

# Attitudes of people towards COVID-19 booster dose : A systematic review



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## Introduction

Vaccine hesitancy refers to delay in acceptance or refusal of vaccination despite availability of vaccination services (SAGE). The phenomenon has been a huge hurdle, first in vaccination efforts against COVID-19, and now similar restraints are being observed with regard to booster doses and these must be addressed timely in order to eradicate the disease.

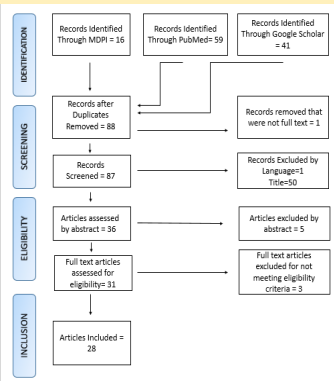
## Objectives

Assess attitudes (hesitation/Acceptance) of public regarding COVID-19 Booster dose, having wide practical relevance in establishing healthcare policies for eradicating this deadly pandemic.

## Methodology

Systematic Electronic search of the Literature was conducted on 3 Databases; PubMed, MDPI and Google Scholar using keywords were "hesitancy", "acceptance", "restraints" and "booster dose". Cross-sectional, cohort, case-control studies from 2021-2022 with data about booster acceptance (all kinds) both before and after getting fully vaccinated from general public, healthcare workers, students, patients, minorities. Grey literature, letters of communications, case series, reports, proceedings and articles in other languages excluded.

A total of 116 records were identified, and after the screening process according to Prisma guidelines, a total of 28 articles were included in this systematic review



## Limitations

This study included many cross sectional studies, and online surveys with different sample sizes which involve selection bias, volunteer bias and self report bias which might have distorted the results. Mostly acceptance was measured by self reports without any scale. People without smartphones wouldn't have responded to online surveys thus limiting the accuracy of results. The information on occupation was not collected due to which differences in vaccine acceptance due to occupation cannot be explained thus these variables should be taken into account to evaluate and compare the reasons of hesitancy to accept the covid-19 booster shots.

## Conclusions

Vaccine acceptance rate is higher among East Asian countries. European countries also have significantly high vaccine acceptance rate but data from South Asia and Middle Eastern countries was inadequate to formulate any recognizable pattern. The acceptance of Vaccine Booster was more among males and aged persons.

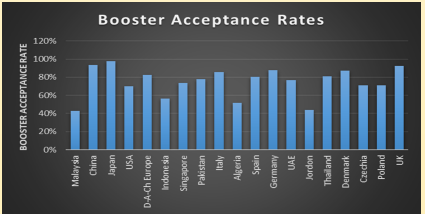
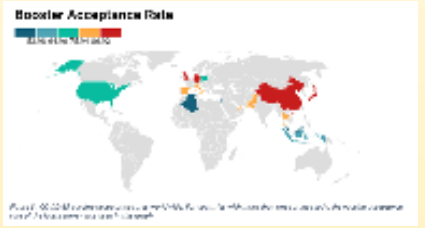
## Results

### Baseline Characteristics OF Articles

Studies were Collected from 22 different countries, all dated between April, 2020 to March 2022. 19 surveys were carried out on General population while 1 was done on Factory workers, 1 on medical students, 3 on Health care workers, 3 on University students and employees and 1 specifically focused on child caregivers.

### Rates of COVID-19 Booster Acceptance

The highest Booster dose acceptance rates (>90%) among the general public were found in Fukushima, Japan, China and UK. The Lowest rates (< 60%) were found in Indonesia, USA, Algeria, Jordan, Malaysia.



In university Community, Highest Acceptance was In Germany, Italy and UAE and among the healthcare sector USA followed by Singapore and Czechia.

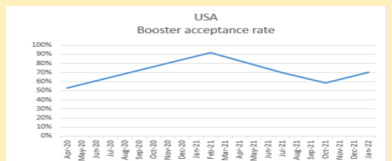
## Discussions

Vaccine acceptance rates were generally higher >90% in East Asian (2 surveys from China and one from Fukushima, Japan) and fairly high >80% in European states (UK, Denmark, Germany, Italy, Spain, Austria and Switzerland). Data from south Asia, Africa and Middle East was inadequate to formulate any recognizable pattern

Acceptance rates were higher in males as compared to females, most common explanations found for this pattern were related to the psychological and hormonal characteristics of females including increased risk perception. Higher Booster acceptance was found in old age group This can be related to the fact that elderly people are among the prioritized group for booster administration.

Multiple surveys were conducted in USA and China over time, the following changes in COVID -19 vaccine acceptance rates were observed:

In the **United States** the acceptance rate was 53% in April 2020, 92% in February/March 2021, 69.6% in July 2021, 58.3% in October 2021 and 70.2% in January 2022



In **China** it was recorded at 91.6% in August 2021, 76.8% in October 2021 and 93.7% in November 2021

