

Individual Differences Across The Lifespan Essay On Autism

Introduction

There were many psychological theories that were discussed in the class debate. Some of them were the empathising-systemising theory, the extreme male-brain theory, as well as the theory of mind. However, one psychological theory that was discussed during the class debate in order to understand Autism Spectrum Disorder (ASD) across the lifespan that raised the most interest was the Weak Central Coherence Theory of autism. The weak central coherence theory, developed by Uta Frith, claims that people who have ASD are born with an innate tendency to concentrate on the local characteristics of information and struggle to incorporate these features into meaningful representations (Vanegas & Davidson, 2015). This means that people who have ASD are exceptional at picking out the fine details of a mass of information. On the flip side however, they are not able to incorporate all the fine details into one big picture. This theory is one of the more popular psychological theories that are used in order to further explore and understand ASD and its traits. The phrase "central coherence" describes an individual's capacity to extract a general meaning from a wealth of specifics (*Cognitive Theories Explaining ASD*, n.d.). In short, the weak central coherence theory states that individuals who have ASD have difficulties in seeing things as a bigger picture, but instead are able to pick out the smallest details from a collection of objects and details.

Strengths

The weak central coherence theory, even though it has its criticisms and its shortcomings throughout the years since its conception as a theory, is still however widely used over multiple studies and researches, showing that the weak central coherence theory in itself is a good and valid theory. Although many studies have found the weak central coherence theory to be inconsistent with the data from the studies, a majority of the studies do admit that the data is partially correlational to the weak central coherence theory, proving that it has its merits. This means, according to Frith and Happe (1994), that people with autism spectrum disorder may not exhibit the typical bias towards processing particular kinds of information at a global level, the propensity to combine several sources of information to create context-based, higher-level meaning. (Jarrold & Russell, 1997).

One example of the correlation between the weak central coherence theory with the data found from researches and studies would be the research study done by Pellicano et al. (2006) where Pellicano et al. drew the conclusion that the findings from their study confirms that the weak central coherence theory was valid and true based on the study's data which correlates with the traits of the weak central coherence theory. Pellicano et al. (2006) also found that when it came to tasks that benefited from a local processing bias, children with ASD performed better on the test than the typically developing children which were the control group of the study. Additionally, children with ASD performed worse on the Developmental Test of Visual–Motor Integration (VMI) test, which required global processing, than children with typical development. This is consistent with the expectations and traits of the weak central coherence

theory, which postulates a complementary and correlational link between the global and local processing (Frith & Happé, 1994, as cited in Pellicano et al., 2006). Therefore, Pellicano et al.'s findings in their study do in fact show that the weak central coherence theory is true in the fact that children with ASD will perform better at visual and motor tasks when compared to typically developing children. This was also brought up in the class debate, when someone said that hyper-masculinization of brain activity has been seen and observed in the parents of children with ASD, suggesting that this may be a component of the wider autism spectrum. Nonetheless, the weak central coherence theory is supported by the empirical evidence brought forward by a plethora of studies and researches done by using the weak central coherence theory as a baseline for understanding as well as interpretation of the data collected from the respective studies.

The weak central coherence theory is widely used among many researchers in search of an answer to understand ASD with more clarity and reasoning. Many researchers have found empirical evidence in terms of correlation between weak central coherence tendencies with ASD symptoms and traits. Loth et al. (2008) discovered that children with high functioning autism and Asperger's Syndrome scored differentially across areas of Weak Central Coherence tests, which is consistent with the disparities reported between the two groups of children (Vanegas & Davidson, 2015). Therefore, it is evident that children with high functioning autism as well as Asperger's syndrome display traits that are reflected in the weak central coherence theory.

Autism has been associated with a perceptual-cognitive style known as weak central coherence. This idea suggests that the majority of autistic individuals, although not all of the children with ASD, have difficulty extrapolating elements from their environment and

integrating them into a deeper story (Laushman, 2023). According to an online article written by Laushman (2023), not all people who have ASD exhibit signs and traits of a weak central coherence which can explain why the data from studies done on children with ASD does not completely correlate with the traits of the weak central coherence theory. This in fact does not mean that the weak central coherence theory in itself is false or untrue. This just shows that the autism spectrum disorder is more complex and complicated than it was originally thought it was. However, this does not mean that the weak central coherence theory does not help understand ASD further.

Several studies have been done using the weak central coherence theory as an integral part of the study in order to interpret the data better, which yielded significant results. Additionally, there have been no studies that concluded that the weak central coherence theory was conceptually wrong. Due to the empirical evidence that the weak central coherence theory has been used in studies and research time and time again, this shows that there is some merit to the weak central coherence theory. The weak central coherence theory should not be set aside as a baseless theory as a multitude of studies have shown that there are in fact multiple sets of data which show correlation with the traits of Frith's weak central coherence theory.

Criticisms

According to a study by Bernette et al. (2005), children with high functioning autism outperformed the control group on verbal measures of weak central coherence. On visual-spatial measures of weak central coherence, however, the high functioning autism group fared much

worse than the control group, contradicting expectations and theory. This shows inconsistency in the weak central coherence theory as the group of high functioning autism children should have performed better in the visual-spatial measure of weak central coherence as compared to the control group. According to the weak central coherence theory, the group with high functioning autistic children should have scored higher than the control group, suggesting that the theory has a few inconsistencies.

The results of parametric analyses showed that there was no significant relationship between the two measures of weak central coherence and the diagnostic measures of symptom presentation (Bernette et al., 2005). According to Bernette et al., if the weak central coherence theory was accurate and correct, the data should be correlational to the theory itself. On the contrary, the theory has some discrepancies with the data provided from the study done.

However, the study done by Vanegas and Davidson (2015) showed that their findings provided some support for the theory that children with high functioning autism as well as Asperger's syndrome would perform better on visual and spatial tasks as well as linguistic tasks when compared to typically developing children. However, it is only partially true as children with high functioning autism showed proficient local processing on the verbal tasks but not on the visuospatial task and there were no differences observed when compared to children who have Asperger's syndrome. This only further shows the inconsistency between the weak central coherence theory with the results of the research done by using the weak central coherence theory as a basis for the study.

Several studies such as Bernette et al.(2005) as well as Vanegas & Davidson (2015) have had inconsistencies in their data whereby their results have only been partially accurate according to the weak central coherence theory. The theory never fully supports the findings of the previous researchers, showing its inconsistency and perhaps its inaccuracy in certain instances.

Another instance of the weakness of the weak central coherence theory would be the study done by Pellicano et al. (2006). The majority of the central coherence task scores in the ASD and typically developing groups were shown to be significantly correlated, according to the raw correlations. After controlling for age, linguistic ability, and nonverbal ability, the majority of these associations vanished. The Embedded Figures Test (EFT) and Pattern Construction scores were the one exception, continuing to be significantly yet weakly associated for the ASD group (Pellicano et al., 2006). This means that although the raw data showed some correlation, after filtering the data, the correlation between the weak central coherence theory with the group of children with ASD was barely significant. Yet another study has shown the correlation between the weak central coherence theory properties with the data acquired from studies.

Happé & Booth (2008) mentions that Frith's original work of the weak central coherence theory should be looked into again and revised. It may be possible to create a new set of research questions for the area if weak coherence is thought to be the outcome of two distinct dimensions: a decreased inclination to integrate information and a higher tendency to featural process (Happé & Booth, 2008).

Although the weak central coherence theory is a very well theorised and widely used theory, it does not fully explain ASD due to the complexity nature of the disorder. Many people with ASD present different symptoms which are unique to the individual. Therefore, the weak central coherence theory, although a very good and insightful theory, does not fully explain ASD with enough certainty for it to be the best theory. The weak central coherence theory has its shortcomings and does not completely help researchers understand ASD, but does in fact correlate a little with the data that was acquired from the multitude of studies done of children with high functioning autism as well as Asperger's syndrome.

Conclusion

It is evident that the weak central coherence theory has its positive and negative aspects to it. The theory is the basis and the foundation for many research studies done over the past two decades. Many researchers have utilised the weak central coherence theory in order to complete their studies and to further understand the Autism Spectrum Disorder (ASD) when compared to typically developing individuals. However, almost every study done by using the weak central coherence theory concluded that the theory can only be partially correlational to the data that was obtained from completing the study. Therefore, it is only reasonable to assume that the weak central coherence theory has its shortcomings and may not necessarily explain ASD across the lifespan when compared to typically developing individuals.

Therefore, more studies and research should be done to look into the weak central coherence theory in order to further expand on the theory in order to provide more understanding

of the autism spectrum disorder (ASD). The weak central coherence theory is the basis of many researches and should continue to help researchers and psychologists further understand ASD in order to provide more help to children as well as adults who have ASD, not to forget helping lower the rates of ASD so that children can get the help they need in order to cope better with their ASD traits and tendencies in order for them to live a happier and more prosperous life.

Multiple studies have been able to further look into ASD in children as well as Asperger's syndrome by using the weak central coherence theory as a basis to build off of. The weak central coherence theory is the backbone of many researches and studies carried out over the past couple of decades which further solidifies the theory's place in the further understanding of ASD, albeit in children or adults. More researchers should look into the theory in order to find a more cohesive and concise theory which allows not just researchers, but parents who are looking for answers, to understand autism spectrum disorder in order for it to be more understood within society as a whole.

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