

Teacher's point of view about working with children of the autism spectrum

A perspectiva de professores quanto ao trabalho com crianças com autismo

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ABSTRACT

Purpose: Identify and describe the difficulties and the value assigned to their work by teachers. **Methods:** The study included 51 teachers from mainstream and special schools who had children with ASD among their students. A classification type questionnaire was answered by teachers about the role they play in relation to the student, the difficulties and skills that the teacher has in relation to the student, communication strategies used by both behaviors and interests of children observed by the teacher. **Results:** The teachers responded that their influence was mainly related to communication and interpersonal relationships, difficulties were mainly related to learning, communication and behavior of the child. They felt that the school offers enough support for your work, but there is very little support from other professionals and lack of appropriate teaching technology. **Conclusion:** Thus, it is concluded that teachers are unprepared to teach these students and need to be better educated and receive more support from other professionals, and thus can provide a better education for children with ASD.

Keywords: Speech, language and hearing sciences; Autistic disorder; Education; Faculty; Communication

RESUMO

Objetivo: Identificar e descrever as dificuldades e o valor atribuído ao trabalho com crianças com autismo, por professores. **Métodos:** Participaram deste estudo 51 professores de escolas regulares e especiais, que tinham crianças com DEA dentre seus alunos. Um questionário fechado, tipo classificação, foi respondido pelos professores, sobre o papel que exercem em relação ao aluno, suas dificuldades e habilidades no que se refere ao aluno, suas observações sobre comportamentos e interesses da criança e estratégias de comunicação usadas por ambos. **Resultados:** Os professores responderam que a sua influência era, principalmente, relacionada à comunicação e às relações interpessoais e que as dificuldades, predominantemente associadas à aprendizagem, comunicação e comportamento da criança. Consideraram que a escola oferece apoio suficiente para seu trabalho, mas que há pouca contribuição de outros profissionais e falta de tecnologia de ensino adequada. **Conclusão:** Conclui-se que os professores estão despreparados para ensinar alunos com DEA, necessitando de melhores instruções e mais apoio de outros profissionais, podendo, assim, proporcionar educação de melhor qualidade para essas crianças.

Descritores: Fonoaudiologia; Transtorno autístico; Educação; Docentes; Comunicação

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Conflict of interests: No

Authors' contribution: *AGLP* main researcher, study design, research Schedule, literature review, data gathering and analysis, paper writing and submitting ; *FDMF* study design, research schedule, data analysis, paper corrections, approval of the final version.

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Received on: 7/26/2013; **Accepted on:** 3/12/2014

INTRODUCTION

The notion of Autism Spectrum Disorders (ASD) is based in 4 criteria: social delay and deviations; communication disorders; unusual behavior, as stereotyped movements and mannerisms and onset before the 30th month⁽¹⁾.

Children with ASD even with developmental delay in language abilities, cognition and social adaptation are able to identify linguistic and non-linguistic clues from the communicative context and to use them accordingly in their social lives⁽²⁾. These disorders are among the most common developmental disorders, affecting approximately one in every 200 individuals⁽³⁾.

The ASD are characterized by clearly atypical development in social interaction and communication that may lead to the continuous isolation of the child and his/her family. However it is believed that scholarly inclusion may provide opportunities for companionship with other children of the same age. This way the school becomes a place for learning and also for social competence development⁽⁴⁾.

Defining the concept of inclusion and if this process is being effective is not simple. Even with many flaws inclusive schooling has benefits to all involved, but professionals that are not prepared and not motivated are frequently the target of criticism from society when discussing the inclusion of persons with special needs in the public education system⁽⁵⁾.

Education alternatives to children with ASD are limited due to the disorders involved (behavior, socialization and communication) and to the lack of specialized professionals. The teacher must be informed, involved in continuous education processes and needs to receive support by multidisciplinary teams and by the school⁽⁶⁾.

Presently the Brazilian school system strives to find solutions that guarantee that children with ASD are included in regular schools. Some public and private schools have already changed their educational organization, recognizing and valuing the differences without discriminating students with ASD and/or excluding them. There is still some resistance but the school system, teachers, parents and institutions dedicated to the inclusion of persons with ASD are starting to accept the inclusion and proposing new experiences⁽⁷⁾.

Important difficulties in the education of children with disabilities include those that are inherent to each individual, to the teacher's characteristics and to the school's structure⁽⁸⁾.

The expectancies of the different groups involved in the school inclusion process i.e. teachers, parents of children with special needs and parents of normal children are fundamentally different. Teachers are worried mostly with the social issues of the children included, while parents expect them to focus on educational issues⁽⁹⁾.

Despite the growth of the number of children with special needs enrolled in regular schools, the deficit in the number of available vacancies is still a major challenge to the system.

Several actions must be taken in order to include all children with special needs in the educational system. They include awareness initiatives towards the other students and the whole community and curricula adaptations⁽¹⁰⁾.

Teachers from a basic school of Vale dos Sinos, metropolitan region of Porto Alegre/RS have shown that there is some discomfort regarding differences, diversity and inclusion⁽¹¹⁾. In Belo Horizonte it was identified that there were not enough actions directed to the improvement of teacher's continued education or to the information of parents about the inclusion process⁽¹²⁾. Belo Horizonte's city office has proposed actions aimed to facilitate the access of students with DEA in regular schools of the city, but there are evidences that these students show very little participation in schools activities, poor interaction with peers and limited learning of specific contents⁽¹³⁾.

In DC (Brasilia) a research shows that there is still a large number of persons excluded either from the regular educational process and from specialized educational initiatives. This proposal has been developed mostly in special schools and special classrooms, in playrooms or mobile services, among other alternatives⁽¹⁴⁾.

In the United States the inclusion of children with ASD in public schools allows the other children to develop social abilities. However, teachers do not limit their attention to this issue, they also focus on the academic progress and behavior challenges⁽¹⁵⁾.

Teacher's initiatives and role as a mediator and school's adequate context are essential to the success of any inclusion process⁽¹⁶⁾. A more effective education to students with ASD depends on the improvement of several aspects. One of these issues is the existence of a specific supporting network to teachers, auxiliary teachers or assistants, curricula adaptation and measures to facilitate communication and the work of all involved professionals⁽¹⁷⁾.

In Brazil there are some laws similar to the American system, but they are still not fully implemented. Some authors believe that following a foreigner model increases the chances of increasing the access to school to children and adolescents with special needs and therefore improve the general educational system⁽¹⁸⁾.

Public policies regarding inclusion must be developed by means of capacitating programs and continued education that support the teacher's work aiming to gradually decrease the school exclusion⁽¹⁹⁾.

Based on their experience teachers learn how to deal with students with disabilities but they do not have any theoretical knowledge to support their practice⁽²⁰⁾. Elementary school teachers that have a first-hand contact with the inclusion process report that their main difficulties refer to the necessary adaptations in the physical environment, human and material resources and their own training⁽²¹⁾. According to their perspective inclusion processes should be conducted with

smaller groups of children, where teachers could dedicate more attention to each student⁽²²⁾.

There is a general lack of training to work with students with ASD as well as to educate and teach them. It apparently is due to incomplete professional training in special education and to the lack of information about ASD and their characteristics⁽²³⁾.

Educational inclusion of children with ASD is possible but should be based on knowledge that guarantees the necessary resources and a clear position about school's role⁽²⁴⁾. Teachers with specific training are more prepared to work with the inclusion of students with ASD than those without it⁽²⁵⁾.

Training programs for teachers must be updated so that the outcome result in professionals that are also agents of changes in the educational system⁽²⁶⁾. The inclusion process demands not only technical information but also emotional support to the professionals involved in it⁽²⁷⁾.

The purpose of the present study was to identify and describe the perspectives of teachers, either from regular or special schools that have children and/or adolescents with ASD as their students, about their characteristics and their social, behavioral and communicative difficulties.

METHODS

This study and its consent form were approved by the institution's ethical committee with protocol 193/10.

Participants

Participants were 51 teachers of regular and special schools that had, among their students, children and adolescents with psychiatric diagnosis included in the autism spectrum. All were informed about the research and signed the consent form. The kind of school (regular, special, public or private) didn't interfere in the results and therefore these data were not included in the analysis. There was no form of selection regarding the place of work of the teachers that participated in this study. This way, it was a convenient random sample that represented a significant perspective of the educational reality of children and adolescents with ASD.

Procedures

A questionnaire was answered by the teachers (Appendix 1). It was elaborated specifically to this study and had 11 test and classification questions. It aimed to identify the perceptions of the teachers about their role regarding the student with ASD; their difficulties and abilities related to him/her; their observations about behaviors and interests of the student and communication strategies used by both of them.

The questionnaires were sent to the teachers through the parents and caregivers of children and adolescents enrolled on a specialized service along with the consent form and a letter

to the teachers. A total of 89 questionnaires were sent but only 51 were answered.

The quantitative analysis was carried out by the statistical analysis with the following tests: Kruskal-Wallis, Wilcoxon, Spearman and t-Student, with significance level of $p < 0.05$.

The qualitative analysis involved the answers to the first part of the questionnaire, that referred to their knowledge about working with children with ASD. Data were considered discretely, considering each question separately.

RESULTS

Considering the 51 teachers that answered to the questionnaire – less than 60% of the questionnaires that were sent – 49 were female. Their age varied between 20 and 60 years and the majority had an Education degree with 11 to 20 years of experience.

The answers revealed that most of the teachers believed they stimulated and contributed to their student with ASD's interpersonal relations, especially to their communication. They considered that interpersonal relationships and autonomy were the most difficult areas to work with.

The teachers considered that generally the schools provide enough support to their work but that there is very little contribution by other professionals and that there is not enough adequate education technology. According to them the preferred communicative mean to communicate with their students is oral language. The answers regarding the situations where their students with ASD have more communication difficulties and which are the most frequent behavioral disorders were varied. It may be due to the variety of manifestations of ASDs or to the lack of experience by the teachers, leading to difficulties in identifying and observing these characteristics.

The question about which was the area to which the teacher believed they had a meaningful contribution to the student with ASD's development was used as a parameter to verify the possible difference between the categories of the variables (Kruskal-Wallis test).

When associating the alternatives to this question with the teacher's ages, education and time of experience it was observed that there is no significant difference between groups.

The variables "education" and "time of experience" have many categories with very low representativeness, i.e. very few subjects in each group, what didn't allow statistical analysis as proposed (Table 1).

Regarding the question about the area where the teachers had more difficulties, there was a significant association with "teachers' age" and "behavior" ($p < 0.05$). As in the prior question, there were too many categories with very low representativeness and therefore the proposed statistical analysis wasn't possible (Kruskal-Wallis test) (Table 2).

When comparing the questions about the teachers' best and poorest performance there was significant difference in

Table 1. Areas the teachers believe to stimulate the most and contribute to the development of their children with ASD

Variable	n	Mean	Standard deviation	Minimum	Maximum	Percentile 25	Percentile 50 (Median)	Percentile 75	p-value
Communication	41	3.29	2.11	1.00	7.00	2.00	3.00	5.00	0.905
Learning	41	3.80	1.91	1.00	7.00	2.00	4.00	5.00	0.265
Interpersonal relations	41	3.41	2.00	1.00	7.00	2.00	3.00	5.00	0.715
Behavior	41	4.24	1.91	1.00	7.00	3.00	4.00	6.00	0.836
Neuro-psychomotor Development	41	4.93	1.85	1.00	7.00	4.00	5.00	7.00	0.203
Reasoning	41	4.93	1.66	1.00	7.00	5.00	6.00	6.00	0.298
Autonomy	41	3.39	1.91	1.00	7.00	1.00	3.00	4.00	0.690

Kruskal-Wallis' test (p<0.05)

Table 2. Statistical analysis of the variables regarding the areas the teachers refer to have more difficulties with their students with ASD

Variable	Age	n	Mean	Standard deviation	Min.	Max.	Percentile 25	Percentile 50 (Median)	Percentile 75	p-value
Communication	20 to 60 years	42	3.98	2,38	1.00	7.00	2.00	4.00	7.00	0.104
Learning	20 to 60 years	42	3.45	1.94	1.00	7.00	2.00	3.00	4.00	0.524
Interpersonal relations	20 to 60 years	42	4.62	1.89	1.00	7.00	3.00	5.00	6.00	0.122
Behavior	20 to 60 years	42	4.12	2.07	1.00	7.00	3.00	4.00	6.00	0.026*
Neuro-psychomotor Development	20 to 60 years	42	4.14	1.76	1.00	7.00	2.00	4.00	6.00	0.379
Reasoning	20 to 60 years	42	3.24	1.75	1.00	7.00	2.00	3.00	4.00	0.366
Autonomy	20 to 60 years	42	4.52	1.93	1.00	7.00	3.00	4.00	6.00	0.627

*Significant values (p<0.05) – Kruskal-Wallis' test

the items of “interpersonal relationship”, neuropsychomotor development”, “rationale” and “autonomy”. Therefore it was confirmed that most of the teachers report similar abilities and difficulties in working with students with ASD in their classrooms (Wilcoxon test) (Table 3).

The t-Student test was used to analyze the variables regarding the schools' contribution to the teacher's work with the students with ASD. The item “educational material” was chosen as the parameter because it was the area most

frequently reported as the one with less support. It was observed significant differences regarding infrastructure, professional improvement and support by the schools' administration. It points out that educational material must be updated to support the improvement of the work with students with ASD. The association of the variables “educational material” and “help from other professionals” didn't yield to significant results.

The familiar support was the area where the teachers reported more help for their work. However, when analyzing

Table 3. Statistical comparison of the variables regarding areas of contributions and difficulties

Pairs of variables	n	Mean	Standard deviation	Min	Max	Percentile 25	Percentile 50 (Median)	Percentile 75	p-value
Communication	+	37	3.27	2.05	1.00	7.00	1.50	3.00	0.151
	-	37	4.19	2.38	1.00	7.00	2.00	4.00	
Learning	+	37	3.70	1.90	1.00	7.00	2.00	4.00	0.384
	-	37	3.24	1.88	1.00	7.00	1.50	3.00	
Interpersonal relations	+	37	3.30	2.01	1.00	7.00	2.00	3.00	0.015*
	-	37	4.59	1.88	1.00	7.00	3.00	5.00	
Behavior	+	37	4.41	1.89	1.00	7.00	3.00	4.00	0.836
	-	37	4.27	2.08	1.00	7.00	3.00	4.00	
Neuro-psychomotor development	+	37	5.00	1.81	1.00	7.00	3.50	5.00	0.038*
	-	37	4.05	1.81	1.00	7.00	2.00	4.00	
Reasoning	+	37	5.11	1.54	1.00	7.00	4.50	6.00	0.000*
	-	37	3.27	1.69	1.00	7.00	2.00	3.00	
Autonomy	+	37	3.22	1.86	1.00	7.00	1.00	3.00	0.029*
	-	37	4.38	1.96	1.00	7.00	2.50	4.00	

*Significant values (p<0.05) – Wilcoxon text

the associations of “familiar support” and variables as “infrastructure”, “help form other professionals”, professional improvement” and “support from administration”, there were no significant associations. Only the item “education material” had a negative association with familiar support. It confirms the statistical analysis. This way, it can be concluded that the teachers report the need for improvement in their educational material in order to improve their work and their students’ learning performance (Table 4).

Table 4. Statistical verification of the variables regarding the areas where the teachers consider the school better contributes to the development of their work with students with ASD

Variable	Statistics	Family support
Infrastructure	Correlation coefficient (r)	-0.122
	p-value	0.431
	n	44
Help from other professionals	Correlation coefficient (r)	0.024
	p-value	0.875
	n	44
Professional improvement	Correlation coefficient (r)	-0.173
	p-value	0.262
	n	44
Headmasters’ support	Correlation coefficient (r)	-0.129
	p-value	0.402
	n	44
Educational material	Correlation coefficient (r)	-0.349
	p-value	0.020*
	n	44

*Significant values (p<0.05) – Spearman’s correlation test

Usin the Spearman’s correlation test with the aim of verifying the degree of the association between “speech” and the variables “gestures”, “signs” and “written language”, we found a negative correlation with “gestures” and ”signs”. It suggests that although speech is not the only communicative mean used by teachers and students with ASD, it is the preferred one (Table 5).

Table 5. Statistical comparison of the variables regarding the communicative means more frequently used by the teachers

Variable	Statistics	Speech
Gestures	Correlation coefficient (r)	-0.306
	p-value	0.039*
	n	46
Written	Correlation coefficient (r)	-0.182
	p-value	0.225
	n	46
Signs	Correlation coefficient (r)	-0.448
	p-value	0.002*
	n	46

*Significant values (p<0.05) – Spearman’s correlation test

The most frequently reposted communicative function used by the students with ASD was “to request information”. This way, the t-Student test was used with this variable as

a parameter. A significant difference with the variables “to protest” and to “never tries to communicate” was observed. This way, it is not possible to state that the teachers observe that their students use communication just to ask for information.

The t-Student test was also applied to the variables regarding behaviors and interests of the students with ASD as observed by their teachers. The item “relates to other colleagues in the classroom” was chosen as parameter because it was the most frequently reported by the teachers. It was observed that this item had a significant association with the other variables of this question; i.e. according to the teachers the students with ASD show various interests and try to communicate with their peers.

DISCUSSION

The ASD involve a triad of symptoms in the areas of communication development, behavior and socialization⁽²⁸⁾. The questions proposed in the questionnaire were based on these aspects.

Many teachers answered that they contribute mostly to the development of communication and interpersonal relationships, what agrees with a study⁽²⁴⁾ that assessed the social competence profile of a child with DEA, comparing it with that of a child with typical development. It reported that the child with ASD presented more frequent cooperation behaviors and social assertiveness behaviors than the child with typical development. This result and the answers by the teachers of the present research show that the inclusion of students with ASD in the regular educational system is possible and that the social development is the main topic. Another study⁽⁶⁾ pointed out that the educational alternatives to students with ASD are limited due to the disorders involved in the spectrum (behavior, socialization and communication) and to the lack of specialized professionals. This way, it can be understood that the inclusion of ASD students is possible because there are positive answers about it. However, the schools need structure, the professionals must be adequately trained and the support by the multidisciplinary team is fundamental. Besides that, there must be continuous support and monitoring of the inclusion process.

The teachers reported that they think they have a smaller contribution to the student with ASD’s development in the areas of learning and neuropsychomotor development. It also confirms the position of another study with other teachers⁽²²⁾ that consider the school only as an opportunity for socialization. On a way it points out to the lack of knowledge and faith on the school development of students with ASD.

Other teachers studied on another research⁽²⁵⁾ consider that students with ASD benefit from the interaction allowed by the inclusion. Still another research⁽²⁹⁾ confirmed the influence of the teacher on the communicative performance by students with ASD. Therefore, it can be understood that the school is important to the social development of the student with ASD

and that the teacher has a fundamental role to it because he/she has a direct influence on and manages the student's interaction with other persons in the school setting.

According to the teachers' perceptions, the schools do not have the appropriate structure to support the educational, social, cultural and emotional development of students with ASD. They usually don't have appropriate structure to receive the families, technology, infrastructure or specialized professionals. This agrees with a study⁽²²⁾ that reported that the inclusion process showed that the teachers frequently lack the knowledge about and training to work with students that supposedly "do not learn". The school, according to these teachers, would be just an opportunity to socialization and inclusion should be conducted in smaller groups. They report difficulties to dedicate to students with special needs in over-crowded classrooms and lack of structure to receive these students. The need for better opportunities of experience and knowledge exchanges, preparing the teacher with theoretical and emotional support was already stressed by a prior study⁽²⁰⁾.

The teachers of the present study considered that the school provides enough support to their work, but that there is little support by other professionals and lack of adequate technology. It should be work of the speech-language therapist to provide support to the teachers in the identification of the specific needs of students with ASD. It also includes the structure of teaching practices and curricula adaptations to improve the language development, the social interaction and the participation of these students in academic initiatives⁽²⁹⁾.

As did the teachers that participated in another study⁽²³⁾ the participants of the preset research stated that they do not have appropriate and sufficient knowledge to deal with students with ASD in their classrooms. They referred that they not receive enough support to work with these students and the over-populated classrooms. The inclusion determined by the law (Lei de Diretrizes e Bases)⁽³⁰⁾ involving adequate regular schools, capable teachers, curricular adaptations, support services and transitory special classrooms still doesn't exist. It still demands structural and curricula adaptations, adequate support to teachers and families and increased awareness by the general population.

The teacher is the professional with the closest contact with the student and is responsible by the events in the classroom and the messenger of the school content. The teacher observes the relationships among students and intermediates them. That is, they have many responsibilities and frequently little support either by other professionals or by the school's administration, as reported in this research.

This study had some limitations, as the small number of participants and the fact that less than 60% of the sent questionnaires were returned. However, even with a reduced number of answers the work brings information about the Brazilian reality and about how teachers report themselves within the inclusion process. It is also important mentioning

that the kind of school (regular, special, public or private) wasn't part of the studied variables. The focus was placed on the impact of the student with ASD in the work of the teacher.

According to the results of the present study the teachers have shown that do not have enough knowledge about ASD and sometimes feel unprepared to work with inclusion. It reaffirms the importance of training programs to teachers to the implementation of the policy of inclusion of students with special needs in the regular school system⁽¹⁹⁾.

CONCLUSION

The type of school (regular, special, public or private...) was not specified because the aim of this study was to assess the impact that the student with ASD has on the teacher's work and what perspectives it provides. The fact that the questionnaires of different types of schools were not compared is a limitation of the present study but it also corresponds to specific criteria for data gathering. The teachers that answered to the questionnaires had in their classrooms children and adolescents that were enrolled in the service where the research was conducted. It means that there was no other form of selection of the place of work of the teachers. Therefore, it was a convenient random sample that represented a significant perspective of the educational reality of children and adolescents with ASD.

The perspective of these teachers that have children and adolescents with ASD in their classrooms is that they miss more knowledge about the disorder, more training and support by other professionals. They also report difficulties in choosing the contents, the assessment tools or criteria and lack of technological support and infrastructure. The teachers do not believe they are well prepared to receive students with ASD in their classrooms. They need more specific training and knowledge about ASD and its characteristics.

According to the results of this research the teachers have shown to be unprepared to work with inclusion and what to do with their students with ASD. This way it can be concluded that they need help in structuring teaching practices and curricula adaptations aiming to improve social interaction, language development and to increase the participation of these students in academic activities.

More research like this is needed and more papers about it must be published in order to improve the understanding about the real meaning of school inclusion and effectively benefit students with special needs.

ACKNOWLEDGEMENT

To Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP), by the scholarship for this Masters study, process 2010/12786-0.

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Appendix 1. Questionnaire applied to the teachers

1. Name:

2. Age:

3. Education:

4. Teaching time:

5. In what areas do you believe your work stimulate or contribute for your student with ASD better development: (attribute a number from 1 to 7 where 1 is the area to which you contribute the most and 7 the area where your contribution is the smallest)

- Communication
- Learning
- Interpersonal relationship
- Behavior
- Neuro- psycho motor development
- Reasoning
- Autonomy

6. In which areas do you find more difficulties with your student with ASD: (attribute a number from 1 to 7 where 1 is the area to which you contribute the most and 7 the area where your contribution is the smallest)

- Communication
- Learning
- Interpersonal relationship
- Behavior
- Neuro- psycho motor development
- Reasoning
- Autonomy

7. In what factors do you consider the schools contributes to the development of your work with your student with ASD:

(attribute a number from 1 to 6 where 1 is the area where you find more difficulties and 6 the area where you find less difficulties)

- Infrastructure
- Help form other professionals
- Family support
- Professional improvement
- Headmaster's support
- Educational material

8. Regarding communication, what communicative means do you use to communicate with your student with ASD

(attribute a number from 1 to 4 where 1 is the mean you use more frequently and 4 the mean you rarely use)

- Speech Gesture Writing Signs

9. In what circumstances you student with ASD communicates:

(attribute a number from 1 to 5 where 1 is the situation your student produces more communication and 5 the situation where he/she produces less communication)

- To request information, objects or report facts
- To Interact with the teacher and other colleagues.
- Do not focus on subjects
- To protest Never tries to communicate

10. What behavior and interests do you observe most frequently in your student with ASD.

(attribute a number from 1 to 11 where 1 is the situation you observe more frequently and 11 what you rarely observes)

- Relates with other classmates
- Takes orders
- Refuses to participate in proposed activities and/or changes in routine.
- Shows fears.
- Uses persons as tools
- Avoids physical contact
- Maintains visual contact with teachers and peers.
- Shows unusual attachment to objects and/or spins objects
- Shows avoidance and/or indifference
- Presents stereotyped behaviors (persistent repetition of speech and/or acts)
- Presents self or hetero aggression (hits others or self)

11. Do you know any other teacher with students with ASD?

- Yes No

If yes, please inform the contact:
