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RESEARCH ARTICLE

The student–teacher relationship quality in children with selective mutism

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Abstract
Selective mutism (SM) is a rare anxiety disorder that compromises children’s daily life during critical periods of early development. Because school is a prime context for the manifestation of the disorder, the aim of this study was to investigate the quality of the student–teacher relationship and its effects on behavior and work, and on social and relational skills. The sample consisted of 75 children—15 were affected by SM, with 60 in the control group—and 15 teachers. The results showed greater difficulty on the teacher’s part to establish a relationship based on affective closeness with a child affected by SM, compared to that with unaffected children. Nevertheless, an encouraging picture emerges of the inclusion and integration of the child with SM among peers and therefore in the class group.

KEYWORDS
behavioral problem, peer nomination, selective mutism, social status, student–teacher relationship

1 | INTRODUCTION

Selective mutism (SM) is a rare anxiety disorder that compromises children’s daily lives during critical periods of early development. School is therefore an extremely important setting for the child with SM and often where the impairment is most severe (Steinhausen, Wachter, Laimboc, & Metzke, 2006). Whereas children with SM speak with members of the family and some friends, not all of them talk to their teachers (Viana, Beidel, & Rabian, 2009). In fact, the school context causes these children very high anxiety levels as a result of constant performance demands, most of which are related to verbal communication. The impact of the student–teacher relationship on children’s development is particularly important during the first years of school, when children consolidate relevant competences on how to be successful at school and how to develop accurate cognitive representations of themselves as learners (Entwisle & Hayduk, 1988; Pianta & Walsh, 1996). Such impact is even higher in students with atypical development (Robertson, Chamberlain, & Kasari, 2003). For this reason, the aim of this study is to investigate the quality of the student–teacher relationship and its effects on behavior and work, and on social and relational skills.
The latest edition of the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* ([DSM-V], American Psychiatric Association, 2013) reclassifies SM as an anxiety disorder (Muris & Ollendick, 2015). According to the DSM-V, children affected by SM are characterized by the "consistent failure to speak in specific social situations in which there is an expectation for speaking (e.g., at school) despite speaking in other situations" (American Psychiatric Association, 2013, p. 195). Other DSM-V diagnostic criteria specify that the disorder should (1) interfere with education or occupational achievements or with social communication; (2) last at least 1 month, not limited to the first month of school; (3) not be attributable to a lack of knowledge of, or comfort with, the spoken language required in the social situation; (4) not be better accounted for by a communication disorder (e.g., childhood onset fluency disorder); and (5) not occur exclusively during the course of autism spectrum disorder, schizophrenia, or another psychotic disorder.

The prevalence of SM ranges from .03% to 1%, depending on the sampling setting (e.g., clinic vs. school vs. general population) and the ages of the individuals in the sample (American Psychiatric Association, 2013). The prevalence estimates obtained in the school setting are higher than those estimated in clinical samples (Muris & Ollendick 2015) and are higher among children than adults (American Psychiatric Association, 2013; Kumpulainen, 2002). In addition, it seems that SM is more frequent among girls than boys (Hua & Major, 2016; Kumpulainen, 2002; Muris & Ollendick, 2015). The onset of SM usually occurs before the age of 5 years (American Psychiatric Association, 2013) and is manifested when the child begins to feel anxious in social interactions, especially when entering nursery school. Thus, the disorder may not come to clinical attention until the age at which the child enters school (American Psychiatric Association, 2013; Muris & Ollendick, 2015), because the disorder is often mistaken for excessive shyness, or not identified at all. Consequently, one cannot ignore the role of the school and its dynamics in this disorder.

The literature reports many studies carried out on children affected by SM. Some of these have focused on the behavioral, emotional, and cognitive characteristics of students with SM (Busse & Downey, 2011; Kristensen, 2001; Schwartz & Shipon-Blum, 2005; Shipon-Blum, 2002). For instance, studies that compared the rates of internalizing and externalizing problems in children with SM to those of matched controls found that children with SM experience significantly higher levels of internalizing problems (e.g., shyness, inhibition) and symptoms of anxiety, social anxiety disorder, and other anxiety disorders when compared to controls (e.g., Alyanaka et al., 2013; Kristensen, 2001; Vecchio & Kearney, 2005). However, regarding externalizing behaviors, the results are not consistent. Some studies pointed out that parent-reported aggressive and externalizing behavior problems were higher among children with SM than among the control children (e.g., Alyanaka et al., 2013; Kristensen, 2001), but other studies found that children with SM did not demonstrate higher rates of oppositional behavior (e.g., hyperactivity, negativism, defiance, and opposition) in either the home or school setting compared to the controls (Cunningham, McHolm, & Boyle, 2006; Cunningham, McHolm, Boyle, & Patel, 2004; Vecchio & Kearney, 2005). In other studies, teachers rated children with SM significantly lower on subscales of attention-deficit hyperactivity disorder and oppositional defiant disorder compared to the controls (Cunningham et al., 2004).

Other studies focused on the social relationships of students with SM (e.g., Cunningham et al., 2006; Diliberto & Kearney 2016; Sharkey & McNicholas, 2008). Some of these studies pointed out that children with SM may show less social competence in both nonverbal and verbal social situations because of their withdrawal from social interactions (Carbone et al., 2010), may have difficulty making friends (e.g., Diliberto & Kearney, 2016; Sharkey & McNicholas, 2008), and may be rejected by peers or bullied (e.g., Sharkey & McNicholas, 2008). However, other studies found that children with SM were not victimized by peers any more than the control children (e.g., Cunningham et al., 2004). Finally, studies that examined social problems using self-report found that children with SM believed they were accepted and well-liked by peers despite parent-reported deficits of social skills (Cunningham et al., 2006).

On the other hand, few studies have considered the difficulties that the child with SM encounters at school. Some of these studies found that the academic performance of children with SM was significantly lower than that of their peers (e.g., Bergman, Placentini, & McCracken, 2002; Nowakowski et al., 2009). Other studies found that children with SM did well academically or that there were no differences in academic achievement between children with SM and the control group (e.g., Cunningham et al., 2004). At the same time, there are no studies examining the relationship between the teacher and classmates and these affected children. In primary school, the interference of SM in learning and socialization becomes more evident (Sloan, 2007). School is therefore an extremely important setting for the child.
affected by this disorder, being the context for the majority of children with SM (Kehle & Bray, 2009) and often where the impairment is most severe (Steinhausen et al., 2006). Whereas children with SM speak with members of the family and some friends, not all of them talk to their teachers (Viana et al., 2009).

For the infant schoolteacher, paying attention to the problem is therefore fundamental, given the importance that early diagnosis and intervention can have in bringing about a favorable outcome (Schwartz & Shipon-Blum, 2005) and in the process of inclusion and integration in class. In fact, the school context causes these children very high anxiety levels as a result of constant performance demands, most of which are related to verbal communication. For an anxious child, being at school and communicating with classmates and teachers can be an impossible enterprise, or at least be perceived as such, and those who do not interact verbally in the school environment often exhibit greater difficulty engaging in learning and social relationships with peers and teachers (Busse & Downey, 2011; Crundwell, 2006).

The literature shows that the quality of the student–teacher relationship is a crucial factor in preschool and school-age children’s development of socioemotional skills (Collins, O’Connor, Supplee, & Shaw, 2017; Longobardi, Pasta, Gastaldi, & Prino, 2017), effort and scholastic achievement (Quaglia, Gastaldi, Prino, Pasta, & Longobardi, 2013; Ruzek et al., 2016), adaptation to the class, and the integration of foreign students and students with disabilities (Downer, Goble, Myers, & Pianta, 2016; Pasta, Mendola, Longobardi, Prino, & Gastaldi, 2013; Prino, Pasta, Gastaldi, & Longobardi, 2016). The aim of this study is to consider the effects of the quality of the student–teacher relationship in the presence of a child with SM in the classroom. To minimize the potential detrimental effects of SM on children’s social relationships, behavior, and academic achievement, it is essential that school-based practitioners and teachers consider the importance of relational aspects as a protective factor in the development of these children (Longobardi, Gastaldi, Prino, Pasta, & Settanni, 2016; Longobardi, Iotti, Jungert, & Settanni, 2018).

The following research questions were addressed in this study:

Research question one: What are the differences in perceptions of student–teacher relationships between children with SM and students without SM?
Research question two: What is the relationship between the presence of SM in children and their social status in their peer groups?
Research question three: What is the relationship between the presence of SM in children and their teachers’ perceptions of their relationships with these students?
Research question four: What are the relationships between the presence of SM in children and their behavioral problems?

2 | METHOD

2.1 | Participants

The study analyzed the data of 75 children between the ages of 4 and 10 (\(M = 7.67; SD = 1.88\)), 48% of whom were male. The average mean for children with SM was 7.64 (\(SD = 1.88\)) and for students without SM was 7.68 (\(SD = 1.88\)). There were no differences in age between children with SM and students without SM (\(F(1,68) = .004, p = .950, \eta^2 = 0\)). In addition, it analyzed the data of 15 teachers with a mean age of 50.57 (\(SD = 10.60, \text{min} = 30, \text{max} = 62\)), 35% of whom were female.

2.2 | Procedures

The data were collected from 15 nursery and primary schools in Northwest Italy. The school principals gave permission for their teachers to participate in the study, and consent was obtained from each teacher who participated. Prior to data collection, phase 1 included obtaining parental consent to participate and describing the nature and objective of the study in compliance with the ethical code of the Italian Association for Psychology. The consent forms stated that
data confidentiality would be assured and that participation in the study was voluntary. The study was approved by the institutional review board of the University of Turin.

Phase 2 involved the prevalent teacher for each classroom, which included children with SM, meaning the teacher who spent at least 18 hours per week in that classroom. Each teacher completed a questionnaire about five students from his or her class: one with a clinical diagnosis of SM and four with typical development. The five students in each classroom were randomly selected from those who were participating in the research and represented about 20% of the students in the classroom. The teachers completed the questionnaires during free time during the school day, and the average time to complete all five questionnaires was 50 minutes.

In phase 3, the children completed anonymous questionnaires during class time. For children older than 7 years, the data were collected in a paper/pencil format in which a researcher visited each classroom, distributed questionnaires to the five students selected, and remained in the classroom until the students had completed the questionnaires. The researcher answered any questions regarding questionnaire items. The average time to complete the questionnaire was 15 minutes. For younger children, the instruments were administered orally by the researcher.

2.3 | Instruments

2.3.1 | Young children’s appraisals of teacher support (Y-CATS)

Y-CATS (Mantzicopoulos & Neuharth-Pritchett, 2003) is a recently developed tool that aims to assess the child’s perception of his/her relationship with the teacher with reference to the dimensions typically used in the literature in investigating this construct. These are warmth, autonomy support, and conflict. Following numerous revisions, the current version of the tool consists of 31 items, of which 14 items assess the way in which the relationship with the teacher represents a supporting function for the students (e.g., “My teacher listens to me”); nine items concern the teacher’s ability to stimulate the students’ autonomy in class (e.g., “My teacher lets me do the activities I want to do”); and eight items consider the perceived conflict in the relationship (e.g., “My teacher gets angry with me”). Children are presented with the questions orally and give a yes/no answer. The reliability for this study was adequate, with KR20 values equal to .77 and .73, respectively, for conflict and autonomy support.

2.3.2 | Peer nomination technique (Italian version)

This is a peer nomination questionnaire that allows researchers to plot a graphic representation of the interpersonal relationships present in a class group. It was inspired by Moreno’s (1934) sociogram techniques and the Coie, Dodge, and Coppotelli (1982) sociometric strategy for assessing peer statuses in the classroom. It consists of six questions (three positive and three negative) in which children have to nominate three of their peers. The questions are: (1) “Who would you want as a table partner?”; (2) “Who would you want as a schoolwork partner?”; (3) “Who would you want as a field trip buddy?”; (4) “Who would you NOT want as a table partner?”; (5) “Who would you NOT want as a schoolwork partner?”; and (6) “Who would you NOT want as a field trip buddy?” For each child, the sum of the positive nominations received from all peers represented their liking (L) scores. In the same way, the sum of negative nominations received by each child represented their disliking (D) scores. The L and D scores were standardized within each class (Lz and Dz) and used to compute a social preference (SP) score (Lz – Dz) and a social impact (SI) score (Lz + Dz) for each child. Thereafter, following the formula developed by Coie et al. (1982), children were categorized into one of five peer status groups as follows: (1) popular (SP > 1.0; Dz < 0; Lz > 0); (2) neglected (SI < −1.0; Lz < 0; Dz < 0); (3) rejected (SP < −1.0; Dz > 0; Lz < 0); and (4) controversial (SI > 1.0; Lz > 0; Dz > 0), where Lz and Dz stand for standardized liking scores and standardized disliking scores, respectively. Children who did not fit into any of the previous categories were considered average.

2.3.3 | Strengths and difficulties questionnaire (SDQ)

The SDQ (Goodman, 1997; Tobia, Gabriele, & Marzocchi, 2011) is a well-validated behavioral screening questionnaire developed using factor analyses and the nosological concepts that underpin the Diagnostic and Statistical Manual of
Mental Disorders (American Psychiatric Association, 1994) and the International Statistical Classification of Diseases and Related Health Problems (World Health Organization, 1993) classifications of childhood psychopathology. It consists of 25 items and five subscales, which are Conduct Problems, Hyperactivity, Emotional Symptoms, Peer Problems, and Prosocial Behavior. The items are evaluated on a 3-point Likert scale (0 = not true, 1 = partially true, 2 = absolutely true). The score for each of the five subscales was generated by summing the scores for the five items that made up that scale. Reliability for this study was adequate, with Cronbach’s alpha values equal to .73, .85, .61, .64, and .82, respectively for the Conduct Problems, Hyperactivity, Emotional Symptoms, Peer Problems, and Prosocial Behavior subscales.

2.3.4 | Student–Teacher relationship scale (STRS)

The STRS (Fraire, Longobardi, Prino, Sclavo, & Settanni, 2013; Pianta, 2001; Settanni, Longobardi, Sclavo, Fraire, & Prino, 2015) assesses “a teacher’s feelings about his or her relationship with a student, the student’s interactive behavior with the teacher, and a teacher’s beliefs about the student’s feelings toward the teacher” (Pianta, 2001, p. 1). This scale is a self-report instrument consisting of 28 items developed with reference to attachment theory, especially the attachment Q-set (Waters & Deane, 1985). It is designed to be used with children aged between three and eight (preschool through third grade; e.g., Howes & Ritchie, 1999). Items are evaluated on a 5-point Likert scale, ranging from 1 = definitely does not apply to 5 = definitely applies. The scale presents three factors, identified as the Conflict, Closeness, and Dependency subscales. The original instrument by Pianta has been adapted and validated for the Italian context (Fraire et al., 2013). This study used the STRS Short Form validated for the Italian context (Settanni et al., 2015). The Short Form consists of 14 items and two dimensions: closeness (six items) and conflict (eight items). The conflict dimension measures the negative aspects of the relationship (e.g., discordant interactions and the absence of a satisfying teacher–pupil relationship). The closeness dimension measures the existence of a warm, affective relationship with a teacher, capable of promoting positive attitudes toward school, open communication, involvement, and engagement. Reliability for this study was adequate, with Cronbach’s alpha values equal to .83 for conflict and .89 for closeness.

2.4 | Data analysis

The data were double entered and checked for accuracy and analyzed using SPSS (Version 22.0) for Windows. All of the values for univariate skewness and kurtosis for all the variables analyzed were satisfactorily within conventional criteria for normality (−3 to 3 for skewness and −10 to 10 for kurtosis), according to the guideline suggested by Kline (2011). Therefore, no adjustments were made to the scores for the variables measured in our study.

Univariate and bivariate analyses were conducted to address the research questions. To address research question one, several one-way ANOVAs were performed on the three dimensions of the Y-CATS, and the partial eta-squared was estimated as a measure of effect size. To address research question two, the Pearson chi-squared and Cramer’s V tests were performed. To address research question three, point-biserial correlation tests for the presence of SM in children and of the conflict and closeness dimensions of the STRS were performed. Finally, to address research question four, point-biserial correlation tests for the presence of SM in children and of the emotional symptom, hyperactivity, and behavioral problem dimensions of the SDQ were performed.

3 | RESULTS

3.1 | Research question one

The results of a one-way ANOVAs test yielded no statistically significant differences between children with SM and children without SM on the children’s perceptions of their relationships with their teachers with reference to the warmth, autonomy support, and conflict dimensions of the Y-CATS (see Table 1).
### TABLE 1

Mean (SD) scores of children with selective mutism (SM) and children without SM for the warmth, autonomy support, and conflict dimensions of Young Children’s Appraisals of Teacher Support

<table>
<thead>
<tr>
<th></th>
<th>Children with SM</th>
<th>Children without SM</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>F</td>
</tr>
<tr>
<td>Warmth</td>
<td>.83</td>
<td>.14</td>
<td>.87</td>
<td>.11</td>
<td>1.48</td>
</tr>
<tr>
<td>Autonomy support</td>
<td>.53</td>
<td>.25</td>
<td>.52</td>
<td>.23</td>
<td>.01</td>
</tr>
<tr>
<td>Conflict</td>
<td>.27</td>
<td>.28</td>
<td>.31</td>
<td>.27</td>
<td>.18</td>
</tr>
</tbody>
</table>

### TABLE 2

Intercorrelations matrix: Correlation coefficients (and 95% confidence intervals)

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>−.29 (−.52, −.02)</td>
<td>31 (.04, .53)</td>
<td>−.12 (.13, .15)</td>
<td>24 (−.03, .47)</td>
<td>−.05 (−.31, .22)</td>
<td>−.41 (−.22, .42)</td>
<td>.12 (−.22, .42)</td>
</tr>
</tbody>
</table>

Note. *p < .05. **p < .01. Selective mutism (SM): 0 = children without SM, 1 = children with SM. SDQ = Strengths and Difficulties Questionnaire; STRS = Student–Teacher Relationship Scale.

### 3.2 Research question two

The Pearson chi-squared and Cramer’s V tests yielded no statistically significant association between the presence of SM in children and their social status in their peer groups ($\chi^2(4) = 4.61, V = .25, p = .5230$). Therefore, there were no differences between children with SM and children without SM in terms of their social status in the peer group, which means there is no link between being popular and/or rejected children and SM.

### 3.3 Research question three

The correlation tests identified a negative and statistically significant relationship between the closeness dimension and the presence of SM in children ($r_{pb} = -.41$). Following Cohen’s (1988) criteria, a correlation coefficient of $r_{pb} = -.41$ can be interpreted as reflecting a moderate relationship, indicating that the teachers perceived more closeness in their relationships with children without SM than children with SM. Nevertheless, there was no statistically significant link between the teacher’s perception of his/her relationship with the student in terms of the conflict dimension of STR-S and the presence of SM in children (see Table 2).

### 3.4 Research question four

The correlation tests found statistically significant relationships for the behavior problem ($r_{pb} = -.29$) and emotional symptom dimensions ($r_{pb} = .31$). Following Cohen’s (1988) criteria, correlation coefficients of $r_{pb} = -.29$ and $r_{pb} = .31$ can be interpreted as reflecting a moderate relationship, indicating that higher levels of behavior problems were associated with children without SM and that higher levels of emotional symptoms were related to children with SM (see Table 2).

### 4 DISCUSSION

From the child’s point of view, the findings indicated that there was no difference between children with SM and those without SM regarding the perception of conflict in the relationship between student and teacher. The children with SM did not perceive the teacher as a persecutor or as aloof; rather, they perceived him or her as a source of stress and anxiety, as a nonfamiliar subject, and as belonging to a performance context both in terms of the tasks assigned and the requests to manage relationships (Kehle & Bray, 2009; Longobardi et al., 2016). Even the child’s perception of...
a stimulating teacher who is respectful of his or her inclinations and interests did not differ significantly on average in the group of children with SM compared to children who are not affected by this disorder. These findings suggest that the silence of children with SM is not related to the ability of and the propensity for the teacher to spur pupils on to achieve their school goals, which potentially passes for having respect for everyone's interests and attitudes. This provides a supportive dimension to self-sufficiency both for children with SM and those who do not suffer (Busse & Downey, 2011).

From the teacher's point of view, the results identified an association between emotional symptoms and the presence of SM in children. This relationship was expected and already evidenced by Bissoli (2007) in the dysfunctional core of inadequacy, fear of others' judgment, shame, and meta-shame. The anxiety and social phobia associated with SM make the subject more vulnerable and sensitive to the stimuli that reach him, especially within a relationship and, even more so, in a relationship played out in the school context.

The relationship with the peer group was not affected by suffering from SM. That is, children with SM were not unpopular, even though they were perceived as having more emotional difficulties. Children with SM were not excluded from the group, from play activities, or from classwork; they can therefore be part of the group and gain a social status by not being seen as rejected. This finding is consistent with those of Cunningham et al. (2006), which found that children with SM believed they were accepted and well-liked by their peers despite parent-reported deficits in social skills. It is also consistent with evidence that children with SM were not victimized by peers more frequently than the control students (Cunningham et al., 2004). Children with SM manage to find communication channels that enable them to fit in and to be accepted by classmates in spite of their silence (Crundwell, 2006). This result is very encouraging.

Regarding the hyperactivity, peer problems, and prosocial behavior dimensions of SDQ, no association was found between these dimensions and the presence of SM in children. These findings are consistent with those of prior studies that compared the rates of externalizing problems (e.g., oppositionality) in children with SM to those of matched controls and found that children with SM showed equal or even lower levels of such problems than the control children (Cunningham et al., 2004, 2006; Vecchio & Kearney, 2005). However, the available evidence is mixed. For instance, one study found that 10% of children with SM met the full criteria for oppositional defiant disorder (Black & Uhde, 1995), and other studies found heightened scores for externalizing problem in children with SM (e.g., Yeganeh, Beidel, & Turner, 2006).

Apart from the encouraging aspects of peer group inclusion and good relations with the teacher, it is worth noting the perception of the teacher's relationship with children with SM, especially in terms of closeness. Teachers find it easier to interact and establish a close relationship with children without SM than with children affected by SM, perhaps because the silence and lack of eye contact or smiles typical of children with SM do not facilitate the creation and maintenance of a successful relationship with the teacher who, while not perceiving conflict, will not find closeness either. Other studies have already established some of the difficulties teachers face in establishing close relationships with children affected by autism spectrum disorder, hyperactivity, and learning disabilities (Pasta et al., 2013; Prino et al., 2016).

### 4.1 Study limitations

Some limitations of the present work should be discussed. The data are cross-sectional, and therefore it is not possible to draw inferences about cause-and-effect relationships. Thus, future researchers could use a longitudinal design to test the causal relations among variables, which might help us understand how relationships between them unfold over time. In addition, social desirability may have biased the results and our findings. Measurement of this variable through the appropriate questionnaire would make it possible to introduce it into the analyses as a control variable, for example, as a covariate.

Another limitation of this study relates to the Cronbach's alpha value of the emotional symptom ($\alpha = .61$) and peer problem ($\alpha = .64$) dimensions of the SDQ. Thus, the findings must be verified in other samples in which the quality of their measurement is improved.
Finally, it is not possible to generalize the findings to children and teachers located in cities or who are from different cultural backgrounds. Consequently, diverse samples should be used to test the generalizability of our findings in the future.

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