# Schoolteachers' Attitudes Towards People Who Stutter: Results of a Mail Survey

# Attitudes des enseignants et des enseignantes envers les bègues : résultats d'une enquête menée par la poste

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**Abstract**
This study assessed schoolteachers' attitudes toward people who stutter (PWS) and also explored the effect of familiarity and educational factors on teachers' attitudes toward PWS. A 14-item semantic differential scale was used to measure teachers' attitudes towards PWS as compared to fluent speakers. The responses from 178 teachers were analyzed with regards to the teachers' level of experience with PWS and their previous coursework on stuttering. The results indicated that the teachers reported positive attitudes towards both PWS and fluent speakers. The scores on the semantic differential scale indicated that the PWS were judged more positively for three items. Educational and experiential factors were found to have no systematic effect on the teachers' attitudes toward PWS. Future research is needed to further investigate societal stereotypes and biases related to fluency disorders.

**Abrégé**
La présente étude a évalué l'attitude d'enseignants et d'enseignantes envers les bègues ainsi que l'effet des facteurs de familiarité et de sensibilisation aux troubles de la fluence sur leur attitude envers les bègues. On a utilisé une échelle de différentiation sémantique en 14 points pour mesurer les attitudes des enseignants et enseignantes envers les bègues par opposition aux enfants qui ne bégaient pas. On a analysé les réponses de 178 enseignants pour voir leur niveau d'expérience auprès des bègues et leur formation sur le bégaiement. Les résultats indiquent que les enseignants disent avoir une attitude positive autant envers les enfants bègues que les autres enfants. Les pointages obtenus à l'échelle de différentiation sémantique montrent que les bègues étaient jugés plus favorablement pour trois éléments. On a remarqué que l'éducation et l'expérience n'avaient pas d'effet systématique sur les attitudes des enseignants et des enseignantes envers les bègues. Il faut approfondir la recherche pour examiner les stéréotypes et les biais de la société relatifs aux troubles de fluidité.

Key words: semantic differential scale, teachers, attitudes, people who stutter

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## Introduction

It has been argued that stuttering cannot be defined solely as a speech fluency problem. Doing so would ignore the person's feelings about him- or herself and the effect that stuttering has on his or her life. It could also lead to wrong decisions in therapy because the speech fluency may not be the principal problem that the clinician has to address (Guitar, 2006, Manning 2001; Van Riper, 1982; Sheehan, 1975). Yaruss and Quesal (2004) stress that stuttering can severely limit a person's social, occupational, and educational opportunities. All of these issues may have a detrimental impact on the self-concept of people who stutter (PWS). They can also affect how PWS are viewed by others. Okun (1997) defines self-concept as, "the perception we have of ourselves based on information from significant others and from our experiences" (p. 291). For PWS, the listeners' perceptions of their speech will play an important role in shaping their self-concept.

Central to the societal perception of stuttering is the concept of stereotyping. Stereotyping is defined as an "exaggerated belief associated with a category and functions to justify (rationalize) one's conduct in relation to that category" (Allport, 1986, p. 191). Stereotypes are detrimental to the individual because (1) they portray the individual as a member of a category, (2) they polarize by clearly demarcating between those inside and outside of a category, and (3) they may lead to behaviours and actions that reduce options and freedoms for individuals in a category (Smart, 2001).

A review of the literature indicates that the speech of PWS is often subject to negative stereotyping. Such negative stereotyping has been demonstrated for various groups of listeners, including educators (Dorsey & Guenter, 2000; Yeakle & Cooper, 1986; Crowe & Walton, 1981), healthcare professionals (Silverman & Bongey, 1997; Yairi & Carrico, 1992), employers (Hurst & Cooper, 1983a), vocational counselors (Hurst & Cooper, 1983b), speech-language pathologists (Cooper & Cooper, 1996; Turnbaugh, Guitar, & Hoffman, 1979; Woods & Williams, 1976; Yairi & Williams, 1970), lay people (Ham, 1990; Crowe & Cooper, 1977), and college students (Dorsey & Guenter, 2000; Silverman & Paynter, 1990; Ruscello, Lass, & Brown, 1988). Findings from these studies indicate that PWS are characterized using descriptors such as 'shy', 'anxious', 'withdrawn', 'nervous', 'tense', 'hesitant', 'self-conscious', 'less competent', 'introverted', and 'insecure'. Perceptions such as these, based simply on the fact that a person stutters, may contribute to a negative stereotype of PWS. This negative stereotype can lead to behaviours and actions that can discriminate against the individual (Smart, 2001). This in turn can contribute to a negative self-concept among PWS (Manning, 2001; Silverman, 1996).

People with disabilities, including PWS, often internalize negative stereotypes and accept them as the truth about themselves (Smart, 2001). This internalization may be exacerbated if such stereotypes are repeated often and from authority figures. For children in school, teachers are authority figures who can have a significant impact on their lives. Previous studies (Lass et al., 1994; 1992; Yeakle & Cooper, 1986) found that teachers and school administrators held largely negative stereotypes about PWS. Yeakle and Cooper (1986) also explored the effect of experience with PWS or course work in speech disorders in teachers' perceptions of PWS. The study found that teachers who reported having experience with PWS or course work in speech disorders expressed more realistic attitudes toward PWS, thus indicating that familiarity and/or education can help improve teachers' perceptions of PWS.

Obviously, it is of concern if such an influential professional group admits to negative stereotypes. However, no further research on this topic was undertaken after the study by Lass et al. (1994). Additionally, no study has explored the effect of familiarity and educational factors on teachers' perceptions of PWS after the study by Yeakle and Cooper (1986). The purpose of the present study was twofold: (1) to reassess schoolteachers' attitudes; and (2) to explore the effect of familiarity and educational factors on their perception of PWS.

## Methods

### Participants and Survey Distribution

The participants for this study were schoolteachers of the levels Kindergarten (K) to grade 12. The teachers were recruited from all 50 states of the United States of America. The participants were identified via an internet search of K-12 schools in each state. Based on this convenience sample, 1,100 potential participants were selected quasi-randomly. This list included teachers of all disciplines and grade levels. Each participant was mailed a copy of the survey packet and asked to complete and return it. The survey packets contained a demographic questionnaire, a 14-item semantic differential scale (Burley & Rinaldi, 1986; Collins & Blood, 1990), a cover letter, an informed consent form, and a postage paid return envelope.

Of the 1,100 survey packets that were mailed, 44 questionnaires were returned because the address was incorrect. A total of 212 participants returned the survey, which corresponds to a response rate of 19.27%. Of the 212 returned questionnaires, 178 (16.2% of all mail-outs) were complete and usable. Of the 34 questionnaires that were not usable, 30 questionnaires could not be used because the participants did not complete the entire questionnaire. Four questionnaires were excluded from the analysis because the participants reported that they themselves stuttered. It was assumed that these four teachers might have had a positive bias toward PWS, thus potentially distorting the survey results.

### Semantic differential questionnaire

A semantic differential scale was utilized to measure the attitudes that the teachers reported towards PWS. The semantic differential scale utilized in this study was a 14-item instrument consisting of 14 adjectives paired with their antonyms (Collins & Blood, 1990; Burley & Rinaldi, 1986; see Table 1). Semantic differential scales, like the one used in this study have been used previously to measure attitudes toward PWS (Gabel, 2006; Silverman & Bongey, 1997; Collins & Blood, 1990; Horsley & FitzGibbon, 1987; Burley & Rinaldi, 1986; Woods & Williams, 1976). The antonyms (e.g. 'sincere - insincere') were randomly assigned to the left and right columns in an equal number of items. The random assignment was used to reduce the likelihood of stereotypical response patterns (Silverman & Bongey, 1997). The ratings were made on a 7-point scale, which was placed between the antonyms. The participants were asked to circle the number on the scale they felt best described the individual. Positive and negative items were randomly distributed to either the left (1) or the right (7) ends of the scale. In order to quantify the rating results, the negative extreme of each antonym was scored with a 7 and the positive extreme was scored with a 1. Therefore, a higher score indicated a more negative attitude and a lower score indicated a more positive attitude.

Each of the 1,100 participants was randomly assigned to complete the semantic differential scale in reaction to one of two descriptions of a person. The two descriptions were: (1) a person who stutters and has no other communication disorder (PWS) and; (2) a person who does not stutter and has no other communication disorder (normal speaker). No specific definitions of stuttering were provided to the participants in order to ensure that all responses and ratings were based on the participant's internal standards. Of the 178 usable questionnaires, 88 teachers responded to the first description and 90 teachers responded to the second description.

## Demographic questionnaire

The demographic questionnaire required the participants to report their age, sex, and years of teaching. It also asked about the teachers' knowledge about stuttering, based on their readings or participation in courses. Finally, the teachers were asked if they had taught students who stutter in one of their present or past classes. Table 2 summarizes the response data, sorted according to the version of the semantic differential questionnaire that was filled in.

## Data Analysis

Means and standard deviations were obtained for each item on the semantic differential scale. According to the scoring system applied, a higher mean score for a particular group was indicative of negative attitudes toward that group and, conversely, a lower mean score was indicative of positive attitudes toward that group.

A Multivariate Analysis of Variance (MANOVA) was used to compare the differences of reports made by the two groups of participants for the 14 items on the semantic differential scale as well as the overall mean scores. The MANOVA was used to explore which traits (positive or negative) were more or less likely to be associated with PWS compared to fluent speakers. The initial target alpha level was set to $p < 0.05$. Due to the large number of two-way comparisons conducted, the alpha level was adjusted to reduce the risk of a statistical Type I error (false positive). According to the Bonferroni procedure, the target alpha of $p < 0.05$ was divided by the total number of analyses conducted (14 individual items and the overall mean score), resulting in a more rigorous alpha value of $p \leq 0.003$.

For the participants responding to the description of the PWS ($n$=88), an additional MANOVA

**Table 1**
*Comparison of participants' responses for PWS (N = 88) and fluent speakers (N = 90) on the semantic differential scale, together with the results of the MANOVAs. Statistically significant differences (p ≤ 0.003) between the two groups are indicated with *.*

| Adjective | Mean (*SD*)-Judgments of PWS | Mean (*SD*)-Judgments of fluent speakers | *F*-value | *p*-value |
|---|---|---|---|---|
| Sincere-insincere | 2.19 (1.28) | 2.81 (1.35) | 9.72 | 0.002* |
| Likable-notlikeable | 2.23 (1.32) | 2.73 (1.31) | 6.31 | 0.013 |
| Trustworthy-not trustworthy | 2.17 (1.36) | 2.68 (1.27) | 6.84` | 0.010 |
| Decisive-indecisive | 2.81 (1.58) | 2.96 (1.42) | 0.432 | 0.512 |
| Physically normal-physically abnormal | 2.05 (1.37) | 2.96 (2.53) | 8.78 | 0.003* |
| Reliable-unreliable | 2.20 (1.35) | 2.67 (1.30) | 5.62 | 0.019 |
| Good sense of humor-poor sense of humor | 2.77 (4.63) | 2.91 (1.30) | 0.04 | 0.785 |
| Mentally stable-mentally unstable | 2.18 (1.49) | 2.64 (1.36) | 4.65 | 0.032 |
| Sociable-unsociable | 2.90 (1.57) | 2.87 (1.47) | 0.01 | 0.891 |
| Friendly-hostile | 2.37 (1.28) | 2.64 (1.30) | 1.91 | 0.168 |
| Strong character-weak character | 2.42 (1.34) | 2.72 (1.27) | 2.44 | 0.120 |
| Intelligent-unintelligent | 2.26 (1.49) | 3.15 (1.62) | 14.60 | 0.000* |
| Employable-unemployable | 1.89 (1.19) | 2.45 (1.45) | 7.80 | 0.006 |
| Emotionally adjusted-emotionally maladjusted | 2.47 (1.39) | 2.87 (1.65) | 3.03 | 0.083 |
| Overall mean score | 2.35 (1.21) | 2.79 (1.08) | 6.53 | 0.011 |

**Table 2**
Summary of responses to the demographic questionnaire

| | Group responding about fluent speakers (*N*=90) | Group responding about PWS (*N*=88) |
|---|---|---|
| 1. Age of participants | Mean = 43.52<br>Range = 23-72<br>Standard Deviation = 11.34 | Mean = 45.02<br>Range = 25-67<br>Standard Deviation = 9.67 |
| 2. Gender | Male = 18 Female = 71 | Male = 24 Female = 64 |
| 3. Ethnicity | Caucasian = 76<br>NA = 7<br>Asian = 4<br>African-American = 3<br>Latino = 0 | Caucasian = 73<br>NA = 9<br>African-American = 3<br>Asian = 2<br>Latino = 1 |
| 4. Do you stutter? | Yes = 0 No = 90 | Yes = 0 No = 88 |
| 5. Do you know someone who stutters? | Yes = 0 No = 90 | Yes = 0 No = 88 |
| 6. Number of years in education | Mean = 14.69<br>Range = 1-39<br>Standard Deviation = 9.46 | Mean = 17.13<br>Range = 2-46<br>Standard Deviation = 9.87 |
| 7. Grade level presently teaching | Preschool = 0<br>K-2 = 7<br>3-6 = 24<br>7-9 = 30<br>10-12 = 28<br>Adults = 1 | Preschool = 1<br>K-2 = 15<br>3-6 = 13<br>7-9 = 29<br>10-12 = 29<br>Adults = 1 |
| 8. Did you take any college courses dealing with disorders of speech? | Yes= 21 No = 68<br>No Response = 1 | Yes = 23 No = 65 |
| 9. Have you ever done any professional reading about stuttering? | Yes = 24 No = 65<br>No Response = 1 | Yes = 25 No = 63 |
| 10. How many people who stutter have you taught? | 0 = 18<br>1-3 = 51<br>4-6 = 13<br>More than 6 = 8 | 0 = 19<br>1-3 = 55<br>4-6 = 9<br>More than 6 = 5 |
| 11. Do you presently have a student in your class who stutters? | Yes = 21 No = 69 | Yes = 11 No = 77 |

was completed to explore in how far the participants' responses were influenced by their personal experience and/or additional training about PWS. These analyses were based on the participants' responses to four questions of the demographic questionnaire. The four questions in the demographic questionnaire used as independent variables for this analysis were:

1) Have you ever had a college course in disorders of speech?
2) Have you ever done any professional reading about stuttering?
3) How many people who stutter have you taught?
4) Do you presently have a student in your class who stutters?

The first, second and fourth questions required yes/no answers with two levels of the independent variable. The third question had four levels to the independent variable. The alpha level for this analysis was set to $p < 0.05$. The initial target alpha level was set to $p < 0.05$. To reduce the risk of a statistical error, the target alpha of $p < 0.05$ was divided by the total number of analyses conducted (14 individual items and the overall mean score), resulting in an alpha value of $p \leq 0.003$.

The decision to use a parametric test for an analysis of equal-appearing interval data was based on a review of past literature. Collins and Blood (1990), Horsley and FitzGibbon (1987), Yeakle and Cooper (1986), Burley and Rinaldi (1986), and Woods and Williams (1971) all

used parametric tests to analyze the results from semantic differentials with equal-appearing interval scales. In the present study, all pair-wise comparisons were recalculated using the more conservative non-parametric Mann-Whitney U-test to corroborate the findings from the MANOVAs. In terms of instances of statistical significance (or non-significance), the results from the non-parametric comparisons were identical to the parametric statistics. Only the results of the parametric procedures are reported and discussed in the following sections.

## Results

The mean score and standard deviations for each of the 14 items and the overall mean score on the semantic differential scale are reported in Table 1. The mean scores for the items rated by the first group (who rated PWS) ranged from 1.89 to 2.91. For group 2 (who rated fluent speakers), the results ranged from 2.46 to 3.16. The overall mean score for the semantic differential scale for PWS was 2.35 and 2.79 for fluent speakers.

MANOVAs were used to explore the difference between the two groups' perceptions of PWS and fluent speakers for each item on the semantic differential scale, as well as the overall mean score. The results are displayed in Table 1 and indicate significant differences for three of the items ($p \leq 0.003$). These three items include the antonyms 'sincere – insincere', 'physically normal - physically abnormal', and 'intelligent – unintelligent'. For these three items, the participants reported more positive attitudes towards PWS than towards fluent speakers.

A second set of MANOVAS was calculated for the data from the 88 participants who completed the scale in response to the PWS in order to determine the influence of their experiences and previous training on their judgments. Four MANOVAs were conducted to explore the possible effects for each of the 14 items and the overall mean score. No significant effects were found for any of these analyses.

## Discussion

This study reassessed K-12 schoolteachers' attitudes toward PWS and fluent speakers. Of 1,100 survey packages mailed, only 178 (16.18%) were returned completed and usable. This response rate was reasonable given the fact that the teachers received the questionnaire unannounced and with no particular incentive to participate in the study. Nevertheless, the sample may not have been representative of the general population of teachers. This limits the ability to generalize the results of the study and should be considered when interpreting the results.

Based on the teachers' responses on the semantic differential scale, it was found that the K-12 schoolteachers did not report overtly negative attitudes toward PWS. Both PWS and fluent speakers were described positively for each item on the semantic differential scale, which also yielded a positive result for the overall mean score. While both groups were judged positively, the PWS received significantly more positive scores than the fluent speakers for three items on the semantic differential scale. Educational and experiential factors were not found to have an effect on the teachers' overall positive attitudes toward PWS.

In this study, a Bonferroni adjustment was used to reduce the risk of a Type I error (false positives) in light of the relatively large number (15) of two-way analyses conducted. However, the use of a more rigorous alpha level for the analyses reduced the number of significant differences found between groups. Without the Bonferroni adjustment, there would have been significant differences between the groups for eight items on the semantic differential scale and for the overall mean score. As a result of the Bonferroni adjustment, significant differences between the groups were found for only three items on the semantic differential scale. The use of the Bonferroni adjustment may therefore have contributed to the increase in a Type II error (false negatives; Perneger, 1998).

The findings of this study differ from previous research, which consistently found that teachers (Lass, et al. 1992; Yeakle & Cooper, 1986) and school administrators (Lass et al., 1994) reported negative attitudes toward PWS. Instead, the results of the present study could be cautiously interpreted to indicate a positive shift in teachers' attitudes toward PWS. However, it should be noted that the methodology used by this study differs from the methodology used by Lass et al., (1992) and Yeakle and Cooper (1986) studies. Therefore, the results are not directly comparable and the findings need to be further corroborated.

A positive shift in teachers' attitudes toward PWS was also noted by Cooper and Cooper (1996) with regard to causality, early intervention, and character judgment. This conclusion was based on an analysis of studies published between 1973 and 1983. Two more recent studies by Healey, Gabel, Daniels and Kawai (2007) and Gabel (2006) found that members of the general population reported more positive attitudes towards PWS than in the past. Finally, Irani, Gabel, Hughes, Swartz and Palasik (in press) explored occupational stereotyping of PWS by K-12 schoolteachers but did not find evidence of such stereotyping. The findings of this study and of these other recent studies may suggest a general positive shift in attitudes towards PWS.

It could be argued that the results from the different studies should not be compared directly because of methodological differences. For example, Lass et al., (1992, 1994) asked teachers and administrators to list adjectives to describe a typical 8 year-old female and male PWS, compared to a typical adult female and male PWS. The majority of the adjectives listed were deemed to be indicative of negative attitudes toward PWS. The semantic differential used in the present study did not allow the participants to generate their own descriptors. However, the scale between the antonyms would still have allowed the participants to express negative attitudes and feelings towards PWS.

It should also be noted that the respondents were not provided with a definition of stuttering. This approach was chosen based on previous studies (e.g., Woods &

Williams, 1971; Lass et al., 1992; 1994), which used a similar methodology, but this may not be the best research design. Future research exploring teachers' attitudes towards stuttering might incorporate a verbal definition of stuttering or audiovisual samples, to either support or refute the present findings.

Finally, in every questionnaire study, the respondents might give socially acceptable responses rather than admit to their genuine beliefs. The teachers may have felt that reporting negative attitudes towards PWS would be unacceptable for their profession. Considering society's predisposition to political correctness, people might hesitate to overtly express negative attitudes or feelings on a semantic differential scale. There is no easy way to assess such a positive answer bias, however, some researchers have used psychophysiological measures to address this issue. Guntupalli, Kalinowski, Nanjudeswaran, Saltuklaroglu and Everhart (2006) found skin conductance and heart rate changes in fluent adults who were watching 1-minute video clips of PWS reading aloud. However, even a participant with a strong averse physiological response may still make a cognitive decision to behave in a tolerant and inclusive manner. The teachers in the present study had no specific incentive to participate. It is therefore reasonable to assume that they also did not have any strong motivation to provide insincere answers.

The findings from the present study suggest that American K-12 teachers have become more tolerant and accepting of people who stutter. This is a positive finding that should be documented and corroborated by more research, using further semantic differential studies as well as alternative methodologies.

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