## **Originals**

A. Amor Salamanca

# Psychotherapy treatment program in a group of adults with high-functioning autism spectrum disorder

Mental Health Care Center for Adults Sant Cugat del Valles Hospital Universitario Mutua de Terrassa

Introduction. An increasing number of adults diagnosed with a high-functioning autism spectrum disorder are diagnosed as being adult, so much the treatment applicable conditions, and possibly the clinical outcome. As a complement to medication and individual psychotherapy, group psychotherapy treatment is a clinical tool that offers significant advantages in the treatment of this syndrome.

Metodology. This paper describes the sequence of group treatment we have been doing in our workplace, in the light of what the medical literature contains the subject, and according to the basic needs of this group of patients in adulthood.

**Conclusion.** Group psychotherapeutic treatment in adult patients with a high-functioning autism spectrum disorder is a treatment option to consider, and whose clinical effectiveness must be evaluated in future studies.

Kev words:

Autism. Asperger. Adults. Treatment. Psychotherapy. Group.

Actas Esp Psiquiatr 2010;38(2):94-100

### Programa de tratamiento psicoterapéutico en un grupo de pacientes adultos con un trastorno del espectro autista de alto funcionamiento

Introducción. Cada vez es mayor el número de adultos diagnosticados de un trastorno del espectro autista de alto funcionamiento que reciben el diagnóstico siendo ya adultos, lo que condiciona mucho el tratamiento aplicable, y posiblemente los resultados terapéuticos. De forma complementaria al farmacológico y psicoterapéutico individual, el tratamiento psicoterapéutico grupal es una

Correspondence:
Alejandro Amor Salamanca
CSMA Sant Cugat del Vallés
Hospital Universitario Mutua de Terrassa
C/Sant Antoni, 32
08221 Terrassa (Barcelona) (Spain)
E-mail: Alejandro-amor@terra.es

herramienta clínica que ofrece importantes ventajas en el tratamiento de este síndrome.

Métodología. En este trabajo se expone la secuencia del tratamiento grupal que hemos venido realizando en nuestro centro de trabajo, a la luz de lo que la literatura médica recoge al respecto, y según las necesidades básicas de este grupo de pacientes en su edad adulta.

Conclusiones. El tratamiento psicoterapéutico grupal en pacientes adultos con un trastorno del espectro autista de alto funcionamiento es una opción de tratamiento a tener en cuenta, y cuya efectividad clínica deberá ser evaluada en futuros estudios.

Palabras clave:

Autismo. Asperger. Adultos. Tratamiento. Psicoterapia. Grupo.

#### INTRODUCTION

Autism spectrum disorders are a group of clinical conditions sharing an essential core of symptoms: problems to establish and maintain interpersonal relations, verbal or nonverbal communication problems, and the existence of a restricted and repeated pattern of activities and interests.<sup>1,2</sup> In order to refer to the subgroup of these patients who have adequate cognitive performance and apparently normal use of the linguistic skills, the terms high performance or high functioning autism are used as synonymous to that of Asperger syndrome (ICD-10) or disorder (DSM-IV). The tendency of the future international classifications,3 however, seems to be to eliminate the latter term as they consider that sufficient evidence does not presently exist to establish qualitative differences between "low" and "high performance" autism as has been done up to now in the DSM since its fourth edition or in the ICD, by the term Asperger, and to choose a simply dimensional classification. In the present work, however, we will use all of these terms indistinctively.

Decades after Hans Asperger clinically described by in 1944,<sup>4</sup> awareness of the existence and perhaps the fre-

quency of this syndrome have been significantly increasing in recent years.<sup>5</sup> Parallelly, its correct diagnosis has also been increasing (many of these adults were already being treated within mental health networks, but often under incorrect diagnoses and treatments), this going from being considered an uncommon disorder to being a relatively frequent one,<sup>6</sup> both in childhood as well as adulthood. Parallelly, the works referring to this problem and adults have been multiplying.<sup>7-9</sup>

There are no specific psychopharmacological treatments for this Asperger syndrome, although drug treatment often produces very important symptomatic improvement which in turn may lead to a very significant change in the patient's prognosis. However, it is the psychotherapeutic treatment, especially in early ages, that seems to be essential for the long-term modification of the core symptoms of the disorder in these patients. There is still little information about when this psychological intervention is performed in the adult age, although everything seems to indicate that it continues to be beneficial in spite of the delay in its application. 12,13

The use of group psychotherapy techniques for patients affected by Asperger Syndrome is a complementary tool to pharmacological treatment or to individual psychotherapy, with some types of advantages regarding the latter: a) it permits the close relationship of each patient with other persons affected by the same problem, both in the group as well as after and having met, outside of it. In our experience, those affected by high functioning autism spectrum disorder often have special affinity to maintain a relationship among themselves; b) it makes it possible for them to observe certain inadequate social behaviors among themselves, that they could be made aware of and to work with them in common; c) it breaks up, among all the members of the group, the weight that an individual intensive treatment may have for the patient, with the decreased efficacy that this could cause for several reasons (avoidance of the sessions, greater personal blockage during them, etc.), and d) it means an investment of time, at low cost, and in turn reinforcement of the aspects treated in the individual visits.

There are few references in the medical literature regarding group psychotherapy treatment of the Asperger syndrome in the adult age, 14-16 those focused on child and adolescents being more abundent. 17-31 The subjects treated in this study are on aspects such as communication skills, behavior modulation and responses in social contexts, and, finally, awareness of the difficulties associated to the disorder, working with all this in group sessions, and using different complementary techniques such as reevaluation of the previous sessions in video, role-playing, or use of certain games and activities, in order to perform the therapeutic purposes of the group in a pleasant

way. There is no uniform schedule of treatment among the texts evaluated. The results vary greatly, from null or with minimum changes after the sessions<sup>17, 24, 27, 31</sup> to others stated as effective. <sup>15, 18, 20, 22, 26, 28</sup>

In recent years, we have been performing group psychotherapy in our mental health care center, together with the common individual treatment in our adult autism patients<sup>32</sup> that is complementary to the rest of the therapeutic approaches and that we comment in the following.

#### INTERVENTION PROGRAM

The program is structured into eight sections that deal with fundamental aspects of the life of the patients with high functioning autism that will be developed in 60-minute individual sessions. Several of these sections could be dealt with in a single session, but most undoubtedly will require more than one hour combined work each.

The sessions have a fortnightly frequency and are attended by 4 to 6 persons over 18 years of age diagnosed of autism spectrum disorder (ASD) (according to the DSM IV criteria for autistic disorder, Asperger disorder or generalized disorder of non-specified development) each one. Although there is diversity of involvement secondary to the autistic condition among those attending the program, we decided to only exclude those patients that we did not believe were going to benefit from them due to the especially marked differences of understanding and social adequacy from the sessions.

#### What is an autism spectrum disorder

The first session has two basic objectives:

In the first place, the presentation of the syndrome. All those attending the group know their diagnosis, but there is always a different grade, so that it seems to be essential to review their basic characteristics without excessively referring to aspects that are too theoretical or technical. Autism spectrum disorders are explained as a continuum, with different grades of discapacity, above all, social, together with other more positive and generally advantageous aspects (honesty, outstanding memory at times, sometimes great knowledge in a certain material). Taking advantage of this explanation, the treatment program is presented, stressing active co-participation as a basic aspect of its effectiveness, and the objectives to be achieved during the sessions are established.

In the second place, the presentation and initial contact between the patients themselves: it must be kept in mind that attending the group, especially in the beginning, can be an important stressful and insecure factor for this type of patient and is an essential aspect to keep in mind and to work on, already from in the first session. As we have previously mentioned, the group often helps those attending to establish personal relationships among the group members, which, we consider, is already, by itself, a first very positive outcome, and by itself therapeutic, of these sessions.

#### Social skills I: Instrumentals

Social behaviors that depend essentially on good use of certain discrete motor skills are the easiest to work on and those in which it is the easiest to achieve rapid results. In fact, on many occasions, adult Asperger patients have been correctly incorporating these behaviors into their social skills repertoire if they do not have them, although sometimes they do it mechanically and coldly. The more this skill is distanced from a largely motor and automatic use and the more that it depends on spontaneous social exchange, the worse the results from the social point of view and the more difficult the previous training.

This section deals with aspects such as the following: visual contact (that may not exist, or may be very limited, before the patients become aware of it. On other occasions, the contrary may occur, maintaining eye contact too long or, definitively, inadequately); social smile (the patient should be made aware of the social importance of this physical aspect, but it should also be made clear that gestures that are too forced and artificial are not convenient); handshaking (although most of the ASD patients generally have this aspect of the social life incorporated into their mechanical habits, advantage should be taken to stress the real meaning and convenience of handshaking naturally, but consciously and effectively); hellos and goodbyes (in order to be aware of their convenience, but stressing their short character); appropriateness of the speech to the circumstances (in regards to volume of the voice and attention to the signs that may be emitted to the speaker indicative that its duration is excessive: facial signs and other signs that may indicate hurry, or boredom); attention to body posture, in order to facilitate communication; and awareness of the personal physical space, in order to not venerate and provoke with it avoidable uncomfortableness; other social roles in human groups (maintaining silence when it is socially convenient, adequacy of wardrobe to the circumstances, basic hygienic rules).

## Personal relationships for the patients with autism spectrum disorder

During this session, a less practical one than the previous or upcoming ones, it is aimed to consider the relationships between human beings within the group. These reflec-

tions are proposed as opportunities for personal enrichment, which they can freely choose, but that require some rules to be fulfilled so that the relationship will not fail. Here, it must be remembered that many patients suffering from high performance ASD have, in our experience, great desires to relate with others, but do not know how to do so adequately and effectively, and also that they have frequently developed a rejection, with self-protective intention, towards personal contacts. With the general approach of the human relationship that we have commented on, it is aimed:

- To provide the patients with an explanation on why their relationships in the past were poor, perhaps before knowing their diagnosis, and frequently painful, and that this may currently be conditioning in a negative way their attitude towards new personal relationships.
- To increase their confidence in the possible improvement of their social awkwardness, through a specific training.

The explanation that as a result of a cerebral dysfunction, personal relationships generally require such a difficult effort for them, may often be the initiation of the acceptance of the reality, and a decrease in the struggle to want to be "the same as the others," before knowing why they could not previously be so. This sensation of relief is not at odds with the attempt to want to overcome these difficulties, under a new point of view.

Although the large diversity between the different persons that one may be getting to know has been commented on, it stands out that, in general, the rules of personal relationships are valid in most human relationships, because they are secondary to common brain functionings. Thus, the desire to relate with others would be a generalized tendency in the human species, and would be compared with the desire of relationship of these patients with that of the rest of the persons.

#### Social skills (II): empathies

As we commented on previously, this is an important section within the psychotherapy treatment and perhaps is more complex to perform than others are. It not only depends on a programmable behavior according to the circumstances, as occurs with the most instrumental skills, but depends much more on the capacity to know by intuition foreign feelings (that is, it is a behavior that depends on a correct theory of the mind for its good functioning).

The first part of the training is focused especially on the conversations they have with others, and the associated behaviors: how to begin a verbal contact with someone, according to the circumstances of the moment; the importance of maintaining an argumental line, procuring to not speak exclusively about personal interests, or during an excessive

time; avoid the repetitive and serotype answers, or inadequate comments; also avoid inappropriate behaviors during the conversations (scratching, laughing without a shared reason); pay attention to answering the speaker directly and adequately, showing interest for the concerns and interests of others and respecting the conversation turns.

Once these skills have been commented on and practiced, they are worked with in an integrated way through role playing of certain formalities by telephone, or under other circumstances of the social life: shopping, request for interventions, meetings, spontaneous petitions to strangers, etc. As commented in other studies, the representation of imagined situations is of great utility to train and work with personal attitudes before real situations.<sup>14</sup>

Later, the personal encounters were evaluated from the point of view of their motivation and objective: what was aimed with the personal contact, what could be expected from such encounter from the point of view of human enrichment, and the adequacy or inadequacy of the interaction according to the environmental circumstances. The purpose of this approach is to increase the sensation of control regarding personal relationships, thus decreasing the anxiety that many human contacts cause, especially in the case of little known persons.

During the sessions, after asking those attending in this regards and obtaining their didactic understandings, and explicit approval, the social inadequacies that were occurring were commented on publically with as much tact as possible, we believe that this is a useful way to understand, and modify, socially rejectable behaviors.

Although, as we have previously commented on, many patients who suffer from high-functioning ASD very often want to have relationships, and to explicitly learn the social behavior that their brain does not offer them intuitively, in others, the effort that they need to adapt to these non-spontaneous attitudes in them is exhausting, and the social relationships are not rewarding for them, which is the cause of their desire to be alone and not relate with others. We believe that an attitude of respect should be maintained toward this functioning as a natural way of being of some of these patients, but always considering that it is going to be better, even feasible, for the patient in the middle term.

## Sexuality in patients with autism spectrum disorder

The aspects related with the sexual life in the Asperger syndrome should be dealt with using special sensitivity and tact because they often entail important associated feelings of frustration and impotence. If the close personal relations are already often difficult for this type of patient, sexual

relationships, within others of affect and closeness, are very often an unreachable reality. Thus, their sexual needs generally exist with physiological normality,<sup>33</sup> but they frequently lack the skills to satisfy them within an interpersonal relationship. Thus, the frequency of sexual behaviors alone as well as the hiring of sexual services<sup>34</sup> is high. The session dedicated to this subject aims to:

- To decrease the bitterness and hopelessness experienced by many of the adult ASD patients regarding their sexuality. Acquisition of certain social skills will always be useful for the improvement of any personal relationship.
- To analyze the bases of sexual performance in the human species, to understand it better, but also to prevent possible abuses towards this population of patients, vulnerable due to their characteristic lack of ability to sense intentions of others, associated to their unsatisfied desire to relate sexually with others.
- To increase the sexual information of many Asperger patients, for whom it may often be scarce or inadequate.<sup>35</sup>
- To always recommend the use of the pertinent contraceptive methods, in the sporadic relations they may have,<sup>36</sup> as is the case of the hiring of sexual services.
- On occasions, added to the difficulties of these patients to relate and have a close relationship is a precarious personal sexual identification of many of them.<sup>37</sup> This causes confusion on the gender of their sexual object, leading them to try to have relations with members of one gender or another.<sup>38</sup> This, in the context of their innate interpersonal difficulties, is not generally pleasant and serves as a new element of confusion and personal disorientation.

## Life together of the patients with autism spectrum disorder

Although the grade of functionality and independence for the development of an adult life varies greatly between those who suffer ASD, most<sup>39</sup> have a lower level than that which would be expected for their intellectual capacities, as shown in the meta-analysis of studies in this regards collected by Howlin. 40 Although it seems that the number of persons with ASD who live in long stay units/psychiatric hospitals seems to have decreased in recent years, the proportion of those who are living with their families of origin or who need great life support is really very high, this exceeding 80% in our study. Realities such as this support the hypothesis of the executive dysfunction as essential in this condition, 41 as some authors consider. In spite of this, it must not be overlooked that, as occurs with other aspects of their adult life, those affected by high-performance ASD want to have the largest possible degree of independence, in this case applied to the way of living. Unfortunately, in our country, there is still a deficiency of intermediate services between the

37

psychiatric hospital and care given exclusively by the families of origin. This requires a great burden on the latter and requires many patients to maintain a type of life that is below their possibilities.

The following aspects are commented on during the group session dedicated to coexistence:

- In the first place, the theoretical alterations available to a person to reach the adult age, according to the way of life and to the persons with which they may be living together with are commented on.
- After, the motivations that may exist to change their way of life, especially if it deals with leaving the paternal family core, are examined. The importance of discovering, and following, personal desires in this regards, as far as possible, is stressed.
- The possible ways of living in our Western society, both now as in the medium term, are evaluated. Those patients who live with both parents, or with only one of them, should be aware that the generational change over will forcefully change these circumstances.
- In collaboration with the social service of our center, the resources present in our area to have the option in the future to increase their degree of personal independence (official protection apartments, shared or individual apartments with or without support, out-patient support programs through social workers, assisted care residences) are explained. Unfortunately, as previously mentioned, these resources are still too scarce, and very nonspecific, and do not take the characteristics themselves of the ASD patients into consideration.

## The work in the adult with autism spectrum disorder

There is little practical information, and secondarily, few specific resources, regarding the needs of the high-functioning autism patients for their adequate work integration.<sup>42</sup> Thus, it is not surprising that most are absent from the work market, and are economically dependent on their families of origin.<sup>43</sup> In the case of those who do work, it is known that they generally occupy posts of little responsibility, and generally of a lower level than that which could be expected for their abilities and preparation.<sup>44, 45</sup> As occurs with other aspects that affect the patients suffering from ASD, the greater the functionality and capacities shown by the person, the worse the understanding and tolerance towards them, as their integration problems are not as obvious.<sup>46</sup>

The first part of the session dedicated to work is focused on the problems that those suffering with high-functioning ASD generally find in regards to their work integration. An audiovisual tool oriented in this aspect is used for this.<sup>47</sup> The

work difficulties of these patients seem to lie in the social aspects of the work and not so much on the requirements themselves of the jobs.<sup>42, 48</sup> Although there are patients who, at this time, do not plan to start any work activity, we believe that this session is equally useful for them, since the social skills to be developed at work are equally useful, logically, in other life areas.

Thus, the following aspects are commented on:

- It is advisable to require some rules, as explicitly as possible, on personal performances and responsibilities at work. The least that is left up to suppositions, the better these persons will perform their usual task, with greater security and responsibility. It would be well for them to have a work monitor, who may be their superior at work, whose function is not only to give them the instructions to be performed but also to supervise and facilitate the solution of problems that may arise in the development of the usual work activity, especially in the aspect of interactions with work peers.
- The habit of confirming the instructions received to perform a task is practiced again, trying to decrease misunderstandings as much as possible, and especially if they had not understood well the first time.
- Possible work interviews are practiced.
- Search for an occupational activity is encouraged, in light of, above all, the skills, and strongest aspects, or difficult and problematic aspects, of the patient. At this point, it must be kept in mind, however, that it is often not possible to choose the ideally desired activity, but rather really available offers, that many times are scarce.

After this, and in second place, the possible pathways of normal and protected work available in the area, again in collaboration with social services, are explained. Several of our ASD patients, after having gone through the group, are working in a protected workshop, with a high grade of personal satisfaction.

# The adult age as challenge for the patients with autism spectrum disorder

The last session is used to consider the cycle as finished, trying to offer a combined view of all that commented on in the different sessions, and obtaining a global point of view of each one of the participants in the sessions on what they have learned, and what they fear about their future.

#### DISCUSSION

The purpose of the present study is to provide knowledge of our activity and experience on an aspect of the treatment

that we believe to be important and that we suspect is used little in our setting, probably due to diagnostic problems in these patients. The fundamental aspects to be developed in the medium term in relationship with the group treatment should focus on their clinical effectiveness, in spite of the difficulties of having a control group that could facilitate this knowledge. An already mentioned previous study in adults<sup>15</sup> evaluates the advances in the grade of independence or of work improvements, before and after the group, although these improvements cannot be totally attributed to the sessions conducted, and it collects the impressions of the relatives or personal satisfaction, also subjective, after completing the group treatment. Another known problem pending quantification and subsequent intervention is that of the generalization of learning for its application in real life situations, and not only artificially provoked, as done in the group.

Regarding other circumstances to comment on during the development of the sessions, we believe it advisable to mention the need, parallelly and outside the group, of individualized psychotherapy treatment for those attending it. Thus, they could attend to and solve personal type problems that cannot be generalized and that also cannot be dealt with in common, and reinforce, at the same time, previously commented aspects among all of them. On some occasions, during the sessions, some of the problems appearing between encounters have been dealt with because they have been considered to be sufficiently generalizable to use them in common, for the learning of the entire group.

At the same time, we believe it is important at all times to try to offer the patients a realistic view of the limitations that affect them and to not create false expectations on their therapeutic possibilities of the group.

#### CONCLUSIONS

High-functioning autism spectrum disorders are much more frequent than thought up to now, and are a therapeutic challenge. These are patients in whom the specific treatment should be performed in the early years of life, and that generally has more or less pronounced affect on many fundamental aspects of their development. Thus, all the therapeutic resources available to us should be used to help them improve their daily functioning, as much as possible. Group psychotherapy is one of these options, with advantages compared to other therapeutic means that it should complement, and whose clinical effectiveness should be evaluated in future studies.

#### REFERENCES

 CIE-10. Décima revisión de la clasificación internacional de las enfermedades, trastornos mentales y del comportamiento. Gi-

- nebra: Organización Mundial de la Salud, 1993.
- DSM-IV. Diagnostic and statistical manual of mental disorders. 4th ed. Washington DC: American Psychiatric Association, 1994
- American Psychiatric Association. Report of the DSM V Neurodevelopmental Disorder Work Group. 2009. Disponible en: http://www.psych.org/MainMenu/Research/DSMIV/DSMV/DS-MRevisionActivities/DSM-V-Work-Group-Reports/Neurodevelopmental-Disorders-Work-Group-Report.aspx.
- Asperger H. Die «Autischen Psychopathen» im Kindesalter. Archiv für Psychiatrie und Nervenkrankenheiten 1944;117:76–136.
- Nassar N, Dixon G, Bourke J, Bower C, Glasson E. et al. Autism spectrum disorders in young children: effect of changes in diagnostic practices. Int J Epidemiol 2009;38:1245–54.
- Autism and Developmental Disabilities Monitoring Network Surveillance Year 2006 Principal Investigators. Centers for Desease Control and Prevention (CDC). Prevalence of autism spectrum disorders – Autism and Developmental Disabilities Monitoring Network, United States, 2006. MMWR Surveill Summ. 2009:58:1–20.
- Howlin P. Autism and Asperger syndrome, preparing for adulthood. 2nd ed. Abingdon: Routledge, 2004.
- 8. Jennes-Coussens M, Magill-Evans J, Koning C. The quality of life of young men with Asperger syndrome: a brief report. Autism 2006;10(4):403–14.
- Tantam D. The challenge of adolescents and adults with Asperger syndrome. Child Adolesc Psychiatr Clin N Am 2003;12:143–63.
- Findling RL. Pharmacologic treatment of behavioral symptoms in autism and pervasive developmental disorders. J Clin Psychiatry 2005;66 (Suppl 10):26–31.
- Martín Borreguero, P. El síndrome de Asperger: ¿excentricidad o discapacidad social?. Madrid: Alianza editorial, 2004: p. 179– 232.
- Roy M, Dillo W, Emrich HM, Ohlmeier MD. Asperger's syndrome in adulhood. Dtsch Arztebl Int 2009:106:59–64.
- Attwood T. Frameworks for Behavioral interventions. Child Adolesc Psychiatr Clin N Am 2003;12:65–86.
- Mesibov GB. Social skills training with verbal autistic adolescents and adults: a program model. J Autism Dev Disord 1984;14:395– 404.
- Howlin P, Yates P. The potential effectiveness of social skills groups for adults with autism. Autism 1999;3:299–307.
- 16. Sperry LA, Mesibov GB. Perceptions of social challenges of adults with autism spectrum disorder. Autism 2005;9:362–76.
- 17. Bauminger N. Brief report: group social-multimodal intervention for HFASD. J Autism Dev Disord 2007;37:1605–15.
- Mackay T, Knott F, Dunlop AW. Developing social interaction and understanding in individuals with autism spectrum disorder: a groupwork intervention. J Intellect Dev Disabil 2007;32:279– 90
- Williams White S, Keonig K, Scahill L. Social skills development in children with autism spectrum disorders: a review of the intervention research. J Autism Dev Disord. 37:1858–68.
- Tse J, Strulovitch J, Tagalakis V, Meng L, Fombonne E. Social skills training for adolescents with Asperger syndrome and highfunctioning autism. J Autism Dev Disord. 2007;37:1960–8.
- 21. Herbrecht E, Poustka F. Frankfurt group social communication and interaction skills training for children and adolescents with autism spectrum disorders. Z Kinder Jugendpsychiatr Psychother 2007;35:33–40.
- Cotugno AJ. Social Competence and social skills training and intervention for children with Autism Spectrum Disorders. J Autism Dev Disord 2009;39:1268-77.
- 23. Williams T. A social skills group for autistic children. J Autism

- Dev Disord 1989;19:143-55.
- Barry T, Klinger LG, Lee JM, Palardy N, Gilmore T, Bodin SD. Examining the effectiveness of an outpatient clinic-based social skills group for high-functioning children with autism. J Autism Dev Disord 2003;33:685–701.
- Hwang B, Hughes C. The effects of social interactive training on early social communicative skills of children with autism. J Autism Dev Disord 2000;30:331–43.
- Kroeger KA, Schultz JR, Newsom C. A comparison of two groupdelivered social skills programs for young children with autism. J Autism Dev Disord 2007;37:808–17.
- Marriage KJ, Gordon V, Brand L. A social skills group for boys with Asperger's syndrome. Aust N Z J Psychiatry 1995;29:58– 62.
- 28. Webb BJ, Miller SP, Pierce T, Strawser S, Jones W. Effects of social skill instruction for high-functioning adolescents with autism spectrum disorders. Focus autism other Dev Disabl 2004;19:53–62.
- Solomon M, Goodlin-Jones B, Anders T. A social adjustment enhancement intervention for high functioning autism, Asperger's syndrome and pervasive developmental disorder NOS. J Autism Dev Disord 2004;34:649–68.
- Stichter JP, Herzog MJ, Visovsky K, Schmidt C, Randolph J, Schultz T et al. Social competence intervention for youth with Asperger syndrome and high-functioning autism: an initial investigation. J Autism Dev Disord 2010 (En prensa).
- Rao PA, Beidel DC, Murray MJ. Social skills interventions for children with Asperger's syndrome or high-functioning autism: a review and recommendations. J Autism Dev Disord 2008;38:353–61.
- Amor A. Tratamiento psicoterapéutico en un grupo de adultos con síndrome de Asperger. Psiquiatr Biol 2006;13:188–192.
- Hénault I. Asperger's syndrome and sexuality. From adolescence through adulthood. Londres-Filadelfia: Jessica Kingsley Publishers, 2006.

- 34. Van Bourgondien ME, Reichle NC, Palmer A. Sexual Behavior in adults with autism. J Autism Dev Disord 1997;27:113–25.
- 35. Stokes MA, Kaur A. High-functioning autism and sexuality: a parental perspective. Autism 2005;9:266–89.
- 36. Newport J, Newport M. Autism-Asperger's and sexuality: puberty and beyond. Future Horizons, 2002.
- Hellemans H, Colson K, Verbraeken C, Vermeiren R, Deboutte D. Sexual behavior in high-functioning male adolescents and young adults with autism spectrum disorder. J Autism Dev Disord 2007;37:260–9.
- 38. Tissot C. Establishing a sexual identity. Case studies of learners with autism and learning difficulties. Autism 2009:13:551–66.
- 39. Howlin P, Goode S, Hutton J, Rutter M. Adult outcome for children with autism. J Child Psychol Psychiatr 2004;45:212–29.
- 40. Howlin P. Autism and Asperger syndrome, preparing for adulthood. 2nd ed. Abingdon: Routledge, 2004: p. 336–8.
- Rusell J. Autism as an executive disorder. New York: Oxford University Press, 1997.
- 42. Hurlbutt K, Chalmers L. Employment and adults with Asperger syndrome. Focus Autism Other Dev Disabl 2004;19:215–22.
- Alvarez R, Capella M, Saldaña D. Quiero trabajar. Empleo y personas con trastornos del espectro autista. Federación Autismo Andalucía, 2009.
- 44. Howlin P. Autism and Asperger syndrome, preparing for adulthood. 2nd ed. Abingdon: Routledge, 2004: p.233–69.
- 45. Howlin P. Outcome in adult life for more able individuals with autism or Asperger syndrome. Autism 2000;4:63–83.
- 46. Howlin P. Autism and Asperger syndrome, preparing for adulthood. 2nd ed. Abingdon: Routledge, 2004: p. 3.
- Fundación Adapta. Una imagen mejor que mil palabras: una herramienta multimedia para la preparación laboral de personas con discapacidad intelectual.
- 48. Higgins KK, Koch LC, Boughfman EM, Vierstra C. School-to-work transition and Asperger syndrome. Work 2008;31:291–8.