Autism Research Update

Issue 10: Challenging behaviours

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Assessing challenging behaviors in children with autism spectrum disorders: A review

J. L. Matson & M. Nebel-Schwalm (2007)

Introduction

Autism spectrum disorder (ASD) is defined by qualitative difficulties in social communication, interaction and by the presence of repetitive interests, most of which are often accompanied by at least one challenging behaviour. Associated behaviours with ASD are self-injury, aggression and disruptions to the environment, when compared to others with differing types of developmental conditions. These related challenging behaviours are problematic in that they place the child and others around them at risk of physical injury whilst limiting involvement in community and educational activities.

The study

Despite the high presence of challenging behaviours in ASD, the research regarding assessment, identification and monitoring of challenging behaviours is not much. Typically, challenging behaviours are evaluated by scaling methods by using behavioural observations of operationally defined target behaviours and via functional assessment. In the present paper, a review and analysis of the current assessment literature is provided, and recommendations for future clinical and research developments are suggested.

Findings

The reviewers made several conclusions about the development of assessment methods for challenging behaviours in children with ASD.

In particular, three major issues were discussed. Firstly, challenging behaviours are rarely screened for or included as outcome measures in programmatic research studies for children with ASD. It was argued that the presence or absence of such behaviours should be routinely screened for in early intervention attempts, and when these behaviours are present they should be treated for. Also, identifying and prioritizing challenging behaviours will require a different set of assessment procedures relative to how best to judge the treatment outcome. However, this area of assessment research has received little levels of attention. Another major issue was the general lack of systematic research on how best to assess challenging behaviours in children with ASD.

Conclusion

Most diagnosticians are of the opinion that challenging behaviours are not core features of ASD. However, the general consensus is that these maladaptive responses are associated with ASD at a high rate. Thus, it was suggested that a great deal of research on challenging behaviours in ASD is urgently needed, since most learning objectives will be markedly hampered while behaviours of this type are being displayed by the child with ASD.
Introduction

Aggression is usually defined as intentionally causing harm to another person or object, this includes harm intended to be physical, emotional, or social. The few studies conducted on aggressive behaviour in children with an ASD suggest that aggressive behaviour is as common in children with ASD as it is in children with other learning disabilities. Despite the importance of studying the causes of aggressive behaviour, little research has been done to determine what the normal levels of aggressive behaviour are, in children with ASD, and if those levels differ from typically developed peers or from peers with other difficulties.

The study

The present study looked at the characteristics of aggression through the Children’s Scale for Hostility and Aggression: Reactive/Proactive (C-SHARP). This scale comprises of five empirically derived subscales: Verbal Aggression, Bullying, Covert Aggression, Hostility and Physical Aggression. Additionally, possible demographic variables (ASD subtype, age, and gender) were explored to determine if there was any evidence of a difference between ASD and IDD Children.

Findings

The ASD group had significantly higher scores than the learning disability group on three subscales: Bullying, Hostility and Physical Aggression. Scores on the remaining subscales were nearly identical for both groups. Younger participants scored higher on the Bullying, and Physical Aggression scales compared to older participants.

Conclusion

This study indicates that children with ASDs do engage in aggressive behaviour. In this sample, the behaviours on the Bullying and Hostility subscales were of particular concern, yet they might represent a reaction to the environment rather than a reaction to another person as an attempt to intimidate behaviour. It seems likely, given the results presented here, that aggressive behaviours in children with ASDs differ in prevalence and expression from peers who have other learning difficulties.
Introduction

Aggression is a significant problem for many children and adolescents with autism spectrum disorder (ASD). The current study examined how common it is and what are the predictors for aggressive behaviour. Aggression has been observed to be more frequent among adolescents and children than among adults with ASD. Children also face a range of co-occurring problems including self-injury, gastrointestinal problems and sleep problems which may relate to the occurrence of aggression.

The study

The sample covered 1584 children and adolescents across US and Canada, aged between 2 and 17 years old. The study screened for factors that are thought to be predictors of aggression including sex, race, and caregiver education level. Additional surveys included questions on the existence of aggressive behaviour, sleeping problems, sensory issues, episodes of self-injury, gastrointestinal problems and communicative level.

Findings

The observed rate of aggressive behaviour amongst children and adolescents with ASD was 54%. There were no sex differences nor was frequency related to IQ or race. However, children with difficulties with communication skills and sensory or sleep disturbances were more prone to aggression.

The most significant link was that of aggressive behaviour and self-injury (78% of self-injurers also engaged in aggressive behaviour, compared to the 48% shown by non self-injurers). A small difference was observed between those with and without gastrointestinal problems, with aggression being more prevalent in children with GI problems (62%) that without them (46%). A marginal difference was observed regarding caregiver's education level: children whose caregivers went to university showed the lowest rate of aggression (47%), and those whose caregivers had no post high-school education demonstrated a much higher rate of aggression (62%).

Conclusion

Results show a high-prevalence of aggression amongst children with ASD. Aggressive behaviour seems to be less prevalent with age, something consistent with observations for typically developed children. The results reveal that self-injury is highly associated with aggression among children with ASD. It is possible that, for some children, self-injurious behaviour and aggression may be, somehow, reinforced.
Expressive communication of children with autism: the use of challenging behavior  
H. M. Chiang  

**Introduction**

The aim of the present study was to investigate challenging behaviour among Australian and Taiwanese children with autism who were non-verbal or had limited speech in naturalistic settings and to address the following questions: (1) What are the communicative characteristics of challenging behaviour? (2) Do sample characteristics associate with the amount of challenging behaviour?

**Findings**

Half of the children with autism used challenging behaviour as a form of communication. From the percentage of challenging behaviour in total, expressive communication in each child ranged from 0% to 100%. Challenging behaviour was used for requesting and rejecting with the same frequency.

Challenging behaviour was directed to adults significantly more frequently than to peers. Deny was the most common partner’s response and removed was the least common one. Challenging behaviour occurred most often during academic activities and seldom occurred during free time.

Results indicated that no significant relationships existed between the amount of challenging behaviour and age, autism severity or adaptive behaviour level. The use of graphic symbols was positively associated with the amount of challenging behaviour.

**Conclusion**

Challenging behaviour was still displayed, even if the partner refused the request of children, this may indicate that denying the communicative function of challenging behaviours does not help to decrease it.

Findings may indicate that the occurrence of challenging behaviour is associated with structured activities. The study suggests that simply teaching to use AAC is unrelated to decrease challenging behaviour, however it should be treated with caution when interpreting the results from the present study.

**The study**

A total of 32 children with autism, aged between 3 and 16, were recorded and observed for 2 hours during their everyday school routines. Communicative functions of challenging behaviour were coded in two categories: request (i.e. ask for an object, service, etc.) or reject/protest (i.e. refuse to do or accept something). Communicative partners were coded into two categories: adult (i.e. teaching staff) and peer. Partner’s responses were coded into: deny, acknowledge, no response, delivered and removed. Classroom activities were coded into: academic activities, morning circle, free time, morning tea and lunch.
The Relationship of Challenging Behaviors to Severity and Symptoms of Autism Spectrum Disorder

J. Matson, J. Wilkins, & J. Macken

Journal of Mental Health Research in Intellectual Disorder (2008)

Introduction

Challenging behaviors, such as stereotypies, aggression, property destruction, and self-injury, are often exhibited by children with autism spectrum disorders (ASD). These behaviors have a significant impact on the quality of life of children with ASD and their family and pose a risk to the physical safety of the child and those around them. Additionally, if the behaviors go untreated, they are more than likely to persist into adulthood and continue to increase in severity as the child physically matures.

The study

The study examined the relationship between symptoms of ASD and challenging behaviors. Firstly the authors compared the amount and severity of challenging behaviors between children with ASD. Comparing them to both normally developed children and children with an atypical development. Next they investigated if the severity of ASD affects the type of problems in these children. The sample for this study consisted of 313 children and adolescents.

Authors used the Autism spectrum disorders diagnostic for children (ASD-DC) and the Autism spectrum disorder behaviors problems for children (ASD-BPC). The second scale consists of 18 items pertaining to disruptive, aggressive, self-injurious, and stereotypic behaviors commonly reported as challenging behaviors in children with ASD.

Findings

Children with ASD showed significantly greater levels of challenging behavior than typically developed children and children with atypical development. It should be noted, however, that there were significantly fewer males in the typically developed controls (i.e., it could be expected that males would exhibit higher levels of challenging behaviors than females.). Also, severity of ASD was positively related to the number and intensity of challenging behaviors, and those with severe ASD showed higher levels of problem behaviors than children with mild or moderate ASD. Symptoms found to be significant predictors of challenging behaviors were related to deficits in social interaction.

Conclusion

These results have several implications for assessment and treatment of children with ASD. Intervention programs may also decrease those challenging behaviors that can be predicted by ASD symptoms. Authors recommend that given the relationship between symptoms of ASD and the presence and severity of challenging behaviors, it is important to adequately assess both of these.
**A review of interventions to reduce challenging behaviour in school settings for students with autism spectrum disorders**  
*W. Machalicek, M. F. O’Reilly, N. Beretvas, J. Sigafos, & G. E. Lancioni*  

**Introduction**

Challenging behaviours are a common feature in school settings for children with autism spectrum disorders (ASD). With the risk of these behaviours becoming chronic, many interventions have been designed in order to address this issue. The present study aimed to provide a comprehensive review of interventions aimed at decreasing challenging behaviours in school environments for ASD students aged between 3 and 21 years.

The interventions selected fell into four categories:

1) interventions aimed at changing the environment to suit the students’ needs (*Antecedent manipulations*)

2) Interventions aimed at making alternative provisions for the student, such as making tasks easier etc. (*Changes in instructional categories*)

3) Interventions rewarding the student following a set period of time when they did not engage in challenging behaviour (*Differential reinforcement*), and

4) Interventions focussed on teaching students to self-monitor their own behaviour (*Self-management*).

**The study**

Twenty-six studies were identified which fell into one of the four categories highlighted above. To be included, the study also needed to meet the following criteria: (a) included students with ASD; (b) used a single-subject design; (c) was an intervention targeting challenging behaviour in school; and (d) was published between 1995 and 2005.

**Findings**

1) *Antecedent Manipulations*: Social Stories™, including musically adapted ones, was the most consistent intervention and had the most and profound effect on the students’ behaviour. It was suggested that this method is most effective as it targets challenging behaviour, but also improves upon social skills.

2) *Changes in instructional context*: Interventions included using prompting and giving the child the choice of reward. These interventions aim to address the behaviour before it turns challenging. However, it was concluded that these types of interventions are effective in periods of low stress, but fail to work when stress is high.

3) *Differential reinforcement*: The most effective intervention in this category was functional communication training (FCT). This intervention identifies the consequences that maintain the student’s challenging behaviour, and finding a more appropriate response as equivalent. It was reported that FCT intervention eliminated the challenging behaviour when conducted correctly.

4) *Self-management*: Overall, the use of these kinds of intervention, which included the use of new communication systems, was not as effective as the other categories. Many of the students achieved limited independence, and required prompting to use the new system.

**Conclusion**

This review suggests that the interventions designed to reduce or eliminated a variety of challenging behaviour in a school setting, have been successful in their task. The interventions identified reported 73% positive findings, in the majority of those successful were also focussing on the core deficits of ASD.
Introduction

Although challenging behaviours may not be part of the diagnostic criteria for Autistic Spectrum Disorder (ASD), they are frequently exhibited by children and adults with the condition. Challenging Behaviours such as stereotypies, aggression, property destruction, and self-injury are often shown in order to perform preferred activities and to generate reinforcing consequences, which in turn, serve as a self-stimulatory function. More specifically, in studies which include people with other types of developmental difficulties challenging behaviour appears more often to be maintained by attention (i.e. positive reinforcement) or to escape from demands. Less is known about the function of challenging behaviour in children with ASD.

The study

The purpose of this study was to provide an analysis of the function of challenging behaviours in 10 children with ASD or PDD-NOS. Each child was exposed to five assessment conditions: (a) attention, (b) demand, (c) tangible, (d) alone, and (e) play. If the participants engaged in any of the identified target behaviours during a 10s interval, then an instance of challenging behaviour was scored for that period.

Findings

The results showed that for 8 out of the 10 children, challenging behaviour was maintained by automatic reinforcement, whilst for the other 2 children challenging behaviour was maintained by multiple sources of reinforcement.

Specifically for those 8 children, challenging behaviour occurred at consistently high levels across all of the social conditions (demand, attention, and tangible), control (play) and alone condition. A different pattern was observed for the two children who showed the highest level of challenging behaviour in the demand and tangible condition with very little challenging behaviour occurring during the play or alone condition.

Conclusion

The current findings consistently differ from the results of studies on children with other types of developmental disabilities. In contrast with this results of this study are consistent with previous results of functional assessment of challenging behaviour in participants diagnosed with ASD. This suggests that children with ASD are more likely to have non-socially motivated challenging behaviour when compared with other types of developmental disability.