

ORIGINAL ARTICLE - PUBLIC HEALTH

A CROSS SECTIONAL STUDY ON PERCEPTIONS AND ATTITUDES OF PATIENTS ABOUT ADULT VACCINATION AND THEIR VACCINATION STATUS

Gokila Preethi C L ⁽¹⁾, Uma Maheswari R ⁽¹⁾, Prabhakaran B ⁽¹⁾

(1) - Institute of Community Medicine, Madras Medical College

Abstract

BACKGROUND : One of the most important and effective measures in public health to prevent a disease is vaccination. The attitudes of the physicians along with the patients regarding adult vaccination is very important. In adults, vaccine-preventable diseases such as pneumonia, hepatitis B, tetanus etc are a source of morbidity and mortality. However, in India, as like the rest of the world, children remain the focus of vaccination and its importance and need in adults is yet to be emphasized. In this study, we have aimed to assess the perceptions and attitudes of patients about adult vaccination and their vaccination status in a Primary Health Centre (PHC) in Tamilnadu.

OBJECTIVES : To assess the perceptions and attitudes about the adult vaccination and their vaccination status among patients attending OPD in Medavakkam PHC

METHODS : A cross sectional study was conducted from July to September 2021 among 165 adult patients attending OP in Medavakkam PHC using a pretested, semi structured questionnaire. Data was entered in Excel and analyzed using SPSS version 16.

RESULTS : Interview was conducted among 165 participants aged more than eighteen years, nearly 92.7% of the study participants thought that adults should be vaccinated, while only 7.3% thought adults should not be vaccinated. About 80% of the participants stated that vaccination was recommended to them in their adult life and only 83% were aware about adult vaccination. Nearly 30.9% of participants did not keep record of the vaccines they have taken and 65.5% believed in herd immunity. The most commonly received vaccine was covid -19 vaccines in general. While 94% of the patients to whom vaccination was recommended received the vaccine, 69.7% of patients received vaccine without any recommendation.

CONCLUSION : The vaccine coverage rates among adults in this study was relatively high, perceptions of patients about adult vaccination was really positive and most of the study participants reacted in a positive way while their physicians recommended a vaccine for them. In light of the success of childhood vaccinations, there is indeed room for increasing the reception of adult vaccines as well.

KEY WORDS : Adult vaccination, perception, attitudes

INTRODUCTION

Vaccination is an effective and one of the most important public health measures to curtail many infectious diseases in developing countries. Vaccination has been well acknowledged and the most valued preventive aspect in reducing mortality, morbidity and disability rates in adults as a result of communicable diseases.¹ Adults in general, are not the focus of vaccination campaigns. Childhood vaccination programs are well-accepted and widely used, but unfortunately awareness for adult vaccination is by far less prominent. Adult vaccination is to be highly considered in order to reduce the incidence rates of common infections that occur due to age factor, health conditions, lifestyle, travelling, and occupational risks. A number of reasons may account for the differences in adult and childhood vaccination rates such as the ignorance of primary care physicians towards adult vaccination schedules, lack of public awareness and knowledge.²⁻⁴ Emphasis towards adult vaccination as a part of health care services is highly ignored in India. Thus the vaccination rates in adult populations still remain below the targets.

The immunization schedule for adults by CDC - Advisory Committee on Immunization Practices (ACIP 2020) recommends Seasonal influenza vaccine, Td vaccine, Pneumococcal vaccine (PCV13/PPSV23), Human Papilloma virus vaccine (HPV), Hepatitis A vaccine, Hepatitis B vaccine, Haemophilus influenza b(Hib), Meningococcal vaccine, Measles mumps rubella vaccine (MMR), Varicella zoster vaccine for all adults having no evidence of immunity.⁵

Vaccinating the adult population can be a powerful tool to

- reduce the disease burden of the country.
- enhancing the productivity of the working class.
- increasing the longevity of life and ultimately uplifting the nation to a better state of well being.



Please Scan this QR Code to

View this Article Online

Article ID: 2023:03:01:02

Corresponding Author : Gokila Preethi C L

e-mail: gokilapreethi@gmail.com

OBJECTIVES

To assess the perceptions and attitudes about the adult vaccination and their vaccination status among patients attending OPD in Medavakkam PHC

METHODOLOGY

STUDY AREA AND STUDY DURATION

A cross sectional study was conducted at Medavakkam Primary Health Centre, Rural Health Training Centre for Institute of Community Medicine, attached field practice area of Madras Medical College. The study was carried out for a period of three months from July to September 2021.

STUDY POPULATION, SAMPLE SIZE AND SAMPLING TECHNIQUE

The study population was all adult patients aged 18 years and above who attended Outpatient Department at Medavakkam PHC.

By assuming 50 % prevalence of perceptions and attitudes of adult vaccination, the sample size was calculated to be 165 including 10% of non response rate. Ethical clearance was obtained from the Institutional Ethical Committee, Madras Medical College.

Out of all Primary Health Centres in Tamilnadu, Medavakkam PHC was selected by simple random sampling method. Official permission to conduct the study was obtained from Directorate of Public Health and Preventive medicine, Deputy Director of Health Services, Chengelpet District for conducting the study. All adult patients aged 18 years and above attending OP in Medavakkam PHC was included in the study after obtaining written informed consent by universal sampling method.

STUDY TOOL AND DATA COLLECTION

A pretested, semi-structured questionnaire was used for data collection which had 2 sections.

Section I: Includes information on socio-demographic profile of the participants.

Section II: Includes questions regarding the perceptions and attitudes about adult vaccination and their respective vaccination status

The purpose of the study was briefed and rapport was established with the study participants. Questionnaires were distributed personally and informed consent was obtained. Participants were allowed a few minutes to read the questionnaire and ask any questions regarding the contents. Difficult terminologies were first explained and then the participants were told to give their response independently and unbiased way without any undue pressure, maintaining the strict confidentiality of their identity. The filled questionnaires by the

respondents were collected after allowing adequate time to fill the response by the study participants. Those who were not willing to participate in the study were excluded from the study. Hence a total of 165 responses were obtained.

DATA ENTRY AND ANALYSIS

The data was entered in MS Excel and was analyzed using SPSS version 16. Descriptive statistics was expressed as proportions, mean, and standard deviation. Data were expressed in graphs, tables and charts wherever necessary.

RESULTS

A total of 165 study participants was interviewed for the study. The mean age of the study participants were 39.75 ±15.95 years, 47.9% were males and 52.1% were females. Regarding education only 4.2% were illiterates and the remaining study participants were literates. Socio demographic characteristics of the patients are given in Table 1.

Table 1: Socio demographic details of study participants (n = 165)

Socio demographic details		Frequency	Percentage (%)
Age	<30 years	69	41.8
	>30 years	96	58.2
Gender	Male	79	47.9
	Female	86	52.1
Education	Literate	158	95.8
	Illiterate	7	4.2
Occupation	Employed	120	72.7
	Unemployed	45	27.3

Out of 165 study participants, comorbid condition were present among 40 (24.3%) of them. The most common comorbid condition were Diabetes mellitus(17.5%), Hypertension(25%), both Diabetes mellitus and Hypertension(27.5%), patients on steroid therapy(7.5%), followed by coronary artery disease(5%).

About 83% of the study participants were aware about adult vaccination while the remaining 17% were not aware regarding adult vaccination. (Figure 1).

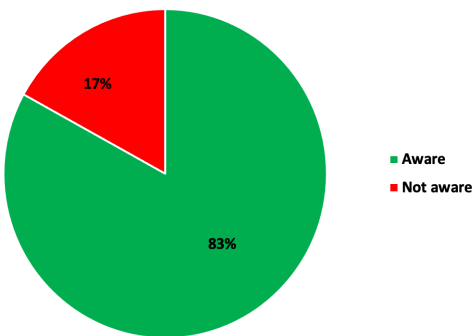


Figure 1: Participants awareness about adult vaccination (n = 165)

Nearly 77% of study participants responded that adult vaccines are given in government institutions and 23% responded that adult vaccines are not given in government institutions (Figure 2)

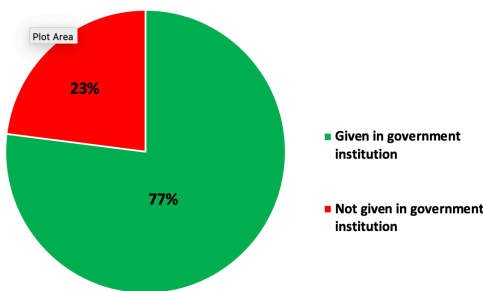


Figure 2: Participants perceptions about adult vaccination
(n = 165)

While 92.7% of the patients responded that adults should get vaccines, 7.3% thought that adults do not need to be vaccinated (Figure 3)

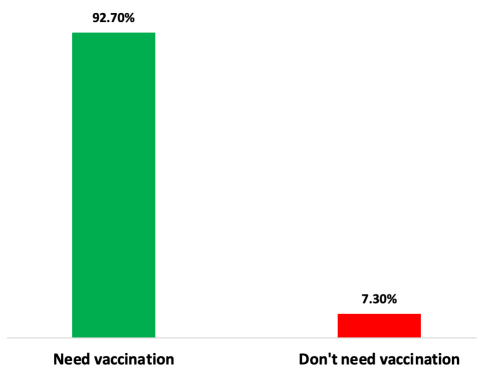


Figure 3: Participants perceptions about adult vaccination
(n = 165)

Among those who thought that adults should not be vaccinated, 38.5% stated that they were unaware of vaccines, 30.8% stated that vaccines are not necessary for adults, 7.7% stated that only children need vaccines, 7.7% thought vaccines are not appropriate for adults, 7.7% thought that vaccines were just a "money trap", 3.8% were afraid of the adverse effects, 3.8% avoided vaccines due to religious beliefs (Figure 4).

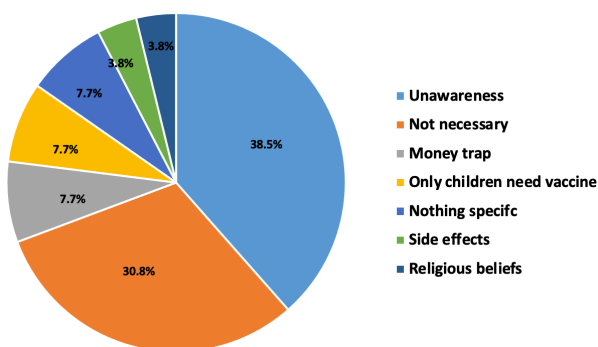


Figure 4: Participants perceptions about adult vaccination
(n = 165)

95.1% of study participants believe that vaccine prevent illness in adults while 4.9% believe that vaccine does not prevent illness in adults (Figure 5)

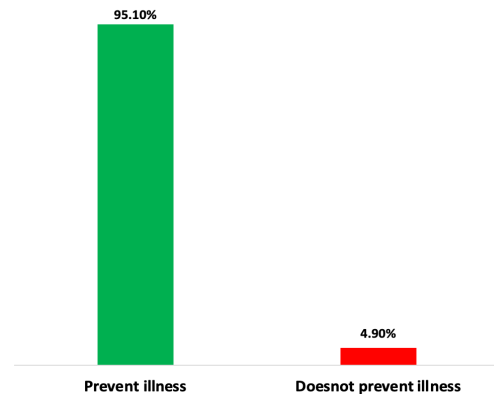


Figure 5: Participants perceptions about adult vaccination preventing illness (n = 165)

Regarding herd immunity, study participants were of the perception, nearly 65.5% of them believe that if a large number of people in a community is vaccinated, it could prevent the disease in non vaccinated people also, while 34.5% responded that if a large number of people in a community is vaccinated, it would not prevent the disease in non vaccinated people. Those who thought that adults should be vaccinated were asked about which vaccination should be given to adult patients. The top-ranking answers were covid 19 (88.2%), tetanus (39.2%), hepatitis B (30.7%), influenza (30.7%) (Figure 6).

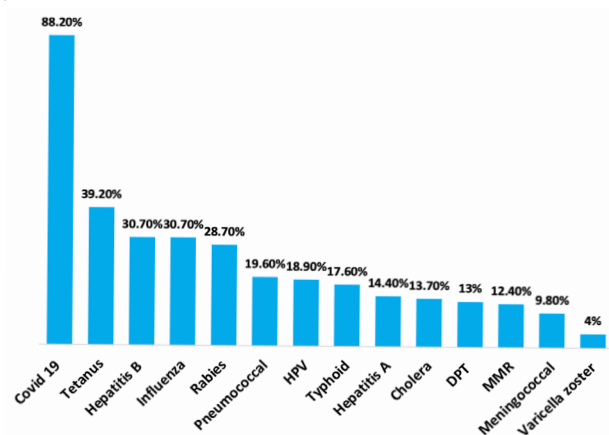


Figure 6: Patients attitude towards vaccines indicated in adult life
(n = 165)

Maximum 80% of study participants have been recommended vaccine in their adult life and 20% were not been recommended any adult vaccines. Nearly 80% of the patients stated that vaccination was recommended to them in their adult life, while 94% of the patients to whom vaccination was recommended received the vaccine, 69.7% of patients received vaccine without any recommendation. Recommendation was mostly made by the doctors from primary care doctors (45.5%), family (53%) and friends (42.4%) rather

than tertiary care(19%) or secondary care doctors(17.4%). The most commonly recommended vaccines were covid 19 vaccines(96.2%), tetanus(23.5%), hepatitis B(19.7%), rabies(15.1%).(Figure 7)

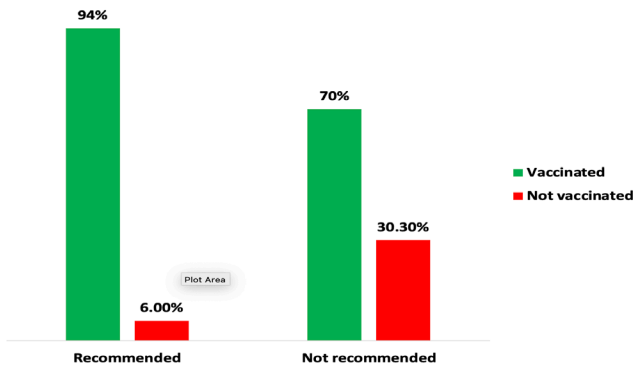


Figure 7: Health care providers recommendation of vaccination (n = 165)

Among 165 participants nearly 89% were vaccinated sum sort of adult vaccines in their adult life and 11% were not vaccinated with any of the adult vaccines. 72.7% of the study participants responded in a positive way that they would receive the vaccine if it were been reimbursed free of cost and 27.3% responded that they would not receive the vaccine even if it was reimbursed free of cost. The record of the vaccines received by the study participants were kept safely by 69% of the patients while 31% of them does not have the record of their vaccines they received. Overall, the most commonly received vaccine was covid 19 vaccines(95.2%), tetanus(30.6%), hepatitisB(18.4%), rabies(9.5%) and influenza(6.8%) (Figure 8)

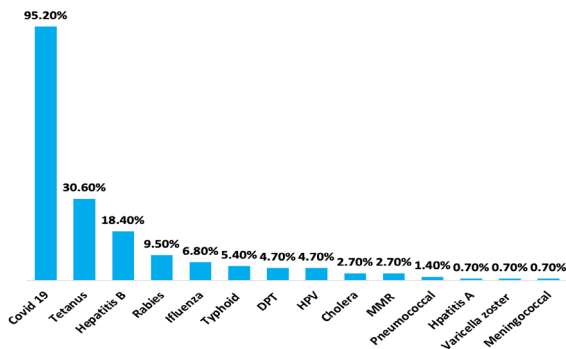


Figure 8: Participants vaccination status (n=147)

DISCUSSION

Adult vaccination is important and life saving. Immunization prevents illness, disability and death from vaccine preventable diseases. Global vaccination coverage is 86%. The top ten causes of death in India among adults are Heart disease, Chronic Obstructive Pulmonary Disease(COPD), Stroke, Diarrhealdiseases, Lowerrespiratoryinfection, Tu-

berculosis, Neonataldisorders, Asthma, Diabetes, Chronic Kidney disease. The routine vaccinations in adults expected to protect against SARSCoV2, Influenza, Measles, Rubella, Tetanus, Diphtheria, Poliomyelitis, Hepatitis, Rabies. Adult vaccinations is important since as we age, we become susceptible to serious diseases caused by common infections and the immunity also wanes over time.Proper Adult vaccination results in preventable morbidity and mortality.

In our study about 20% of adult patients were not recommended for any of the adult vaccines, 89% of adults received vaccine in their adulthood, the most common vaccine received was covid 19 vaccines followed by tetanus,hepatitis B,rabies and influenza vaccines, 94% of adults received vaccine on recommendation by healthcare providers,family,friends whereas 69.7% of adults received vaccine without any recommendations.This was similar to a study titled perceptions and attitudes of patients about adult vaccination and their vaccination status done by Lale Ozisik et al among adult patients aged 19 to 64 years in a University hospital in Turkey which revealed that 36.1% of adults were not recommended of any adult vaccines,48% of them received vaccine in their adulthood,tetanus was the most common vaccine received,71.4% of adults received vaccines by recommendation and 34.9% of adults received vaccines without any recommendations.⁶

In a study done by Sanjana Chatana Shanmugappa et al on Perceptions and attitudes towards adult vaccination ,a cross sectional survey among individuals from IT sector companies in Karnataka,India which revealed that 31.5% were aware of adult vaccines,6.43% of adults believed that vaccines does not prevent illness, 54.38% of adults believed in herd immunity and 70.76% of adults did not keep the record of the vaccines they have taken,the most common vaccine received was hepatitis B and varicella zoster and comparing to our study results emphasizing the fact that 83% of adults were aware of adult vaccines, 4.9% believed that vaccines does not prevent illness, 65.5% believed in herd immunity and 31% of adults did not keep record of the vaccines they have taken and the most common vaccine received was covid 19 vaccines and tetanus.⁷

Muneera Naz Baloch et al conducted a cross sectional study among adult citizens in Krachi pakistan which revealed that 80% of them considered adult vaccination is important whereas in our study quotes the fact that 92.7% of adults recognized the importance of adult vaccination on the whole.⁸

CONCLUSION

This study demonstrated that there are knowledge gaps

and misperceptions that might lead to low vaccine coverage rates in an adult population attending general outpatient clinics. The perceptions and the attitudes of the adult patients responding to this survey were basically positive and indeed showed that there is room for improvement. The findings of local surveys such as the current one can be used to improve adult vaccination strategies on a national basis.

LIMITATIONS

The major limitation of this study was that vaccines were self-reported and therefore might be subject to recall bias.

RECOMMENDATIONS

In India, recommendations on specific vaccines or strategies are made by National Technical Advisory Group on Immunization (NTAGI). Specific National Programmes exclusively for Adult Vaccination should be implemented including all recommended adult vaccines by ACIP. Information, Education, Communication (IEC) on Adult vaccination should be done. Adult vaccination coverage can be improved only through framing of proper National guidelines and implementing widely. Adult vaccination for free of cost to be given in all government institutions.

CONFLICTS OF INTEREST Nil

ACKNOWLEDGEMENT

We would like to express our sincere gratitude to the Dean, Madras Medical College and Directorate of Public Health & Preventive medicine, DDHS, Chengelpet district. We also acknowledge and express our thanks to the faculties and postgraduates of Institute of Community Medicine, MMC, Chennai for their guidance and suggestions in conducting this study.

REFERENCES

1. A cross-sectional study to assess the awareness and practices related to adult immunization among nursing students in a metropolitan city [Internet]. [cited 2020 Oct 3]. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6225393/>
2. Limaye D, Limaye V, Fortwengel G. A study to assess the vaccination coverage of university students in Mumbai, India. 2017 [cited 2020 Oct 3]; Available from: <https://serwiss.bib.hs-hannover.de/frontdoor/index/index/docId/1084>
3. Verma R, Khanna P, Chawla S. Adult immunization in

India: Importance and recommendations. *Human Vaccines & Immunotherapeutics*. 2015 Sep 2;11(9):2180–2.

4. Sevin AM, Romeo C, Gagne B, Brown NV, Rodis JL. Factors influencing adults' immunization practices: a pilot survey study of a diverse, urban community in central Ohio. *BMC Public Health*. 2016 May 23;16:424.
5. Pubmeddev, al RY et. Knowledge and awareness of hepatitis B among households in Malaysia: a community-based cross-sectional survey. - PubMed - NCBI [Internet]. [cited 2020 Apr 16]. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30630464>
6. Ozisik L, Basaran NC, Oz SG, Guven GS, Tanriover MD. Perceptions and Attitudes of Patients About Adult Vaccination and Their Vaccination Status: Still a Long Way to Go? *Med Sci Monit*. 2017 Jun 29;23:3178–84.
7. Shanmukhappa SC, Abraham RR, Chandan S. Perceptions and attitudes towards adult vaccinations: A cross sectional study from Karnataka, India. *Int J Adv Community Med*. 2020 Jan 1;3(1):164–7.
8. Baloch MN, Siddiqui NZ, Bano A, Siddiqui S, Kiran T, Khan MK, Asad W. A cross sectional survey: Attitude towards adult vaccination in Karachi-Pakistan. *International Journal of Advanced Research*. 2015;3(3):512–2.
9. Dash R, Agrawal A, Nagvekar V, Lele J, Di Pasquale A, Kolhapure S, Parikh R. Towards adult vaccination in India: a narrative literature review. *Human vaccines & immunotherapeutics*. 2020 Apr 2;16(4):991–1001.
10. Bali NK, Ashraf M, Ahmad F, Khan UH, Widdowson MA, Lal RB, Koul PA. Knowledge, attitude, and practices about the seasonal influenza vaccination among healthcare workers in Srinagar, India. *Influenza and other respiratory viruses*. 2013 Jul;7(4):540–5.
11. Harrison N, Brand A, Forstner C, Tobudic S, Burgmann K, Burgmann H. Knowledge, risk perception and attitudes toward vaccination among Austrian health care workers: A cross-sectional study. *Human vaccines & immunotherapeutics*. 2016 Sep 1;12(9):2459–63.