Vaccine Hesitancy and Acceptance During Pandemics and Global Outbreaks

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Vaccine Hesitancy Definition: Refusing to vaccinate or being slow to accept a vaccine when it becomes available is termed as vaccine hesitancy. (Majid and Ahmad, 2020).

Background: Studying vaccine hesitancy in the context of past pandemics such as Severe Acute Respiratory Syndrome, Influenza A/H1N1, Middle East Respiratory Syndrome, and Ebola Virus Disease is key to finding ways to curb disease spread (Majid et al., 2020). Past research has identified many factors affecting vaccine hesitancy, however, little research has examined these factors and their affect in the context of pandemics and epidemics.

Research Objective: Our study focuses on studying factors that promote vaccine hesitancy in two major past pandemics, including H1N1 and Ebola Virus Disease.

Methods: We conducted a systemic review and thematic analysis on 28 studies on two major past pandemics: H1N1 and Ebola Virus Disease.

Results:

Social Demographic factors:

- **Ethnicity**: Black populations were the least likely to vaccinate when compared to Caucasian and Hispanic populations living in the USA (Mesch and Schwirian, 2015).
- **Age**: Individuals who were older were more likely to vaccinate (Mesch and Schwirian, 2015).
- **Pregnancy/Sex**: Women who were pregnant or had children were more likely to vaccinate, and men expressed a higher intention to vaccinate their children (Hilton and Smith, 2010).
- **Education and Income**: More educated participants (had a bachelor's degree) or earned a greater income (greater than $50,000/year) were more inclined to support prioritizing vaccination resources upon availability (Hilyard et al., 2010).

Accessibility and Cost: Vaccines that are more accessible (family clinic or mass immunization clinic) and had a lower cost lead more individuals to vaccinate (Cassady et al., 2012; Determann et al., 2016).

Trust: High trust in medical information from the government, health service organizations and personal networks increased likelihood of vaccination (Gilles et al., 2011).

Personal Responsibility and Risk Perceptions: Many internal and external factors influenced individuals perceived risk of infection. When individuals believed their risk of acquiring infection was high, they were more likely to vaccinate and vice versa (Borjesson and Enander, 2014).

Precautionary Measures Taken Based on the Decision to Vaccinate: There was a higher likelihood of individuals adhering to preventative measures if they vaccinated (Borjesson and Enander, 2014).

The Safety and Efficacy of a New Vaccine: New vaccines lead individuals to feel fear and uncertainty which contributed to vaccine hesitancy. They were concerned about long-term side effects and vaccine safety and efficacy (Bangerter et al., 2012).

Lack of Information and Vaccine Misinformation: Individuals that did not have a comprehensive understanding of vaccination or had inaccurate information greatly influenced vaccine hesitancy (Balkhy et al., 2010).