

## A process study of Anxiety, Social anxiety and Depression among people who stutter

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### **Abstract:**

Stuttering is a type of communicative disorder that has not yet been identified as the main cause, and not definitive treatment has been found for it. Stuttering is a complex disorder that in addition to communication disorder can cause mental disorders too. In this research, we probe three common mental disorders (Anxiety, Social anxiety, Depression) in people with stuttering. The results show that social anxiety is the most common mental disorder in people with stuttering. Anxiety in stutters people is more than those have not stuttering, but about depression, the results are not the same. Sometimes there is no difference, and sometimes the rate of depression is more than nonstuttering. It seems depression in stutters people will increase by rising of age. Probably, one the most important reason of conflict results in evaluating of mental disorder such as depression is utilizing different measures. Unfortunately, the most studies in diagnose of mental disorders for stutters, is done by speech therapists. Often Speech therapists use inventories to diagnose mental disorders. Therefore, using clinical interviews by mental health professionals is the best way to correct the diagnoses of mental disorders in stutters. It is suggested that introducing the most appropriate type of psychotherapy and paying much attention to depression in stutters should be studied.

**Keyword:** Mental disorder, Anxiety, Social anxiety, Depression, Stutter

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**INTRODUCTION:**

Although we still do not know the cause of stuttering (Ann Packman, 2012), But research shows that there are some deficit in the neural process of people with stuttering for their speaking. (Chang, Erickson, Ambrose, Hasegawa-Johnson, & Ludlow, 2008; Chang, Horwitz, Ostuni, Reynolds, & Ludlow, 2011; Cykowski, Fox, Ingham, Ingham, & Robin, 2010; Watkins, Smith, Davis, & Howell, 2007).

Stuttering occurs between the ages of 2 and 5 as the verbal and linguistic skills grow (Yairi, Ambrose, & Cox, 1996). In order to keep speech restructuring, we must look at the mental disorders of people who are stuttering (Iverach, Jones, et al., 2009). Stuttering can affect the whole stutter's life, like frustration, anger, feeling of guilt and humiliation feeling (Bloodstein & Bernstein Ratner, 2008; Daniels & Gabel, 2004). The child becomes conscious of his stutter from and begins to react negatively (Boey et al., 2009; Ezrati-Vinacour, Platzky, & Yairi, 2001; Langevin, Packman, & Onslow, 2009). They have less chance for employment and Higher Education (Bricker-Katz, Lincoln, & McCabe, 2009; O'Brian, Jones, Packman, Menzies, & Onslow, 2011).

Although not all negative consequences occur for people with stuttering but they have Serious problems with communication competence, self-confidence and Romantic relationship (Iverach et al., 2016). Stuttering people have a lot of psychological problems, for examples negative listener reactions, lowered quality of life, social problem and Avoid communicational situations (Blumgart, Tran, & Craig, 2010; Ashley Craig, Blumgart, & Tran, 2009; Cream, Onslow, Packman, & Llewellyn, 2003; Iverach et al., 2016). People with stuttering have a lot of mood disorders and mental health problems. Which includes anxiety and depression and interpersonal problems (Tran, Blumgart, & Craig, 2011). The level of mental disorders in people with stuttering is significantly higher than the average of the community. (Gunn et al., 2014). with stutter treatment, Quality of life and value and self-esteem will improve. (Boyle, 2015). In this research, we probe three common mental disorders (Anxiety, Social anxiety, Depression) in people with stuttering.

**1-1 Anxiety:**

Anxiety is probably the most common mental disorder of people with stuttering (Iverach & Rapee, 2014). The prevalence of stuttering is about 1% and the rate of incidence between 4-5% (Iverach, O'Brian, et al., 2009). The negative consequences of stuttering start from a 4-5 years old and and it continues throughout life (Blood & Blood, 2007; Langevin et al., 2009). These problems become more complex and complicated in adolescence which includes anxiety, social communication, and educational problems (Blood & Blood, 2004). People with stuttering due to negative reactions of the listeners and negative attitude to their speeches, avoid behaviors, anxiety, aggression, and conflict exist in most of

them(Peters & Starkweather, 1989; Snyder, 2001) and These negative experiences lead to feelings of embarrassment, shame, and lack of academic achievement. The probability of having psychological, behavioral and emotional disorders is higher, especially anxiety (Ashley Craig, Hancock, Tran, & Craig, 2003; Moutier & Stein, 1999; Yaruss, 2001). The most research on mental disorders in people with stuttering was anxiety, regarding the role of speaking in academic achievement and communication and having a job, It is not surprising that anxiety is high in stutterers(Iverach, O'Brian, et al., 2009). Despite the numerous studies, stuttering and anxiety in all studies have not clearly been clarified(Iverach, Menzies, O'Brian, Packman, & Onslow, 2011), Is justifiable by the low volume of research and diagnosis based on stuttering reports(Smith, Iverach, O'Brian, Kefalianos, & Reilly, 2014), But today, due to valid psychological tests and diagnostic interviews, conflicting results have been reduced(Iverach & Rapee, 2014).

The results obtained in anxiety research among children with stuttering are equivocal(Smith et al., 2014). Some research show is anxiety is common disorder between children and adolescents stutters(Blood, Blood, Tellis, & Gabel, 2001; Davis, Shisca, & Howell, 2007; Mulcahy, Hennessey, Beilby, & Byrnes, 2008) and in other studies this effect was not observed(Andrews & Harris, 1964; Ashley Craig & Hancock, 1996; Ashley Craig et al., 1996; Messenger, Packman, Onslow, Menzies, & O'Brian, 2015; Ortega & Ambrose, 2011; van der Merwe, Robb, Lewis, & Ormond, 2011). Finally, we conclude that anxiety is high in stutterers and better than diagnostic interviews(Iverach et al., 2011; Menzies, Onslow, & Packman, 1999). Boys tend to hide their anxiety about their stuttering(Messenger et al., 2015), This could be one of the reasons for the dual results of research on stutter anxiety and The worse outcome is perhaps the fact that these people will be less likely to go to treatment(Blood, Blood, Tellis, & Gabel, 2003; Erickson & Block, 2013; Huber, Packman, Quine, Onslow, & Simpson, 2004).

Unfortunately, most research on stuttering and anxiety occurs in adults, while the most likely occurrence of mental disorders, especially anxiety, is adolescence.(Albano, DiBartolo, Heimberg, & Barlow, 1995), however, few studies that investigate mental disorders in people with stuttering in adolescence, anxiety was one of the most common psychiatric disorders (Blood et al., 2001; Davis et al., 2007; McAllister, Collier, & Shepstone, 2013; Mulcahy et al., 2008)

### **1-2Social phobia:**

Social anxiety is a chronic mental disorder that is diagnosed with severe fear from others in social situations or when its performance is assessed by others(A. P. Association, 2013)

Anxiety and social anxiety disorders are common disorders in people with stuttering(Ezrati-Vinacour & Levin, 2004; Iverach, Jones, et al., 2009; Kraaimaat, Vanryckeghem, & Van Dam-Baggen, 2002; Mahr & Torosian, 1999; Mcallister, 2015),this disorder in teenage stuttering also exists(Gunn et al., 2014) and It can also

be seen among children aged 7 to 12 years(Iverach et al., 2016). People who seek treatment for stuttering are more likely to receive symptoms such as anxiety, social anxiety, and general anxiety disorder(Lindsay & Langevin, 2017).

In many studies, 22-60% of people with stuttering had a social anxiety(Blumgart et al., 2010; Iverach & Rapee, 2014; Menzies et al., 2008; Stein, Baird, & Walker, 1996), Social anxiety is not only among stutterers, but also prevalence in the community between 8-13%, one of the most common psychiatric disorders in the world(Kessler, Chiu, Demler, & Walters, 2005; Ruscio et al., 2008), This diagnosis of mental disorder can negatively affect the outcome of the treatment(Iverach, O'Brian, et al., 2009).

Comparison between stuttering and non-stuttering individuals indicates that the probability of diagnosis for social phobia and anxiety and general anxiety disorder is several times that of stutterers, Future studies should assess the impact of these mental disorders on treatment outcomes(Iverach et al., 2016).

Shame, shame, guilty feelings, poor social interaction, and fear of speaking, especially among strangers, are common problems with stuttering people (Beilby, Byrnes, Meagher, & Yaruss, 2013; Bleek et al., 2012; Corcoran & Stewart, 1998; Daniels & Gabel, 2004; Daniels, Gabel, & Hughes, 2012; L. Plexico, W. H. Manning, & H. Levitt, 2009; L. W. Plexico, W. H. Manning, & H. Levitt, 2009). It seems that the growth of social anxiety in stuttering people begins with childhood experiences and Communicative problems and negative outcomes that stuttering people experience throughout their life can be a source of social anxiety. Social anxiety also exacerbates behavioral weaknesses in social situations and reduces social interactions (Blood & Blood, 2016; Iverach & Rapee, 2014; Menzies, Onslow, Packman, & O'Brian, 2009).

There are many reasons for the relationship between stuttering and social anxiety, Stuttering is accompanied by negative social factors and psychological disorders in life span(Schneier, Wexler, & Liebowitz, 1997), These negative consequences start with the early childhood, so that these children are prone to being ridiculed, harassed, deprived by their peers(Langevin et al., 2009; A Packman, Onslow, Attanasio, & Harrison, 2003), These negative consequences will be more severe during school hours due to more social communication and more need for talking to establish social communication, Regarding all these reasons, stuttering people are more likely to be rejected by peers, as well as runaway from social and social connections, Therefore, these consequences lead to shame and embarrassment and lack of self-esteem, lower academic performance(Davis, Howell, & Cooke, 2002; Hearne, Packman, Onslow, & Quine, 2008; Langevin & Prasad, 2012). The factors associated with social anxiety are very similar and close to each other(Hudson & Rapee, 2009).

Not surprisingly, most stutterers reported that stuttering had many negative effects during the school year, as well as their social and emotional performance (Hayhow, Cray, & Enderby, 2002; Hugh-Jones & Smith, 1999; Klein & Hood, 2004).

There are many reasons why stuttering people experience a high level of social anxiety and there are many ways to grow social anxiety (Kearney, 2006; Kimbrel, 2008; Ollendick & Hirshfeld-Becker, 2002), Which grows in childhood and adolescence (Alfano, Beidel, & Turner, 2006; Morris, 2001).

Clinical psychologists find that many reasons, such as social, environmental, biological, and genetic and psychological, are the source of social anxiety, which combination and interaction together show the complexity of the disorder(Higa-McMillan & Ebesutani, 2011; Hofmann & Barlow, 2002; Kearney, 2006; Kimbrel, 2008; Morris, 2001; Rapee & Spence, 2004).

Some of these factors may be stronger in people with stuttering, such as social factors, Stuttering children may be more exposed to negative reactions from peer groups such as ridicule, rejection and harassment(Kearney, 2006; Morris, 2001; Rapee & Spence, 2004), Which reduces social interaction, reduces the age-appropriate social and social skills and increases the chance of social anxiety(Morris, 2001; Rapee & Spence, 2004).

There is not much evidence to examine and evaluate the factors that lead to the emergence and growth of social anxiety in stuttering people, the main problem for examination and assessment is that people with stuttering may become more anxious when they are taken into consideration, and the other major problem is that they react when they are evaluated. It may not be the same, which are in normal position Therefore, when evaluating social situations in people with stuttering, you should pay attention to these.(Iverach et al., 2016).

### **1-3Depression:**

The correlation between depression and stuttering of the language has not yet been thoroughly investigated and research in these cases is very incomplete but Comparison of mean depression scores in stuttering and stuttering people shows that the mean depression scores for stutterers are higher(Manning & Beck, 2013; Miller & Watson, 1992) and Based DSM 4 (IV-TR), depression can occur in people with stuttering(Association, 2000)

Because of the high positive correlation between depression and anxiety (Barlow, 2004; Gurney, Roth, & Garside, 1970; Leckman, Weissman, Merikangas, Pauls, & Prusoff, 1983).

Depression itself has several types, but their common feature is sadness, lack of pleasure, decreased or increased appetite, reduced or increased sleep, and impaired function(D.-A. P. Association, 2013). Research related to depression in stutterers has also received contradictory results, while some studies have reported high levels of depression in people with stuttering (Liu et al., 2001; Tran et al., 2011; Yanagawa, 1973).While other studies failed to prove that people with stuttering have a greater depression than their peers(Bray, Kehle, Lawless, & Theodore, 2003; Miller & Watson, 1992). It should be noted that in the Miller and Watson study, the average

depression scores for stutterers were higher than non-stuttering. But a new study suggested that people with stuttering are more likely to have mood disorders, as well as depression (Tran et al., 2011) However, in another study, another study considered the relationship between depression and stutter negatively (A Craig & Tran, 2006).

The relationship between depression and stuttering has been shown in older research (Ardila et al., 1994; Becker, 1989; Yanagawa, 1973).

Stuttering is a chronic and debilitating disorder, And research has shown that levels of anxiety, shame, lack of control, and low levels of life satisfaction in other disabling disorders, such as multiple sclerosis, epilepsy and asthma, are very common (Goodwin, Jacobi, & Thefeld, 2003; Patten, Beck, Williams, Barbui, & Metz, 2003; Swinkels, Kuyk, De Graaf, Van Dyck, & Spinhoven, 2001) Which may increase the likelihood of psychological harm and depression (Harden et al., 2007).

Anxiety, social avoidance, embarrassment, shame, negative reactions of peers, low quality of life, dissatisfaction with academic performance and occupation, increases the likelihood of depression in people with stuttering (Yaruss, 2001).

The Beck Depression Inventory (BDI-II; (Beck, Steer, & Brown, 1996), One of the most well-known inventory is depression assessment, which is widely used.

Stein et al. (1996) Reported that depression scores of people with stuttering in the BDI-II test were very low. In another study, using Reynolds Depression Scale (1986 measuring depression in adolescents, there was no correlation between depression and stuttering (Bray et al., 2003)

There are also studies that used other tests to measure depression. Research using Reynolds Adolescent Depression among stuttering and non-stuttered adults did not show a significant difference in depression between the two groups (Bray et al., 2003; Reynolds, 1986).

In contrast to research conducted in Spain, stuttering students showed significantly more depressive symptoms than non-stuttering students. Clinical diagnosis was not used in this study and self-report questionnaire was used to measure depression. (Ardila et al., 1994).

A number of other researches also used personality Inventory to measure depression in stutterers. Research using the Minnesota Multiphasic Personality Inventory (MMPI-A [Butcher, Dahlstrom Graham, & Tellegen, 1989] and MMPI-2 [Butcher, Dahlstrom, Graham, & Tellegen, 1992]), found that people with stuttering had significantly higher scores on depression than those without stuttering (J. Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989; J. N. Butcher et al., 1992; Treon, Dempster, & Blaesing, 2006).

Overall, it can be said that the relationship between depression and stuttering is still not well defined, and one of the main reasons is the lack of use of the appropriate unit for measuring depression, and another reason is a small number of research in this case, which is to clarify The connection between depression and stutter requires more research.

## Conclusion

Stuttering is a complex disorder, as long as it has not yet been identified as the cause of its occurrence, nor is definitive treatment for it to be found. Stuttering can disturb a healthy and pleasant speech, as well as verbal communication in the community. But in many cases, stuttering problems are not limited to speech problems, and also have a negative effect on the mental health of people with stuttering. If accompanied by stuttering, there is another psychological disorder, the stutterer has several concurrent disorders, which can make treatment harder. Attention to mental disorders in stutterers although it has been started for several decades, many stuttering psychological aspects have not yet been fully covered. The most research related to psychological disorders in stuttering, was anxiety and social phobia. It seems that the most common psychological disorders are the same, perhaps because it starts in childhood and is strengthened by the environment. The high level of anxiety and social anxiety show that the diagnosis and treatment of these disorders in childhood and adolescence has been less focused, and these disorders may also be more severe with age. For this reason, it may be most essential and useful to help people with stuttering, diagnose and treat these psychological disorders in childhood to improve their mental health in adulthood. As age grows, the likelihood of depression is increased. Although we still do not have access to clear results about the relationship between stuttering and depression, there are conflicting reports that it seems necessary to focus future research on depression. The most important point for clarity in this case is using diagnostic interviews instead of questionnaires. The lack of mental health of stutterers may have negative effects on relationships, good jobs, academic achievement, and romantic relationships, therefore, treatment should not be limited to speech therapy and Although speech therapy may partly reduce the severity of mental disorders, it is better to use mental health professionals to diagnose and treat these disorders, since in many cases, after treatment, these mental disorders will continue untreated. Most research on psychological disorders in stutterers has been done by speech therapists. Therefore, most studies have only focused on evaluating disorders using questionnaires, and a very limited number of studies have been conducted on the treatment of mental disorders in stutterers. Therefore, in order to properly diagnose, timely treatment is best used by mental health professionals. Stuttering adults are less willing to receive a diagnosis of other mental disorders in addition to stuttering, so their responses to the questionnaire may not be valid. Mental health professionals can increase the validity of responses to questions through the use of therapeutic communication, and can be more accurately diagnosed. There are conflicting results about the level of mental disorders in people with stuttering, so that in some studies there was no significant difference between stutterers and non-stutterers. Two main reasons for this issue can be predicted: the first reason is the lack of use of a unique evaluation tool and the lack of clinical interviewing, and the second reason is the difference in the mental health level of the

studied population. The importance of mental health and people's attitudes about mental disorders in different societies is not the same. Therefore, studies on mental disorders in people with stutter in different societies do not get the same results.

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