

Sex differences in the brain psychology essay



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There has been ongoing debate and research on the differences between the male and female brain by endless amounts of researches. According to a few researches (Leonard et al., 2009), not much has been researched to show a sex difference in terms of behavioural. While many or some still believe that women and men think and act the same, there are actually some differences in each other's brains that show otherwise. According to one Geary (1998), the development of sex differences are through sexual selection which relates to sex hormones and also sex differences in the brain. The main debate on this particular topic would be that both gender are equal in terms of thought , skills and life strengths. There also have been arguments giving theories that women and somewhat better than men in certain skills while men are better in certain skills than women. Some may question the importance of undergoing research on this debate but it is of utter most importance to discover the strength and weakness of both genders in order to achieve a better living environment.

It can be seen in both male and female that there are differences between the brains through their behaviour, personality traits and life skills and their much stronger abilities. In terms of abilities, it can be seen in their visuospatial, verbal and quantitative abilities. This is shown through ones individual behaviour. For males, an example would be in terms of their visuospatial abilities which include object rotation (Nisbett et al., 2012). In other words, it is where they are able to imagine how an object would appear when rotated (Quinn & Liben, 2012). Example would be in a particular subject requiring imagining object rotation in Video Games. Men are more likely to be able to create a game faster compared to women because of this

particular ability and that may be the reason why men are usually the hunters. For there is a need of visuospatial abilities in hunting, which might explain this phenomena. As for women, they are more likely to score higher in verbal abilities such as speech fluency and memory abilities (Nisbett et al., 2012). This may be the reason why women have a higher tendency to be giving speeches in any form without compromise. Although we may say that there are no differences, it is already shown through some research that differences among men and women can be seen.

Besides that, there is another individual difference between both men and women which would be in terms of intelligence of different fields. The structure and organization of both male and female brains are similar but through deeper inspection, it can be seen that some parts of the brain between the male and female are differ from one another (Giedd, Castellanos, Rajapakse, Vaituzis, & Rapoport, 1997). Another individual difference which can be seen would be aggression. Men tend to be more aggressive than women in terms of how they show it. It shows that men tend to be direct with their aggression. But as for women, they tend to show their aggression indirectly. A good example would be through gossips, straight forward remarks and many more. This shows that their aggression would be through words rather than physical harm. Before this there were arguments on why the treatment between men and women are different where men were treated much better than women in terms of given opportunities. This would lead to the idea of stereotyping between men and women. Although it shows that there are differences, the action of splitting both gender into their own groups might lead them to stereotyping and it wouldn't be healthy for

both genders. In some way, through these research, it can be said explained that there is a difference between both genders but to some extent. These research act as guidelines in terms of assigning work or tasks depending on their strongest ability and knowing their limitations might help increase the chances of a better performance in a group, team or taskforce.

There are also debates going around about effects of cultural differences upon the sex differences of the brain. In the opinion of Baron-Cohen (2005) culture and socialization has a part in affecting the male and female brain in terms of strengthening a certain area, for example their systematic side for the guys and emphatic side for the girls. But there are a few studies on infancy which strongly suggests that biological factors play an important role in developing a person's brain. According to Neisser et al. (1996), the influence on behaviour of postnatal and prenatal hormones are there, which also includes influence on cognition and personality and character of a male and female. It is said that sex hormones has an effect on human cognition in life, which might explain the why older women have better fluency in their verbal abilities (Wolf & Kirschbaum, 2002, as cited in Nisbett et al., 2012). This is because a higher estrogen levels effect the verbal abilities of a person. As for males, if one were to be born with IHH (Idiopathic Hypogonadotrophic Hypogonadism), they would most likely have small testes which would explain why they would be doing badly in the more spatial parts when it comes to systemizing a task compared to normal males. Besides that, a male with AI (Androgen Insensitivity) Syndrome, they would also be doing worse in systemizing compared a normal male. Through the

few research stated above, it can be seen that hormones play a big role in developing both female and male brains.

There is an assumption or conclusion where there are absolutely no sex differences in the brain between both male and female (Jensen, 1998 as cited in Nisbett et al., 2012). There are some researches who supported this conclusion by conducting a 42 mental ability test (Johnson & Bouchard, 2007, as cited in Nisbett et al., 2012). It is said that there are no differences between the sexes yet a contradicting statement says " however, several test showed a difference between male and female... " (Nisbett et al., 2012). This may be caused by certain limitations faced by the experimenter during the time of research for different periods of time use different method. Some better than the other due to the increasing development in research method as time passes. Besides that, there are research that says that there are sex differences in behaviour. And a research supports that saying there was very little evidence to support the fact that there are sex differences in behaviour (Chiarello et al., 2009). Little can be said about the behaviour as one could easily be influenced by the environment that they have been raised in. But in the way of thought and certain skill set, it can be seen there is a difference in the brain between both male and female.

There are new theories that have been brought to light at this time period. One of them would be the empathizing-systemizing (E-S) theory. This theory states that the female brain tends to be more stronger in terms of empathy while the male brains are more towards the understanding and building of systems (Baron-Cohen, 2005). To further understand this, we must know the meaning of empathizing and systemizing. Empathizing helps a person able

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to source out someone else's emotions and thoughts while being able to interpret it to give the right emotional response. These people usually try to find out how a person feels rather than what they are doing thus making them more sensitive and able to care for them well. As for systemizing, it is the motivation or drive to explore and analyze the system, to be able to think out of the box and see the unseen, imagining possibilities by just looking at one shape and how it would turn out to be once it has been completed. They are able to figure out the workings of the system, but sometimes using the rules as guidelines. Through this theory, it can be said that, a person, may it be male or female, has a certain type of brain. There are three categories in this brain type. The first would be a stronger empathizing ability than systemizing which is labelled as brain type E. The following one would be a stronger ability in systemizing, which is labelled as brain type S. It can also be known as the male brain because the majority gender that has this type of brains would be the male compared to the female. The last one would be the strong ability in both empathizing and systemizing. This is labelled as a balanced brain which falls under category brain type B.

Through this research, it can be seen there is a significance difference between the male and female brain in certain areas. In terms of verbal abilities, women score higher in this section of the research while men score higher in visuospatial abilities and quantitative abilities. Although this research is ongoing and never ending as new theories and findings will come out, there is no harm in applying what has been found into the world today. For example would be at work. Certain work can be divided among different

gender workers depending on their strongest ability. Some may be given the task to increase their knowledge and ability in that field. By doing so, there is a possibility of increasing productivity, teamwork, communication and development of the company and employees. There has to be a certain level of equality to avoid stereotyping from happening in the workplace. In school's it is better not to split genders and have only gender based education as it may bring harm to both male and female in terms of mental and psychological factors. This may make boys and girls stereotyping one another once they leave school. As this topic falls in the area of cognitive psychology and neuropsychology, it can help us learn more about each gender. This could benefit everyone in the long run and also avoid any thoughts of stereotyping or sexism among both genders in the working and studying environment.

As a conclusion, through this research, it can be seen that there are sex differences in the brain between both genders but only in certain areas. The strengths of one gender might differ from the other. The study of sex differences in the brain may continue and the debate will go on. As this progresses, new theories and finding will come to light. The influence of external sources like the environment in which a person has grown also effects the differences in the brain. Besides that, biological factors would also greatly effect the development of a persons brain. Applying this into our current situation might help in future developments and also it could end the thought of stereotyping another gender. Furthermore, the rapid development of new technologies could help us understand more of these differences in

the future and maybe the society would change and be more open to allowing the application of these research into our daily lives.