delays.^{10,11} Unavailability of vaccines and caregivers' fear of being infected were documented to be the cause of substantial delays in Immunisation during the outbreak of Covid19.¹²

Despite years of concrete efforts from the government and other health agencies, the coverage of vaccination has not yet been satisfactory, and a large population of infants and children remain deprived of its benefits, contributed majorly by the inadequacy of community participation in routine Immunisation and lack of effective IEC activities and propaganda. Even though the Indian government provides free and mandatory immunisation services, coverage may still be below ideal in some rural areas due to several factors, including a lack of knowledge, cultural barriers and beliefs, socioeconomic limitations, societal norms, a shortage of skilled workers, and challenges in accessing healthcare, among others.¹³

KNOWLEDGE, ATTITUDES, AND PRACTICES REGARDING VACCINATION AMONG CAREGIVERS

The rural population in India remains cornered in receiving the full benefits and advantages provided by government policies and schemes. The level of knowledge among caregivers of children under five is assumed to be vital in closing the barriers to compliance with effective vaccination. It is crucial to identify knowledge gaps among caregivers of children under five regarding vaccination schedules, advantages, and possible side effects, as well as the factors and variables influencing their level of knowledge. A recent study documented place of delivery, availability of vaccination cards and socioeconomic status as the significant factors affecting complete Immunisation.¹⁴ Providing outreach services for home-delivered babies, extending the immunisation period, and educating mothers about vaccinations are vital interventions in increasing immunisation coverage.¹⁵ A study from India observed that 19.5% of parents under study reported their children had not received the recommended vaccinations on time.¹⁶ To get 100% immunisation and zero dropouts, vaccinations must be given at the scheduled time.^{16,17} A recent study from Kerala documented a substantial knowledge gap among carers regarding newer vaccinations and modifications in the immunisation schedule. The influence of anti-vaccination campaigns on attitudes towards vaccination was also highlighted in the study.¹⁸

ROLE OF HEALTH WORKERS

Health workers' attitudes, treatment methods, technical performance, and communication with caregivers significantly impact treatment effectiveness, client satisfaction, and willingness to use health services. Health professional skills impact vaccination coverage and dropout rates, protecting individuals and communities from avoidable illnesses. Interactions between health workers and caregivers at facilities or outreach sites can influence the immunisation rates. Interactions between health workers and caregivers might impact vaccination coverage and dropout rates for children, as Immunisation takes numerous service encounters. Caregivers may experience embarrassment, unpleasant treatment, or inadequate explanations of side effects and follow-up doses from healthcare professionals. Caregivers of partially and unimmunised children reported not completing immunisations due to unfavourable experiences with previous healthcare treatments. Those who had a terrible experience with one child might avoid vaccinating another child. Also, in areas with recurrent vaccine shortages, health staff may refuse to administer multidose immunisations like measles or BCG to a small number of children. The most prevalent erroneous contraindication is to immunise a

child who is ill or undernourished. Healthcare providers should encourage communication with caregivers regarding key information like side effects and return dates. Caregivers may avoid asking questions because of privacy concerns, pressure from waiting clients, or fear of the vaccine's reaction. Encouraging caregivers to ask questions and express concerns during health seminars and community activities, as well as providing detailed information about side effects and return dates, may increase their knowledge about Immunisation and thus result in a positive attitude towards complete Immunisation.¹⁹ Improved knowledge, attitude, and practice substantially correlated with enhanced patient-physician communication. Higher levels of knowledge were substantially linked to better attitudes, whereas higher knowledge and attitudes were linked to improved practices.²⁰

ROLE OF MEDIA

Increased internet and media penetration and online news content will likely alter public views and attitudes towards vaccination. Social media and communication issues hampered the measles-rubella immunisation campaign in several areas of India. Negative vaccination news makes up a large amount of web news and has the potential to impact public vaccine sentiment and attitudes. The public response to measles-rubella, pentavalent, and human papillomavirus vaccinations indicates the importance of thorough media mapping and tracking to maintain public vaccine trust and boost coverage.²¹ Concerns about Adverse Events Following Immunisation (AEFI), which can include mild side effects like fever

and swelling, and unfounded myths and misconceptions about vaccines are the main causes of vaccine hesitancy, which makes communities susceptible to outbreaks in the ongoing fight against measles and rubella. It takes a team effort to overcome vaccine reluctance, and the media is essential in fostering public confidence, busting falsehoods, and reaffirming the efficacy of vaccinations.

CONCLUSION

The effectiveness of immunisation programmes mostly depends on the caregiver's attitude and level of knowledge. Enhancing vaccination coverage and avoiding vaccinepreventable illnesses depend heavily on parents' KAP about vaccination among children under five. Healthcare providers are also the key to achieving the optimal health status of the population. The attitudes of the caregivers of children towards Immunisation and the development of trust in healthcare workers are essential. Assessment of the caregivers' attitudes and practices can uncover specific cultural or systemic factors associated with hesitancy.

Given the high stakes of under-5 vaccination in preventing childhood illnesses, assessment of KAP regarding Immunisation amongst parents of under-five children can be beneficial in bridging the gap between policy and practice. Assessment of KAP in the selected rural setup can reflect on the pre-existing lacunae and contribute towards the potentiality of raising the awareness of vaccine schedules and targeting health education interventions during visits to the hospital to sustain and improve routine immunisation coverage.

REFERENCES

- Million Death Study Collaborators. Changes in cause-specific neonatal and 1-59-month child mortality in India from 2000 to 2015: a nationally representative survey. Lancet. 2017 Oct 28;390(10106):1972-1980. doi: 10.1016/S0140-6736(17)32162-1.
- Ministry of Health & Family Welfare Govt of India. Achievements under National Health Mission (2021-24): a milestone in improving India's public health outcomes. 2025 [cited 2025 Feb 10]; Available from: URL: https://www.mohfw.gov.in/?q=pressreleasetb-3

Official Publication of Academy of Health Research and Medical Education (AHRME)

- 3. Shet A, Dhaliwal B, Banerjee P, DeLuca A, Carr K, Britto C, et al. Childhood immunisations in India during the COVID-19 pandemic. BMJ Paediatr Open. 2021 Apr 14;5(1):e001061. doi: 10.1136/bmjpo-2021-001061.
- 4. Ministry of Health & Family Welfare Govt of India. Universal immunisation programme. [cited 2025 Feb 10]; Available from: URL: https://mohfw.gov.in/sites/default/ files/41016395871489662752.pdf
- 5. Ministry of Health & Family Welfare Govt of India. Update on Immunisation of children. 2024 [cited 2025 Feb 12]; Available from: URL: https://pib.gov.in/PressReleasePage. aspx?PRID=2042058
- Perin J, Mulick A, Yeung D, Villavicencio F, Lopez G, Strong KL, Prieto-Merino D, et al. Global, regional, and national causes of under-5 mortality in 2000-19: an updated systematic analysis with implications for the Sustainable Development Goals. Lancet Child Adolesc Health. 2022 Feb;6(2):106-115. doi: 10.1016/S2352-4642(21)00311-4.
- 7. World Health Organisation. Immunisation coverage. 2024 [cited 2025 Feb 12]; Available from: URL: Immunisation coverage
- Nuwarda RF, Ramzan I, Weekes L, Kayser V. Vaccine hesitancy: contemporary issues and historical background. Vaccines (Basel). 2022 Sep 22;10(10):1595. doi: 10.3390/ vaccines10101595.
- 9. World Health Organisation. WHO COVID-19 dashboard [cited 2025 Feb 13]; Available from: URL: https://data.who.int/dashboards/covid19/deaths
- 10 Chakrabarti A, Bair EF, Thirumurthy H. Routine child immunisations in India during the COVID-19 pandemic. SSM Popul Health. 2023 Jun;22:101383. doi: 10.1016/j. ssmph.2023.101383.
- Summan A, Nandi A, Shet A, Laxminarayan R. The effect of the COVID-19 pandemic on routine childhood immunisation coverage and timeliness in India: retrospective analysis of the National Family Health Survey of 2019-2021 data. Lancet Reg Health Southeast Asia. 2023 Jan;8:100099. doi: 10.1016/j.lansea.2022.100099.
- 12. Mishra K, Mohapatra I, Sarathi Mohapatra P, Madhusikta S, Parimita P. Challenges and barriers to Immunisation during COVID-19: An experience of parents/caregivers from a well-baby clinic of a tertiary care hospital of Eastern India. Clin Epidemiol Glob Health. 2023 Jan-Feb;19:101200. Doi: 10.1016/j.cegh.2022.101200.
- 13. Shrivastwa N, Wagner AL, Boulton ML. Analysis of state-specific differences in childhood vaccination coverage in rural India. Vaccines (Basel). 2019 Feb 24;7(1):24. doi: 10.3390/vaccines7010024.
- Srivastava S, Fledderjohann J, Upadhyay AK. Explaining socioeconomic inequalities in immunisation coverage in India: new insights from the fourth National Family Health Survey (2015-16). BMC Pediatr. 2020 Jun 16;20(1):295. doi: 10.1186/s12887-020-02196-5.
- 15. Ali AHM, Abdullah MA, Saad FM, Mohamed HAA. Immunisation of children under 5 years: mothers' knowledge, attitude and practice in Alseir locality, Northern State, Sudan. Sudan J Paediatr. 2020;20(2):152-162. doi: 10.24911/SJP.106-1586870453.

Official Publication of Academy of Health Research and Medical Education (AHRME)

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16. Jelly P, Jeenwal N, Wadhwa N, Kumari N, Kumari P, Mathur P, et al. Knowledge, attitude, compliance and barriers of Immunisation among parents of under-five children. International Journal of Africa Nursing Sciences 2023; 19:100608. doi.org/10.1016/j. ijans.2023.100608. [cited 2025 Feb 15]; Available from: URL:

https://www.sciencedirect.com/science/article/pii/S2214139123000835

- 17. Rao M IS, Kasi SG, Dhir SK, Wadhwa A, Rajsekhar B, Kumar CM, et al. Indian academy of pediatrics (IAP) advisory committee on vaccines and immunisation practices (ACVIP): recommended immunisation schedule (2023) and update on Immunisation for children aged 0 through 18 years. Indian Pediatr. 2024 Feb 15;61(2):113-125. [cited 2025 Feb 15]; Available from: URL: https://www.indianpediatrics.net/feb2024/113.pdf
- 18. Navaneetha N, Abraham SB, Thomas T, Mary R. B, Abbas H. Knowledge and perceptions regarding Immunisation among mothers of under-five children: a community study from South Kerala. Int J Contemp Pediatr. 2019 Dec. 24;7(1):66-71. [cited 2025 Feb 19] Available from: URL: https://www.ijpediatrics.com/index.php/ijcp/article/view/2911
- World Health Organisation. A guide for exploring health worker/caregiver interactions on Immunisation. 2018. [cited 2025 Feb 20] Available from: URL: https://cdn. who.int/media/docs/default-source/immunization/demand/hw-kap-2018-en. pdf?sfvrsn=487cfed_2
- 20. Matta P, El Mouallem R, Akel M, Hallit S, Fadous Khalife MC. Parents' knowledge, attitude and practice towards children's vaccination in Lebanon: role of the parent-physician communication. BMC Public Health. 2020 Sep 22;20(1):1439. doi: 10.1186/s12889-020-09526-3.
- 21. Das MK, Singh D, Sharma S. Media news on vaccines and vaccination: The content profile, sentiment and trend of the online mass media during 2015–2020 in India. Clinical Epidemiology and Global Health. 2021;10:100691. doi.org/10.1016/j. cegh.2020.100691. [cited 2025 Feb 20]; Available from: URL: https://www.sciencedirect.com/science/article/pii/S221339842030261X

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