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Burack Shriberg Wellman, Kesikci Simmonds Hepburn & Cicchett Pekar Mostofsky

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The Impact of Autism on Child Development; a Case Study of Children within Illinois State, USA

^{1*}Burack Shriberg Wellman, ²Kesikci Simmonds Hepburn &³Cicchett Pekar Mostofsky

^{1*}Student, University of Illinois at Chicago, USA

²Student, University of Illinois at Chicago, USA

³Lecturer, University of Illinois at Chicago, USA

Email of the corresponding author: wellmanburack@gmail.com

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Abstract

Raising a child with an autism spectrum disorder (ASD) can be an overwhelming experience for parents and family members. The prevalent and extreme deficits frequently existing in children with ASD are associated with a myriad of problems, including reduced parenting effectiveness, increased parenting stress and a rise in psychological and physical health issues. Along with significant financial strain and stress, high prices of divorce and reduced overall family health highlight the burden that having a child with an ASD can put on families. The study findings showed that the persistent increase of autism is worrying and creating panic among the children in the United States of America. The content of aluminum, mercury, glyphosate and monosodium glutamate in the vaccination are considered to some of the primary causes the autism. Autism is affecting a large population of the children in the USA; however, people in power continue to blame other factors for causing autism rather than the vaccines. The study recommended that the content of aluminum, mercury, glyphosate and monosodium glutamate in the vaccination should be minimized and if possible, a further examination should be conducted to establish the repercussions of aluminum, mercury, glyphosate and monosodium glutamate in the treatment. The study also recommended that the government should recognize that autism is an epidemic in society and should deal with ways to minimize it instead of having the blame games about the causes of the disease. The study also recommended that several programs should be undertaken to resolve the variety of social, language and behavioral troubles associated with autism spectrum condition. Various other programs should focus on mentoring the kids on how to act in social scenarios or interact better with others. Further, children with ASD should be exposed to different activities to improve social skills, communication and behavior skills. The study also recommended that it is good to consult a medical expert to prescribe the best diet.

Keyword: Autism, aluminum, mercury, glyphosate and monosodium glutamate, Illinois State USA



1.1 Introduction

The percentage of kids with autism in the United States continues to rise and according to a new report from the Centers for Disease Control and Prevention (CDC), it is estimated that 1 in every 59 children had autism in 2014, up from 1 in 68 children in 2012 and 1 in 88 children in 2008 (Rogers, Hepburn, Stackhouse & Wehner, 2017). The increase in the number of autism is a worry to the entire nation and the government and the families should work hard to control the menace. The children with autism spectrum disorder (ASD) struggle with focus, attention, transitions, organization, memory, time management, emotional control and frustrations from the parents and peers (South, Ozonoff & Mcmahon, 2014). Centre for Diseases Control (CDC) established that the causes of the rampant increase of the ASD are unknown; however, Dr. Stephanie Seneff believed that vaccines are the primary causes of ASD (Del, 2018).

The persistent increase of ASD triggers an alarm to the researchers and the scholars to examine its causes (Srinivasan, Kaur, Park, Gifford, Marsh & Bhat, 2015). According to Dr. Stephanie Seneff, the persistent increase of autism is contributed by the immense vaccines given to children (Del, 2018). The public had not ever interrogated the Centre for Disease Control and Prevention to explain whether autism has to do with the vaccination or is just from the unknown phenomenon (Landa & Goldberg, 2015). The society and other stakeholders are not interested and rarely demanded the answers from the institutions assigned to do researchers concerning the rise of Autism (Del, 2018). Autism Spectrum Disorder is becoming an epidemic in American and many children are developing the disease, making it so much widespread (Paul, Shriberg, McSweeny, Cicchetti, D., Klin & Volkmar, 2016).

The challenges that are caused by autism can impact a kid's learning and also advancement-- for example, after reviewing a tale, the child might remember the small details yet neglect what the story indicates in general. A younger child could look at a picture publication as well as focus on more information in the background, rather than the personalities and also the story. Signs and symptoms of ASD are inclusive of shortages in social interaction and also limiting repetitive behavioral patterns that emerge early in a child's advancement (Matthews, Goldberg, Lukowski, 2012). While parents do not trigger these problems, disabilities in social relatedness can stress parent-child interactions and parental tension can have adverse transactional effects that impede a kid's growth. Besides, the actions of the adult and parents can also boost development in ASD (Schuwerk, Vuori, & Sodian, 2015). Nonetheless, proof progressively reveals that adult behavior plays a role in the event of kids with ASD as it does with typically developing children. Scholars show that children with autism perform poorly in social skills, repetitive behaviours, speech and nonverbal communication (Peterson, Wellman & Liu, (2015).

2.1 Analysis of Autism

The primary cause of autism among the children is the vaccination (David, Zelazo, Jacques, Burack & Frye, 2012). There is a positive correlation between the persistent increases in the vaccine and autism in the United States. The total number of autism has exponentially increased over time and became 90794 in 2015 (Del, 2018). It signified that there are no signs that the number of children with autism is decreasing over time instead of increasing rapidly. According to Gokcen, Bora, Erermis, Kesikci and Aydin (2019) by 2025, the number of children affected with autism would be 50 percent of the total number of children in the United States (Del, 2018). The figure is much worrying, and the forecast is much stunning, and it will be decidedly worse in the future if an immediate solution is not found relating to the vaccination.



Furthermore, Minshew and Hobson (2018) established that the availability of aluminum and mercury in the dose of the vaccination has a positive relationship to the persistent increase of autism over time. The number of California statistics indicated that the number of autism increased to 90794 in 2015, making a tragedy in the region (Del, 2018). However, the government and some medical researchers, such as CDC, deny that aluminum and mercury content is not the leading cause of autism. However, the continuous increase in the total number of people living with Autism Spectrum over time proves that those components of aluminum and mercury may be the primary cause of the Autism Spectrum disorder (Del, 2018).

Besides, the glyphosate jointly cooperates with the toxic components in the vaccines to damage the neurons in the brain (Landa & Goldberg, 2015). The period of autism is more concerned with the health of the pediatric and glyphosate is the enemy to the brain system and the body of the kids causing more toxins to damage the brain (Del, 2018). According to Srinivasan, Kaur, Park and Gifford (2015), glyphosate could be present in the vaccines because certain vaccines viruses developed on the gelatin found from the ligaments. The glyphosate is believed to be an element that may be causing autism to the majority of the infants in the United States at the

Besides the mercury toxicity and poisoning are veracities that every American has to face in the lifetime (Sealey, Hughes, Sriskanda, Guest, Gibson, Johnson & Bagasra, 2016). Children with autism showed the highest level of mercury and this significantly explained the negative impact of mercury vaccination on children (Price, Thompson, Goodson, Weintraub, Croen, Hinrichsen, & Bernal, 2010). The lead and mercury considered as one of the paramount causes of autism among the children in the United States. The environmental exposure, as well as the flaw of the substantial metal metabolism, is very much responsible for the high level of the heavy metals found within the bodies. Therefore, mercury has been minimized to be used in most of the vaccines subjected to the children because of the repercussions associated with it (Price, Thompson, Goodson, Weintraub, Croen, Hinrichsen, & Bernal, 2010).

Monosodium Glutamate is a component in the vaccines recommended by the Center for Diseases and prevention used as a stabilizer. The Monosodium Glutamate has significantly shown the results of having the potential to contribute to the damaging of the brain neurons (Nguyen, McBean, Martson, & Honorof, 2018). Monosodium Glutamate overstimulates the brain resulting in the production of extreme amounts of the dopamine, thus ravages the brain and modifies the ability of the mind to counter to the signal from the hormone leptin. Glutamate is the key to the transmission of the messages all over the brain activating the nerve cells to the fire. The existence of the excessive glutamate creates overstimulation, and the balance tips between the other neurotransmitters are not achieved; hence the nerve cells signalling them to stop firing when appropriate are not consistent (Parpia, 2016). The overstimulation of the cells in the body, mainly the brain system, makes them die to result in the disorder in the brain, thus developing autism at an early age.

In carrying out clinical research, several ethical concerns should be taken into consideration. These issues can be categorized as issues concerning the research participants or those related to the researcher. Subjects related to human participants are of concern since they are the primary source of data for this type of researches. It is the responsibility of the researcher to make sure that they protect the integrity, privacy, dignity, autonomy, health, and lives of their participants in the course to the research. The fundamental principles that the researchers should ensure to uphold are respect to the autonomy of the participants. The beneficence by providing no harm is



done to the participants while promoting their health. The last principle is justice for their participants both at an individual and societal level (Yip et al., 2017). Mistreatment of any kind to the participants is considered as research misconduct, while deception and fraud are regarded as scientific misconduct.

One of the most critical considerations in medical research is informed consent. Informed consent is where a participant gives his or her permission voluntarily to be interviewed, or data to be collected from him/her, or even clinical trials to be done through them (Rampal, 2015). In the case of informed consent, the participant should first be informed by the researcher about the process as well as all the relevant information regarding the research that may affect him or her. The risks and benefits of the procedure should also be communicated to the participant to help them make informed decisions. Informed consent should be well documented by the use of written and signed forms (Yip et al., 2016). In the case of special populations such as children and intellectually impaired individuals, informed consent should be sought from a legally recognized representative. To involve these participants, it should first be proved that they stand to benefit from the research outcome. Spouses, parents, relatives, and power of attorney and legal guardians are allowed to give consent under these circumstances. In cases of emergency, the guidelines provided by WHO, the Council for International Organization of Medical Sciences and Helsinki allow for exceptions (Yip et al., 2016). However, the researcher should notify the next of kin at the earliest opportunity.

Besides, it is established that some ethical considerations need to be undertaken while conducting autism research. In carrying out research, several ethical concerns should be taken into account. These issues can be categorized as issues concerning the research participants or those related to the researcher. Subjects related to human participants are of concern since they are the primary source of data for this type of researches. It is the responsibility of the researcher to make sure that they protect the integrity, privacy, dignity, autonomy, health, and lives of their participants in the course to the research. The fundamental principles that the researchers should ensure to uphold are respect to the autonomy of the participants. The beneficence by providing no harm is done to the participants while promoting their health. The last principle is justice for their participants both at an individual and societal level (Yip et al., 2017). Mistreatment of any kind to the participants is considered as research misconduct, while deception and fraud are regarded as scientific misconduct.

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exceptions (Yip et al., 2016). However, the researcher should notify the next of kin at the earliest opportunity.

Furthermore, while hereditary root causes of autism are still being investigated, other research studies recommend that particular ecological direct exposures in the womb might boost the opportunities of a kid creating autism. On top of that, certain geographical areas of the nation have much higher prices of autism, such as California, Texas, North Carolina and also Utah. Are medical professionals or moms and dads in these states quicker to suspect and also detect autism, or is something else taking place that is triggering much more youngsters to create autism. States that call for a physician or psychologist to diagnose autism for family members to qualify for exclusive education benefits tend to have reduced general prices of autism. It's additionally real that youngsters that stay in city areas as well as whose moms and dads are better off are more likely to be detected with autism, yet once again, that finding does not explain the higher rates of autism in the golden state, Texas, North Carolina and Utah. Some scientists have recommended that more significant quantities of environmentally toxic substances in these areas might discuss the relatively high rates of autism.

3.1 Conclusion

In conclusion, the persistent increase in autism is worrying and creating panic among children in the United States of America. More children are expected to be detected with autism in the future if robust policies to control the causes of autism will not be established, such as minimization of the content of aluminum, mercury, glyphosate and monosodium glutamate in the vaccination. The study also concluded that Autistic youngsters take advantage of very early diagnosis, preferably in the very first two years of life. Early medical diagnosis enables behavior modification or other treatments to start early when it appears to be most effective. If you are worried regarding your kid, speak with your doctor regarding a recommendation to see an expert that can help identify if follow-up is needed. Parents ought to also understand that the FDA has released warnings about unverified therapies for autism, such as hyperbaric oxygen therapy, chelating agents, as well as other probiotics as well as supplements that assert to aid treat autism. See the FDA record right here. The future generation has a high risk of developing autism problems if the current situation is not dealt with.

In addition to specialist therapies, some family members choose to offer their autistic children with art treatments such as horseback riding, craniosacral massage therapy and homeopathy. However, scanty information exists concerning the core signs and symptoms of autism, but several families believe these treatments make a favorable difference for their children. Children with autism often have aversions to various kinds of foods and also individuals with autism are most likely to have food level of sensitivities, food allergies, or intestinal signs and symptoms. It is testing to guarantee your child is obtaining adequate nutrition and also gastrointestinal issues might intensify autism behaviors and even symptoms. It is advisable to talk with the medical professional, that may refer to a dietitian for recommendations.

Autism is something in the environment that is affecting a large population of the children in the USA and still, people in power will continue to blame other factors for causing autism rather than the vaccines. Autism is a developmental disorder characterized by difficulties with social communication and communication in which the parents start observing the character of the children at the early stages. Besides, it was established that children with autism spectrum disorder (ASD) could have problem with focus, interest, shifts, organization, memory, time



management, emotional control as well as disappointment. Issues with these capacities can affect a child's understanding. For instance, while fixing a maths issue, the kid might know her truths well, but could not be able to generate a service. This is since she can't arrange her ideas or place all the information with each other to solve the

4.1 Recommendation

The investigation recommends that the content of aluminum, mercury, glyphosate and monosodium glutamate in the vaccination should be minimized, and if possible, a further examination should be conducted to establish the repercussions of aluminum, mercury, glyphosate and monosodium glutamate in the treatment. The study also recommends that the government should recognize that autism is an epidemic in society and should deal with realization and policies without having the blame games about the causes of the disease. The study also recommends that further scholars and researchers should conduct thorough studies in other states to establish ways on how to prevent autism from increasing and causing problems in society.

Based on the analysis, it is also recommended that several programs should be undertaken to resolve the variety of social, language and behavioral troubles associated with autism spectrum condition. Some programs should be focused on decreasing trouble actions and showing brand-new abilities. Various other applications should also focus on mentoring the kids on how to act in social scenarios or interact better with others. Applied behavior analysis (ABA) can assist youngsters in finding out new abilities as well as generalize these abilities to multiple situations with a reward-based motivation system. Besides, children with autism spectrum disorder often respond well to highly structure educational programs; thus, specialists and a variety of activities to improve social skills, communication and behavior should be developed. Preschool children who receive intensive, individualized behavioral interventions often show good progress and overcome the challenges of ASD. The study further recommended that it is good to consult a medical expert to prescribe the best diet.

5.1 References

- David Zelazo, P., Jacques, S., Burack, J. A., & Frye, D. (2012). The relation between theory of mind and rule use: evidence from persons with autism-spectrum disorders. *Infant and Child Development: An International Journal of Research and Practice*, *11*(2), 171-195.
- Del, B (2018). Is the autism epidemic being hidden? [Episode 57] .The HighWire. Podcast retrieved from <u>https://www.youtube.com/watch?v=Ip8oSNuZe-s</u>
- Gokcen, S., Bora, E., Erermis, S., Kesikci, H., & Aydin, C. (2019). Theory of mind and verbal working memory deficits in parents of autistic children. *Psychiatry Research*, *166*(1), 46-53.
- Landa, R. J., & Goldberg, M. C. (2015). Language, social, and executive functions in high functioning autism: A continuum of performance. *Journal of autism and developmental disorders*, 35(5), 557.
- Matthews, N. L., Goldberg, W. A., Lukowski, A. F. (2012). Does theory of mind performance differ in children with early-onset and regressive autism?. *Developmental science*, 15(1), 25-34.



- Minshew, N. J., & Hobson, J. A. (2018). Sensory sensitivities and performance on sensory perceptual tasks in high-functioning individuals with autism. *Journal of autism and developmental disorders*, 38(8), 1485-1498.
- Nguyen, T., McBean, E., Martson, S., & Honorof, I. (2018). Vaccines: The Biggest Medical Fraud in History (Vol. 26). EnCognitive. com. Retrieved from https://www.learntherisk.org/news/msg/
- Parpia, R. (2016). Monosodium glutamate used as a stabilizer in vaccines. TheVaccine Reaction. Retrieved from <u>https://consciouslifenews.com/msg-being-one-ingredients-vaccines/11121359/#</u>
- Paul, R., Shriberg, L. D., McSweeny, J., Cicchetti, D., Klin, A., & Volkmar, F. (2015). Brief report: Relations between prosodic performance and communication and socialization ratings in high functioning speakers with autism spectrum disorders. *Journal of Autism* and Developmental Disorders, 35(6), 861.
- Peterson, C. C., Wellman, H. M., & Liu, D. (2015). Steps in theory-of-mind development for children with deafness or autism. *Child development*, 76(2), 502-517.
- Price, C. S., Thompson, W. W., Goodson, B., Weintraub, E. S., Croen, L. A., Hinrichsen, V. L., ... & Bernal, P. (2010). Prenatal and infant exposure to thimerosal from vaccines and immunoglobulins and risk of autism. Pediatrics, peds-2010.Retrieved from <u>http://pediatrics.aappublications.org/content/pediatrics/early/2010/09/13/peds.2010-0309.full.pdf</u>
- Rogers, S. J., Hepburn, S. L., Stackhouse, T., & Wehner, E. (2017). Imitation performance in toddlers with autism and those with other developmental disorders. *Journal of child psychology and psychiatry*, 44(5), 763-781.
- Schuwerk, T., Vuori, M., & Sodian, B. (2015). Implicit and explicit theory of mind reasoning in autism spectrum disorders: the impact of experience. *Autism*, *19*(4), 459-468.
- South, M., Ozonoff, S., & Mcmahon, W. M. (2014). The relationship between executive functioning, central coherence, and repetitive behaviors in the high-functioning autism spectrum. *Autism*, 11(5), 437-451.
- Srinivasan, S. M., Kaur, M., Park, I. K., Gifford, T. D., Marsh, K. L., & Bhat, A. N. (2015). The effects of rhythm and robotic interventions on the imitation/praxis, interpersonal synchrony, and motor performance of children with autism spectrum disorder (ASD): a pilot randomized controlled trial. *Autism research and treatment*, 2015.