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Why the MMR Vaccine-Autism Myth Persists. A Mixed-Methods Study on Belief, Experience, and Misinformation.

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Abstract
This research emphasizes the relation between the growing number of autism cases in recent years and MMR vaccination. This belief is seen exclusively in parents who observed the symptoms of autism soon after the vaccination, although this was based on a 1998 paper that was later found to be a fraudulent study based on the methodology he followed, and medical ethics were not adhered to. The main goal of this paper is to examine the reasons why this belief is repeated and spread and the factors that contribute to it. With the use of interviews and surveys of parents and young adults, this research will explore how experiences, misinformation, and distrust of medical institutions combine to cause vaccine hesitancy.

1. Introduction

Autism spectrum disorder has proliferatively made an appearance in both medical textbooks and in everyday life. Meanwhile, the MMR vaccine is very much under scrutiny because of the overall conception by the parents that it causes autism in children. This belief grew in strength after a study conducted by Dr. Andrew Wakefield suggested a possible link between the MMR vaccination and autism. Though the study was declared fraudulent and withdrawn, its effects is supported often by emotionally compelling on people's minds are very strongly imbibed. stories, Today, despite a solid scientific consensus refuting the charge, many still have the notion that the vaccine causes autism. It personal anecdotes, particularly by parents who witness changes vaccination. Social media and the internet have magnified misinformation before it can be corrected.

2. Literature Review

Various scientific studies have found no link between MMR vaccination and autism. Taylor et al.(2014) conducted a large-scale meta-analysis on over 1.2 million children and found no causal relationship. Supporting the safety of early childhood vaccines, DeStefano et al. (2013) and Madsen et al. (2002) also attained the same conclusions. Public health institutions such as the CDC, WHO, and NHS have repeatedly issued strong reassurances on its safety. Yet, belief in the MMR autism link remains adamantly prevalent. Research by Kata (2010) reveals that misinformation thrives in emotionally charged environments, especially online. The Wakefield study, despite its retraction, provided a narrative that gave comfort or explanation to many parents dealing with a challenging diagnosis. Moreover, people's faith in the

healthcare system is very low. Larson et al. (2016) states that suspicion and doubt can be caused by multiple sources, including historical medical injustices and inconsistent messaging. Often, people are more impressed by children's participation in human stories than by cold, hard statistics. Even if it's just a coincidence, many parents may perceive the onset of autism symptoms shortly after a vaccination as incontrovertible proof. Parents can mistakenly believe that the timing of the diagnosis proves a causal relationship, a phenomenon known as confirmation bias. The scientific findings are clear, but we still don't know enough about the psychological and social aspects that lend credence to this view.

3. Methodology:

This study will employ a mixed-methods approach to gain a comprehensive understanding of public perceptions regarding the MMR vaccine and autism. This approach combines both qualitative data and quantitative data. Through this, it not only allows us to measure how widespread certain beliefs are but also understand the personal and deep emotional reasons behind those beliefs. The first phase involves an online survey with three participant groups consisting of young adults who received the mmr vaccine in childhood, parents of children diagnosed with autism following the vaccination and the general public involved in online heath discussions. The survey will gather information on beliefs about the MMR-autism link, sources of information (like social media or doctors), trust in healthcare, and personal or family experiences with vaccination and autism. The data will be analyzed to find patterns, such as whether low trust in medical institutions or high exposure to misinformation is linked to belief in the vaccine-autism theory. In the second phase, selected survey participants will take part in semi-structured interviews to discuss their personal experiences, emotional responses to an autism diagnosis with views on medical advice, and how online content has shaped their viewpoints. Ethical guidelines will be followed by providing informed consent to the participants and maintaining their identity anonymous. The goal of these interviews is not to dispute personal experiences, but to explore how they may contribute to the continued belief that the MMR vaccine causes autism. Using both surveys and interviews, this mixed methods approach captures broad public attitudes while also examining the personal experiences that shape them.

4. Conclusion

The ongoing belief in the MMR-autism link represents more than scientific misinterpretation because it reflects the social and emotional influences within public health understanding. The project plans to deliver practical outcomes for science communicators, educators and healthcare practitioners by examining the difference between experience and evidence. Combating misinformation requires more than just delivering factual content. The solution entails demonstrating empathy and creating trust while gaining an in-depth understanding of how people construct their reality which becomes especially important when working with children who have autism. By conducting research that goes beyond facts and into lived experience we can empower people to make informed decisions which is rooted in understanding, not fear or bias.

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