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Language and Emotion

A study investigating interjectional usage by children and adolescents with Autism Spectrum Disorder, Developmental Language Disorder, and a typically developing cohort



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Abstract

Interjections are utterances used to express emotion and they can also be used to convey a speaker's internal mental state. Phatic interjections are used to maintain social communication, which forms part of the triad of impairments in Autism Spectrum Disorder (ASD). Thus far, the study of interjections has been extremely limited in scope. The aim of this preliminary study is to provide an insight into the use of interjections among children and adolescents with ASD, ASD with an accompanying language impairment (ASD-LI), and Developmental Language Disorder (DLD) in comparison to a typically developing (TD) cohort. All participants were asked to generate a story using the picture book *Hug* (Alborough, 2000). Narratives were analysed according to a range of features including the number of propositions, references to frames of mind, and other evaluative devices. Participants also played snakes and ladders, designed to elicit spontaneous language, with the researcher. The number of interjections produced during both tasks was calculated and analysed for type and frequency. While the ASD and TD groups performed on a similar level, the ASD-LI and DLD groups showed notable similarities when they were assessed on their linguistic abilities using the British Picture Vocabulary Scale and the Clinical Evaluation of Language Fundamentals. Groups did not differ in regard to frames of mind references produced during the narrative task or cognitive and emotive interjections during the play session. Furthermore, interjections were produced during character speech by the ASD, ASD-LI and DLD groups. With regard to the number of phatic interjections produced, the ASD and ASD-LI groups did not differ from the TD cohort. The use of interjections by all groups was evident during both the narrative task and play method, with the latter eliciting a broader range. These findings provide a deeper insight into the role of interjections in language and emotion.

Dedication

This book is dedicated to my parents, Angela and Stephen, who have supported me tirelessly throughout my entire life.

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List of Abbreviations

ADOS-G – Autism Diagnostic Observation Schedule – Generic

ARC – Additionally Resourced Centre

AS – Asperger’s Syndrome

ASD – Autism Spectrum Disorder

ASD-LI – Autism Spectrum Disorder with Language Impairment

BNC – British National Corpus

BPVS - British Picture Vocabulary Scale

BPVS-II - British Picture Vocabulary Scale – Second Edition

BPVS-III - British Picture Vocabulary Scale – Third Edition

CELF – Clinical Evaluation of Language Fundamentals

CELF-5 - Clinical Evaluation of Language Fundamentals – Fifth UK Edition

CHILDES – Child Language Data Exchange System

CNTNAP2 – Contactin Associated Protein 2

DLD – Developmental Language Disorder

DSM-5 – Diagnostic and Statistical Manual of Mental Health Disorders (2013)

ELI – Expressive Language Index

fMRI – Functional Magnetic Resonance Imaging

FOXP2 – Forkhead Box Protein P2

ICD-10 – International Classification of Diseases – Tenth Edition (World Health Organization, 2016)

ICD-11 – International Classification of Diseases – Eleventh Edition (World Health Organization, 2018)

LARSP - Language Assessment, Remediation and Screening Procedure

LCI – Language Content Index

MRI – Magnetic Resonance Imaging

RLI – Receptive Language Index

SENTASS – Special Educational Needs Teaching and Support Service

SLI – Specific Language Impairment

TD – Typical Development

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Chapter 1. Introduction

Autism Spectrum Disorder and Developmental Language Disorder are two distinct neurodevelopmental disorders whereby the onset of symptoms is present during the initial stages of a person's life (American Psychiatric Association, 2013). In England, the estimated prevalence of Autism Spectrum Disorder (ASD) is 1.1 per cent (Brugha *et al.*, 2012, p. 28). Like ASD, Developmental Language Disorder (DLD) is a common neurodevelopmental disorder. With an estimated prevalence of 7.58 per cent, approximately two out of thirty children in a classroom will have a clinically significant language disorder whereby the cause remains unknown (Norbury *et al.* 2016, p. 1253). Despite being almost seven times more common than ASD, Developmental Language Disorder is under-studied (McGregor, 2020).

1.1 Description and Diagnostic Criteria for Autism Spectrum Disorder

There are a triad of impairments that form the criteria for a diagnosis of Autism Spectrum Disorder (ASD) including persistent deficits in social communication, social interaction, and restricted, repetitive patterns of behaviour (American Psychiatric Association, 2013). The Diagnostic and Statistical Manual of Mental Health Disorders – Fifth Edition (DSM-5, American Psychiatric Association, 2016) is used by clinicians and psychiatrists and, according to the updated version, an individual must present with all of the following communicative deficits to receive a diagnosis for ASD: social and emotional exchanges, non-verbal methods of communication, and deficits in the ability to develop, maintain, and understand relationships. Individuals with ASD tend to show less interest in engaging with others and initiating interactions. Although some individuals with ASD are able to deliver an extensive monologue about a subject that interests them, difficulties lay in turn-taking and being able to hold a conversation about the same topic between two or more people. Non-verbal behaviours are also a difficulty for individuals with ASD as they may avoid making eye contact, struggle to decode facial expressions, and they may avoid using gestures.

The level of severity in ASD is wide-ranging as each person's profile is individualistic, differing from another person diagnosed with the same pervasive neurodevelopmental disorder (Kjelgaard and Tager Flusberg, 2001; Lord *et al.*, 2018). According to the DSM-5 (American Psychiatric Association, 2013), severity levels for ASD can be divided into three categories according to social communication and restricted, repetitive behaviours. The first level iden-

tifies the individual as requiring support; the second level requires substantial support, and the third level requires very substantial support. There are several factors which may influence this including a person's chronological age, their intellectual functioning, and language abilities (American Psychiatric Association, 2013). In the DSM-5 (American Psychiatric Association, 2013), Autistic Disorder, Childhood Disintegrative Disorder, Pervasive Developmental Disorder – Not Otherwise Specified, and Asperger Syndrome have been merged into one umbrella term, Autism Spectrum Disorder, to provide a more accurate diagnosis. Prior to this, the four disorders were treated as separate diagnoses. Asperger Syndrome, for example, was diagnosed if an individual had an IQ of 70 or above and no language delay was reported during childhood. Overall, there is a tendency for researchers to recruit individuals with ASD whose language abilities are classed as being within the normal range. Considering that at least half of all children with ASD have intellectual disabilities, a large proportion of the ASD population is omitted from research (Mody and Belliveau, 2013, p. 158).

1.2 Description and Diagnostic Criteria for Language Disorder

There are different modes of language including the spoken, written, and signed form. Also categorised as a communication disorder in the DSM-5 (American Psychiatric Association, 2013), the diagnostic criteria for Language Disorder includes persistent difficulties in the acquisition and use of language. This is a result of comprehension and/or production deficits including reduced vocabulary, limited sentence structures, and impairments in discourse (American Psychiatric Association, 2013). Structural language includes grammar and phonology; these aspects are limited in children with a language disorder. Thus, poor sentence repetition and the repetition of non-words are a clinical marker of the disorder (Tomblin, 2011).

Language Disorder is heterogeneous as each person has their own idiolect and severity differs among individuals (Tager-Flusberg, 2015, p. 1045). Standardised language assessments are often administered to individuals susceptible of having a Language Disorder. Diagnostic criteria for a language impairment involve language achievement levels below cut-off values of 1.0 to 1.5 standard deviations below age expectations. If a person's performance during these tests reaches two standard deviations below the mean, the results are indicative of a severe language disorder (Kjelgaard and Tager-Flusberg, 2001). A moderate language disorder is diagnosed if assessment results reach 1.5 standard deviations

below the mean. There is variation in which standard deviation score is used within previous research studies. It is therefore worth bearing in mind the severity of language disorder among participants when collating results from previous studies and using the findings in conjunction with one-another.

Until recently, the term Specific Language Impairment (SLI) was widely used to refer to children whose language abilities are significantly below age expectations when compared to their typically developing peers (Bishop *et al.*, 2017). The DSM-5 (American Psychiatric Association, 2013), however, excludes the term Specific Language Impairment whereas Language Disorder is used to refer to the condition instead. To clarify, Language Disorder and language impairment are terms that can be used interchangeably to refer to an individual presenting with comprehension and/or production deficits. Within the past few years, interest has been generated addressing the suitability of the term SLI and its appropriateness for use. An alternative proposal to SLI was suggested following a review meeting consisting of speech and language therapists, psychologists, paediatricians, psychiatrists, specialist teachers, and charity representatives. One outcome of the meeting proposed distinguishing between Language Disorder associated with a biomedical condition and Developmental Language Disorder (DLD), whereby an individual has language difficulties which are not associated with a known biomedical condition (Bishop *et al.*, 2017). It is important to make the distinction between the two as the term Language Disorder, used in the DSM-5 (American Psychiatric Association, 2013), encompasses both Developmental Language Disorder and Language Disorder associated with a biomedical condition. This is outlined in Table 1. In England, the prevalence of Language Impairment associated with existing medical diagnoses and/or intellectual disorder is 2.34 per cent whereas 7.58 per cent of the population is estimated to have a clinically significant language disorder whereby the cause is unknown (Norbury *et al.*, 2016, p. 1253). The latter is referred to as Developmental Language Disorder and, from this point forward, the term will be used where appropriate. Also, the term Specific Language Impairment will be used throughout this book in reference to previous research studies whereby this was the name used at the time of publication.