Bullying in children and teenagers who stutter and the relation to self-esteem, social acceptance and anxiety

Susanne Cook & Peter Howell

University College London

Abstract

This study examined the relationship of bullying to self-esteem and anxiety in children and teenagers who stutter. Bullying in 59 children and teenagers who stutter was assessed using a newly-developed questionnaire, the Bullying Assessment. Additionally, the participants completed the Harter Self-Perception questionnaire, and an adapted version of the State-Trait-Anxiety Inventory. A significant correlation was found between bullying and the peer related self-perception and state anxiety in a shop. The analysis was then repeated for two different age groups (children and teenagers) to assess whether there were differences over ages. For children, a relation between bullying and self-esteem was found, whereas for teenagers there was a relation between bullying and state anxiety. Clinical implications discuss strategies how to deal with bullying and stress the importance of in-vivo-training and working on self-confidence.

Keywords: Stuttering, Bullying, self-esteem, anxiety

Educational Objectives

The reader will get an overview over the literature on bullying, self-esteem, and anxiety in relation to stuttering in children and teenagers and will be able to (a) understand the instruments used in this research project, (b) explain the correlations between bullying, self-esteem and anxiety for all participants, (c) realize the difference between the results for children and teenagers, and (d) summarize clinical implications of this research.

Introduction

There is no doubt that bullying is a serious problem that affects many children and adolescents. Children and adolescents with special health-care needs such as learning disabilities, autism spectrum disorder, attention deficit, hyperactivity and stuttering are at increased risk of being bullied (Blood, Boyle, Blood & Nalesnik, 2010; Erickson & Block, 2013; Twyman, Saylor, Saia, Macias, Taylor & Spratt, 2010). Several studies have shown that bullying and victimization can co-occur with lower self-esteem (Andreou, Didaskalou & Vlachou, 2013; Guerra, Williams & Sadek, 2011; Klompas & Ross, 2004; O'Moore & Kirkham, 2001) and higher rates of anxiety (Salmon, James & Smith, 1998).

Stuttering and Bullying

Olweus (1993) defined bullying as behavior intended to cause distress and as a situation in which a student is a repeated target of negative actions by one or more others. These negative actions involve verbal, indirect and direct aggression (Hunter, Boyle & Warden, 2007). Craig, Pepler and Blais (2007) described bullying as "a form of abuse at the hands of peers, that can take different forms at different ages." (p.465). In such a situation, the bully is in the position of having more power than the victim. This

does not necessarily mean more physical strength, but can also mean knowing the other's vulnerability and using that knowledge to cause distress (Craig et al., 2007). Children who stutter are often teased or bullied about their stuttering (Langevin, Bortnick, Hammer & Wiebe, 1998).

Langevin et al. (1998) developed a self-report questionnaire and collected data from 28 Children who stutter to evaluate the relation between stuttering and teasing/bullying. Fifty-nine percent of the participants reported being teased or bullied about their stuttering. Langevin et al. (1998) concluded that stuttering seems to play a role in bullying. Murphy, Yaruss and Quesal (2007) documented the difference between teasing and bullying. Teasing refers to a comparatively enjoyable exchange between friends that is not intended to be hurtful. Bullying, on the other hand, implies refers to is defined as comments or behaviours that are designed to hurt someone or control them. Davis, Howell and Cooke (2002) studied peer relationships of children who stutter and their non-stuttering classmates. According to their findings the children who stuttered were more likely to be nominated to the bullied category. Blood and colleagues (2011) also found a negative correlation between victimization and self-esteem in students who stutter. A retrospective study by Hugh-Jones and Smith (1999) examined the experience of bullying and the short- and long-term effects on people who stutter, and Benecken and Spindler (2004) replicated this study in Germany. Both studies reported that the majority of the respondents (83% in the United Kingdom and 75% in Germany) had experienced bullying during their time at school, mainly between the ages of 11 and 13. This is noteworthy as this is a sensitive period in adolescence.

Stuttering and anxiety

Anxiety is defined as the tense, unsettling anticipation of a threatening but vague event (Rachman, 2004). Many components are involved in the activation, and the

experience of, anxiety; Rachman (2004) described it as a process rather than a categorical event that occurs or does not occur. Spielberger's (1966, 1972) conceptual framework distinguished two types of anxiety: state, and trait, anxiety. State anxiety represents a situation-specific anxiety that usually endures for only a limited period of time. Trait anxiety refers to a person's inherent level of anxiety, and results from the individual differences between people in the way in which they perceive the world and respond to it. Most of the research on the relationship between anxiety and stuttering has focused on adults. However, there is a small body of research with children or adolescents who stutter. The results can be divided in two groups: 1) studies that did not find a relationship between anxiety and stuttering in children who stutter (e.g., Blood, Blood, Maloney, Meyer & Qualls, 2007; Craig & Hancock, 1996); and 2) findings supporting that there is a relationship between anxiety and stuttering in children who stutter (e.g., Davis, Shisca, & Howell, 2007; Vanryckeghem, Hylebos, Brutten, & Peleman, 2001). Davis et al. (2007) found that adolescents who persisted in stuttering had higher levels of state anxiety than controls for three out of four speaking situations tested. Alm (2014) reported, that no study of preschool children who stutter found a significant difference in regard of state or shyness in comparison with controls, but that people who persisted in their stuttering often developed state anxiety as a result of their speech problem. According to Alm (2014) there is limited information in regard of the typical age for this process, but it would be supposedly at school-age or teenage.

Stuttering and self-esteem

Chiu (1988) describes self-esteem as the "evaluative component of the self-concept" (p.298). In their preliminary study of self-esteem, stigma, and disclosure in adolescents who stutter (aged 13 yrs to 18 yrs), Blood, Blood, Tellis and Gabel (2003) found that the participants had positive self-esteem. The majority of the adolescents

did not experience a negative impact of stuttering on their lives but would rarely or never discuss the topic of stuttering. Zückner (2011) examined the self-esteem of 171 German children who stutter aged 8.0 yrs to 15.11 yrs. His results showed that the group of children who stutter, in comparison to a fluent control group, showed significantly higher self-esteem. However, the data on self-esteem showed a continuous decline between the ages of 8.0 yrs and 15.11 yrs. On the other hand, Davis et al. (2002) found that children who stutter were less popular than their non-stuttering peers and less likely to be nominated as leader. Klompas and Ross (2004) investigated the impact of stuttering on the lives of South African adults. Most participants felt that stuttering had affected their self-esteem and self-image, and their stuttering had evoked strong emotions. In his analysis of speech attitude of children who stutter, Boey (2010) found that a higher stuttering severity was associated with a more negative speech attitude. In summary, a relation between self-esteem and stuttering seems to exist, however, the studies reviewed do not provide consistent results.

The aim of the current study was to assess the relation between experience of bullying, self-esteem and anxiety in children and adolescents who stutter using a new assessment tool and to determine whether these experiences differed between children aged 9 to 12 and teenagers aged 13 to 17.

Methods

Participants

Fifty-nine German-speaking children and teenager who stutter aged between 9.0 years/months and 17.8 years/months (M=13.4 years/months, SD=2.6

years/months) participated in the study. Fort-four were boys and fifteen were girls. All participated in a three-week intensive treatment for children and adolescents who stutter and have previously attended speech therapy sessions. Data was collected at the beginning of the three-week intensive treatment.

To assess differences between children and teenagers, the participants were then divided into two groups: Group one had 27 children who stuttered (22 boys, 5 girls) aged between 9.0 years/months and 12.9 years/months (M=11.1 years/months, SD=1.2 years/months) and group two had 32 teenager who stuttered (22 boys, 10 girls) aged between 13.0 years/months and 17.8 years/months (M=15.3 years/months, SD=1.7 years/months).

Instruments

Bullying Assessment

To measure the experience of bullying in children and adolescents who stutter the *Bullying Assessment* was developed and validated for this study. This is a paper and pencil test that consists of 13 questions arranged in three categories. The categories were "Bullying", "Frequency of Bullying", and "Forms of Bullying". Responses were given on a 6-point Likert scale. For category A ("Bullying") and category C ("Forms of Bullying") responses ranged from "Always" to "Never", for category B ("Frequency of Bullying") responses ranged from "Strongly Agree" to "Strongly Disagree". See Figure 1 for details.

To assess the reliability and validity of the *Bullying Assessment*., 136 German children and adolescents who stutter completed the Bullying Assessment. There were 96 boys and 40 girls aged between 8.3 years/months and 17.11 years/months (M = 12.10 years/months; SD = 2.7 years/months). Participants were recruited in speech

therapy settings and intensive treatments for children and teenagers who stutter in Germany. At the time of the study, all participants were attending speech therapy sessions. Speech therapists handed out the questionnaires and after completion sent them back to the first author. Internal consistency was calculated with Cronbach's alpha. For the Bullying Assessment Cronbach's alpha was .879, which is an acceptable value (Field & Hole, 2002). To calculate test-retest reliability, the *Bullying Assessment* was completed by 22 participants twice, in a period between 7 and 14 days apart from each other. Test-retest reliability for 22 participants was highly significant with $r = .923$ and $p < .001$. A factor analysis with varimax rotation was performed for the 13 items of the *Bullying Assessment*. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) was used to determine the appropriateness of the factor analysis. High scores on KMO indicated that the factor analysis was appropriate (Field, 2005). The KMO for the *Bullying Assessment* was .820, which is a good result according to Field. The percentiles for school-aged children of Stuttering Severity Instrument 3rd edition (SSI-3, Riley, 1994) was used to convert the raw scores on the *Bullying Assessment* into severity ratings. This was equivalent to the procedure Howell, Davis and Williams (2009) used to standardize their questionnaires that were used with children, parents and researchers. The SSI-3 targets children who stutter in the same age range as the *Bullying Assessment*. Riley (1994) obtained his severity scores by assessing 72 preschool children, 139 school-aged children and 60 adults who stuttered and analyzing their speech for severity. According to his findings, the SSI-3 instrument is a reliable and valid way of determining the stuttering severity of children, adolescents and adults who stutter. To analyze the data collected with the *Bullying Assessment*, the percentiles of the severity ratings for school-aged children by Riley (1994) were compared to the total raw scores of the 136 responses of the

Bullying Assessment. The *Bullying Assessment* only contained 13 questions, which means the total raw score of 13 equals no bullying. To adjust this to the percentiles of the severity ratings for school-aged children by Riley (1994), the two lowest categories were rated as no bullying. Higher scores represent a higher experience of bullying. The score obtained provides a severity rating ranging from no bullying to very severe which indicates the experience of bullying (see Figure 2).

Figures 1 and 2 about here

Self-Perception Profiles

To assess self-esteem, the Self-Perception Profiles for Children/for Adolescents (SPPC/SPPA Harter, 1985, 1988) were used. Chiu (1988) describes self-esteem as the "evaluative component of the self-concept" (p.298). Hagborg (1993) compared the Rosenberg self-esteem scale and the Harter Self-Perception profile to assess the relationship between self-esteem and self-perception in adolescents. He found a strong correlation between self-esteem and self-perception and concluded that both are measuring similar constructs (Hagborg, 1993). The version of the Self-Perception Profile used with children contains five specific domains (scholastic competence, social acceptance, athletic competence, physical appearance, behavioral conduct) and global self-worth (Harter, 1985). The adolescent version also covers the domains of job competence, romantic appeal and close friendship (Harter, 1988) For this study, the overall score and the domain "social acceptance" was of specific interest.

Anxiety

The State Trait Anxiety Inventory (STAI, Spielberger, 1983) is a standardized pencil and paper questionnaire that was designed to differentiate between the temporary condition of "state anxiety" and the long-standing quality of "trait anxiety" in adolescents and adults. Similar to Davis et al.'s (2007) study an extended version of the STAI was used where participants were asked about their anxiety in four different speaking situations (with friends, in a shop, at school, on the phone).

Results

Table 1 gives the results for the two age groups on the *Bullying Assessment*., the SPPC/SPPA, and the STAI for the four different speaking situations. There were no significant differences between results across the age groups.

Table 1 about here

Stuttering-related bullying occurred (*M*=23.81, *S.D.*=9.302, *n*=59) (see Figure 3). Figures 4 and 5 show the distributions of the overall scores separately for the two age groups; for the younger age group (children, *n*=27) the overall score of the *Bullying Assessment* was *M*=25.67 (*S.D.*=10.937), and for the older age group (teenagers, *n*=32) the overall score was *M*=22.25 (*S.D.*=7.488). This indicated that the children as a group reported a slightly higher experience of bullying than the teenagers. However, this difference was not significant.

Figures 3, 4, 5 about here

Correlations between the measures were calculated with Pearson's correlation coefficient *r*. First the correlations for all participants (*n*=59) are reported, and then the participants were divided in the two groups (children (*n*=27) and teenagers (*n*=32)). Reported effects are regarding the correlation coefficient *r*, with *r*=.10 representing a small effect, explaining 1% of the variance, *r*=.30 a medium effect, accounting for 9% of the variance, and *r*=.50 a large effect accounting for 25% of the variance (Field, 2005).

Results for all participants

A significant correlation occurred between bullying and the domain "social acceptance" of the SPPC/SPPA (*r*=-.298, p=.022, medium effect). These questions related to how easy the participant made friends, how many friends they had, whether they would like to have more friends and how popular they were with their peers. The only other significant correlation was between bullying and state anxiety in a shop (*r*=.264, p=.043, small to medium effect).

Results for the two separate age groups

The younger age group (9.0 years/months to 12.9 years/months) showed a significant correlation between bullying and the domain "social acceptance" of the SPPC (*r*=-.516, *p*=.006, large effect). This was also true for each sub-category of the *Bullying Assessment* and the domain "social acceptance" of the SPPC: Category A (bullying): *r* = -.489, *p*=.010 (medium to large effect); category B (frequency of bullying): *r* = -.386, *p*=.047 (medium effect); category C (forms of bullying): *r* = -.445, *p*=.020 (medium to large effect). A marginally significant correlation was found between the overall result of the SPPC and bullying (*r*=-.387, *p*=.046, medium effect).

When at bullying and anxiety were examined, the only significant correlation for this age group was between state anxiety when interacting with friends and category C of the *Bullying Assessment* (forms of bullying) which had $r=.409$, $p=.034$ (medium to large effect).

The older age group (13.0 years/months to 17.8 years/months) showed significant correlations again between bullying and state anxiety when speaking in a shop ($r = .387$, $p=.029$, medium effect), and in addition between bullying and state anxiety when speaking at school ($r = .411$, $p=.019$, medium to large effect). When the sub-categories of the *Bullying Assessment* were investigated, a significant correlation was found between category A (bullying) and state anxiety in a shop ($r = .505$, $p=.003$, large effect).

Discussion

In agreement with previous studies, stuttering-related bullying was found (e.g., Blood et al., 2010, Hugh-Jones & Smith, 1999, Klompas & Ross, 2004). The negative correlation found for bullying and the domain "social acceptance" of the SPPC/SPPA indicated that a child accepted by his or her peers was less likely to be bullied. Davis and colleagues (2002) found that children who stutter were less popular and less likely to be nominated as a leader. The correlation between state-anxiety in a shop (the child imagined asking for an item in a shop) was only marginally significant and indicated that if a child experienced levels of bullying, the anxiety levels when asking for something in public were higher. Davis et al. (2007) observed similar results and found higher levels of state anxiety in the group of children who persisted in their stuttering. Salmon et al. (1998) also reported a positive correlation between bullying and anxiety in male adolescents.

Dividing the participants into two age groups (children and teenager) allowed a more detailed examination of the data. For the younger age group, significant correlations between bullying and self-perception were found. This may indicate that, especially for children in this age group, social acceptance helped to prevent bullying. The significant correlation between anxiety and bullying that was found for this age group only occurred in situations when speaking with friends. Andreou (2000) reported similar results in a study that investigated the association of bully-victim problems and psychological constructs among eight to twelve year old school children. The participants completed the SPPC (Harter, 1985) and the Bullying Behaviour Scale and Peer Victimization Scale (Austin & Joseph, 1996). They reported a significant negative correlation between bullying and the domain social acceptance. The study by O'Moore and Kirkham (2001) with primary and post-primary school-aged children also concluded that victims of bullying had significantly lower self-esteem than children who had never been bullied.

For the older age group (teenagers) no significant correlation between self-perception and bullying was found. However, correlations between bullying and state anxiety in a shop and state anxiety when speaking at school were evident. This is in line with Alm's (2014) conclusions that younger children do not tend to show traits such as social or general anxiety, but that people with persistent stuttering develop social anxiety as a result of their speech problem. Davis et al. (2007) drew similar conclusions.

Weaknesses of the Bullying Assessment

The *Bullying Assessment* has some weaknesses. The second category in the *Bullying Assessment* ("Frequency of bullying") asked about the experience of

bullying now and when the respondent was younger. This measurement depended on the age of the respondent and therefore did not give an exact measure of frequency of bullying. Additionally it should be noted that the third category of the *Bullying Assessment* ("Types of Bullying") asked a question about two points in time. It was not clear, whether the child currently experienced the types of bullying or whether he or she had previously experienced them. These questions will be clarified in follow-up work.

Clinical Implications

Although there are some weaknesses, the Bullying Assessment is a helpful tool for identifying stuttering-related bullying. If a child experiences bullying, strategies to deal with bullying can be taught. Dobson (2002) proposed strategies that were not specifically developed for children who stutter. Some of his strategies do not require speech and can be adopted by children who stutter. A person showing a confident posture is less likely to be picked on as a victim. Dobson also recommended keeping a journal and writing down any situation in which bullying occurs. If it is necessary to report to a teacher, the journal helps to identify problem situations. Another non-speech related strategy Dobson uses is to "pause". This means not to react straight away in a situation in the way the bully wants, for example by screaming or bursting into tears. It is more powerful to pause and calm down. Murphy et al. (2007) proposed strategies specifically tailored for dealing with bullying by children who stutter. One strategy is not to cry, as this might encourage bullies to continue their behaviour. Further advice included not to fight back physically and not to make threats that cannot be carried out. Murphy et al. (2007) also suggested not to ignore bullies completely as this might cause the bully to try harder. It is better to say, "I don't want you to tease me" (p.156). If a child or teenager experiences bullying the clinician can

help them to deal with this situation using the different strategies.

The correlations between bullying and social acceptance suggest, it might help to work on increasing the child's self-confidence, which could lead to a decrease in bullying. It would also be useful to create peer-support networks, as previous research has shown that children who are accepted by their peers are less likely to be bullied (e.g., Davis et al., 2002). Another helpful therapeutic strategy could be in-vivo training, which means taking the therapeutic intervention outside the therapy room and later transfer them into the "real world". Desensitization exercises might also help to decrease anxieties in shop-related situations.

Conclusion

The results of this study confirmed a relationship between bullying, anxiety, and self-esteem in children and adolescents who stutter. Children show a relationship between bullying and self-esteem, whereas in teenagers show one between bullying and anxiety.

References

Alm, P. A. (2014). Stuttering in relation to anxiety, temperament, and personality: Review and analysis with focus on causality. *Journal of Fluency Disorders*, *40*, 5-21. doi:10.1016/j.jfludis. 2014.01.004

Andreou, E. (2000). Bully/victim problems and their association with psychological constructs in 8-to 12-year-old greek schoolchildren. *Aggressive Behavior*, *26*(1), 49-56.

Andreou, E., Didaskalou, E., & Vlachou, A. (2013). Bully/victim problems among greek pupils with special educational needs: Associations with loneliness and self-efficacy for peer interactions. *Journal of Research in Special Educational Needs.*

Austin, S., & Joseph, S. (1996). Assessment of bully/victim problems in 8 to 11 year-olds. *Br J Educ Psychol*, *66 (Pt 4)*, 447-56.

Benecken, J., & Spindler, C. (2004). Zur psychosozialen situation stotternder schulkinder in allgemeinschulen. *Die Sprachheilarbeit*, *49*(2), 61-70.

Blood, G. W., Blood, I. M., Maloney, K., Meyer, C., & Qualls, C. D. (2007). Anxiety levels in adolescents who stutter. *Journal of Communication Disorders*, *40*(6), 452-69. doi:10.1016/ j.jcomdis.2006.10.005

Blood, G. W., Blood, I. M., Tellis, G. M., & Gabel, R. M. (2003). A preliminary study of self- esteem, stigma, and disclosure in adolescents who stutter. *Journal of Fluency Disorders*, *28*(2), 143-58; quiz 158-9.

Blood, G. W., Blood, I. M., Tramontana, G. M., Sylvia, A. J., Boyle, M. P., & Motzko, G. R. (2011). Self-reported experience of bullying of students who stutter: Relations with life satisfaction, life orientation, and self-esteem. *Percept Mot Skills*, *113*(2), 353-64. doi: 10.2466/07.10.15.17.PMS.113.5.353-364

Blood, G. W., Boyle, M. P., Blood, I. M., & Nalesnik, G. R. (2010). Bullying in children who stutter: Speech-language pathologists' perceptions and intervention strategies. *Journal of Fluency Disorders*, *35*(2), 92-109. doi:10.1016/j.jfludis.2010.03.003

Boey, R. A. (2010, April 23). Does the communication attitude of children just represent stuttering severity. [Conference presentation: 2nd European Symposium Fluency Disorders].

Chiu, L.-H. (1988). Measures of self-esteem for school-age children. *Journal of Counseling & Development*, *66*(6), 298-301.

Craig, A., & Hancock, K. (1996). Anxiety in children and young adolescents who stutter. *Australian Journal of Human Communication Disorders*, *24*(1), 28-38.

Craig, W., Pepler, D., & Blais, J. (2007). Responding to bullying what works? *School Psychology International*, *28*(4), 465-477.

Davis, S., Howell, P., & Cooke, F. (2002). Sociodynamic relationships between children who stutter and their non-stuttering classmates. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *43*(7), 939-47.

Davis, S., Shisca, D., & Howell, P. (2007). Anxiety in speakers who persist and recover from stuttering. *Journal of Communication Disorders*, *40*(5), 398-417. doi:10.1016/j.jcomdis. 2006.10.003

Dobson, M. (2002). *Back off, bully - a crash course in stopping bullies.* Syndey: Transworld Publishers.

Erickson, S., & Block, S. (2013). The social and communication impact of stuttering on adolescents and their families. *Journal of Fluency Disorders*, *38*(4), 311-24. doi:10.1016/ j.jfludis.2013.09.003

Field, A., & Hole, G. J. (2002). *How to design and report experiments.* Sage.

Field, A. P. (2005). *Discovering statistics using SPSS : (And sex, drugs and rock 'n' roll).* London ; Sage Publications.

Hagborg, W. J. (1993). The Rosenberg self-esteem scale and Harter's self-perception profile for adolescents: A concurrent validity study. *Psychology in the Schools*, *30*(2), 132-136.

Harter, S. (1985). *Manual for the self-perception profile for children.* University of Denver.

Harter, S. (1988). *Manual for the self-perception profile for adolescents.* University of Denver.

Howell, P., Davis, S., & Williams, R. (2009). The effects of bilingualism on stuttering during late childhood. *Arch Dis Child*, *94*(1), 42-6. doi:10.1136/adc.2007.134114

Hugh-Jones, S., & Smith, P. K. (1999). Self-reports of short-and long-term effects of bullying on children who stammer. *British Journal of Educational Psychology*, *69*(2), 141-158.

Hunter, S. C., Boyle, J. M., & Warden, D. (2007). Perceptions and correlates of peer-victimization and bullying. *Br J Educ Psychol*, *77*(Pt 4), 797-810. doi:10.1348/000709906X171046

Klompas, M., & Ross, E. (2004). Life experiences of people who stutter, and the perceived impact of stuttering on quality of life: Personal accounts of south african individuals. *Journal of Fluency Disorders*, *29*(4), 275-305. doi:10.1016/j.jfludis.2004.10.001

Langevin, M., Bortnick, K., Hammer, T., & Wiebe, E. (1998). Teasing/bullying experienced by children who stutter: Toward development of a questionnaire. *Contemporary Issues in Communication Science and Disorders*, *25*, 12-24.

Murphy, W. P., Yaruss, J. S., & Quesal, R. W. (2007). Enhancing treatment for school-age children who stutter II. Reducing bullying through role-playing and self-disclosure. *Journal of Fluency Disorders*, *32*(2), 139-62. doi:10.1016/j.jfludis.2007.02.001

Olweus, D. (1993). *Bullying at school : What we know and what we can do.* Oxford, UK ; Cambridge, USA: Blackwell.

O'Moore, M., & Kirkham, C. (2001). Self-esteem and its relationship to bullying behaviour. *Aggressive Behavior*, *27*(4), 269-283.

Rachman, S. (2004). *Anxiety* (2nd ed.). New York: Psychology Press.

Riley, G. (1994). *Stuttering severity instrument for children and adults* (3rd ed.). Austin, Texas: Pro Ed.

Salmon, G., James, A., & Smith, D. M. (1998). Bullying in schools: Self reported anxiety, depression, and self esteem in secondary school children. *BMj*, *317*(7163), 924-925.

Spielberger, C. D. (1966). Theory and research on anxiety. In *Anxiety and behavior* (pp. 3-20). New York: Academic Press.

Spielberger, C. D. (1972). Conceptual and methodological issues in anxiety research. In *Anxiety: Current trends in theory and research* (Vol. 2, pp. 481-493). New York: Academic Press.

Spielberger, C. D. (1983). Manual for the state-trait anxiety inventory: STAI. Palo Alto, CA: Consulting Psychologists' Press.

Twyman, K. A., Saylor, C. F., Saia, D., Macias, M. M., Taylor, L. A., & Spratt, E. (2010). Bullying and ostracism experiences in children with special health care needs. *J Dev Behav Pediatr*, *31*(1), 1-8. doi:10.1097/DBP.0b013e3181c828c8.

Vanryckeghem, M., Hylebos, C., Brutten, G. J., & Peleman, M. (2001). The relationship between communication attitude and emotion of children who stutter. *Journal of Fluency Disorders*, *26*(1), 1-15.

Zückner, H. (2011). Selbstwert von stotternden Kindern und Jugendlichen-Einfluss auf Sprechverhalten und Erleben von Stottern (self-esteem of children and adolescents who stutter - impact on speech behaviour and reaction on stuttering). *Sprache Stimme Gehör*, *35*(02), 77-86.

	All participants *n*=59	Children *n*=27	Teenager *n*=32
Bullying Assessment overall	*M*= 23.81 *S.D.*= 9.302	*M*= 25.67 *S.D.*= 10.937	*M*= 22.25 *S.D.*= 7.488
Bullying Assessment A	*M*= 9.17 *S.D.*= 4.457	*M*= 9.63 *S.D.*= 4.542	*M*= 8.78 *S.D.*= 4.419
Bullying Assessment B	*M*= 4.58 *S.D.*=1.886	*M*= 4.74 *S.D.*= 2.123	*M*= 4.44 *S.D.*= 1.684
Bullying Assessment C	*M*= 10.07 *S.D.*= 4.777	*M*= 11.30 *S.D.*= 5.856	*M*= 9.03 *S.D.*= 3.393
SPPC/SPPA overall	*M*= 2.9153 *S.D.*= .48720	*M*= 3.0284 *S.D.*= .44286	*M*= 2.8198 *S.D.*= .50898
SPPC/SPPA social acceptance	*M*= 2.8870 *S.D.*= .68610	*M*= 2.8951 *S.D.*= .76257	*M*= 2.8802 *S.D.*= .62681
STAI overall	*M*= 40.12 *S.D.*= 9.235	*M*= 37.81 *S.D.*= 11.256	*M*= 42.06 *S.D.*= 6.691
STAI shop	*M*= 46.25 *S.D.*= 12.727	*M*= 44.33 *S.D.*= 12.058	*M*= 47.88 *S.D.*= 13.237
STAI school	*M*= 49.63 *S.D.*= 13.300	*M*= 47.15 *S.D.*= 14.002	*M*= 51.72 *S.D.*= 15.516
STAI friends	*M*= 38.08 *S.D.*= 12.063	*M*= 39.33 *S.D.*= 10.126	*M*= 37.03 *S.D.*= 13.556
STAI phone	*M*= 37.75 *S.D.*= 11.427	*M*= 38.04 *S.D.*= 10.383	*M*= 37.50 *S.D.*= 12.399

Table 1. Means and Standard Deviations for all participants (*n*=59), for children (*n*=27), and for teenager (*n*=32) for the *Bullying Assessment*, the SPPC/SPPA, and the STAI including sub-categories.

Bullying Assessment

A Bullying	Always	Very often	Often	Sometimes	Rarely	Never
1. I get bullied at school.	☐	☐	☐	☐	☐	☐
2. I get bullied outside school.	☐	☐	☐	☐	☐	☐
3. The bullying is directly related to my stuttering.	☐	☐	☐	☐	☐	☐
4. The bullying affects my stuttering.	☐	☐	☐	☐	☐	☐
5. I find it hard to make friends at school.	☐	☐	☐	☐	☐	☐

B Frequency of bullying	Strongly agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree
1. I never get bullied now.	☐	☐	☐	☐	☐	☐
2. I never got bullied when I was younger.	☐	☐	☐	☐	☐	☐

C Types of bullying	Always	Very often	Often	Sometimes	Rarely	Never
1. I was/am called names.	☐	☐	☐	☐	☐	☐
2. Rumours are/were spread about me.	☐	☐	☐	☐	☐	☐
3. I was/am threatened.	☐	☐	☐	☐	☐	☐
4. I was/am bullied physically (hit or pushed).	☐	☐	☐	☐	☐	☐
5. I have had property stolen/broken.	☐	☐	☐	☐	☐	☐
6. I was/am left out by my friends.	☐	☐	☐	☐	☐	☐

Figure 1. *Bullying Assessment*.

Total raw score of the *Bullying Questionnaire*	Experience of bullying
13	No bullying
14	Mild
15 – 18	Mild to moderate
19 – 23	moderate
24 – 30	Moderate to severe
31 – 35	Severe
36 – 45	Severe to very severe
46 and up	Very severe

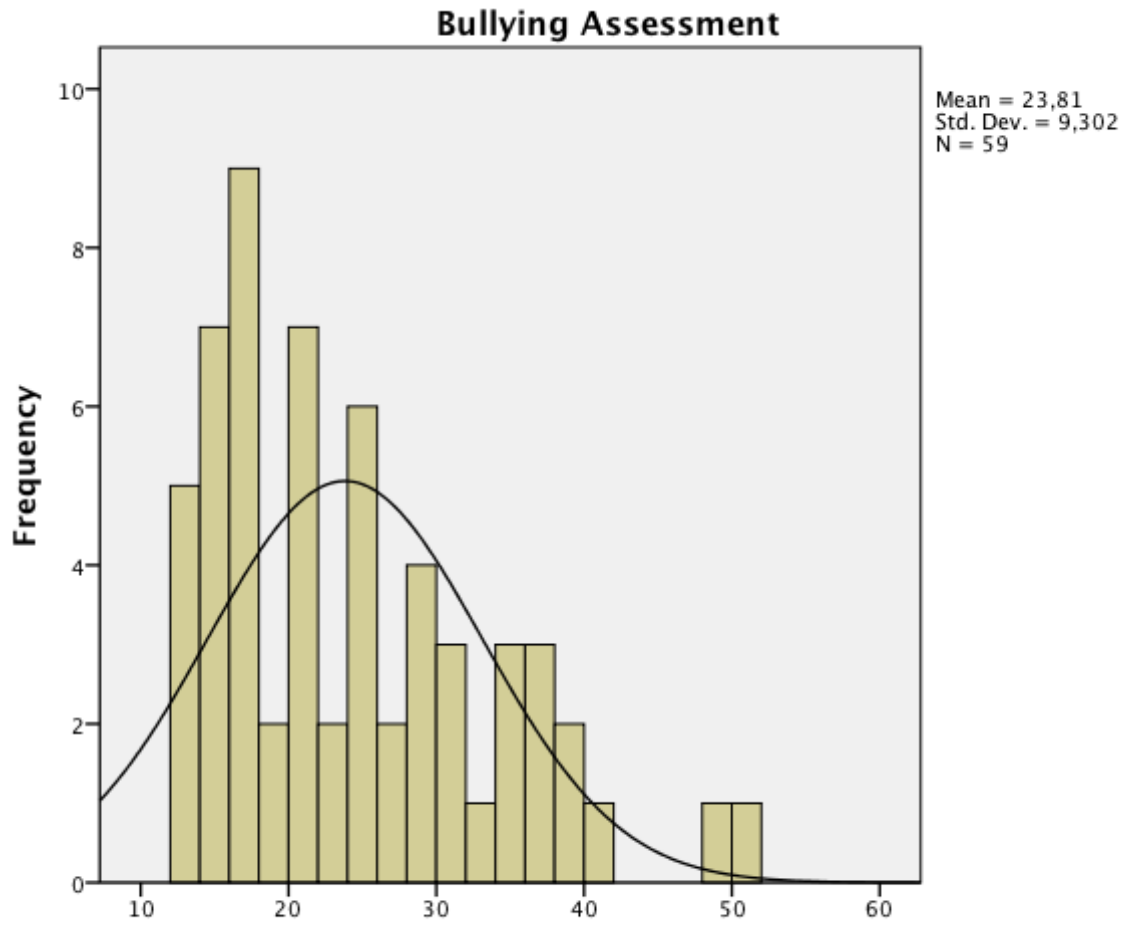Figure 2. Experience of bullying measured with the *Bullying Assessment*.

Figure 3. Overall scores for the *Bullying Assessment* for all participants *n*=59.

Bullying Assessment
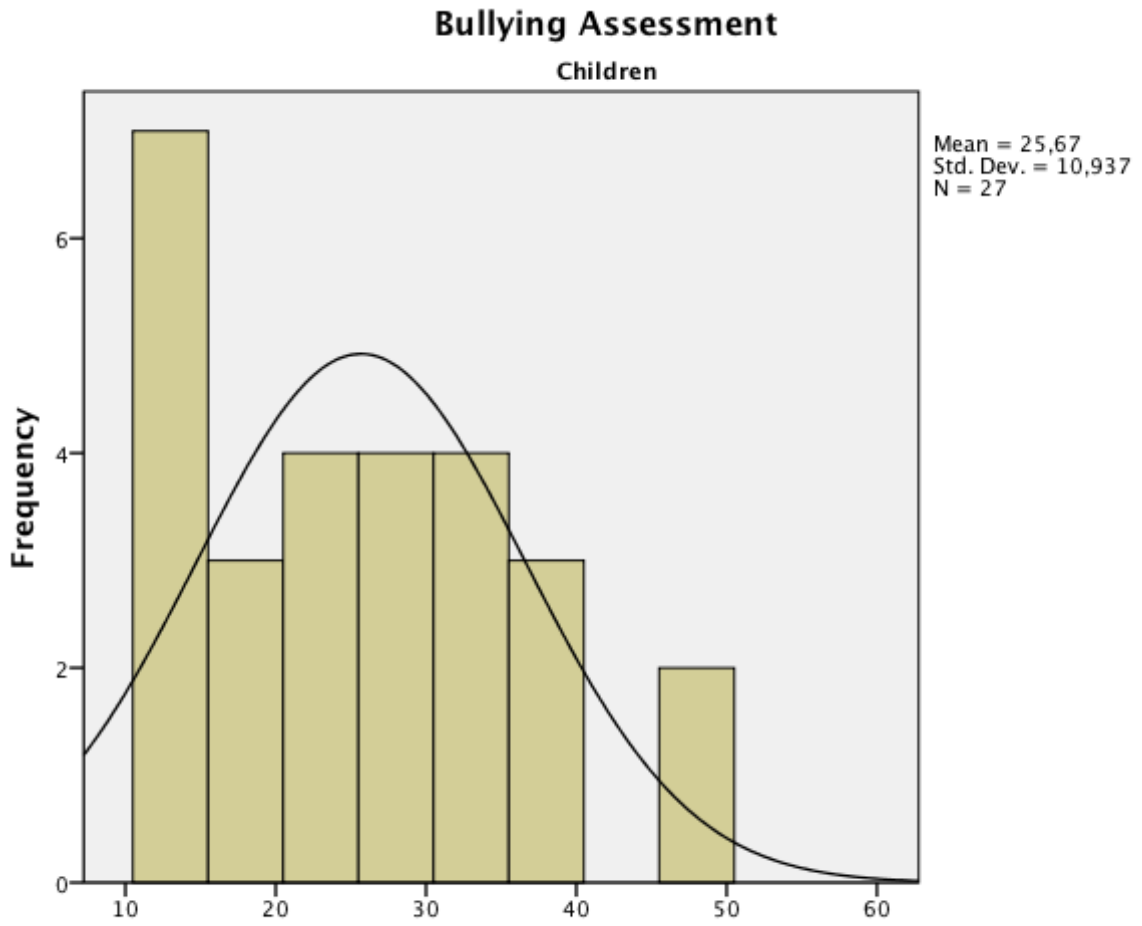
Children

Mean = 25,67
Std. Dev. = 10,937
N = 27

Figure 4. Overall scores for the *Bullying Assessment* for the younger age group (children aged 9.0 to 12.9) *n*=27.
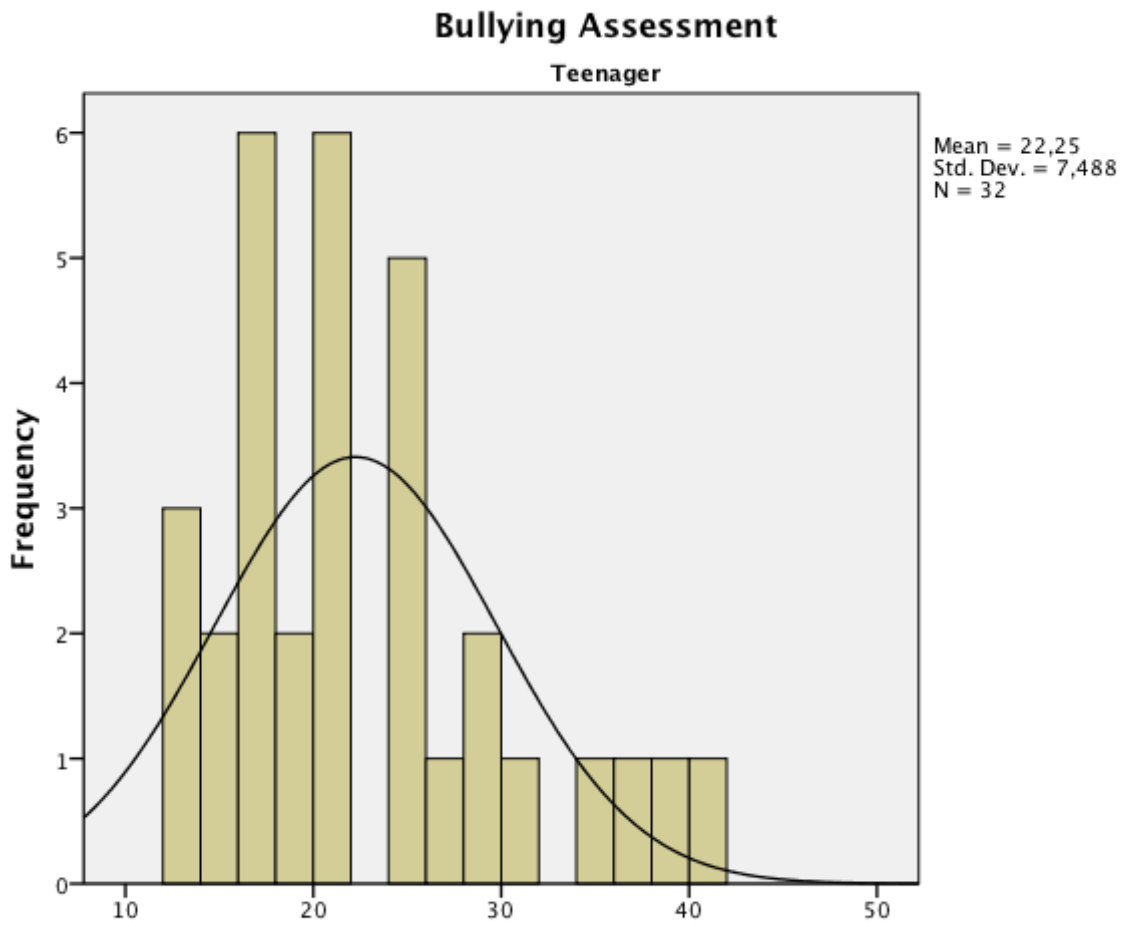
Figure 5. Overall scores for the *Bullying Assessment* for the older age group
(teenagers aged 13.0 to 17.8) *n*=32.