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Final project

A case series in 1998, which implied that the MMR vaccine contributes to autism which consequently affects how people interact with others, was published by Andrew Wakefield and 12 of his colleague in "the Lancet". After a considerable amount of time, medical studies were held and published, disproving the link between the vaccine and ASD (Autism spectrum disorder). The logic that the MMR vaccine may cause autism was also questioned because a link between the two is unexpected. Both of these things are expected only in childhood. The publishing of this research by Andrew Wakefield contributed highly to reduced use of MMR vaccines since most parents were concerned about the risk of autism after the vaccination was injected. Measles outbreaks in the United Kingdom, USA and Canada between 2008 and 2009, causing harm to the over 200 people and infecting them was all due to the ignorance of MMR vaccines. The count of infected people who didn't get MMR vaccine were almost "eighty fiver percent". This caused great harm to the scientific cause of medical research as well . A while later, a retraction was made by 10 of the 12 original authors, to the original publication. According to the retraction, no specific connection was found between the MMR vaccine and ASD due to insufficient use of data during the research. In early 2010, due to the authors admitting that a lot of elements in this research were incorrect even though the findings of the initial tests reported otherwise, the research was completely withdrawn. This led to Wakefield being found guilty of fraud. Wakefield was heavily funded by lawyers who were involved with cases against the companies which produced vaccines. Wakefield was found guilty of ethical violations as they had

conducted the sampling on children without meeting the compulsory ethical clearances. The scientific attitude was not applied at all in this case due to the small sample size containing only 12 people. Such a small sample count that it can merely verify anything at all let alone be this huge research. He claimed that his research was not selective at all which in fact was untrue. The unchecked design of the experiment and the hypothetical nature of the conclusions made by Wakefield was indeed due to him being very selectively and biased about not using the vaccines. Moreover, Wakefield had strong and famous celebrities, such as Jenny McCarthy, a famous model and activist, as supporters, McCarthy used the power of her fame in the public to raise voice against the MMR vaccine implying that Wakefield's research was right, influencing a lot of people. Although it may sound very absurd but upon investigation it was also found that "Wakefield paid 5 pounds to each child at his son's birthday celebration so that he could use their blood for his research and that he could mold the results in any way he wanted to as there would be no documented proof about the blood samples". Moreover, many of the children in this study were suffering from chronic constipation which is associated with ASD. Wakefield never mentioned this information while reporting his data. It was also found that when he sent medical tests for ASD in the children and saw a negative result back he always altered it. He, alongside, was also inventing some diagnostic tools and medicines for his self made non-existing syndrome "autistic enterocolitis". If he was not investigated and stopped back then, there would have been a huge need for such tools and medications because of the terrors he created about MMR. What he had done was truly very unethical. It had no scientific attitude as he attempted a fraud for his monetary interests by putting other people's life in danger. He didn't have any respect for the people who lost their lives by trusting him and not getting MMR vaccines, all due to his deliberately spoken lies and flawed, altered and biased research. Until now other researchers have conducted the same study and no authentic link between autism and the MMR vaccine has ever been discovered. It is an ethical responsibility of the scientists who publish their research study to make sure that the research was

conducted based upon solid evidence. The sample size should be large enough to ensure it has higher chances of authenticity. The data collection and data analysis should be very carefully done . Data reporting should include all the results and nothing must be omitted even if it is against the personal expectations of the researcher i.e no biases. There can not be any negligence with such sensitive research because any tiny mistake can cost someone their life and it causes harm to the scientific cause as we can see from Wakefield's big attempt of felony and treachery in the history of the scientific world. We can spot flaws in other studies by looking at the lack of peer review. A study can also be flawed if there is lesser number and greater preselection of tested relations. Where these I less flexibility in designs, outcomes and statistical data. "Across biomedical science and beyond, scientists do not get trained sufficiently on statistics and on methodology," said Jhon Ioannidis, professor of medicine at Stanford University, who specializes in the study of scientific studies.