

## The association between autism spectrum disorder (ASD) and self-injurious behaviours (SIB)

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### Executive summary

Self injurious behaviours (SIB) is an area of concern in individuals on the autism spectrum disorder (ASD) and related disabilities. Those behaviours include head banging, skin picking, self-biting and eye pressing, to name a few. As defined by Minshawi and colleagues (Minshawi et.al, 2014), SIB are topographical responses which not only interfere with learning and everyday social interactions but they also pose a great danger to an individual's mental and physical well-being. This case study presents a non-vocal boy, aged 8, whose self injurious behaviours are closely related to gastrointestinal difficulties.

### Introduction

The pupil in question is a very active boy who was diagnosed with autism spectrum disorder (ASD) at the age of 3. He currently attends Year 4 class, Key Stage 2, at Park House School, where he receives 1:1 teaching based on Applied Behaviour Analysis (ABA) and Verbal Behaviour (VB). The boy enjoys bouncing on a trampoline, being pushed on a spiny chair and looking at books. His favourite activities are organised around sensory play. The learner is learning to communicate his needs and desires using Proloquo2go. Currently a point prompt teaching procedure is implemented to evoke appropriate mands (requests). Noisy environments are very difficult for him, which has been the most potent barrier when transitioning to the classroom environment. Furthermore, as reported by the parents, pain caused by gastrointestinal issues (difficulty with bowel movement) frequently results in the boy looking anxious and distressed, which, in turn, would often lead to SIB. This, in the long run, could very likely lead to psychological risks. This study focuses on the role of complex medical difficulties in the exacerbation of self-injurious responses.

### Method

Chronic constipation and impaction negatively affects the boy's physical health and learning. As reported by the parents, diagnostic imaging done on his abdomen has revealed that the boy has got a badly impacted bowel. Following multiple visits at the paediatric gastro specialist, strong laxatives were prescribed and immediately implemented. From the behavioural perspective, the following antecedent manipulations have been introduced; staff working with the learner were instructed to pass with him by the toilets and, if applicable, prompt the request for "toilet"; offer a quiet place the pupil can go to and prompt appropriate response to "go" and/or a warm beanie bag/water; reduce difficulty and effort of responses; and implement differential reinforcement procedure. The frequency of episodes involving SIB (biting self, head banging and pinching) emitted by the learner in question were collected daily on three clearly labelled clickers and graphed accordingly at the end of the school day.

### Results

The analysis of the SIB data allowed to compare the number of occurrences of self-injurious topographical responses that the learner engaged in before (Autumn period) and after (Spring period) the administration of medications. Over 50 school days in Autumn term 2019, the pupil in question engaged, on average, in 11 instances of self-biting, 31 episodes of head banging and 7 instances of self-pinching a day. That is presented in Figure 1.

Over 37 school days in Spring Term 2020, the learner engaged, on average, in 4 instances of self-biting, 13 episodes of head banging and 3 instances of self-pinching a day (Figure 2).

Even though the data during the first and the last week of the Spring term is variable, it can be determined that with the administration of the medication immediate change in frequency of the daily instances of SIB was observed. Namely the number of the episodes of SIB decreased with treatment of the pupil's medical conditions. Since the medication had been administered, there were periods where the pupil did not engage in any form of SIB 3 to 5 days in a row. It has also been observed that the pupil in question was more alert, showed increased tolerance to demands, and his concentration span was longer. It can be, thus, hypothesized that the experiences stomach pain and discomfort were, in many occasions, antecedents to SIB.

## Discussion

More data collection is required in order to determine the long term effects of the medication and their association with self-injurious behaviours displayed by the pupil in question. The analysis of the SIB data collected on the pupil in question has, however, allowed to determine that there is a clear correlation between underlying medical conditions and self-injurious responses one may engage in. Therefore, medical conditions that cause discomfort and pain ought to be considered in determining the etiology of SIB.

## References

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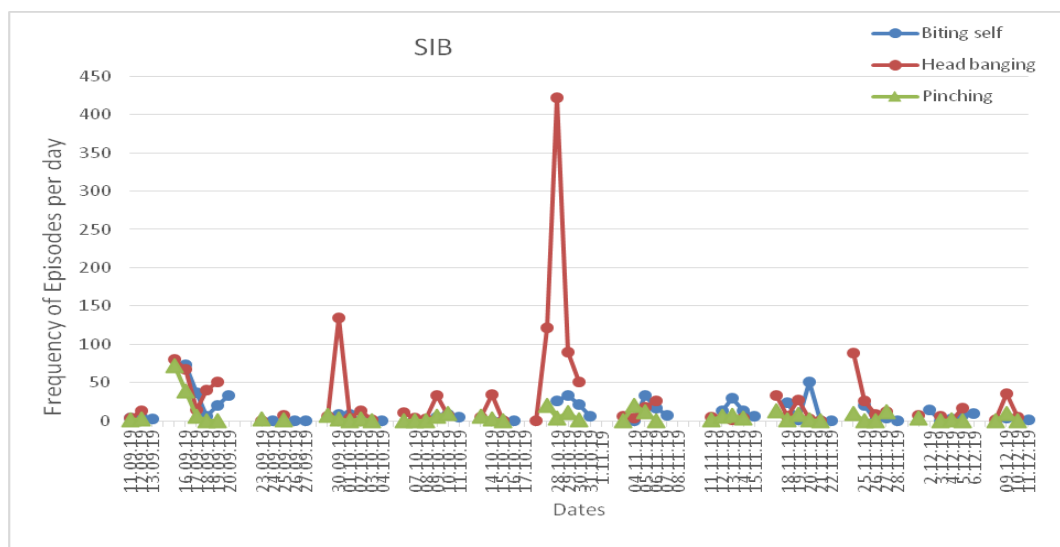


Figure 1

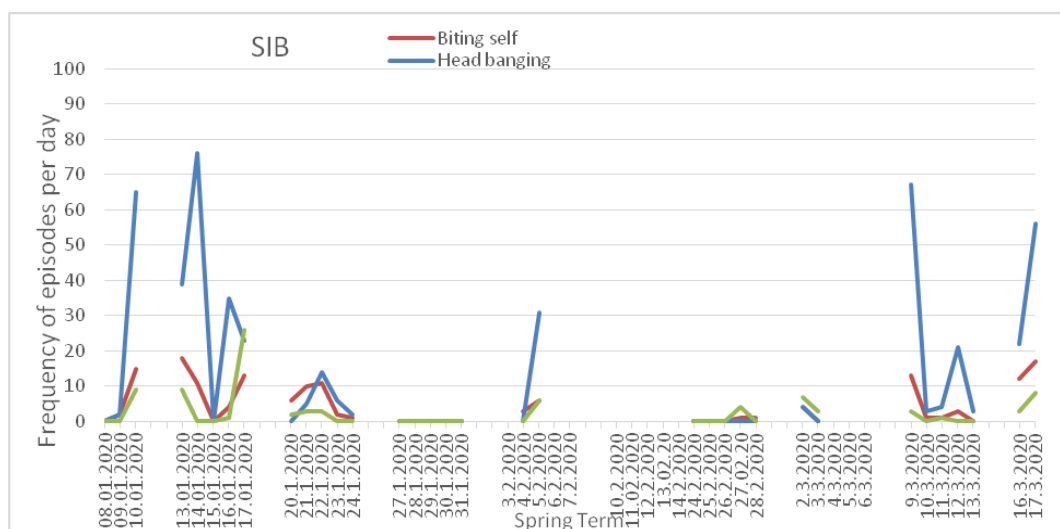


Figure 2