

Developmental Disabilities

Dev01

A Hybrid of Functional Communication Training and Sensory Integration in Managing Self-injurious Behaviour: A Single Case Study for Adult With Autism Spectrum Disorder

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Background: People with developmental disabilities are particularly at risk for developing self-injurious behaviour (SIB). Functional communication training (FCT) views the challenging behaviours possess its own meaning and is a way of communication. The purpose of FCT is to teach an individual an appropriate alternative response to obtain reinforcement and to replace behaviour. It is frequently used for reducing problem behaviour exhibited by individuals with developmental disability. **Methods:** The case study described the application of FCT to reduce the frequency of SIB on an adult diagnosed with moderate mental retardation and autism spectrum disorder (ASD). The client's SIB caused him to sustain a wound at forehead and did not heal up even though with constant wound care. The baseline frequency of SIB across 5 days was collected. **Results:** A functional analysis with sensory integration assessment has been done, the client's need on tactile stimulation was found and speculated that the SIB was his way to "communicate" about his sensation need. The client was then trained to express his sensation need with scratching gesture instead of doing SIB. At the same time, a special designed tactile stimulation vest was fabricated to satisfy his tactile need, the vest was only put on the client if he made the scratching gesture correctly. The client gradually learned the relationship between gesture and sensation satisfaction. **Conclusion:** The programme successfully reduced the frequency of SIB to nearly zero in the post training evaluation and the wound at forehead healed up eventually.

Dev02

Development and Validation of a Fine Motor Assessment Tool for Young Children in a Chinese Population

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Background: Most of the fine motor assessment tools used in Hong Kong are designed in Western countries, there is a need to develop a standardized fine motor test which is relevant to the culture and daily living tasks of local (Chinese) population. This study aimed to (a) develop a fine motor assessment tool (the Hong Kong Preschool Fine Motor Developmental Assessment [HK-PFMDA]) for young children in a Chinese population; and (b) examine its psychometric properties. **Methods:** The HK-PFMDA was written by a group of occupational therapists experienced in paediatrics in Hong Kong. Its content validity was reviewed by a panel of 21 experts. Rasch analysis was used to examine the test construct. Intra-rater and inter-rater reliability, convergent validity and criterion-related validity were examined. Participants included 783 typically developing children and 70 children with developmental disabilities. **Results:** Rasch analysis suggested that the 87 items of the HK-PFMDA had acceptable model fit, and the HK-PFMDA has a unidimensional factor structure (91.6% variance explained by model). The HK-PFMDA demonstrated excellent intra-rater reliability (ICC = .99), inter-rater reliability (ICC = .99) and acceptable to very good internal consistency (α ranges from .83 to .92). In the study of validity, the HK-PFMDA had significant positive correlations with age and the convergent measures of the Peabody Developmental Motor Scales (PDMS-2). **Conclusion:** A set of normative data for local children aged 0–6 was established. The HK-PFMDA has excellent psychometric properties and is suitable for clinical application by occupational therapists for assessment of fine motor development of young children.

Dev03

The Effect of Sound-based Intervention on Adults With Severe Graded Intellectual Disability

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Background: To investigate the effectiveness of a sound-based intervention by combining therapeutic listening (TL) and sensory diet on adults with severe graded intellectual disability (ID) in sensory processing and emotional expressive behaviour. **Methods:** Ten participants (mean age: 33; severe graded ID) with sensory processing disorder and emotional disturbance was recruited. The adult sensory profile (ASP), the aberrant behaviour checklist (ABC), the INTERACT, the measure of the needs for sensory processing or emotional management (SPEM) using the Goal Attainment Scale and the measure of frequency of occurrence and degree of the emotional expressive behaviour (EEB) were administered before and after the intervention. Each participant received a 12-week TL programme in conjunction with sensory diet. In the TL programme, participants listened specified CDs for 30 minutes each session, twice a day. In the sensory diet, activities promoting the three fundamental sensory systems, tactile, proprioception and vestibular, were included. **Results:** There was no significant difference in the total score of the ASP, ABC and INTERACT. A move towards the normal range was noted in the ASP. Borderline significance was found in the "behaviours to environments" subscale in the INTERACT. In the SPEM, improvement in sensory processing and enhancement in emotions were found. The frequency of occurrence and degree of temper tantrum and self-injurious behaviour in the EEB improved significantly after interventions. **Conclusion:** The sound-based intervention as one type of sensory integration therapy has a positive effects on emotional behaviour for adults with severe graded intellectual disability.

Dev04

Use of Social Stories by a Parent to Improve Social Performance of an Adolescent With Autism Spectrum Disorder

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Background: Social impairment is one of the major identifying characteristics of autism spectrum disorder (ASD). Effective intervention to enhance the social functioning of this population is of occupational therapists' great concern. Recently, much enthusiasm has surrounded the use of social stories (SS). By reading SS, individuals with ASD can gain mental rehearsal and reasoning on how to cope with certain social situations. SS is usually written and implemented by professionals in both clinical and educational settings. Little literature has documented the feasibility of training parents to write and implement SS for their children. **Methods:** The mother of an adolescent with ASD was invited to write and implement SS for her child. Psychoeducation on SS writing techniques, coaching on the writing process and guidance on the implementation procedures were provided. The Canadian Occupational Performance Measure (COPM) and Goal Attainment Scale (GAS) were used to evaluate the progress of the adolescent. After treatment, an interview was conducted with the mother to explore her experiences in the process. **Results:** Regarding treatment effectiveness, improvement was found for COPM and GAS. Also, improved awareness and comprehension of social cues, increased use of emotion vocabularies to describe feelings and appropriate response to certain social situations were reported in the parent interview. For the experiences in the process, the mother found writing SS no easy task but feasible and worthwhile. However, sufficient guidance and encouragement by therapist were necessary. **Conclusion:** The results provide guidance to therapists on what should be noted in parent training to increase the successful rate of SS writing and implementation. Consequently, parents can be empowered to carry out such lifelong training skills for their children with ASD from hospital setting to home setting.