A Paper Investigating Stuttering and Second Language Acquisition

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Abstract

In this paper, the topic of stuttering and second language acquisition will be investigated through reviewing the recent research materials and the literature regarding stuttering as a speech disorder from psycholinguistic and neurolinguistic points of view. Before investigating the effects of stuttering on second language acquisition, stuttering itself must be identified and explained fairly so as to understand it and to be in a clear position before going further and investigating its possible effects on second language acquisition. This paper will also briefly investigate the literature and the current studies regarding stuttering with the intention of examining the latest updates on speech therapy and how stuttering could be *treated* as well as briefly addressing the issue from a pedagogical social point of view.

Keywords: stuttering, psychogenic, neurogenic, developmental stuttering, treatment, speech therapy, speech disorder, second language acquisition, teacher, pedagogy

Stuttering and Second Language Acquisition

Stuttering is a language expressive disorder that affects fluency. This speech impairment can also affect second language acquisition directly by the same fluency issues as well as indirectly by the anxiety, anger, and frustration that are usually associated with stuttering and that may predominantly influence the confidence, attitude, self-esteem, and classroom participation and engagement of the person who stutters. Therefore, having strong negative effects on that person's second language acquisition. Although stuttering is merely a speech fluency disorder and it has not been proven to affect intelligence, it may affect academic performance to some degree as it could impact various aspects of the life of the person who stutters as is evident according to a study by Craig, A., Blumgart, E., & Tran, Y. (2009) who suggest that stuttering will negatively impact vitality, and social, emotional and mental functioning of people who stutter, and the extent of the impact of stuttering on their quality of life is apparent when comparisons are made to the impact of other disorders. However, to be able to identify the various ways stuttering affects SLA, stuttering itself, its types, and its causes must be identified first.

Nonetheless, this is the problem. This oldest language disorder is still a mystery and without an effective thorough treatment, and no one is even certain of its cause according to the American Speech-Language-Hearing Association. Stuttering has been a serious and a very common issue among children and adults of all ages throughout the history of human civilization and since the dawn of language, but there is no thorough nor comprehensive treatment for stuttering. In fact, no one is even completely certain with regards to the underlying causes behind stuttering thus far. The research done in the field is either full of speculations and assumptions, or lacking certainty and concrete evidence, or dwelling on previous findings with no significant progress. In

other words, to go further and try to identify the problem of stuttering, even in this paper, will still be based on the same speculations and hypotheses. Therefore, this paper will focus on and examine the gap in the latest literature and aim to provide a solid refute thereof. In addition, this paper will objectively examine the current treatments and solutions used with people who stutter as well as investigate the impact stuttering has on second language acquisition in the hope of drawing enough and much-needed attention to this issue for more experts to help in furthering this field and presenting necessary, thorough, and appropriate solutions to help find serious, scientific, and effective treatments for stuttering as a means to lessen its effect on first and second language acquisition for children and adults.

Literature Review

Stuttering

Many research studies, as will be cited throughout this paper, have examined stuttering and its causes as a language disorder phenomenon. It is detected in people who stutter usually as repetitions, prolongation, and blocks in speech, words, or sounds. However, these studies have not made any significant discoveries in understanding the main issues of the onset or nature of stuttering nor found an effective thorough treatment therefor, as previously mentioned. Moreover, these studies deal with stuttering in different ways as it could be categorized by what is thought to be the reason behind it into psychogenic, neurogenic, genetic, and developmental. In short, studies which investigate stuttering as a psychogenic issue claim that it is caused by anxiety and other emotional problems. Other studies which investigate it as a neurogenic issue argue that stuttering can be a result of a neurological disease or a severe injury to the brain. Additionally, stuttering in some studies is viewed as being a genetic issue, since some people who stutter have family members who also stutter. Furthermore, stuttering is also examined as a

developmental issue which is the most common type of stuttering that usually can be found in children between the ages of 2-5 years old.

In more detail, with regards to psychogenic stuttering, Craig, (2000) explains that most views regarding stuttering in the 20th century claim that psychological factors such as, different emotional problems and anxiety were the cause of stuttering, as the latter was believed to be a main cause. Nonetheless, there was no concrete evidence to support this claim. In addition, Craig, (2000) argues that if high levels of anxiety were the main cause of stuttering in children, for example, then children who stutter should have high anxiety levels, which is not the case as recent studies show. Furthermore, Craig (2000) also adds that children who stutter are not found to be more anxious than children that do not stutter. As a matter of fact, Alm, (2014) found that children who stutter do not show any elevated levels of anxiety or even shyness when compared with other children that do not stutter. Nonetheless, some research studies suggest the use of antianxiety drugs such as, alprazolam, citalopram, and clomipramine to reduce the effects or severity of stuttering as Brady, & Ali, (2000) claim that the above mentioned antianxiety agents were surprisingly helpful with 3 out of 4 patients treated at the time of their study. However, Brady, & Ali, also state that the stuttering was not completely cured in any of these patients. In fact, Alm, (2014) argues that lessening anxiety levels even in adults who stutter does not show any significant improvement in fluency. As things stand now, it could be argued that the reason these antianxiety drugs show some improvement could very well be that they are treating anxiety as a symptom for some people who stutter and not the core of the problem for any person who stutters.

As shown above, recent studies that investigated anxiety as a main cause to stuttering did not find any solid proof that stuttering and emotional problems or anxiety in children and adults

are connected. With that being said, Blomgren, (2013) says that stuttering impacts the daily life of people who stutter in a major way making them vulnerable to feel frustration, anger, embarrassment, and also the shame of having a stutter and not being able to express themselves as quickly and efficiently as their colleagues or classmates. Also, Boyle, (2013) reached a conclusion on the stigma associated with stuttering that speech pathologists can recognize the presence of self-stigma their adult clients who stutter suffer from, and they try to help them to change these beliefs. On that account, it is reasonable to assume that the anxiety found in children and adults who stutter is merely triggered by these negative emotions. Moreover, it is also reasonable to assume that anxiety is only a symptom of stuttering that could worsen it. However, it is still not the main cause.

Furthermore, neurogenic stuttering can be defined as a sudden onset of stuttering believed to be caused by a severe injury, a neurological disease, or a stroke that affected the parts of the brain responsible for the process of speech production, or the nerves and/or muscles responsible for controlling the articulatory system. And if this damage is severe enough, whether it is whole or partial, will cause an interruption in the process of speech production which will cause a dysfluency known as a neurogenic stutter. Also, Chang, Synnestvedt, Ostuni, & Ludlow, (2010) add that neurogenic stuttering typically occurs in adults following neurological and/or psychological trauma, and it is considered different from developmental stuttering, which starts during early childhood with few if any cases reported after adolescence. However, this type of stuttering is not the main concern of this paper as it is caused by trauma and is not a *mystery*, although, according to Helm, Butler, & Benson, (1978), acquired stuttering resulting from brain damage in adults has received little attention in comparison to that given to developmental stuttering.

In addition, there is also strong evidence that stuttering could have a genetic element as some children who stutter have a family relative or more who shares this dysfluency. Moreover, Yairi, Ambrose, and Cox, (1996) argue that, over a long period of time, the fact that stuttering runs in families has been documented and has led to more speculations and research that there is an unknown genetic component behind this disorder and that such research has provided strong continued support for a connection between stuttering and genetics. However, more recent studies made revolutionary discoveries regarding some mutations that could be associated with stuttering. Furthermore, Drayna, & Kang, (2011) argue that investigations of the region of chromosome 12 identified mutations in the *GNPTAB* gene that are associated with stuttering in families and in the general population. Moreover, Drayna, & Kang, (2011) claim that subsequent studies have also identified mutations in both genes *GNPTG* and *NAGPA*, and these mutations can be identified in less than 10% of cases of stuttering in families, and this knowledge allows a variety of new studies that can help more in identifying the neuropathology that is behind this disorder. However, this alleged component remains unknown till this day.

Additionally, developmental stuttering is arguably the most common dysfluency in children 5 years or younger. Although this speech disorder, which can be found in males more than females, is not usually a serious issue and will gradually disappear as children grow and their articulation system fully develops as Wakaba, et al. (2004) argue that this type of stuttering can recover spontaneously, it can in many cases persist into adolescence and adulthood according to Maguire, et al. (2004). Moreover, Cieslak, Ingham, R. J. Ingham, J. C., & Grafton, (2015) believe that developmental stuttering is considered to arise from some genetic determinants interacting with neurologic functions and that changes within speech-motor white matter (WM) connections may also be implicated. In addition, more studies show that people with

developmental stuttering have some abnormalities in white matter as Usler, Smith, & Weber, (2017) confirmed that the results of their research support recent neuroimaging studies that reported gray matter development in Broca's area in people who stutter (Beal et al., 2015) as well as differences in development between children who stutter and children who do not stutter in white matter connectivity in the inferior frontal gyrus (Chang, Zhu, Choo, & Angstadt, 2015). Moreover, Maguire, Riley et al. (2004) attempted to treat developmental stuttering as being a psychogenic condition with olanzapine, an antianxiety drug, but showed only moderate improvement and did not cure the core problem. And as demonstrated in the literature above, with all of these recent discoveries, the cause behind developmental stuttering is still under investigation.

Treatment of Stuttering

According to Fry, Millard, & Botterill, (2013) the treatment of adolescents who stutter is underresearched. Logically, there is no serious treatment. The reason of which is the lack of accurate identification of the problem and its causes. In addition to the abovementioned *failed* attempts to completely treat the different types of stuttering, there are other ways speech therapists use to treat people who stutter. According to the American Speech–Language–Hearing Association (ASHA), almost all programs that aim to treat stuttering are *behavioral* in their treatment approach. Meaning, speech pathologists in such programs mostly rely on teaching the person who stutters certain techniques and behaviors that could be helpful in lessening the severity of the speech dysfluency and achieve better fluency. Furthermore, these programs have other different behavioral methods to treat stuttering such as, recommending and training people who stutter to take their time and speak slower, which could help decrease the frequency of stuttering. However, this method is not an ideal or long-term treatment, and could in fact raise

other issues such as, the speech rate would not be at a *regular* speed and this may lead to frustration and more anxiety. Furthermore, this *treatment* is carried out under the assumption that speaking fast is the reason behind stuttering, which is not completely true with most people who stutter as stuttering could be categorized into multiple types depending on causation as mentioned above.

Stuttering and Second Language Acquisition

Although there hasn't been any scientific research on stuttering and second language acquisition, there are, however, a few on stuttering and bilingualism that will be cited below. Moreover, the effects of stuttering could be examined by examining the process of acquisition itself. Children acquire language at a very young age. And as they grow with their language and acquisition, their brains and articulatory systems grow physically as well. And as they venture through this journey, it is only natural for them to find difficulties in pronouncing certain words either for their length or phonetic and phonological complexity. These difficulties in pronunciation and in language fluency could more likely be in the form of stuttering and will affect the second language in a manner similar to the first language. Nevertheless, stuttering is not a disorder associated with a specific language nor a nationality nor a community. It is a speech issue of the human individual not of the language spoken, no matter how complicated the phonological system of any spoken language may be. Moreover, this dysfluency will certainly and naturally transfer to any second language a child or an adult learns, if not addressed as early as possible with the professional and appropriate speech therapy needed at least to avoid increase in the severity of the dysfluency and/or different major complications, as stuttering is forked. In all cases, parents should seek help from speech therapists as soon as they notice some type of stuttering with their child and the early the better, especially with developmental stuttering.

These types include, but may not be limited to, word repetitions, prolongation, and sound blocks. In fact, parents should not ignore the problem or attempt to remedy the issue in any way without a professional consult. Parents are also encouraged to not try to pressure the child to speak *properly* because that could make the child anxious and worsen the dysfluency issue.

Nonetheless, the negative impacts of stuttering do not affect acquisition per se, but they do, however, affect pronunciation and second language fluency. Nevertheless, it is still possible for people and children who stutter to learn a second language. Having said that, some believe that learning a second language for children who stutter will increase the risk and severity of their stuttering, which is clearly a false belief as stuttering has never been proven in any medical or social study to worsen after or during second language acquisition. Despite that, Howell, Davis, & Williams, (2009) claim, in a study they conducted on 317 bilingual children, that the stuttering in children who are bilingual from birth was significant, and that bilingual children have more chance of stuttering than children who used a second language in the pre-school years exclusively. However, according to Byrd, Watson, Bedore, & Mullis, (2015) this suggestion is significantly compromised by the lack of data on the development of patterns of normal fluency as well as the lack of knowledge with regards to the manifestation of stuttering in bilingual children. On the other hand, Roberts, P. M. (2010) presented the argument that if learning a second language is neurologically or cognitively difficult for young children who stutter, then why are tens of millions of children around the world do so successfully?

Stuttering and Second Language Acquisition: Suggestions for Solutions from a Pedagogical and Societal Perspective

Before any discussion with regards to the learning environment of second language acquisition, the issue of how people and children who stutter are perceived in society and by others must be addressed through raising awareness in society, school and academic systems to improve the image towards people who stutter. Furthermore, Craig, Blumgart, & Tran, (2009) agree that research focusing on developing treatments and investigating them for stuttering is imperative as the evidence is clear and strong that the quality of life for people who stutter can be severely and negatively impacted by stuttering. Moreover, Craig, Blumgart, & Tran, also call that pressure should be placed on health funding authorities to increase funding and improve resources in order to address the potential negative impact of stuttering in people's lives. Additionally, in a study by Franck, et al. (2003) it was found that school-age children showed a more negative perception towards a person who stutters than a person who does not stutter. Therefore, it is evident that children who stutter face a lot of difficulties, hardship, discrimination, and bullying simply because of their dysfluency. Such problems can certainly severely damage children who stutter, hinder their education as a whole and their second language acquisition and/or learning, and make grave negative changes in their lives as they grow up; making them feel unwanted or unappreciated. Such negativity also can damage these children’s characters, confidence, and view towards themselves and society. To add to this, Yaruss, (2010) states that people who stutter reported that they experienced negative reactions with regards to their speech disorder, difficulty communicating in important situations, depreciated satisfaction with their life, and a reduced ability to achieve their life goals. Additionally, most teachers, if not all, do not know how to deal with students who stutter. And this lack of training can be severely damaging to the process of second language acquisition as Klompas, & Ross, (2004) reported that students who stutter stated that some of their teachers, who appear to have little to no understanding of the

hardship and difficulties of people who stutter, made significant damage to their personal growth and educational progress. However, teachers must be prepared to deal with this grave issue and it is the responsibility of the society, government, and even privately-owned institutions to stand together in raising awareness and preparing teachers.

Moreover, parents should also support their children who stutter and give them the attention they need to help them be confident and realize that their stuttering does not mean they are less in any way in society or the world. Moreover, Irani, Abdalla, & Gabel, (2012) state that teachers are perceived as authority figures who can have a significant impact on their students' lives in school. To this effect, there are many ways teachers can help children who stutter. Some of these ways is by making the environment of the classroom friendlier to these students as well as helping them understand that language is a way to express themselves and their ideas and that they are listening for the message and not the way it is delivered, as stuttering does not affect the meaning of the messages conveyed. To this regard, teachers should give students who stutter their chance and time to finish their sentences like their classmates, encourage them to speak more, and share their thoughts, viewpoints, and opinions without any interruptions as this could certainly help give these students the confidence and motivation to go forward with their learning and acquisition of a second language.

Moreover, teachers should also encourage students to participate more in classroom activities and show them that they trust them with the work assigned to them. On a similar note, communication with the parents of the children who stutter is also important to help build a safe and more understanding environment for these children at school and in the community in order to help create a healthy conducive environment for second language acquisition and learning.

Discussion and Conclusion

Stuttering is a speech impairment that is not yet fully investigated nor understood. Researchers do not know what is behind it and how to treat it. This certainly conveys the depth of the problem and the unknown number of second language acquisition issues that could arise from this and the lack of teacher preparation to deal with stuttering in language learning classrooms. As researchers, teachers, parents, and a society, this challenge must be overcome. In fact, it is puzzling and not acceptable that a dysfluency that has had such negative serious impacts and implications on human individuals for hundreds of years still lacks comprehensive remedy in this age of knowledge and medical advancement. Also, it is a must to raise awareness in the community and among teachers, parents, and people who stutter to ease and erase the stigma associated with stuttering. Moreover, all educational institutions must work towards lowering anxiety in the children environment and work closely with teachers and parents to help protect children who stutter from bullying through programs, conferences, community meetings, etc.

Furthermore, a solution to any problem starts with identifying the problem first and the reason for its emergence. Therefore, before researching how to limit the effects of stuttering on second language acquisition, and before going any further with any research regarding stuttering, stuttering first must be identified and addressed. Ergo, what is the reason behind stuttering?

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