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# LIFESPAN CHANGES IN AUTISM SPECTRUM DISORDER CHARACTERISTICS IN SEVEN GENETIC SYNDROMES: AN 8 YEAR FOLLOW UP

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**Background:** Currently there is a scarcity of lifespan research relating to rare genetic syndromes. Whilst differential behavioural profiles have been identified for autism spectrum disorder (ASD) characteristics within some of these groups, these profiles have yet to be examined in a comparative longitudinal study. This study aims to describe the changing behavioural phenotype of seven rare genetic syndromes with regard to repetitive behaviour and characteristics of ASD over an eight year period. **Methods:** Parents of individuals with Angleman (AS; N=47), Prader-Willi (PWS; N=61), Cornelia de Lange (CdLS; N=51), Cri du Chat (CdC; N=30), Lowe (LS; N=26), Smith Magenis (SMS; N=20), and Fragile X syndromes (FXS; N=101), completed the Social Communication Questionnaire (SCQ) and the Repetitive Behaviour Questionnaire (RBQ) on two occasions separated by eight years. We compared children and adults within each syndrome group and reviewed the developmental trajectories of the seven syndromes using reliable change index scores. **Results:** Our results indicate patterns of change that are specific to each syndrome group. The FXS group were more likely to show increased impairment on the social communication subscale of the SCQ ($p<.05$). The LS group showed decreases in repetitive behaviour overall ($p<.05$) but increases in repetitive use of language ($p<.05$). The PWS group showed increases in ASD characteristics ($p<.01$) but not repetitive behaviour ($p>.05$). The CdC group showed increased repetitive behaviour ($p<.01$) and ASD characteristics ($p<.05$). The AS group showed decreased ASD characteristics ($p<.05$) and the SMS group showed an increase in compulsive behaviour ($p<.05$) but a decrease in impairment on the sociability subscale of the SCQ ($p<.05$). Although age related differences were found at a syndrome group level, they did not contribute to these differences. **Conclusion:** Behavioural phenotypes are not stable and a developmental perspective should be taken when considering diagnosis and prognosis.
**Keywords:** 'behavioural phenotype' 'lifespan changes' 'genetic syndromes' 'autism spectrum disorder characteristics' 'repetitive behaviour'.