

# KARAVALAMBAN

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**NATIONAL INSTITUTE FOR THE EMPOWERMENT OF PERSONS WITH INTELLECTUAL DISABILITIES (DIVYANGJAN)**



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Department of Library & Information Services



### **National Institute for the Empowerment of Persons with Intellectual Disabilities (Divyangjan)**

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## **1.0 Abstracts of Current Articles**

### **1.1 Psychology**

#### **1.1.1 SHANYAN LIN, et al.**

Closeness in Student–Teacher Relationships and Students’ Psychological Well-Being: The Mediating Role of Hope

**JOURNAL OF EMOTIONAL BEHAVIORAL DISORDERS, VOL. 30(1), MARCH 2022, 44-53p.**

A close student–teacher relationship is a protective factor for students’ psychological well-being, and it is associated with students’ internalizing and externalizing symptoms, but the mechanism underlying this association is unclear. To address this issue, this study investigated the role of children’s hope in the relationship between teachers’ perceived closeness in the student–teacher relationship and children’s internalizing and externalizing symptoms. Participants consisted of 562 Italian students ages 4 to 9 years and 48 Italian teachers ages 26 to 60 years. Results indicated that the children’s hope played the mediating role between closeness and children’s internalizing and externalizing symptoms. Findings, limitations, and suggestions for future research were discussed.

#### **1.1.2 M. JAN TACKETT, et al.**

Understanding the rehabilitation psychology specialty career pathway

**REHABILITATION PSYCHOLOGY, VOL. 67(1), FEBRUARY 2022, 1-8p.**

**Objective:** Little is known about how psychologists choose their specialty practice area, and rehabilitation psychology is no exception. Specialization and specialty certification in professional psychology have been controversial topics impacting the field during the training sequence and across the span of professional careers (Drum & Blom, 2001; Robiner & Fossum, 2017). The American Board of Rehabilitation Psychology (ABRP) has been providing specialty certification since 1995 and rehabilitation psychology was recognized as a unique specialty in 2015 by the APA’s Council for the Recognition of Specialties and Proficiencies in Professional Psychology (CRSPPP). There are limited established training programs and minimal information about the specialty in undergraduate course materials. The current survey is intended to provide information about how people are introduced to the field of rehabilitation psychology, specialty identification, and to identify opportunities for improvement.

**Method:** A survey of members of APA Division 22 and ABRP specialists was conducted to collect information about their exposure to and involvement in rehabilitation psychology.

**Results:** Results from 174 respondents suggest that personal relationships are the current key means of recruitment and confirms that rehabilitation psychology has limited presence in undergraduate training. Most professionals come to identify with rehabilitation psychology after training in clinical neuropsychology and health psychology.

**Conclusions:** These preliminary results suggest that the current generalist training sequence does not provide sufficient exposure to, or preparation for the field of rehabilitation psychology. Recruitment opportunities should emphasize student leadership network activities and the identification of early and midcareer practitioners unaware of the rehabilitation specialty.

### 1.1.3 MERCEDES A. ZAPATA

Group identity in blindness groups predicts life satisfaction and lower anxiety and depression  
**REHABILITATION PSYCHOLOGY, VOL. 67(1), FEBRUARY 2022, 42-52p.**

**Objective:** Group disability identity (GDI) refers to feelings of connection to the disability community. Researchers have proposed that disability identity protects against disability-related stressors. However, few empirical studies have examined this hypothesis, and psychological research is needed that examines the role of GDI in mental health and related outcomes.

**Method:** This cross-sectional study examined the association between 2 GDI attitudes (disability integration and disability isolation) and 3 mental health-related indicators (life satisfaction, anxiety, and depression) in a sample of 187 U.S. adult members of visual impairment or blindness (VI) community groups.

**Results:** Findings from hierarchical linear regression indicated that positive GDI attitudes predicted higher life satisfaction ( $\beta = .25$ ,  $p < .001$  for integration;  $\beta = -.45$ ,  $p < .001$  for isolation) and that higher disability isolation predicted higher anxiety ( $\beta = .26$ ,  $p < .001$ ) and depression ( $\beta = .40$ ,  $p < .001$ ), after controlling for demographic and impairment-related factors. Younger age was also a significant predictor of anxiety and depression in both GDI models, and female gender ( $\beta = -.21$ ,  $p < .001$ ) was a significant predictor of anxiety in the disability isolation model.

**Discussion:** The present study found that positive GDI attitudes predicted positive mental health-related indicators in a sample of U.S. adult members of VI community groups, controlling for other factors. Results of the present study further indicated that male participants reported lower anxiety and depression.

**Conclusions:** Given present findings, rehabilitation practitioners may consider supporting clients' mental health and related outcomes by facilitating their exploration of disability identity attitudes (see Forber-Pratt et al., 2019), including feelings of connection to the disability community.

### 1.1.4 ANTHONY J. LONGORIA, et al.

Effect of multimorbidity and psychosocial factors on posttraumatic stress symptoms among post-9/11 veterans

**REHABILITATION PSYCHOLOGY, VOL. 67(1), FEBRUARY 2022, 69-78p.**

**Objectives:** Examine the association of multimorbidity and psychosocial functioning with posttraumatic stress disorder (PTSD) symptom severity reported among post-9/11 veterans.

**Method:** This was a secondary analysis of survey data collected from a national sample of post-9/11 veterans with at least 3 years of Department of Veterans Affairs care, stratified by comorbidity trajectory and sex ( $N = 1,989$ ). Comorbidity trajectories were derived by latent class analysis to develop probabilistic combinations of physical and mental health conditions in a previous effort (Pugh et al., 2016). In this study, linear models analyzed symptom severity reported on the PTSD Checklist for the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition by psychosocial factors (i.e., resilience, self-efficacy, and postdeployment social support) while controlling for sociodemographic characteristics and deployment experiences.

**Results:** Veterans in the mental health, pain, and polytrauma clinical triad comorbidity trajectories reported more severe PTSD symptoms than the healthy comorbidity trajectory ( $p < .01$ ). All psychosocial factors were significantly associated with PTSD symptom severity, accounting for nearly 43% of variability in follow-up analyses. Confidence in self-efficacy demonstrated the strongest association among them ( $p < .01$ ).

**Conclusion:** Veterans experiencing multimorbidity, particularly mental health distress, reported greater PTSD symptom severity after controlling for psychosocial factors, sociodemographics, and deployment experiences. The salience of psychosocial factors in reported PTSD symptom severity underscores resilience, self-efficacy and social support as potential facilitators of functional reintegration following military service. Our analyses underscore the need to address the systemic barriers in health care access and delivery for minority patient populations in future investigations.

### **1.1.5 GUILLAUME LAMONTAGNE, et al.**

Anxiety symptoms and disorders in the first year after sustaining mild traumatic brain injury  
**REHABILITATION PSYCHOLOGY, VOL. 67(1), FEBRUARY 2022, 90-99p.**

**Purpose/Objective:** The goals of the present study were (a) to document the prevalence of anxiety-related disorders and anxiety symptoms at 4, 8, and 12 months postinjury in individuals with mild traumatic brain injury (mTBI) while considering preinjury history of anxiety disorders and (b) to verify whether the presence of anxiety in the first months after mTBI was associated with more symptoms present 1 year after the injury.

**Research Method/Design:** One hundred and twenty participants hospitalized after an accident and having sustained mTBI were assessed at 4, 8, and 12 months postaccident with the Mini-International Neuropsychiatric Interview, the Hospital Anxiety and Depression Scale, and questionnaires assessing fatigue, irritability, perceived stress, cognitive difficulties, depression, insomnia, and pain.

**Results:** At 4 months, 23.8% of participants presented with at least one anxiety-related disorder compared with 15.2% at 8 months and 11.2% at 12 months. Overall, 32.5% presented with at least one anxiety disorder over the first 12 months post-mTBI. Participants with a history of anxiety (20.5%) were significantly more anxious after their accident. Individuals who were anxious 4 months after the accident presented with more symptoms in different areas 12 months postinjury compared with nonanxious individuals.

**Conclusions/Implications:** The present results highlight that anxiety should be evaluated and managed carefully as it appears to be a key factor in the persistence of other mTBI-related symptoms.

### **1.1.6 CAROLINE ALTARAS, et al.**

A closer look at the influence of mood and disability on illness intrusiveness in multiple sclerosis.

**REHABILITATION PSYCHOLOGY, VOL. 67(1), FEBRUARY 2022, 100-109p.**

**Purpose:** Multiple sclerosis (MS) patients often report high levels of illness intrusiveness. The direct and indirect effects of disability and psychological symptoms on illness intrusiveness remain largely unknown, despite their pervasiveness. The present study aimed to examine how depression and anxiety can serve as mechanisms through which disability may impact illness intrusiveness in 3 life domains—instrumental activities, intimacy, and relationships and personal development.

**Method:** Participants (N = 72) were adults (Mage = 47.86, SD = 11.79), predominantly female (73.6%) and diagnosed relapse-remitting MS (81.9%). The data was used from an archival neuropsychological database. Data on self-report measures were analyzed to examine the relationship between disability and illness intrusiveness, with depression and anxiety as mediators. Mediation models were run for total illness intrusiveness and the subscales.

**Results:** Depression and anxiety were significant mediators through which disability may impact overall illness intrusiveness. When examining life domains, depression was a significant mediator in all domains. Anxiety was only a significant mediator between disability and relationships/personal development.

**Conclusions:** Results suggest that greater disability both directly and indirectly interferes with illness intrusiveness via depression and anxiety. However, life domains are differentially impacted. Thus, this study helps to guide interventions on the best symptoms to target to improve illness intrusiveness and overall quality of life.

#### 1.1.7 E. COLLIS, et al.

Autistic adults' experience of restricted repetitive behaviours

**RESEARCH IN AUTISM SPECTRUM DISORDERS, VOL. 90, FEBRUARY 2022, 1-13p.**

**Background:** Restricted and Repetitive Behaviours (RRB) are a core characteristic of autism, though little is known about autistic people's lived experience of these phenomena. Research has defined RRB in terms of: 1) a distinction between higher-order and lower-order RRB; as well as 2) a perceived lack of function and 3) a perceived lack of voluntary control.

**Method:** Twelve autistic adults without intellectual disability were interviewed to elucidate an understanding of these three issues from their lived experience.

**Results:** Thematic analysis identified four key themes regarding RRB: Self-regulation; positive impacts; negative impacts and suppression. The distinction between higher-order and lower-order RRB was not reflected in the adults' lived experience. In addition to having both positive and negative impacts, the expression of RRB for some behaviours in certain contexts was largely, though not wholly, under voluntary control. Perceived negative evaluations from others can result in strategies to minimise the expression of RRB to observers, although suppressing RRB can be stressful with a cost to the individual.

**Conclusions:** These findings provide insight into the important functions of RRB and both its positive and negative impacts. It indicates that future research should look to help maximise the positive impacts and minimize the negative, and consider the impact suppression of RRB has on mental health and functioning.

#### 1.1.8 MELINDA MADAREVIC, et al.

Parenting behaviours among mothers of pre-schoolers on the autism spectrum: Associations with parenting stress and children's externalising behaviour problems

**RESEARCH IN AUTISM SPECTRUM DISORDERS, VOL. 90, FEBRUARY 2022, 1-12p.**

**Background:** Parents of pre-schoolers diagnosed with Autism Spectrum Disorder (ASD) report increased parenting stress (i.e., stress related to the parent role) and more behaviour problems of the child compared with parents of non-autistic pre-schoolers. Parenting stress and children's behaviour problems are both associated with parenting behaviours, but have not yet been investigated together.

**Method:** 42 mothers of autistic and non-autistic pre-schoolers were observed during mother-child interaction and they reported on parenting behaviours, parenting stress, and children's externalising behaviour problems. Spearman correlations between all variables were calculated for the ASD group and the non-ASD group separately, and Linear Mixed Models were built to investigate whether parenting stress and externalising behaviour problems were similarly associated to parenting behaviours in both groups.



**Results:** Mothers in the ASD group reported more parenting stress and more externalising behaviour problems than mothers in the non-ASD group. In the ASD group only, parenting stress was related to externalising behaviour problems but not to the level of autism characteristics. In both groups, more externalising behaviour problems were associated with more observed negative parenting behaviours (i.e., criticising and ignoring the child), and more parenting stress was associated with less reported autonomy support.

**Conclusions:** Our findings indicate that in the case of possibly problematic parenting behaviours, such as negativity and lack of autonomy support, it is important to investigate associated factors like parenting stress and children's behaviour problems. An individualised strengths and needs assessment could then offer a tailored intervention to families with an autistic pre-schooler.

#### **1.1.9 JOSEPH A. HIMLE, et al.**

Digital Mental Health Interventions for Depression

**COGNITIVE AND BEHAVIORAL PRACTICE, VOL. 29(1), FEBRUARY 2022, 50-59p.**

This paper provides an overview of the of digital mental health (DMHI) interventions for depression. The paper begins with a description of the clinical context and services needs for persons experiencing depressed mood. It is well-known that there is a large gap between the availability of evidence-supported psychotherapy for depression and the large number of people who would likely benefit from it. DHMIs based on a cognitive-behavioral (CBT) model have shown substantial promise as a method to deliver tested-effective treatment to large numbers of people experiencing depression. The article continues with a review of clinical research evaluating DMHIs for depression with a special emphasis on CBT. The article also reviews both the strengths and challenges associated with the clinical use of DHMI for depression. Next, the article continues with a description of a newly-developed DHMI for depression that uses an entertaining approach to deliver well-established CBT strategies. Finally, the paper concludes with a discussion of the need for further research and development of DHMIs for persons experiencing depression.

#### **1.1.10 MUNIYA S. KHANNA & MATTHEW CARPER**

Digital Mental Health Interventions for Child and Adolescent Anxiety

**COGNITIVE AND BEHAVIORAL PRACTICE, VOL. 29(1), FEBRUARY 2022, 60-68p.**

Anxiety disorders are the most common mental health conditions in children, with approximately 13% of kids struggling with excessive anxiety. The vast majority do not have access to effective treatments and there continues to be a disjunction between treatments that are empirically supported and those that are available in the community. Digital mental health interventions (DMHI) can increase efficiency, reach, and standardization as well as reduce costs of providing of mental health care. Here we review the extant research on DMHI, including web- or cloud-based programs, mobile applications (apps), virtual reality (VR), and digital assessment methods such as ecological momentary assessment (EMA) for the delivery and/or support of evidence-based care in child anxiety. Preliminary research is promising for these tools to improve access and efficiency of evidence-based practice. However, ethics and practice guidelines are needed and questions remain regarding what level and quality of therapeutic involvement is needed to maximize treatment completion and outcomes in youth and whether DMHIs are contraindicated for certain populations or whether they are similarly

effective with those with comorbid conditions is unclear.

#### **1.1.11 SEAN A. LAUDERDALE, et al.**

Pragmatic Screening of Anxiety, Depression, Suicidal Ideation, and Substance Misuse in Older Adults

**COGNITIVE AND BEHAVIORAL PRACTICE, VOL. 29(1), FEBRUARY 2022, 105-127p.**

Older adults' mental health needs are often unmet across care settings (e.g., primary or residential care) for a variety of reasons, such as mental health stigma and mental health care professionals' lack of awareness of age-related changes in mental disorders. Screening, when coupled with access to evidence-based interventions, is effective at identifying and reducing anxiety, depression, suicidal ideation, and substance misuse in older adults across care settings. Unfortunately, due to lack of training many mental health care professionals may be unsure about what or how to screen, as well as which screening measures are available for use with older adults. Following professional guidelines recommended for older adults, we provide an overview of screening measures for anxiety, depression, suicidal ideation, and substance misuse that are evidence-based and meet pragmatic criteria identified by stakeholder research. Specific pragmatic criteria include screening measures developed with older adults (unless unavailable) as well as brief in length (items  $\leq 30$ ), time for administration ( $\leq 15$  minutes), scoring ( $< 5$  minutes), and interpretation ( $< 5$  minutes). Other pragmatic criteria include screening measures readily available on the internet at no cost and usable across diverse settings (e.g., community, primary care, and/or residential care). For each measure, we also review relevant psychometric properties (e.g., reliability, cut-scores, sensitivity, specificity, and construct validity). Lastly, we discuss strategies to facilitate screening with older adults and direct mental health care providers to internet resources that can be used to learn more about assessment with older adults.

#### **1.1.12 ANN CHORYAN BILBREY, et al.**

Cognitive Behavioral Therapy for Late-Life Depression: Evidence, Issues, and Recommendations

**COGNITIVE AND BEHAVIORAL PRACTICE, VOL. 29(1), FEBRUARY 2022, 128-145p.**

This paper discusses relevant research on structured therapy techniques used in the course of cognitive behavioral therapy (CBT) that are helpful in treating older adults with depressive disorders. These findings are compared and contrasted with clinical observations pertinent to the identification of moderator/mediator and other contextual factors critical to the efficacy of CBT for the treatment of this population. While some of these techniques may be viewed as a specific type of intervention in their own right (e.g., Behavioral Activation and Lifeskills Approach), their underlying theory and specific operations are consistent with the underpinnings of other cognitive and behavioral strategies and may be frequently juxtaposed within a CBT framework, depending on the nature of the problem and the specific available resources. Several common issues identified as being problematic for clinicians new to clinical work with older adults are highlighted, and useful information on how to adapt/modify traditional CBT approaches to augment treatment outcome with older adults is provided. Clinicians who use CBT will be familiar with most components discussed, but one novel augmentation towards the development of an age-appropriate format of CBT, termed Lifeskills Approach, is included. In this approach, clinicians are encouraged to identify and

incorporate evidence of prior successful coping strategies to challenges that occur across the lifespan. This approach values and respects how clients have overcome aversive life experiences to facilitate attentional deployment away from a narrative of failure to one of resilience and self-acceptance, thereby down-regulating emotional distress. An important consideration discussed is how to use behavioral activation effectively, particularly with persons who have mild cognitive impairment (MCI) or are in the early stages of dementia.

#### **1.1.13 ERIN L. CASSIDY-EAGLE, et al.**

Cognitive-Behavioral Therapy for Insomnia in Older Adults

**COGNITIVE AND BEHAVIORAL PRACTICE, VOL. 29(1), FEBRUARY 2022, 146-160p.**

Sleep is disturbed by a range of factors across the lifespan. However, older adults experiencing disruptions in their sleep are often simultaneously contending with a range of comorbid medical and psychiatric conditions that compound the biological changes in sleep that commonly occur with age. Cognitive behavioral therapy for insomnia (CBT-I) is the gold-standard, nonpharmacological intervention for sleep disturbances, and is a cost-effective treatment approach that can occur in either individual or group format. It has also been shown effective in older adults with medical, psychiatric, and cognitive comorbid disorders. This review highlights the success of CBT-I with older adults, as well as studies that illustrate the use of alternative delivery methods and treatment modifications for complex clinical presentations.

#### **1.1.14 K. D. CSUMITTA, et al.**

Updated profiles of everyday executive function in youth with Down syndrome using the BRIEF-2

**JOURNAL OF INTELLECTUAL DISABILITY RESEARCH, VOL. 66(1), JANUARY -FEBRUARY 2022, 68-80p.**

**Background:** Executive function difficulties in youth with Down syndrome (DS) are well recognised using informant-report measures. However, the profile of relative challenges and strengths has not yet been evaluated using the Behavior Rating Inventory of Executive Function, Second Edition (BRIEF-2), which includes a new internal factor structure.

**Method:** Using the BRIEF-2, profiles of everyday parent-reported executive function (EF) were evaluated in youth with DS (n = 34) and compared with age-based and sex-based norms. EF profiles were also compared across raters (parent vs. teacher, n = 20) and relative to mental age-matched typically developing controls (ns = 19 in each group).

**Results:** Although within-group differences were not revealed on indexes, significant differences were found among BRIEF-2 scales. Across raters, teachers reported significantly more difficulties than parents. Compared with mental age-matched typically developing controls, the DS group was rated more poorly on some but not all BRIEF-2 scales.

**Conclusions:** At the scale, but not the index level, the BRIEF-2 identifies a variegated EF profile in children with DS. For several of the scales, significant differences were noted relative to both chronological age expectations (using norms) and mental-age expectations (using a developmentally matched comparison group). At the scale level, the BRIEF-2 continues to be a sensitive tool for identifying executive function difficulties as well as profiles of relative strengths and weaknesses in children with DS.

### 1.1.15 J. CHEVALÈRE, et al.

The influence of emotional contexts on mental flexibility in Prader–Willi syndrome  
**JOURNAL OF INTELLECTUAL DISABILITY RESEARCH, VOL. 66(1), JANUARY  
-FEBRUARY 2022, 133-150p.**

**Background:** The present study investigated the influence of emotional contexts on mental flexibility in adults with Prader–Willi syndrome (PWS) using a voluntary task-switching paradigm that was implemented with emotionally valenced pictures. The study aims were to assess whether adults with PWS have impaired switching abilities, whether the deficit is specific to PWS or linked to intellectual disabilities, and the influence of emotional contexts on performance.

**Method:** The task-switching performance of 30 adults with PWS was compared with that of 30 healthy adults matched on chronological age, and to that of 30 adults with intellectual disabilities but without PWS, matched on intellectual quotient level and chronological age. Indicators of switching performance were switching cost and repetition bias. Emotional contexts were operationalised with positive, neutral and negative task-irrelevant pictures.

**Results:** Adults with PWS showed a large increase in switching costs compared with the two control groups, and this effect did not vary across emotional contexts. More fine-tuned examination revealed subtle performance modulations: negative contexts tended to increase the repetition bias in all three groups while positive contexts slowed down global performance in PWS.

**Conclusions:** The results confirmed previous studies, showing impaired switching abilities in PWS over and beyond the influence of intellectual level, but revealed no robust variations in switching deficits across emotional contexts.

### 1.1.16 E. SANTEGOEDS, et al.

Neurocognitive functioning of children with mild to borderline intellectual disabilities and psychiatric disorders: profile characteristics and predictors of behavioural problems  
**JOURNAL OF INTELLECTUAL DISABILITY RESEARCH, VOL. 66(1), JANUARY  
-FEBRUARY 2022, 162-177p.**

**Background:** The aim of the current study was twofold: first, to uncover a neurocognitive profile of normative and relative strengths and weaknesses that characterises an extremely vulnerable group of children with mild to borderline intellectual disabilities (MBID) and comorbid psychiatric disorders, and second, to investigate the relevance of these neurocognitive functions explaining internalising and externalising symptoms.

**Method:** We recruited 45 children ( $M_{age} = 9.5$ ,  $SD_{age} = 1.7$ ; range 6–13 years) with MBID (Full-Scale IQ 50–85) and at least one psychiatric disorder. Neurocognitive functioning was examined utilising the Wechsler Intelligence Scale for Children – Fifth Edition (WISC-V) indices and the Cognitive Task Application (COTAPP), a comprehensive computerised self-paced task designed in such a manner that ‘g’ (an overall tendency of children with MBID to execute tasks with a slower reaction time and a higher error rate) has been corrected for in the administration of the task (i.e. completely self-paced) and in the operationalisation of outcome measures. Behavioural problems were measured using the CBCL and TRF. One-sample t-tests and binomial tests were carried out to compare performance with normative data. Regression analyses were used to examine the relationship between neurocognitive parameters and mental health.

**Results:** Compared with normative data, very small to very large effect sizes were found, indicating clear heterogeneity amongst neurocognitive domains relevant for children with MBID. Two prominent neurocognitive weaknesses emerged: processing speed –

characterised by slowness and unstableness combined with a high drift rate and delayed processing of the previous trial, particularly under higher cognitive demands – and working memory – in terms of a weaker central executive and ‘slave’ systems to temporarily store information. Both domains were not clearly predictive of internalising or externalising problems.

**Conclusion:** Children with MBID and psychiatric disorders are hampered by a strongly diminished processing speed and working memory capacity, together resulting in an overall limited processing capacity that may underlie the general developmental delays on domains that depend on fast and parallel processing of information (i.e. language, reading, mathematics and more complex forms of social cognition). Neurocognitive vulnerabilities are neither necessary nor sufficient to explain internalising and externalising problems; rather, a mismatch between the support needs and adaptations these children need, arising from their diminished processing capacity, and the inadequacy of the environment to compensate for this vulnerability may be of relevance.

### 1.1.17 S. ROORDING-RAGETLIE, et al.

Working memory training in children with borderline intellectual functioning and neuropsychiatric disorders: a triple-blind randomised controlled trial

**JOURNAL OF INTELLECTUAL DISABILITY RESEARCH, VOL. 66(1), JANUARY -FEBRUARY 2022, 178-194p.**

**Background:** Poor working memory, lower IQ and maladaptive behaviour form a triple disability known to have negative effects on the academic and social development of children with borderline intellectual functioning (BIF;  $70 < IQ < 85$ ) and neuropsychiatric disorders [attention-deficit hyperactivity disorder (ADHD) and/or autism spectrum disorder (ASD)]. Treatment possibilities for these children are scarce and hardly evidence based. This study primarily investigated whether adaptive computerised working memory training (WMT) may lead to significantly more improvement on a non-trained visuospatial WM task compared with a non-adaptive control WMT (placebo) in children with BIF and neuropsychiatric disorders. As secondary outcome measures, we used the scores on several non-trained neuropsychological near-transfer and far-transfer tasks as well as behavioural measures.

**Method:** We conducted a triple-blind placebo-controlled randomised clinical trial in 72 children (aged 10;0–13;11 years, 53 boys, 19 girls) with BIF and comorbid neuropsychiatric disorders (ADHD = 37, ASD = 21, both = 14) that were referred to child and adolescent psychiatry care, between May 2012 and March 2019. Children completed the Dutch version of Cogmed WMT, either the adaptive training version or the non-adaptive placebo version, 25 sessions (30–45 min a day), for 5 weeks. The primary outcome measure was the score on a non-trained visuospatial working memory task. The primary outcome was measured before and directly after 5 weeks of WMT and again 6 months after training.

**Results:** A total of 375 children were screened for eligibility and 72 were randomised. No significantly higher levels of improvement over time were found on our primary outcome measure in the experimental WMT group compared with the placebo control WMT, nor in the secondary (near-transfer and far-transfer tasks) or tertiary (behavioural measures) outcome measures. However, this study did show changes over time for these measurements for both the experimental and placebo conditions.

**Conclusions:** This study was unable to document superior training effects over time of an adaptive WMT in children with BIF and neuropsychiatric disorders, compared with a placebo (non-adaptive) WMT. The objectively documented changes over time in the non-adaptive

WMT arm suggest that these children with persistent impairments in WM may benefit from a structured learning environment that is associated with improvement of neurocognitive functioning and coping strategies. Further research is needed to examine which elements of cognitive training may be useful for which specific patients and to study long-term effects of training.

#### **1.1.18 S. E. K. SCHWORER, et al.**

Evaluating working memory outcome measures for children with Down syndrome  
**JOURNAL OF INTELLECTUAL DISABILITY RESEARCH, VOL. 66(1), JANUARY -FEBRUARY 2022, 195-211p.**

**Background:** There is a critical need for the psychometric evaluation of outcome measures to be used in clinical trials targeting cognition in Down syndrome (DS). This study examines a specific cognitive skill that is of particular importance in DS, working memory, and the psychometric properties of a set of standardised measurements to assess working memory in individuals with DS.

**Methods:** Ninety children and adolescents ages 6 to 18 years old with DS were assessed on a selection of verbal and visuospatial working memory subtests of standardised clinical assessments at two time points to examine feasibility, distributional qualities, test–retest reliability and convergent validity against a priori criteria. Caregivers also completed an adaptive behaviour questionnaire to address working memory subtests' associations with broader developmental functioning.

**Results:** The Stanford Binet-5 Verbal Working Memory, Differential Ability Scales-2 Recognition of Pictures, Stanford Binet-5 Nonverbal Working Memory and Wechsler Intelligence Scale for Children-5 Picture Span measures met the most psychometric criteria overall across the full age and IQ range of the study. Although Differential Ability Scales-2 Recall of Sequential Order and Differential Ability Scales-2 Recall of Digits Backward met the fewest a priori criteria, follow-up analyses suggested greater feasibility in specific age and IQ ranges.

**Conclusions:** Several working memory measures appear to be psychometrically sound and appropriate for use in clinical trials for children with DS, especially when focusing on raw scores. However, floor effects on standard scores and feasibility of some measures were problematic. Guidelines for use of the working memory subtests with this population are provided.

#### **1.1.19 GAIL S. ROSS & JEFFREY M. PERLMAN**

Relationship of withdrawn, anxious/depressed and attention problems to cognitive performance in preterm children at 18 months and 36 months of age

**INFANT BEHAVIOR AND DEVELOPMENT, VOL. 66, FEBRUARY 2022, 1-9p.**

**Objective:** A positive significant association has been found between behavior problems and lower cognition in very low birthweight (VLBW) preterm children at school age, but there is relatively little information about whether such an association exists in toddlers and on the continuity of this association. The aim of this study was to assess if there is a relationship between behavior problems and cognitive performance in VLBW preterm children at 18 months post conception and 3 years old, independent of socioeconomic status and sex.

**Method:** Parents of 124 preterm children completed a behavior rating questionnaire (Child Behavior Checklist 1.5–5) to measure behavior problems characteristic of preterm children (Withdrawn, Anxious/Depressed, and Attention Problems). Children completed the Cognitive

Scale of the Bayley Scales of Infant Development-III at 18 months and the Wechsler Preschool and Primary Scale (III or IV) at 36 months old. Socioeconomic status (SES), sex, and diagnoses of autism spectrum disorder (ASD) and attention-deficit/hyperactivity disorder (ADHD) at 3 years were recorded for each child.

**Results:** Withdrawn problems at 18 months were associated with lower cognitive scores at 18 months and both Withdrawn problems at 18 months and 36 months were associated with lower cognitive scores at 36 months. Increases in Attention Problems scores from 18 to 36 months were associated with decreases in cognitive scores over that period. Lower SES was associated with lower cognitive scores at 36 months and decreases in cognitive scores between 18 and 36 months. Sex was not related to behavior problems or cognition. Diagnoses of ASD and ADHD were significantly associated with increased Withdrawn behavior and Attention Problems, respectively.

**Conclusions:** The early association of Withdrawn behaviors with less favorable cognitive performance at 18 months and 36 months and the relationship between increases in Attention Problems with decreases in cognitive scores between the toddler and preschool period indicate the need for early assessment of and intervention for behavior problems, as well as concurrent cognitive delays, in VLBW preterm children.

#### **1.1.20 CLAIRE ESSEX, et al.**

Understanding the differential impact of children's TV on executive functions: a narrative-processing analysis

**INFANT BEHAVIOR AND DEVELOPMENT, VOL. 66, FEBRUARY 2022, 1-17p.**

Evidence from multiple empirical studies suggests children's Executive Functions are depleted immediately after viewing some types of TV content but not others. Correlational evidence suggests any such effects may be most problematic during the pre-school years. To establish whether "screen-time" is developmentally appropriate at this age we believe a nuanced approach must be taken to the analysis of individual pieces of media and their potential demands on viewer cognition. To this end we apply a cognitive theory of visual narrative processing, the Scene Perception and Event Comprehension Theory (SPECT; Loschky, Larson, Smith, & Magliano, 2020) to the analysis of TV shows previously used to investigate short-term effects of TV viewing. A theoretical formalisation of individual content properties, together with a quantitative content-based analysis of previously used children's content (Lillard & Peterson, 2011; Lillard et al., 2015b) is presented. This analysis found a pattern of greater stimulus saliency, increased situational change and a greater combined presence of cognitively demanding features for videos previously shown to reduce children's EF after viewing. Limitations of this pilot application of SPECT are presented and proposals for future empirical investigations of the psychological mechanisms activated by specific TV viewing content are considered.

#### **1.1.21 NAIARA ÁLVAREZ, et al.**

Maternal mentalization and child emotion regulation: A comparison of different phases of early childhood

**INFANT BEHAVIOR AND DEVELOPMENT, VOL. 66, FEBRUARY 2022, 1-10p.**

Parental reflective functioning refers to the parents' ability to reflect on the internal mental states of their children, which will make them respond more sensitively to their children's need. The relation between parental reflective functioning and child emotion regulation has been considered a key factor in early childhood parenting but further research is needed about

this relationship throughout child's development. The aim of this paper was to analyze this interaction considering the early childhood development stages. Three hundred and eighty one mothers of babies between 0 and 26 months of age participated in the study. The PRFQ and ASQ:SE-2 questionnaires were administered to assess parental reflective functioning and child emotion regulation, respectively. Results showed that maternal RF and child emotion regulation do not follow a linear process according to the childhood development stages, and also that the maternal PM dimension generates a conditional effect in children's emotion regulation. These results highlight the importance of paying attention to specific early childhood developmental stages to understand how maternal reflective functioning influences child's ability to calm and adjust to her/his environment.

#### **1.1.22 L.K. GOSSÉ , et al.**

Concordance between subjective and objective measures of infant sleep varies by age and maternal mood: Implications for studies of sleep and cognitive development

**INFANT BEHAVIOR AND DEVELOPMENT, VOL. 66, FEBRUARY 2022, 1-21p.**

Infant habitual sleep has been proposed as an important moderator of development in domains such as attention, memory or temperament. To test such hypotheses, we need to know how to accurately and consistently assess habitual sleep in infancy. Common assessment methods include easy to deploy but subjective parent-report measures (diary/sleep questionnaire); or more labour-intensive but objective motor movement measures (actigraphy). Understanding the degree to which these methods provide converging insights is important, but cross-method agreement has yet to be investigated longitudinally. Moreover, it is unclear whether concordance systematically varies with infant or maternal characteristics that could represent confounders in observational studies. This longitudinal study (up to 4 study visits/participant) investigated cross-method concordance on one objective (7-day actigraphy) and three commonly used subjective (7-day sleep diary, Brief Infant Sleep Questionnaire, Sleep & Settle Questionnaire) sleep measures in 76 typically developing infants (age: 4–14 months) and assessed the impact of maternal characteristics (stress, age, education) and infant characteristics (age) on cross-method concordance. In addition, associations between objective and subjective sleep measures and a measure of general developmental status (Ages & Stages Questionnaire) were investigated. A range of equivalence analyses (tests of equivalence, correlational analyses, Bland-Altman plots) showed mixed agreement between sleep measures. Most importantly, cross-method agreement was associated with maternal stress levels and infant age. Specifically, agreement between different measures of night waking was better for mothers experiencing higher stress levels and was higher for younger than older infants; the reverse pattern was true for day sleep duration. Interestingly, objective and subjective measures did not yield the same patterns of association with developmental domains, indicating that sleep method choice can influence which associations are found between sleep and cognitive development. However, results converged across day sleep and problem-solving skills, highlighting the importance of studying day sleep in future studies. We discuss implications of sleep method choice for investigating sleep in the context of studying infant development and behaviour.



**UNDER AWARENESS PROJECT ANIMATED FILMS CREATED**

**BY  
NIEPID**



**(Animated Films for creating awareness for creating awareness about Intellectual and Developmental Disabilities )**

## **1.2 Special Education**

### **1.2.23 LAURA RHINEHART, et al.**

Children Who Receive Special Education Services for ADHD: Early Indicators and Evidence of Disproportionate Representation in the Early Childhood Longitudinal Study (ECLS-K: 2011)

**JOURNAL OF EMOTIONAL BEHAVIORAL DISORDERS, VOL. 30(1), MARCH 2022, 3-15p.**

Approximately one in 10 children in the United States is diagnosed with attention-deficit/hyperactivity disorder (ADHD), a disability that can negatively affect academic achievement, yet relatively few children with ADHD are in special education. To better understand factors that determine which students with ADHD are in special education, we analyzed students in the Early Childhood Longitudinal Study, Kindergarten Class of 2010–2011 (ECLS-K: 2011). Using logistic regression, we looked to see which sociodemographic, academic, executive functioning, and behavioral skills, all measured in kindergarten, significantly influenced the odds a student would receive special education services for ADHD in fourth grade (N = 220). Results showed that higher conflict with teachers and lower working memory significantly increased these odds. Furthermore, even when controlling for academic and social skills, students who are girls, Hispanic/Latinx, and/or living in a home where a language other than English is spoken were less likely to receive special education services for ADHD. Findings suggest early identification of students with ADHD and special education needs is possible and that sociodemographic characteristics play a significant role in determining who receives special education services for ADHD.

### **1.2.24 ALLISON F. GILMOUR, et al.**

Teaching Students With Emotional/Behavioral Disorders: Teachers' Burnout Profiles and Classroom Management

**JOURNAL OF EMOTIONAL BEHAVIORAL DISORDERS, VOL. 30(1), MARCH 2022, 16-28p.**

Teachers may have affective responses to teaching students with emotional/behavioral disorders (EBD) that influence their effectiveness. We used latent profile analysis to examine the burnout profiles of 102 K–Grade 6 general education and special education teachers who had students with or at risk for EBD in their classrooms. We then examined if profile membership varied by teacher type (special education vs. general education) and if profile membership was related to teachers' directly observed classroom management skills. Our results suggest that teachers exhibit three burnout profiles: “flourishing,” “buffered,” and “struggling”; that profile membership did not vary by teacher type; and that burnout profiles were related to teachers' classroom management skills. These findings suggest teachers may need differential supports when working with students who have EBD and provide directions for future research regarding the association between teacher affect and classroom instruction.

### **1.2.25 JOHN WILLIAM McKENNA, et al.**

Inclusive Instruction for Students with Emotional Disturbance: An Investigation of Classroom Practice

**JOURNAL OF EMOTIONAL BEHAVIORAL DISORDERS, VOL. 30(1), MARCH 2022, 29-43p.**

A survey was developed to obtain information on practitioner self-reported knowledge, use, and perceived effectiveness of classroom-based practices for the inclusive instruction of students with emotional disturbance (ED). This study reports descriptive results for a sample of general and special education teachers from the northeastern United States who provided inclusive instruction and/or support to at least one student with ED in a general education classroom in the past year. Mann–Whitney and MANOVA tests were employed to determine differences between teacher populations for individual practices and four clusters of practices identified in an exploratory factor analysis (EFA): Behavioral Supports, Differentiation, Classroom Management, and Instructional Practices. Findings suggest that special educators serve an important role in efforts to provide instruction that focuses on inclusion rather than merely integration. Implications for practice, study limitations, and areas for future research are discussed.

**1.2.26 SARA BETH HITT, et al.**

Are Online Resources for Evidence-Based Practices Useful?

**THE JOURNAL OF SPECIAL EDUCATION VOL. 55(4), FEBRUARY 2022, 191-200p.**

Because many websites claim to provide information about evidence-based practices (EBPs), consumers must know the information and practices are based upon quality research. Practitioners may intend to locate trustworthy online sources providing EBPs, but if those sources are not easy to navigate and lack implementation resources (i.e., are accessible), then practitioners may be more likely to access less trustworthy sources for instructional strategies and materials. Therefore, the purpose of this study was to evaluate websites, identified as trust or trust with caution, to determine whether they demonstrate a level of usefulness for practitioners. Thirty websites, classified as trust and trust with caution, were reviewed for usefulness and results indicated 14 (46.7%) websites were found to be useful, nine (30%) websites were categorized as somewhat useful, and seven (23.3%) websites were determined to be not useful. Suggestions for future research and implications for practice are provided.

**1.2.27 DAWN M. DECKER, et al.**

A 30-Year Systematic Review of Professional Ethics and Teacher Preparation

**THE JOURNAL OF SPECIAL EDUCATION VOL. 55(4), FEBRUARY 2022, 201-212p.**

Professional ethics in teacher preparation is an area that has received minimal attention in the special education literature. In this systematic review, 18 journals affiliated with the Council for Exceptional Children (CEC) were examined for their coverage of professional ethics over a 30-year period (1988–2018). Results showed that an average of about two articles were published each year on professional ethics and that the majority of the articles were nonempirical academic papers. Only 14% of the articles referenced the CEC's Code of Ethics and/or Standards for Professional Practice. More than 40% of the articles addressing professional ethics acknowledged ethical issues related to teacher preparation, yet there were no empirical studies conducted with preservice special education teachers. Future directions for research and practice are discussed.

**1.2.28 JI YOUNG KIM & DANIEL M. FIENUP,**

Increasing Access to Online Learning for Students With Disabilities During the COVID-19

Pandemic

**THE JOURNAL OF SPECIAL EDUCATION VOL. 55(4), FEBRUARY 2022, 213-221p.**

During the COVID-19 pandemic, there were alarming reports of children missing out on online special educational activities due to a lack of access to those resources. We evaluated a simple online intervention using a concurrent multiple baseline design for three second-grade students with disabilities who unreliably accessed the remote curriculum. The dependent variable was the number of daily assignments completed. During baseline, the teacher provided students and parents with educational activities via Google Classroom, and the teacher contacted parents when a student missed educational activities. For intervention, the teacher implemented a task analysis that listed five daily assignments. Students earned preferred rewards contingent on completing all activities. Results showed that the intervention was effective in increasing engagement in online learning.

### **1.2.29 KELLY K. BRADY, et al.**

Using a Technology-Based Graphic Organizer to Improve the Planning and Persuasive Paragraph Writing by Adolescents With Disabilities and Writing Difficulties

**THE JOURNAL OF SPECIAL EDUCATION VOL. 55(4), FEBRUARY 2022, 222-233p.**

A multiple-probe design was used to investigate planning and persuasive paragraph writing by three secondary students with disabilities and writing difficulties. The intervention consisted of one-on-one explicit instruction in persuasive writing and the use of a technology-based graphic organizer (TBGO) with embedded strategies and supports. Dependent variables included the number of sentences and overall holistic writing quality. The results were mixed. Two adolescents with the primary diagnosis of learning disabilities improved their writing performance when using the TBGO and remained above baseline levels when the TBGO was removed. One more participant diagnosed with autism demonstrated modest changes in the quantity and quality of his writing. Students reported positive perceptions of the TBGO, indicating a socially valid intervention. Implications, limitations, and directions for future research are discussed.

### **1.2.30 CHUNG EUN LEE & JULIE LOUNDS TAYLOR**

A Review of the Benefits and Barriers to Postsecondary Education for Students With Intellectual and Developmental Disabilities

**THE JOURNAL OF SPECIAL EDUCATION VOL. 55(4), FEBRUARY 2022, 234-245p.**

Postsecondary educational programs (PSEs) are increasingly an option for students with intellectual and developmental disabilities (IDD). This scoping review synthesized research to understand the impacts of these programs for students with IDD and for campus, and barriers to these programs across stages of engagement (exploration, participation, completion). Studies were identified by searching PubMed, PsycINFO, ERIC, and Web of Science databases and reference lists of included articles. Twenty-one studies met inclusion criteria. Multiple benefits were identified for students with IDD and campus. Persistent barriers across all stages of program engagement included lack of funding and lack of collaboration. Barriers specific to stages included lack of knowledge, options, individualized support, integration into campus, and transportation. Implications for research and practice are discussed.

### **1.2.31 JESSE I. FLEMING & BRYAN G. COOK**

Open Access in Special Education: A Review of Journal and Publisher Policies

**REMEDIAL AND SPECIAL EDUCATION, VOL. 43(1), FEBRUARY-2022, 3-14p.**

Open-access (OA) options, including preprints and postprints, provide free access to research, accelerate the dissemination of academic work, are associated with increased impact of scholarly work, and may aid in dissemination of null results. However, OA publishing is not an established practice for many special education researchers, and journal and publishers' policies regarding OA are not always clear. In this article, we systematically reviewed OA policies (i.e., regarding preprints, postprints, OA publishing, article processing charges [APCs], and embargo periods) for 51 special education journals and five publishers of special education journals. Most journals provided few policies, only three journals provided information for each OA feature examined, and many journals and publishers reported substantial APCs and embargo periods over 18 months. We recommend journals and publishers clearly post OA policies and reduce APCs to foster broad and open dissemination of special education research.

### **1.2.32 SO YOON KIM**

College Disability Service Office Staff Members' Autism Attitudes and Knowledge

**REMEDIAL AND SPECIAL EDUCATION, VOL. 43(1), FEBRUARY-2022, 15-26p.**

Disability support office (DSO) staff are responsible for providing appropriate support for an increasing population of undergraduate students with autism. A total of 153 DSO staff members in higher education institutions in the United States completed an online survey on their autism attitudes and knowledge, previous contact with autistic people, and demographic characteristics. Multiple regressions were conducted to investigate which variables uniquely predict their attitudes and knowledge. Quality of contact and education level predicted openness toward autism. Quality and quantity of contact, knowledge, and public versus private status of institutions predicted social distance toward autistic individuals. Finally, quality of contact, school size, and average annual cost predicted their knowledge. The underlying mechanisms between institutional variables and autism attitudes and knowledge need to be explored. Understanding what kinds of institutional supports and context-appropriate training should be provided to promote collaborative relationships between DSO staff and autistic students is a promising avenue for future studies.

### **1.2.33 MARY ROSE SALLESE & KIMBERLY J. VANNEST**

Effects of a Manualized Teacher-Led Coaching Intervention on Paraprofessional Use of Behavior-Specific Praise

**REMEDIAL AND SPECIAL EDUCATION, VOL. 43(1), FEBRUARY-2022, 27-39p.**

Paraprofessionals are an essential part of special education. School districts increasingly rely on paraprofessional support to meet students' needs, but formal professional development opportunities vary. A lack of training in effective instructional strategies is potentially problematic for the efficacy of support staff. A multiple-baseline across participants single-case research design examined the effects of a manualized teacher-to-paraprofessional coaching intervention to increase the rate of behavior-specific praise by paraprofessionals. Participant dyads (paraprofessionals and special education teachers) taught in a rural public elementary school serving third- through fifth-grade students. The collaborative multicomponent training program included self-monitoring, performance feedback, goal setting, modeling, and action planning. Analyses encompassed primary author visual analysis,

masked visual analysis by three independent raters, and nonparametric statistical analysis. The intervention resulted in increased use of behavior-specific praise across all four paraprofessionals and participants indicated good social validity. Discussions include implications for future research and practice.

**1.2.34 DIANE D. BRICKER, et al.**

A Proposed Framework for Enhancing Collaboration in Early Intervention/Early Childhood Special Education

**TOPICS IN EARLY CHILDHOOD SPECIAL EDUCATION, VOL. 41(4), FEBRUARY-2022, 240-252p.**

Collaboration with caregivers and between disciplines and agencies is a recommended practice in the field of early intervention and early childhood special education (EI/ECSE) as well as required by federal legislation for young children with disabilities. Review of relevant literature suggests that collaboration entails a complex set of principles and practices that are essential for teams and programs to employ if they are to ensure effective and sustained change. Despite the recognized complexity of collaboration in EI/ECSE, few systems frameworks have been proposed that organize the essential components of effective collaboration. We offer a framework that defines the core components of collaboration in EI/ECSE. The proposed system further identifies and operationalizes the infrastructure and practices associated with the components and the levels of action at which these practices operate.

**1.2.35 COLLIN SHEPLEY, et al.**

Training Teachers in Inclusive Classrooms to Collect Data on Individualized Child Goals

**TOPICS IN EARLY CHILDHOOD SPECIAL EDUCATION, VOL. 41(4), FEBRUARY-2022, 253-266p.**

Progress-monitoring data collection is an essential skill for teachers serving children for whom the general curriculum is insufficient. As the field of early childhood education moves toward tiered service provision models, the importance of routine data collection is heightened. Therefore, we evaluated the effects of a training package on preschool teachers' implementation of progress-monitoring strategies to collect data on children in need of supports beyond those provided through the general curriculum. This study employed a single-case experimental design in which generalized teacher behavior was collected within the context of the design. In addition, masked reliability data collectors were used throughout the study and an analysis of bias was conducted by a researcher unaffiliated with the study. Social and ecological validity data were collected using a multi-method approach.

**1.2.36 CHRISTAN GRYGAS COOGLE, et al.**

The Impact of Real-Time Feedback and Video Analysis on Early Childhood Teachers' Practice

**TOPICS IN EARLY CHILDHOOD SPECIAL EDUCATION, VOL. 41(4), FEBRUARY-2022, 280-293p.**

We used a multiple-probe single-case research design to examine the effect of a professional development package that included real-time, technology-enhanced, and performance-based feedback and video analysis on three preschool teachers' use of naturalistic instruction targeting children's communication and child responses. We also measured the quality of the

teachers' naturalistic instruction targeting children's communication. The professional development package was effective in enhancing teachers' use of naturalistic instruction targeting children's communication. In addition, children responded and teachers enhanced the quality of naturalistic instruction targeting children's communication. Teachers maintained their use of naturalistic instruction targeting children's communication upon removal of the intervention condition.

### **1.2.37 KARYN ASPDEN, et al.**

Identification and Referral for Early Intervention Services in New Zealand: A Look at Teachers' Perspectives – Past and Present

**TOPICS IN EARLY CHILDHOOD SPECIAL EDUCATION, VOL. 41(4), FEBRUARY-2022, 294-306p.**

Inclusive experiences for all children are foundational to New Zealand early childhood education, yet teacher beliefs and practices related to identification and referral processes may be delaying access to important early intervention support for children with disabilities. To better understand teachers' perspectives, past and present, this article details the findings from two studies conducted 14 years apart. Through comparison of findings from the work of Aspden and Baxter, this article explores teachers' beliefs and experiences related to identification and referral practices. In the original 2003 study, 50 early childhood teachers completed a paper-based postal survey, whereas in the 2017 replication, 78 early childhood teachers completed an online survey. Persistent concerns about teacher engagement with identification and referral processes were evident both past and present, particularly in relation to perceived parental reaction and beliefs about the adequacy of service provisions. Furthermore, the data revealed tensions between embracing a strengths-based approach and the need to identify children's disabilities. The findings provide insight into referral practices in the New Zealand early childhood context and suggest the need for ongoing teacher consultation in relation to policy and practice, the development of more formal referral policies and procedures, as well as enhanced professional support and development that targets teachers' need for knowledge of and connection with specialist agencies.

### **1.2.38 TIFFANY HUNT, et al.**

Navigating the Use of Microcredentials

**JOURNAL OF SPECIAL EDUCATION TECHNOLOGY, VOL. 37 (1), MARCH 2022, 3-10p.**

Given the complex roles of special educators, it is important that they be offered tailored professional development (PD) opportunities. Unfortunately, most PD tends to occur in "sit-and-get" formats, with generalized content that may or may not meet the needs of attendees. Districts are starting to investigate the use of microcredentials (MCs) to innovate PD and harness technology to personalize experiences. MCs are digital PD focused on the mastery of competency-based skills. With a variety of topics, formats, and platforms available, educators would benefit from guidance on how to navigate MCs. In this article, we examine the historical context of PD and the gaps traditional PD may create for educators, particularly special educators. We explore the attributes and personalization of MCs and paint a step-by-step picture of how an interested educator might engage in the MC process, from selecting a topic to earning the MC and reflecting on the experience.

**1.2.39 KINGA BALINT-LANGEL et al.**

Teaching the Calendar Application on a Mobile Device to Young Adults With Intellectual and Developmental Disabilities

**JOURNAL OF SPECIAL EDUCATION TECHNOLOGY, VOL. 37 (1), MARCH 2022, 11-21p.**

Individuals with intellectual and developmental disabilities (IDD) often have difficulties with self-management skills such as scheduling daily tasks for educational, vocational, and leisure purposes. In this study, we used a multiple probe across participant design to evaluate the effects of constant time delay in teaching young adults with IDD the necessary steps to schedule events and set reminders using the Calendar application (app). Three students with IDD in a postsecondary education setting participated in this study and acquired the steps required for programming events and their reminders in the Calendar app. In addition, two participants independently attended the scheduled events without additional reminders from adults. Limitations, future research, and practical implications are discussed.

**1.2.40 SARAH A. NAGRO, et al.**

The Connection Between Teacher Candidate Attitude and Video-Based Self-Evaluation Accuracy

**JOURNAL OF SPECIAL EDUCATION TECHNOLOGY, VOL. 37 (1), MARCH 2022, 22-34p**

A deductive, sequential mixed design was used to better understand the internal aspects of performance-based self-evaluation activities as related to teacher preparation. A modified theory of change informed the investigation of a subset (N = 15) of teacher candidates from a larger study, who all showed significant improvements in their teaching abilities after engaging in video analysis. Teacher candidates' video analysis activities were further analyzed to better understand their self-evaluation accuracy and enthusiasm for engaging in such teacher preparation activities. Results indicated candidates rated their perceived ability significantly higher than their observed instructional ability at all four timepoints. Candidates who were most enthusiastic about engaging in video analysis with self-evaluation were the least accurate at rating their own instructional abilities. Additional findings about the association between internal factors (i.e., attitude and accuracy) and the implications for self-evaluation as a reliable form of performance-based assessment within teacher preparation are discussed.

**1.2.41 SANIKAN WATTANAWONGWAN, et al.**

Communication Intervention Implementation via Telepractice Parent Coaching: Parent Implementation Outcomes

**JOURNAL OF SPECIAL EDUCATION TECHNOLOGY, VOL. 37 (1), MARCH 2022, 35-48p**

Telepractice coaching may be a viable alternative technology tool to deliver services to parents of children with autism spectrum disorder. Using a multiple probe design across participants, we examined the effectiveness of telepractice parent coaching in a communication intervention on parents' implementation of strategies to improve their children's communication skills. Project coaches instructed parents on strategies to teach communication skills to their child, including incentivizing communication, modeling, prompting, progressive time delay, and expanding. Results indicated a functional relation between the telepractice parent coaching intervention and parent use of strategies. Effect



sizes for each participant are compatible with visual analysis results that show a very low effect to very strong effect depending on the intervention component examined.

#### **1.2.42 DENYSE V. HAYWARD, et al.**

Exploring Preservice Teachers Engagement With Live Models of Universal Design for Learning and Blended Learning Course Delivery

**JOURNAL OF SPECIAL EDUCATION TECHNOLOGY, VOL. 37 (1), MARCH 2022, 112-123p.**

Universal Design for Learning (UDL) and Blended Learning (BL) formats, are widely adopted across K–12 learning environments. Upon graduation, preservice teachers may be expected to implement UDL and BL practices. The present study was motivated by the need to provide preservice teachers with live modeling of UDL and BL concepts. Learning analytics data from 197 preservice teachers was examined for engagement with UDL/BL Access features (location, day-of-the-week, time-of-day, and regularity), Content features (screencasts and quizzes), and to determine if there was a relationship between engagement and achievement. Examination of the learning management system login data revealed regular access to the digital content across differing locations, week days, and time of day. Associations were significant between academic performance and all features. Designing the BL digital course components following UDL principles appears to have served as a self-regulation enabler for preservice teachers themselves while providing exemplars to adopt in their future practice.

#### **1.2.43 MARGARET FRIEND , et al.**

Maternal education revisited: Vocabulary growth in English and Spanish from 16 to 30 months of age

**INFANT BEHAVIOR AND DEVELOPMENT, VOL. 66, FEBRUARY 2022, 1-11p.**

This paper reports on a cross-language longitudinal study in which we extend previous research on the effects of maternal education on vocabulary growth in Spanish- and English-dominant children at three time points: 16 months, 22 months, and 30 months of age. This study addresses recent conflicting evidence regarding the role of maternal education in children's acquisition of Spanish. Participants were 62 English-dominant children, 47 Spanish-dominant children, and their mothers. Growth curve models were constructed separately for English and Spanish vocabulary. Strong growth rate reliability and effect sizes were evinced for vocabulary across samples. As expected, in English-dominant children, maternal education predicted English vocabulary and growth from 16 to 30 months of age. However, in Spanish-dominant children, there was no significant effect of maternal education on vocabulary or growth, although there was a descriptive advantage for children of college-educated mothers at 30 months of age. In conjunction with prior evidence, we conclude that the effect of maternal education on maternal input and child vocabulary does not generalize readily to children whose first language is Spanish. Our findings contribute to a literature that suggests that focusing on maternal beliefs, input, and the home literacy environment are more fruitful approaches in the study of children learning Spanish in the U.S. Further, the importance of maternal beliefs highlights the need to support parent investment in the quantity and quality of input in the home language.



## NIEPID Indian Test of Intelligence

### **1.3 Medical Sciences**

#### **1.3.44 CHARIS L. WAHMAN, et al.**

Examining the Effects of Social Stories™ on Challenging Behavior and Prosocial Skills in Young Children: A Systematic Review and Meta-Analysis

**TOPICS IN EARLY CHILDHOOD SPECIAL EDUCATION, VOL. 41(4), FEBRUARY-2022, 267-279p.**

Social stories are a commonly used intervention practice in early childhood special education. Recent systematic reviews have documented the evidence base for social stories, but findings are mixed. We examined the efficacy of social stories for young children (i.e., 3–5 years) with challenging behavior across 12 single-case studies, which included 30 participants. The What Works Clearinghouse standards for single-case research design were used to evaluate the rigor of studies that included social stories as a primary intervention. For studies meeting standards, we synthesized findings on the efficacy of social stories using meta-analysis techniques and a parametric effect size measure, the log response ratio. Trends in participants' response to treatment were also explored. Results indicate variability in rigor and efficacy for the use of social stories as an isolated intervention and in combination with other intervention approaches. Additional studies that investigate the efficacy of social stories as a primary intervention are warranted.

#### **1.3.45 ANJALI J. FORBER-PRATT, et al.**

Perspectives about COVID-19 vaccination among the paralysis community in the United States

**REHABILITATION PSYCHOLOGY, VOL. 67(1), FEBRUARY 2022, 9-19p.**

**Purpose/Objective:** We sought to explore perspectives among the paralysis community and caregivers or persons with paralysis (PWP) about the COVID-19 vaccination.

**Research Method/Design:** Data were collected via online survey with multiple choice and open-ended questions from adult PWP and family members and/or caregivers (FC) of PWP. Multiple choice questions were analyzed using descriptive statistics and chi-square analyses were conducted to compare the two groups (PWP and FC); open-ended responses were coded using Hamilton's rapid assessment process.

**Results:** A total of 1,017 respondents (831 PWP, 186 FC). PWP shared the same levels of COVID-19 vaccination hesitancy and received similar levels of information about the vaccine as the general population. Unique concerns about the COVID-19 vaccine expressed solely by PWP included fear of death after the vaccine, concerns about vaccine efficacy, and concerns about Federal Drug Administration approval. At the time, the majority of PWP plan to seek a COVID-19 vaccination and were vaccinated at a higher rate than was the general population.

**Conclusions:** Although PWP share many similar concerns to the general population, there are some concerns unique to PWP that must be noted to ensure that the paralysis community is considered fully and equitably in public health efforts related to the COVID-19 pandemic and beyond.

#### **1.3.46 CARLI FRIEDMAN**

The mental health of Medicare beneficiaries with disabilities during the COVID-19 pandemic  
**REHABILITATION PSYCHOLOGY, VOL. 67(1), FEBRUARY 2022, 20-27p.**

**Purpose:** During the coronavirus disease 2019 (COVID-19) pandemic, there was a tremendous increase in adverse mental and behavioral health symptoms. People with disabilities who are Medicare beneficiaries (under 65) are a vulnerable population, frequently having multiple chronic conditions, and facing a number of social disadvantages, even before the pandemic. As a result of the lack of attention drawn to the pandemic needs and experiences of people with disabilities, as well as the increased needs of Medicare beneficiaries with disabilities, the aim of this study is to examine the mental health of Medicare beneficiaries with disabilities during the COVID-19 pandemic.

**Method:** To do so, we conducted a secondary analysis of United States Census Bureau COVID-19 Household Pulse Survey data from 65,639 (unweighted) people with disabilities who were Medicare beneficiaries. Generalized anxiety disorder and major depressive disorder were measured using the Generalized Anxiety Disorder Scale (GAD-2) and Patient Health Questionnaire (PHQ-2), respectively.

**Results:** Our findings (weighted) revealed, during the pandemic, 43.3% of Medicare beneficiaries with disabilities had symptoms of generalized anxiety disorder, and 36.8% had symptoms of major depressive disorder. In addition, 15.3% said they needed counseling/therapy from a mental health professional but did not get it.

**Conclusions:** Many Medicare beneficiaries with disabilities reported symptoms of generalized anxiety disorder and major depressive disorder during the pandemic, and a lack of access to needed mental health services. As the pandemic continues, and in wake of recovery from the pandemic, it is important to pay attention to, and target the, mental health disparities unearthed in this study.

### 1.3.47 DALIA CHOWDHURY, et al.

Intersection of discriminations: Experiences of women with disabilities with advanced degrees in professional sector in the United States

**REHABILITATION PSYCHOLOGY, VOL. 67(1), FEBRUARY 2022, 28-41p.**

**Purpose/Objective:** Women with disabilities are typically expected to work in underpaid positions and earn much less when compared with men with disabilities or women without disabilities. In this study, we interviewed women who are at the other end of this spectrum—women with disabilities who were engaged in a high-skilled professional sector. We report their lived experiences and how the intersections of their identities impact, contradict, and collide with the aforementioned assumption. We use feminist disability theory and Crenshaw’s theory of intersectionality to inform our research.

**Research Method/Design:** In-depth semistructured qualitative interviews adopting a phenomenological framework were conducted with 37 women with disabilities who hold advanced degrees and work in higher-paying professions.

**Results:** Some of the themes generated from our analysis of the interviews included isolation and hopelessness, a sense of tokenism or de-legitimization, limitations of provided accommodations, the intersection of gender and disability, and how multiple layers of identity fuel marginalization.

**Conclusions/Implications:** Despite their success in placement, women with disabilities in the United States still experience numerous barriers in professional sectors. It is imperative to better understand the implications of intersectionality and how discrimination and marginalization can also impact those with successful employment.

### 1.3.48 TED ALLAIRE, et al.

Flourishing after traumatic spinal cord injury: Results from a multimethod study

REHABILITATION PSYCHOLOGY, VOL. 67(1), FEBRUARY 2022, 53-68p.

**Purpose/Objective:** Adverse outcomes after traumatic spinal cord injury (TSCI) are not ubiquitous; that is, it is possible to thrive in the years after injury. Accordingly, we examined both the association between various factors and psychological flourishing, or ideal mental health, after TSCI, as well as the characteristics of adults with average or higher levels of psychological flourishing in terms of personality, social support, and executive functioning.

**Research Design:** This study included two phases. In Phase 1, we collected information on demographic, health, and psychosocial variables from 449 adults with chronic TSCI using a mail survey. In Phase 2, we completed individual in-person assessments with a subset of 58 individuals from Phase 1 who had endorsed at least average levels of psychological flourishing and collected data using standardized measures of personality, social support, and executive functioning.

**Results:** Phase 1 data indicated that being married, viewing oneself favorably in comparison to others, and reporting better subjective health ratings were significantly associated with higher levels of psychological flourishing. Phase 2 data suggested that, as a cohort, participants tended to display a resilient personality profile, report high-average levels of social support, and perform grossly within normal limits on a measure of executive functioning.

**Conclusion/Implications:** Our findings highlight factors associated with positive psychological outcomes after TSCI. A resilient personality profile, good social support, and unimpaired executive functioning capabilities appear to characterize adults who flourish with chronic TSCI.

### 1.3.49 GARETH A. ROBERTS, et al.

Predictors of military veterans' engagement in bespoke recovery pathways and health and well-being outcomes

REHABILITATION PSYCHOLOGY, VOL. 67(1), FEBRUARY 2022, 79-89p.

**Purpose/Objective:** The objective of this cross-sectional study was to assess how psychosocial variables predict U.K. military veterans' level of engagement in bespoke recovery pathways (Aim 1) and a sports-specific recovery pathway (Aim 2). A further purpose of this study was to test whether predictor variables indirectly predict outcome variables of physical health (Aim 3), mental health (Aim 4), and subjective vitality (Aim 5), when mediated through level of engagement with all recovery pathways and the sport recovery pathway.

**Research Method/Design:** A cross-sectional battery of questionnaires were completed by 514 military veterans who had been enrolled in Help for Heroes recovery pathways (e.g., sports recovery pathway) from 3 months to 10 years. Data were analyzed by multinomial logistic and multiple linear regressions and mediation analyses using the PROCESS SPSS macro.

**Results:** Engagement in all recovery pathways (i.e., frequency and duration of attendance) was predicted by basic psychological needs frustration and perceived social support (Nagelkerke  $R^2 = .16$ ). Sport-related social support ( $p < .05$ ) and competence satisfaction ( $p < .001$ ) were directly positively associated with mental health, and competence satisfaction with physical health ( $p < .001$ ) and well-being ( $p < .001$ ) on the sport recovery pathway. While perceived stress was directly negatively associated with mental health and well-being ( $p < .001$ ). Mediation analyses revealed no significant, indirect effects of psychosocial variables on health and wellbeing through level of engagement.

**Conclusions/Implications:** In sum, engagement in recovery pathways does not mediate the effects of psychosocial variables on veterans' health and well-being. Perceived social support, satisfaction of veterans' needs, and perceived stress were better predictors of health and well-being outcomes and should be an important focus of future research and recovery.

### 1.3.50 SEEMA SIDDIQI & ASNA UROOJ

Nutrient intake profile, growth patterns and hemoglobin levels in children with ASD – A case control study in Mysuru, India

**RESEARCH IN AUTISM SPECTRUM DISORDERS, VOL. 90, FEBRUARY 2022, 1-12p.**

**Background:** Research evidence suggests that the prevalence rate of Autism Spectrum Disorder (ASD) is increasing in India. In addition to socio-behavioral problems, diet-related issues are common and recurrent problems experienced by children with ASD. As there is only minimal research work done on these aspects, the present study is carried out as a case control snapshot to investigate the nutrient intakes of ASD children (n = 104) residing in the Mysore region, India. This data is compared with the nutrient intakes of Typically Developing (TD) controls (n = 121).

**Methods:** We evaluated ASD severity using Indian Scale for assessment of autism (ISAA). All the children aged (2–15 years) were examined for anthropometric measurements and hemoglobin levels. Dietary intakes and mealtime behavior problems were assessed using three-day food records and food frequency questionnaires.

**Results:** Significantly ( $p < 0.05$ ) lower ZHA, ZWA, ZBMIA values among ASD children were observed. Limited food variety and inadequacy of micronutrient intakes were observed and the ORs of ASD children were at 3.57-fold higher risk for failing to meet the recommendations for calcium. Their risk was 2.17-fold higher for iron, 3.06-fold for zinc, 2.92-fold for folate and 1.87-fold higher for vitamin C compared with the TD children. Overall, mealtime behavior issues and eating problems were higher (28.66%) among ASD than TD (10.51 %). Hemoglobin levels of ASD were significantly ( $p < 0.05$ ) lower than TD children. There was a negative partial correlation between Hb levels ( $8.97 \pm 0.91$  g/dL) and micronutrients viz., Iron ( $5.14 \pm 2.83$  mg), Calcium ( $2.52 \pm 1.41$  mg), Zn ( $2.81 \pm 1.90$  mg), Folate ( $83.48 \pm 52.57$  mg) and Vitamin B6 ( $0.47 \pm 0.29$  mg). We found that while controlling the ISSA scores ( $1.94 \pm 0.62$ ), there was no significant difference. Thus signifying ISSA score has strong influence on controlling the relationship between Hb levels and selected micronutrients.

**Conclusion:** Observations strongly indicate that well-timed nutritional screening and personalized dietary interventions can prevent/manage the nutritional deficiencies prevalent among ASD children of this region.

### 1.3.51 DAVID MASON & FRANCESCA HAPPE

The role of alexithymia and autistic traits in predicting quality of life in an online sample

**RESEARCH IN AUTISM SPECTRUM DISORDERS, VOL. 90, FEBRUARY 2022, 1-15p.**

**Background:** Autistic people tend to report poorer Quality of Life (QOL) than comparison groups, though some studies do report more optimistic findings. Higher autistic traits are also related to poorer QOL. However, the role of alexithymia in this relationship has not been explored.

**Method:** A total of 163 participants (N = 53 autistic and N = 111 comparison) consented to

take part; however, 30 participants were excluded due to missing data (who did not differ from those who were retained on age, gender, education, employment, or living status), leaving a final sample of 133 (N = 42 Autistic and 91 Comparison participants). Demographic information (including age, gender) was collected, alongside self-report measures of autistic traits, mental health, alexithymia, and QOL. We estimated regression models based on pre-registered analysis, and we conducted exploratory network analyses.

**Results:** Alexithymic traits did not predict QOL when controlling for covariates. Depression significantly predicted Physical, Psychological, and Social QOL. When examining the impact of just alexithymic traits and autistic traits, both were significantly associated with Physical and Psychological QOL. For participants with a low depression score, the correlation between alexithymia and QOL was strong; suggesting that depression occludes the association between alexithymia and QOL. Network analyses suggested that depression and anxiety exert direct effects on Physical and Psychological QOL, whereas alexithymia scores may influence Physical QOL via autistic traits.

**Conclusion:** In sum, depression is a pervasive negative predictor of multiple QOL domains. The role of alexithymia in predicting QOL dimensionally and categorically was not ruled out, given our exploratory analyses, we suggest that interventions which target alexithymia may positively impact QOL for those who score low on depressive symptoms.

### 1.3.52 KRISTY LOGAN, et al.

A systematic search and appraisal of intervention characteristics used to develop varied communication functions in children with autism who use aided AAC

**RESEARCH IN AUTISM SPECTRUM DISORDERS, VOL. 90, FEBRUARY 2022, 1-18p.**

**Background:** Aided augmentative and alternative communication (AAC) interventions have been shown to be effective in teaching children with autism spectrum disorder (ASD) to communicate for a range of communication functions. However, currently little is known about the specific characteristics of interventions that can be used to teach functions other than object request.

**Method:** A systematic search and appraisal was undertaken of extant ASD-AAC research to determine whether outcomes varied according to intervention strategies used, communication functions and behaviours targeted, treatment intensity, and participant characteristics. Eighteen studies were identified and appraised for constituents and outcomes.

**Results:** Intervention components varied widely, as did behaviours targeted, participant characteristics, dosage, and outcomes. There was evidence that a range of functions and communication behaviours could be taught successfully in structured, context-bound routines, with the teaching strategies of time delay and prompting applied most frequently. A small correlation was found between dosage and effect size.

**Conclusions:** The current appraisal provides evidence that children with ASD who use aided AAC can learn communication functions beyond making requests for objects. AAC interventions that include time delay and prompting, and that teach skills in specific routines, are more likely to demonstrate a moderate to large effect size. Further research on the range of factors that may potentially influence outcomes, such as participant characteristics and dosage, is needed.

### 1.3.53 M.O. BAKARE, et al.

Picture of Autism Spectrum Disorder (ASD) Research in West Africa—A Scoping Review

**RESEARCH IN AUTISM SPECTRUM DISORDERS, VOL. 90, FEBRUARY 2022, 1-15p.**

Research evidence is required to guide health policy and capacity development on specific health condition. Despite the high prevalence of autism spectrum disorders (ASD) worldwide, there is dearth of data in the West African sub-region to inform evidence-based policy and practice. This review aimed to describe the volume and scope of existing research evidence on ASD across countries in the West African sub-region. This is with the view of identifying gaps in research and capacity development.

**Methods:** Literature search was done for all original peer-reviewed research articles on ASD in each of the West African Countries using PubMed, Google Scholar, Google search, African Index Medicus and a direct search of reference list of pertinent journal articles. Publications included were peer-reviewed original articles, irrespective of their quality, carried out within the West African countries and which were available in English or translated to English. Case reports, dissertations, abstracts, publications whose primary focus was not ASD, and studies on ASD among West African populations living outside the sub-region were excluded. The methodological framework described by Arksey and O'Malley (2005) was used to synthesize and present the results.

**Results:** A total of 41 studies that met the inclusion criteria across 5 countries in the sub-region were identified. Five thematic areas emerged from the literature, namely; prevalence/associated factors, professional knowledge and attitude, family and social aspects of ASD, screening/diagnosis and interventions/treatment. Only 6 out of the 16 countries in the sub-region had at least one study with the bulk of the research coming from Nigeria. Research articles on the prevalence/associated factors and professional knowledge of ASD appear modest in the sub-region. A huge gap still exists in the area of epidemiology, aetiology, diagnosis and treatments/intervention.

**Conclusion:** Further research is needed in the identified gaps in the sub-region and this cannot be done without addressing deficit in human capacity development. The results of this study will be useful in comprehensive policies and action plan development for addressing the problems of persons with ASD and capacity development in the sub-region.

**1.3.54 RICARDO F. MUÑOZ**

Harnessing Psychology and Technology to Contribute to Making Health Care a Universal Human Right

**COGNITIVE AND BEHAVIORAL PRACTICE, VOL. 29(1), FEBRUARY 2022, 4-14p.**

The United Nations General Assembly proclaimed the Universal Declaration of Human Rights in 1948. It included the right to medical care. Now, 70 years later, psychologists are recognized as health care providers and have developed several evidence-based health interventions. Digital interventions have the potential to scale access to evidence-based interventions to a degree unimaginable even a few decades ago. This article addresses five key concepts: (a) knowledge is meant to be shared, (b) evidence-based interventions are essential, (c) treatment is not enough to reduce prevalence of mental disorders; prevention is key, (d) nonconsumable interventions have the greatest potential for scalability, and (e) technology now allows us to blanket the world with psychological interventions. By harnessing technology, we can now think globally, act locally, and share globally. Psychology can thus help reduce human suffering beyond our local settings, and contribute to making health care a universal human right.



### **1.3.55 GIOVANNI RAMOS & DENISE A. CHAVIRA**

Use of Technology to Provide Mental Health Care for Racial and Ethnic Minorities: Evidence, Promise, and Challenges

**COGNITIVE AND BEHAVIORAL PRACTICE, VOL. 29(1), FEBRUARY 2022, 15-40p.**

Mental health disparities among racial and ethnic minorities (R&EM) are well documented. Some of the variables driving these disparities are limited care availability, difficulty accessing services, and attitudinal barriers. Although no single approach will eliminate all these obstacles, the use of technology to provide mental health services represents a paradigmatic shift in care delivery that could reduce unmet mental health need. Despite increasing evidence supporting the feasibility and efficacy of behavioral intervention technologies (BITs), such evidence is more limited among R&EM. For BITs to truly reduce disparities in care, these interventions need to overcome common barriers to treatment that disproportionately affect R&EM. This article reviews the empirical support of different BIT modalities with R&EM. We then provide informed clinical recommendations for the use of BITs with these groups, as well as a case example illustrating these guidelines. We conclude this article by discussing future directions that can inform the development and refinement of BIT approaches for R&EM.

### **1.3.56 STEVEN R. THORP, et al.**

Prolonged Exposure Therapy With an Older Adult: An Extended Case Example

**COGNITIVE AND BEHAVIORAL PRACTICE, VOL. 29(1), FEBRUARY 2022, 161-174p.**

Prolonged exposure therapy (PE) has gained strong empirical support for posttraumatic stress disorder (PTSD) in the general population. However, some authors have suggested that exposure therapies may be less effective for the treatment of PTSD in older adults. There is a paucity of empirical treatment studies for older adults with PTSD. The extant studies are briefly reviewed. There are indications that exposure therapies can be feasible, safe, and efficacious for older adults. However, the degree and maintenance of gains may be reduced in older adults relative to younger adults. A case example is presented to provide a detailed illustration of PE conducted with an older adult. The treatment is presented in five phases, including standard treatment components and suggested modifications for older adults. The modifications include careful use of terminology, slowing down the presentation of some information, involvement of family members, and utilizing technology to minimize the negative effects of physical impairments and stigma.

### **1.3.57 D. J. FIDLER & S. LANFRANCHI**

Executive function and intellectual disability: innovations, methods and treatment

**JOURNAL OF INTELLECTUAL DISABILITY RESEARCH, VOL. 66(1), JANUARY -FEBRUARY 2022, 1-8p.**

This editorial presents an introduction to and an overview of the current JIDR special issue on "Executive Function in Intellectual Disability." The articles included in this special issue provide a contemporary, in depth exploration of questions regarding the nature of EF in individuals with ID. Topics include the emergence of EF during early childhood in ID-related conditions, the influence of EF on other domains of development, and the relationship between EF and adaptation throughout the lifespan. This editorial synthesizes the findings presented in this special issue and identifies methodological challenges that researchers will

continue to face in future investigations of this important area.

### 1.3.58 M. SPANIOL & H. DANIELSSON

A meta-analysis of the executive function components inhibition, shifting, and attention in intellectual disabilities

**JOURNAL OF INTELLECTUAL DISABILITY RESEARCH, VOL. 66(1), JANUARY -FEBRUARY 2022, 9-31p.**

**Background:** Executive function is a concept for higher-order cognitive functions, which have the role of controller and modulator of cognitive abilities. The consensus in the literature is that people with an intellectual disability perform significantly lower on executive function tasks than groups matched on chronological age. The comparison with groups matched on mental age is less clear. Therefore, the objective of this meta-analysis was to investigate to what extent executive function is impaired in people with intellectual disability compared with a typically developing control group matched on mental age. It was also investigated if the executive function component and intellectual disability aetiology moderated the effect.

**Methods:** Eligibility criteria were participants with intellectual disability ( $IQ \leq 75$ ) without a dual diagnosis; a comparison group matched on mental age; executive function outcome reported in a group comparison study design with  $n \geq 10$ . Working memory tasks and ratings of executive function were not included. The literature search yielded 6637 potentially interesting articles. Twenty-six studies (with 99 effect sizes) including 1395 participants were included in the quantitative synthesis.

**Results:** A multilevel random-effects meta-analysis found that people with intellectual disability performed statistically significantly lower than the mental age-matched group on the executive function tasks,  $g = -0.34$ , 95% confidence interval =  $[-0.53, -0.16]$ . However, the heterogeneity between effect sizes was large. The intellectual disability aetiology moderator was significant, but it only reduced the heterogeneity marginally.

**Conclusion:** The overall conclusion is that individuals with an intellectual disability have more problems with executive function tasks than mental age-matched controls. Limitations are the large unexplained variance and the remarkably high number (69) of different tests that were used, which make more detailed conclusions problematic. This meta-analysis implies that future studies need to be of better quality, to have higher power, and to a higher degree use the same executive function tests.

### 1.3.59 S. ONNIVELLO, et al.

Executive functions and adaptive behaviour in individuals with Down syndrome

**JOURNAL OF INTELLECTUAL DISABILITY RESEARCH, VOL. 66(1), JANUARY -FEBRUARY 2022, 32-49p.**

**Background:** Previous research has explored executive functions (EFs) and adaptive behaviour in children and adolescents with Down syndrome (DS), but there is a paucity of research on the relationship between the two in this population. This study aims to shed light on the profile of EFs and adaptive behaviour in DS, exploring the differences by age and investigating the relationship between these two domains.

**Method:** Parents/caregivers of 100 individuals with DS from 3 to 16 years old participated in the study. The sample was divided into preschoolers (3–6.11 years old) and school-age children (7–16 years old). Parents/caregivers completed either the Preschool Version of the Behaviour Rating Inventory of Executive Function (for children 2–6.11 years old) or the

Second Edition of the same Inventory (for individuals 7 + years old). Adaptive behaviour was assessed with the Vineland Adaptive Behaviour Scale – Interview, Second Edition.

**Results:** Findings suggest that individuals with DS have overall difficulties, but also patterns of strength and weakness in their EFs and adaptive behaviour. The preschool-age and school-age children's EF profiles differed slightly. While both age groups showed Emotional Control as a relative strength and Working Memory as a weakness, the school-age group revealed further weaknesses in Shift and Plan/Organise. As concerns adaptive behaviour, the profiles were similar in the two age groups, with Socialisation as a strength, and Communication and Daily Living Skills as weaknesses, but with a tendency for preschoolers to obtain intermediate scores for the latter. When the relationship between EFs and adaptive behaviour was explored, Working Memory predicted Communication in the younger group, while in the older group the predictors varied, depending on the adaptive domains: Working Memory was a predictor of Communication, Inhibit of Daily Living Skills, and Inhibit and Shift of Socialisation.

**Conclusion:** As well as elucidating the EF profiles and adaptive behaviour in individuals with DS by age, this study points to the role of EFs in adaptive functioning, providing important information for targeted interventions.

### **1.3.60 M. EROSTARBE-PEREZ, et al.**

Executive functions and their relationship with intellectual capacity and age in schoolchildren with intellectual disability

**JOURNAL OF INTELLECTUAL DISABILITY RESEARCH, VOL. 66(1), JANUARY -FEBRUARY 2022, 50-67p.**

**Background:** There is certain empirical evidence of, on the one hand, a positive correlation between executive functions (EFs) and intelligence in people with intellectual disability (ID) and, on the other hand, a slower rate of development of EFs in these people relative to people without ID. This evidence is not, however, unequivocal, and further studies are required.

**Methods:** We analysed the relationship between development of EFs and both age and intellectual capacity, in a sample of 106 students with either ID or borderline intellectual functioning (BIF) at a special education centre [63 boys and 43 girls, 11–18 years old, mean total intelligence quotient (TIQ) of 59.6]. We applied nine instruments to evaluate both neuropsychological development (working memory, inhibitory control, cognitive flexibility, planning, processing speed and verbal fluency) and behavioural development [teachers' perceptions of the EFs of their students by Behavior Rating Inventory of Executive Function – Second Edition (BRIEF-2) School]. ID and BIF groups were statistically compared in terms of mean performance measures in EF tests. We looked at the correlation between EFs and age, and correlations between EFs and intelligence: TIQ, fluid intelligence [measured by the perceptual reasoning (PR) sub-index of Wechsler Intelligence Scale for Children-IV (WISC-IV)] and crystallised intelligence (measured by the verbal comprehension (VC) sub-index of WISC-IV). Regression models were built for variables with strong correlation.

**Results:** In most of the tests used to evaluate EFs, the ID subgroup performed significantly worse than the subgroup with BIF. In general, teachers' thought that participants had 'medium-low' levels of EFs. TIQ, by WISC-IV scale, correlated significantly with scores in all tests for all EFs. The PR sub-index correlated significantly with 14 of the tests for EFs; 35% of the variation in PR can be explained by variation in performance in Picture Span (working memory) and Mazes (planning). The VC sub-index correlated weakly with seven of the EF tests. We found significant correlations in the ID group between age and scores in all tests of working memory and inhibitory control. Age – considering all participants – did not

correlate with any of the variables of teachers' perception except for working memory, and this correlation was not strong.

**Conclusions:** The results of our study are consistent with descriptions of the typical population: (1) fluid intelligence is more related to EFs than crystallised intelligence is; and (2) working memory capacity is the EF most strongly related with general, fluid and crystallised forms of intelligence. The results suggest that as children and adolescents with ID/BIF get older, their capacities for working memory and inhibitory control increase; development of the other EFs studied was less evident.

Teachers' perceptions of the EFs of children with ID or BIF were independent of intellectual capacity and age. More research is needed to delve further into the development of EFs in people with ID/BIF.

### **1.3.61 CARRETTI, B., et al.**

Developmental trajectories of spatial-sequential and spatial-simultaneous working memory in Down syndrome

**JOURNAL OF INTELLECTUAL DISABILITY RESEARCH, VOL. 66(1), JANUARY -FEBRUARY 2022, 81-93p.**

**Background:** Working memory (WM) is generally considered an area of weakness in the cognitive profile associated with Down syndrome (DS). The great majority of studies explored WM in this population through a comparison with typical development (TD) on the basis of mental age or developmental level. However, it is also relevant to understand how these skills develop and whether such development could be more related to chronological or developmental level. In the present study, we explored cross-sectional developmental trajectories of spatial-sequential and spatial-simultaneous WM in individuals with DS across chronological age and developmental level. Typically developing children (TD) of similar mental age were also included as a comparison group.

**Methods:** Eighty-four individuals with DS (aged between 7 and 30 years) and 327 children with TD (aged between 4 and 8 years) were administered with tasks to assess spatial-sequential and spatial-simultaneous WM, together with tasks to assess both general verbal and spatial developmental levels.

**Results and conclusion:** Performance in spatial-simultaneous WM task was lower compared with spatial-sequential WM task in both groups. In the case of individuals with DS, the developmental trajectories of chronological age are better described through a segmented model showing increased performance until approximately 13 years of age, followed by a rather flat progress. In the case of TD children, developmental trajectories are better described through a linear model in the spatial-simultaneous WM task when chronological age is considered; in the spatial-sequential WM, the increase in performance with age was however characterised by a discontinuity at age 6. The increase in performance followed a linear pattern in both groups (DS and TD) without substantial differences between the types of measure used (verbal vs. spatial) when the developmental level is considered.

### **1.3.62 C. GREINER DE MAGALHÃES, et al.**

Executive function as measured by the Behavior Rating Inventory of Executive Function-2: children and adolescents with Williams syndrome

**JOURNAL OF INTELLECTUAL DISABILITY RESEARCH, VOL. 66(1), JANUARY -FEBRUARY 2022, 94-107p.**

**Background:** Difficulties with executive functions (EF) are very common among individuals

with Williams syndrome (WS). To characterise the pattern of relative strengths and weaknesses in EF for children and adolescents with WS, we considered the performance of a large sample on the parent version of the Behavior Rating Inventory of Executive Function-2 (BRIEF-2). Associations between distinct components of EF and adaptive behaviour, behaviour problems and intellectual ability were investigated. The concurrent effects of components of behaviour regulation and emotion regulation on attention problems and anxiety problems also were evaluated.

**Methods:** Participants were 308 6–17-year-olds with genetically confirmed classic WS deletions. Parent report of EF was measured by the BRIEF-2 questionnaire. Most participants (223/308) completed the Differential Ability Scales-II as a measure of intellectual ability. The parents of these individuals also completed the Child Behavior Checklist and the interview form of the Scales of Independent Behavior-Revised.

**Results:** As a group, the participants evidenced considerable parent-reported EF difficulty. A profile of relative strength and weakness was found at the index level, with performance on both the Behavior Regulation Index and the Emotion Regulation Index significantly better than performance on the Cognitive Regulation Index. Within each index, a statistically significant pattern of relative strength and weakness also was identified. Difficulties with behaviour regulation and emotion regulation were related to both behaviour problems and adaptive behaviour limitations. Higher inflexibility and more difficulty with self-monitoring were associated with lower overall intellectual ability. Difficulty with inhibition was uniquely associated with attention problems, and inflexibility was uniquely associated with anxiety problems.

**Conclusions:** Executive function difficulties are highly prevalent among children and adolescents with WS and are associated with adaptive behaviour limitations, both internalising and externalising behaviour problems and more limited intellectual ability. These results highlight the importance of designing and delivering research-based interventions to improve the EF of children and adolescents with WS.

### 1.3.63 E. K. SCHWORER, et al.

Infant precursors of executive function in Down syndrome

**JOURNAL OF INTELLECTUAL DISABILITY RESEARCH, VOL. 66(1), JANUARY -FEBRUARY 2022, 108-120p.**

**Background:** Although early features of infant cognition are predictive of executive function (EF) in typically developing (TD) children, there is little information regarding the developmental origins of EF in neurogenetic conditions, such as Down syndrome (DS).

**Methods:** The current study compared the performance of infants with and without DS on three dimensions that are hypothesised EF precursors: visual engagement, attention shifting and action planning. Additionally, the relationship between these EF precursors at Time 1 and EF performance at Time 2 (6 months later) was examined in the DS group. Participants were 36 infants with DS, M chronological age = 12.65 months, SD = 2.11; M developmental age = 8.84 months, SD = 2.22, and 36 TD infants, M chronological age = 8.62, SD = 3.06; M developmental age = 8.64 months, SD = 3.40.

**Results:** Infants with DS visually engaged with objects for longer durations and demonstrated challenges with action planning compared with TD infants at Time 1. Attention shifting at Time 1 significantly predicted EF performance at Time 2 in the DS group.

**Conclusions:** This study provides evidence that an early atypical presentation of EF precursors is detectable during infancy in DS and is predictive of subsequent EF performance. These findings contribute to the identification of areas of early cognitive risk in DS and can

inform future interventions in this population.

### 1.3.64 H. BARTON & L. L. MCINTYRE

Caregiver-reported executive functioning and associated adaptive and challenging behaviour in children with histories of developmental delay

**JOURNAL OF INTELLECTUAL DISABILITY RESEARCH, VOL. 66(1), JANUARY -FEBRUARY 2022, 121-132p.**

**Background:** Deficits in executive functioning (EF) have been measured in individuals with developmental disabilities, such as autism spectrum disorder and attention-deficit/hyperactivity disorder, through the use of behaviour rating scales and performance-based assessment. Associations between EF and variables such as challenging and adaptive behaviour have been observed; however, limited research exists on EF profiles in children with heterogeneous developmental delay or with intellectual disability (ID) or the impact of EF on adaptive and challenging behaviour with this population.

**Methods:** The present study sought to examine the EF profile of 93 children (75 male and 18 female) previously identified with developmental delay in early childhood. EF was assessed using the Behaviour Rating Inventory of Executive Function, Second Edition (BRIEF-2). Children were categorised into an ID group (n = 14) or no ID group (n = 79) based on scores from cognitive and adaptive behaviour assessments. EF profiles were investigated and compared by group. In addition, the impact of EF on both adaptive behaviour and challenging behaviour was measured using hierarchical linear regressions.

**Results:** Statistically significant differences in caregiver-reported EF were not observed between groups; however, both the ID and the no ID group scores were elevated as reported by their caregivers. For the overall sample, caregiver-EF accounted for significant variance in both adaptive (22%) and challenging (68%) behaviour after accounting for child age and sex.

**Conclusions:** Results indicated deficits in EF for children with and without ID. The significance of EF was accounted for in both adaptive and challenging behaviour for all children in the sample. Future research could elucidate the role of adaptive and challenging behaviour in understanding EF variability among children with histories of developmental delay.

### 1.3.65 MARIJA ČOLIĆ, et al.

Parental experiences raising children with autism spectrum disorder in Eastern Europe: a scoping review

**INTERNATIONAL JOURNAL OF DEVELOPMENTAL DISABILITIES , VOL. 68(1), JANUARY 2022, 1-13p.**

Parents of children with autism spectrum disorder (ASD) are often at greater risk of experiencing stress and lower quality of life, in comparison to parents of typically developing (TD) children and other developmental disabilities. Despite vast literature on parental experiences in Western countries, little is known about this topic in Eastern Europe. Thus, we aimed to map studies that addressed parental experiences of children with ASD in Eastern Europe using the Double ABCX theoretical framework. The Double ABCX Model of family adaptation describes how families responds to stressors over time, based on the intercorrelation of available resources, coping mechanisms and appraisal of stressors. Following a scoping review methodological framework, we conducted a comprehensive search of three databases. We ultimately included 15 peer-reviewed studies in the review. Within each study, we examined Double ABCX Model factors. The studies were conducted

in nine Eastern European countries and included parents of children and adults with ASD. Consistent with studies conducted in Western countries, parents of children with ASD expressed more personal and family challenges and greater maladaptation compared to parents of TD children. Moreover, families reported lower satisfaction with quality of life and more health problems. The small number of included papers from nine countries suggests that parental experiences of children with ASD in Eastern Europe are overlooked in the literature. Future research should explore findings from this review that differed from the Western literature, including contributing factors to parental adaptation in families in Eastern Europe.

### **1.3.66 ÁLVARO MIRA, et al.**

Exploring the profiles of children with autism spectrum disorder: association with family factors

**INTERNATIONAL JOURNAL OF DEVELOPMENTAL DISABILITIES , VOL. 68(1), JANUARY 2022, 14-24p.**

This study aimed to identify different profiles of children with autism spectrum disorder (ASD) without intellectual disability (ID) and maternal factors characteristic of these profiles. Participants were 89 children between 7 and 11 years old and their mothers, distributed in two groups, 52 children with ASD and 37 with typical development (TD). Based on the children's adaptive, behavioral, and pragmatic manifestations, three clusters were obtained in the ASD group. Children with the most serious difficulties in all the domains assessed were assigned to Cluster 1, whereas the children in Cluster 3 were characterized by relatively minor problems. Cluster 2 comprised children with moderate difficulties in the different domains. Compared to the TD group, group 1, with 'Serious Difficulties', and group 2, with 'Moderate Difficulties', showed significant differences on all the variables evaluated. Group 3, 'Slight Difficulties', was only significantly differentiated from the group with TD on ASD and attention deficit hyperactivity disorder (ADHD) symptoms, pragmatic competence, and applied theory of mind. Therefore, it was outlined as the purest group and basically manifested core ASD symptoms. In addition, mothers of children in the 'Serious Difficulties' group showed higher stress levels and less use of emotional and instrumental support and acceptance strategies, as well as more mental health problems, than mothers of children in the 'Slight Difficulties' group. The results support the need to assess the presentation of other possible problems in ASD children without ID, and design interventions for parents who may be at risk of experiencing higher levels of stress and have fewer coping strategies.

### **1.3.67 S. NIJS, et al.**

Stakeholders' perspectives on how to improve the support for persons with an intellectual disability and challenging behaviors: a concept mapping study

**INTERNATIONAL JOURNAL OF DEVELOPMENTAL DISABILITIES , VOL. 68(1), JANUARY 2022, 25-34p.**

**Introduction:** People with an intellectual disability (ID) are at risk of developing challenging behavior. Although previous research provided important insights into how to support people with an ID and challenging behavior, it remains unclear what various stakeholders consider to be the most essential aspects to further improve their support.

**Method:** Statements regarding aspects perceived necessary to improve the support to people with an ID and challenging behavior were collected in focus groups. Afterwards participants individually prioritized and clustered these statements, resulting in concept maps for people with an ID, direct support workers, and psychologists. Since only three relatives participated

in the entire concept mapping procedure, no concept map could be composed based on their input.

**Results:** Participants generated 200 statements. In the concept map of clients, statements were mentioned regarding relational aspects, providing clarity and structure, characteristics of support staff, and professional attitude of direct support workers. Direct support workers provided statements related to their own personal competencies, the necessity of feeling supported and appreciated, and a physical safe environment. Psychologists provided statements regarding their support for direct support workers, the support for the clients, the perspective on the client, and their role as psychologists.

**Conclusion:** The results of this study may be a starting point to foster increased evidence based practice for the support for persons with an ID and challenging behavior. Moreover, it provides opportunities to create care founded on mutual attunement, based on listening to each other's ideas and insight into perspectives and needs of various stakeholders.

### **1.3.68 JOSLIN ALEXEI DOGBE, et al.**

'There is family tension, but they understand...': familial and sibling relationships following the diagnosis of cerebral palsy in children in Ghana

**INTERNATIONAL JOURNAL OF DEVELOPMENTAL DISABILITIES , VOL. 68(1), JANUARY 2022, 35-46p.**

The challenges faced by parents raising children with cerebral palsy (CP) have been well explored in the literature. However, little attention has been paid to the experiences of parents raising children with CP in low-income countries, such as Ghana.

**Objective:** Therefore, the objective of this study was to explore parents' experiences of raising children with CP, specifically focusing on the relationships between spouses and between children with CP and their typically developing siblings.

**Method:** Qualitative semi-structured interviews were conducted with 40 parents, who were purposively selected from the largest tertiary hospital in Ghana.

**Results:** The results revealed that typically developing children accept their siblings with CP as their equals and even take up domestic responsibilities to lessen the burden on their parents. However, the parents reported experiencing marital and extended family conflict, financial burden and negative attitudes from spouses, resulting in family tensions.

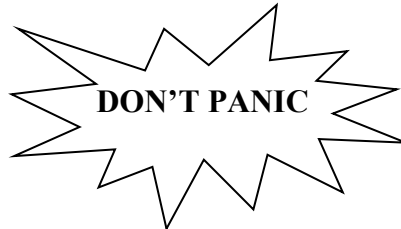
**Conclusion:** The implications of these findings for policy-making have also been discussed.



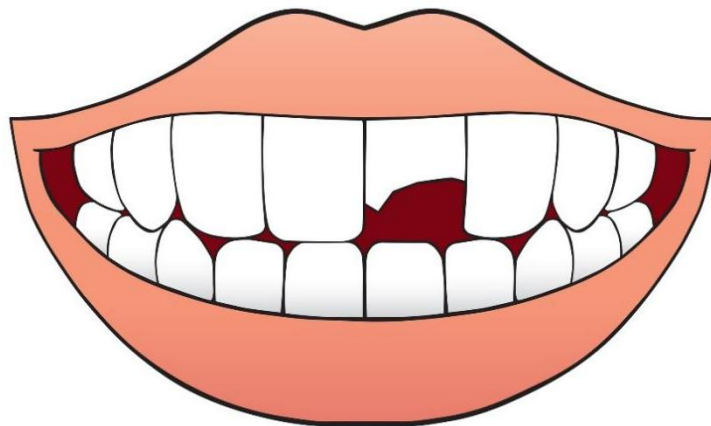
WHAT TO DO FOLLOWING A DENTAL TRAUMA DUE TO EPILEPTIC  
ATTACK OR DUE TO SOME OTHER CAUSE/INJURY

**SAVE YOUR TOOTH**

MOST OF YOUR PERMANENT TOOTH MAY BE SAVED IF YOU GET TO KNOW  
WHAT TO DO AFTER A BLOW OR INJURY TO THE MOUTH



WHAT TO DO IF YOUR TOOTH IS BROKEN?



- ✓ Find The Piece Of Tooth
- ✓ It Can Be Glutted On
- ✓ To Be Possible Seek Attention Immediately From A Dentist
- ✓ It Can Be Fixed

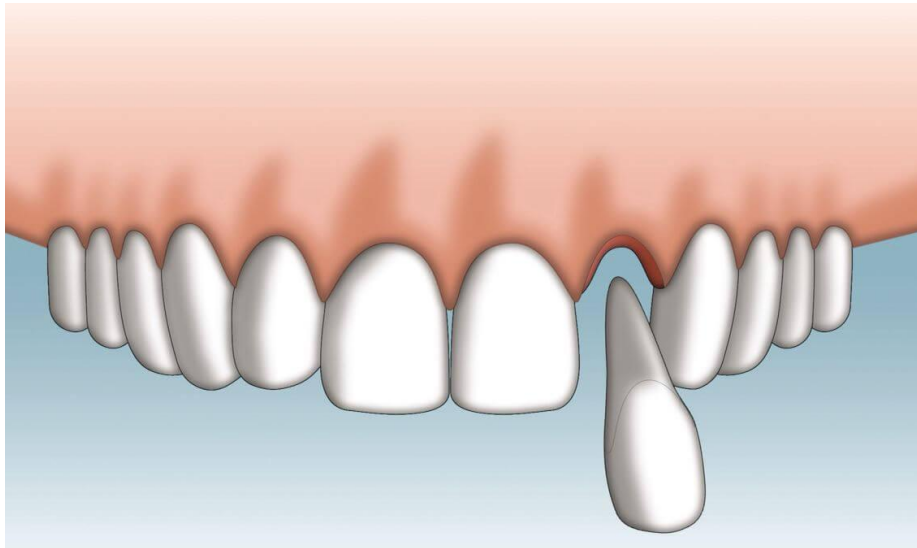
BEFORE:



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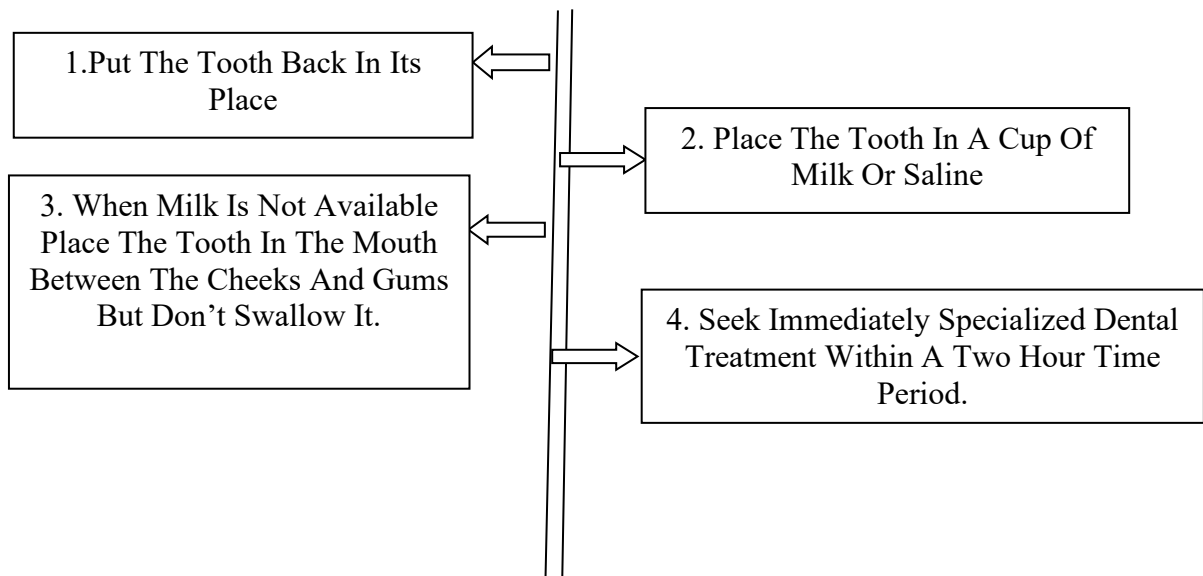


WHAT TO DO IF YOUR TOOTH IS KNOCKED OUT?



- ✓ Find The Tooth
- ✓ Hold It By The Crown (Upper Part Of The Tooth)
  - ✓ Rinse In Cold Running Tap Water
- ✓ Do Not Try To Clean The Tooth By Brushing

**DO ONE OF THESE ALTERNATIVES**



DR. NEETA NILAMWAR (MDS)  
ASSISTANT PROFESSOR (NIEPID)

## HOW UNHEALTHY TEETH CAN AFFECT YOUR OVERALL HEALTH

*“A healthy living starts with healthier teeth”.*

*The health of your mouth directly impacts the health of the rest of the body.*



**THE BRAIN** - Your memory may suffer due to oral bacteria. Oral bacteria may spread to the brain and contribute to the type of degeneration linked to Alzheimer's Disease (Short Term Memory Loss).

Those who suffer from gum disease for more than 10 years are 70% more likely to develop Alzheimer's Disease.



**THE LUNG** - Unhealthy teeth can affect your breathing. Gum disease increase the chance of getting respiratory infections such as COPD (Chronic Obstructive Pulmonary Disease) and Pneumonia.



**THE KIDNEY** – Tooth loss can increase the risk of kidney diseases. A study suggest that tooth loss adults may be more at risk of kidney diseases.



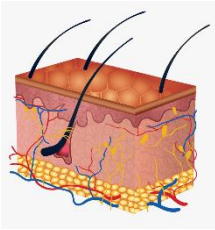
**THE HEART** – Poor oral health/ hygiene leads to an unhealthy heart. Gum disease can lead to heart problems such as infective endocarditis and other functional irregularities.

Up to 50% of heart attacks and strokes are triggered by oral pathogens. (CIRCULATION 2013)



THE PANCREAS – According to study published on 17<sup>th</sup> January 2007 in journal of the national cancer institute, advanced gum disease increases the likelihood of the pancreatic cancer.

Gum disease lowers glycemic control results in diabetes (AAOSH)



THE SKIN – Oral disease can affect the health of your skin. Gum recession and bone loss of the jaw can cause underlying skin to look older.

Your oral health can impact your entire wellbeing. Good oral hygiene means a healthier lifestyle.

DR. NEETA NILAMWAR (MDS)  
ASSISTANT PROFESSOR (NIEPID)

## **1.4 Speech Pathology & Audiology**

### **1.4.69 K. KRISTENSEN, et al.**

Language and executive functioning in young adults with Down syndrome

**JOURNAL OF INTELLECTUAL DISABILITY RESEARCH, VOL. 66(1), JANUARY -FEBRUARY 2022, 151-161p.**

**Background:** This study examined the association between executive functioning and language in young adults with Down syndrome (DS).

**Method:** Nineteen young adults with DS (aged 19–24 years) completed standardised measures of overall cognition, vocabulary, verbal fluency and executive function skills.

**Results:** Friedman's analysis of variance ( $\chi^2(3) = 28.15, P < .001$ ) and post hoc comparisons indicated that, on average, participants had a significantly lower overall non-verbal than verbal cognitive age equivalent and lower expressive than receptive vocabulary skills. Using Spearman correlations, performance on a verbal measure of cognition inhibition was significantly negatively related to receptive vocabulary ( $\rho = -.529$ , adjusted  $P = .036$ ) and verbal fluency ( $\rho = -.608$ , adjusted  $P = .022$ ). Attention was significantly positively correlated with receptive ( $\rho = .698$ , adjusted- $p = .005$ ) and expressive ( $\rho = .542$ , adjusted  $P = .027$ ) vocabulary. Verbal working memory was significantly positively associated with receptive vocabulary ( $\rho = .585$ , adjusted  $P = .022$ ) and verbal fluency ( $\rho = .737$ , adjusted  $P = .003$ ). Finally, visuospatial working memory was significantly associated with receptive vocabulary ( $\rho = .562$ , adjusted  $P = .027$ ).

**Conclusions:** Verbal and non-verbal measures of executive functioning skills had important associations with language ability in young adults with DS. Future translational research is needed to investigate causal pathways underlying these relationships. Research should explore if interventions aimed at increasing executive functioning skills (e.g. attention, inhibition and working memory) have the potential to lead to increases in language for young adults with DS.

### **1.4.70 YUTA UJIE & AKIO WAKABAYASHI**

Intact lip-reading but weaker McGurk effect in individuals with high autistic traits

**INTERNATIONAL JOURNAL OF DEVELOPMENTAL DISABILITIES , VOL. 68(1), JANUARY 2022, 47-55p.**

A weaker McGurk effect is observed in individuals with autism spectrum disorder (ASD); weaker integration is considered to be the key to understanding how low-order atypical processing leads to their maladaptive social behaviors. However, the mechanism for this weaker McGurk effect has not been fully understood. Here, we investigated (1) whether the weaker McGurk effect in individuals with high autistic traits is caused by poor lip-reading ability and (2) whether the hearing environment modifies the weaker McGurk effect in individuals with high autistic traits. To confirm them, we conducted two analogue studies among university students, based on the dimensional model of ASD. Results showed that individuals with high autistic traits have intact lip-reading ability as well as abilities to listen and recognize audiovisual congruent speech (Experiment 1). Furthermore, a weaker McGurk effect in individuals with high autistic traits, which appear under the without-noise condition, would disappear under the high noise condition (Experiments 1 and 2). Our findings suggest that high background noise might shift weight on the visual cue, thereby increasing the strength of the McGurk effect among individuals with high autistic traits.

**1.4.71 RAY D. KENT**

The maturational gradient of infant vocalizations: Developmental stages and functional modules

**INFANT BEHAVIOR AND DEVELOPMENT, VOL. 66, FEBRUARY 2022, 1-15P.**

Stage models have been influential in characterizing infant vocalizations in the first year of life. These models are basically descriptive and do not explain why certain types of vocal behaviors occur within a particular stage or why successive patterns of vocalization occur. This review paper summarizes and elaborates a theory of Developmental Functional Modules (DFMs) and discusses how maturational gradients in the DFMs explain age typical vocalizations as well as the transitions between successive stages or other static forms. Maturational gradients are based on biological processes that effect the reconfiguration and remodeling of the respiratory, laryngeal, and craniofacial systems during infancy. From a dynamic systems perspective, DFMs are part of a complex system with multiple degrees of freedom that can achieve stable performance with relatively few control variables by relying on principles such as synergies, self-organization, nonlinear performance, and movement variability.

**1.4.72 BEATRICE ANDALÒ, et al.**

Do motor skills impact on language development between 18 and 30 months of age?

**INFANT BEHAVIOR AND DEVELOPMENT, VOL. 66, FEBRUARY 2022, 1-11p.**

Despite recent evidence on the relation between motor development and language development in infancy, this relation is still little explored in the late second and third year. This study investigated whether gross and/or fine motor skills affect language outcomes in this age range and whether any such effects narrow over time to specific language categories related to motor experience, such as spatial vocabulary. Thirty-six Italian monolingual toddlers (58% girls) participated, divided into two groups based on their age. They were assessed twice: the younger group at 18 (Time-1) and 24 months (Time-2); the older group at 24 (Time-1) and 30 months (Time-2). At Time-1 motor and language abilities were measured using the Griffiths Mental Development Scales. At Time-2, only language outcomes (three vocabularies: nouns, predicates, and spatial terms) were assessed, using the Picture Naming Game-PiNG. Hierarchical linear regressions show that motor skills affect language abilities also in the late second and third year, but the impact varies according to the type of motor skills (gross vs. fine) and children’s age. At 18 months, controlling for linguistic abilities, a global score of gross motor skills predicted predicate production, and a specific gross-motor coordination skill: general dynamic coordination (GDC) predicted noun production at 24 months. At 24 months, controlling for linguistic abilities, GDC predicted predicate production, and a combination of fine- and gross-motor coordination skills (bilateral coordination and GDC) predicted spatial vocabulary comprehension at 30 months. Overall, results suggest that the relation between motor and language development is not simple or stable over time, but rather dynamic.

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## 1.5 General

### 1.5.73 MATTHEW C. LAMBERT, et al.

The Role of Parental Involvement in Narrowing the Academic Achievement Gap for High School Students With Elevated Emotional and Behavioral Risks

**JOURNAL OF EMOTIONAL BEHAVIORAL DISORDERS, VOL. 30(1), MARCH 2022, 54-66p.**

Parental involvement in school is an undoubtedly important element of a student's educational experience and outcomes. Students with elevated emotional and behavioral risks (EBR) tend to experience poor educational outcomes, and research suggests varying levels of parental involvement across domains for these at-risk students. However, there is minimal research on the links between elevated EBR, parental involvement, and academic achievement for high school students. The purpose of this study was to examine the degree to which (a) parental involvement differed between high school students with elevated EBR and students without EBR, (b) parental involvement was related to academic outcomes, and (c) the gap in academic achievement between students with elevated EBR and students without EBR could be attributed to differences in parental involvement. To address these questions, we fit a structural equation model using data from the High School Longitudinal Survey of 2009. The results demonstrated that (a) parental involvement was significantly lower in multiple domains for students with elevated EBR, (b) was significantly associated with academic outcomes, and (c) differences in parental involvement could account for a significant proportion of the achievement gap. Research limitations, directions for future research directions, and implications are discussed.

### 1.5.74 COLLIN SHEPLEY, et al.

Multitiered Systems of Support in Preschool Settings: A Review and Meta-Analysis of Single-Case Research

**TOPICS IN EARLY CHILDHOOD SPECIAL EDUCATION, VOL. 41(4), FEBRUARY-2022, 307-320p.**

Multitiered systems of support provide a framework for matching the needs of a struggling student with an appropriate intervention. Experimental evaluations of tiered support systems in grade schools have been conducted for decades but have been less frequently examined in early childhood contexts. A recent meta-analysis of multitiered systems of support in preschool settings exclusively synthesized outcomes from group design studies. Our current review extends this review by synthesizing single-case research examining interventions implemented within tiered support system frameworks in preschool settings. Our data indicate that single-case evaluations of tiered support systems do not frequently meet contemporary standards for rigor or consistently identify functional relations. Recommendations and considerations for future research are discussed.

### 1.5.75 QUTAIBA AGBARIA

Parental Styles and Parental Emotional Intelligence as Predictors of Challenging Behavior Problems Among Children in Israel

**TOPICS IN EARLY CHILDHOOD SPECIAL EDUCATION, VOL. 41(4), FEBRUARY-2022, 321-332p.**

This study examined whether two facets of preschool children's home environment, parenting style and parental emotional intelligence, may be risk factors for challenging

behaviors among kindergarten children in Arab society in Israel. The author sampled 524 parents of children ages 4 to 5 years who completed questionnaires about their parenting style, emotional intelligence, and their child's behavior. Teachers also reported on the children's challenging behaviors to increase reliability. The findings revealed that authoritarian (high demandingness, low warmth) and uninvolved (low demandingness, low warmth) parenting styles and low parental emotional intelligence were associated with greater challenging behaviors in children (both parent and teacher reports). Notably, authoritative (high demandingness, high warmth) parenting style was related to fewer challenging behaviors in children, suggesting that this may be a protective factor for children. The findings broadly parallel prior research across cultures.

**1.5.76 FENGFENG KE, et al.**

Virtual Reality–Based Social Skills Training for Children With Autism Spectrum Disorder  
**JOURNAL OF SPECIAL EDUCATION TECHNOLOGY, VOL. 37 (1), MARCH 2022, 49-62p.**

In this study, the researchers explored the usage of a virtual reality (VR)–based social skills learning environment for children with autism spectrum disorder (ASD). Using OpenSimulator, the researchers constructed a desktop VR-based learning environment that supports social-oriented role-play, gaming, and design by children with ASD. Seven 10–14 years old children with ASD participated in this VR-based social skills program for 20+ hr on average. Data were collected via screen recording and observation of play- and design-oriented social skills enactment and pre- and postintervention Social Communication and Skills Questionnaires. Participants demonstrated an increased level of successful social skills performance from the baseline to the intervention phase. The findings provided preliminary evidence for the usage of a VR-based social skills learning environment for children with ASD.

**1.5.77 RACHEL E. WRIGHT, et al.**

Smartwatch Executive Function Supports for Students With ID and ASD  
**JOURNAL OF SPECIAL EDUCATION TECHNOLOGY, VOL. 37 (1), MARCH 2022, 63-73p.**

This study examined the use of a wearable smartwatch-based intervention to support the executive functioning needs of college students with intellectual disability and autism spectrum disorders. The study was designed to address the universal design for learning guidelines and checkpoints for Provide options for Executive Functions. Three students with intellectual disability, two on the autism spectrum, participated in this multiple-probe across participants with an embedded ABAB design to determine whether a causal relationship exists between the smartwatch intervention and the percentage of tasks completed independently. Students were taught to use a wearable smartwatch device to enter novel appointments for the coming week and the associated tasks. All students self-operated the wearable device to enter appointments, attend appointments on time, and complete associated tasks. Results are discussed in the context of applying new technology applications to assist individuals with intellectual disability and autism to self-manage technological supports to learn new skills, set reminders, and enhance independence.



**1.5.78 REEM SUMLAIMAN BARAGASH, et al.**

Augmented Reality and Functional Skills Acquisition Among Individuals With Special Needs: A Meta-Analysis of Group Design Studies

**JOURNAL OF SPECIAL EDUCATION TECHNOLOGY, VOL. 37 (1), MARCH 2022, 74-81p.**

Augmented reality (AR) has the potential to support individuals with special needs and to enable their development of daily living skills. This meta-analysis study examined the effect of AR on functional skills acquisition across individuals affected by different disabilities. Group design studies based on a random-effects model alongside the Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines were used in this study. A total of 119 individuals with different types of disabilities (including intellectual disability, autism spectrum disorder, attention deficit hyperactivity disorder, Down syndrome, hearing disability, and visual disability) were obtained from seven studies. The overall effect size of AR across the seven studies was significant. The results showed that AR can be effective and helpful for individuals with disabilities to help them make daily decisions and guide their actions in society. The implications for practice and research as well as the possible areas that require further investigation are discussed.

**1.5.79 ADAM CARREON, et al.**

A Review of Virtual Reality Intervention Research for Students With Disabilities in K–12 Settings

**JOURNAL OF SPECIAL EDUCATION TECHNOLOGY, VOL. 37 (1), MARCH 2022, 82-99p.**

Virtual reality (VR) technology has improved in access and availability in the area of K–12 instruction, increasingly being cited for its promise to meet the varied learning needs of individuals with disabilities. This descriptive review of 25 research studies conducted in K–12 settings examined the defining characteristics of immersion levels associated with VR, the purpose and application of the augmented reality intervention, the outcomes associated with the current use of VR, and the possibility of generalization beyond VR. The results of the review reveal that a majority of studies are utilizing nonimmersive screen-based simulations. While still considered under the VR domain, these technologies do not take advantage of the features of semi- and fully immersive VR which make it an appealing intervention for students with disabilities. Based on the results of this review, we provide recommendations to establish a strong research base on emerging VR technology and its use for students with disabilities in the K–12 classroom.

**1.5.80 SANIKAN WATTANAWONGWAN, et al.**

Communication Intervention Implementation via Telepractice Parent Coaching: Child Outcomes and Correlations

**JOURNAL OF SPECIAL EDUCATION TECHNOLOGY, VOL. 37 (1), MARCH 2022, 100-111p.**

Individuals with autism spectrum disorder (ASD) have deficits in social and communication skills that can cause problems such as difficulty interacting with others and challenging behaviors. Research has demonstrated the effectiveness of parents as intervention implementers to improve children's communication skills. We evaluated the effects of a telepractice parent coaching communication intervention on communication skills of children with ASD utilizing a multiple probe design across participants. Parents applied strategies

learned with their child, targeting communication skills, such as asking opinion-oriented questions or using augmentative and alternative communication to request items. Results indicated improvement in children's communicative behaviors and a significant correlation between parent implementation of intervention elements and children behaviors. Effect size results for the participants indicated strong effects consistent with visually inspected data.

**1.5.81 KELLY KOERNER, et al.**

Using Technology to Train and Sustain Delivery of Evidence-Based Practices

**COGNITIVE AND BEHAVIORAL PRACTICE, VOL. 29(1), FEBRUARY 2022, 41-49p.**

Practitioners face three challenges in delivering evidence-based practice: limitations in the evidence available to guide routine clinical decisions; limitations in clinical judgment that are hard to remedy with typical work routines; and the practical difficulties of training and sustaining the breadth of skills relevant to meet diverse patient needs in a generalist practice. We recommend designing practice environments that support development of excellent clinical judgment with use of standardized work routines that help detect relationships between clinical decisions, interventions, and patient outcomes. We describe examples illustrating how technology can support training and supervision within this framework.

**1.5.82 STEPHEN M. SCHUELLER, et al.**

An Introduction to Core Competencies for the Use of Mobile Apps in Cognitive and Behavioral Practice

**COGNITIVE AND BEHAVIORAL PRACTICE, VOL. 29(1), FEBRUARY 2022, 69-80p.**

Mobile technologies have become increasingly pervasive and integral in our daily lives. A growing number of mobile applications are focused on health applications with many specifically focused on helping the prevention, treatment, and management of mental health issues. These apps are slowly being introduced into clinical settings, either being brought in by clients who themselves are using these tools or by health systems or providers. Unfortunately, most practicing providers obtained their clinical training before the advent of mobile health tools and methods. Thus, a critical need exists to develop and disseminate resources to develop the essential skills needed to adopt mobile health techniques. We discuss the five core competencies in mobile health care: evidence, integration, security and privacy, ethics, and cultural considerations. Although this paper will not fully prepare a provider to use mobile apps in their practice, it provides an introduction that will helpfully guide a provider to additional resources and additional ways to develop these competencies. Finally, we discuss the future directions of the field, including a growing differentiation of the impact of mobile apps on clinical care and the need for training models and experiences to match this differentiation.

**1.5.83 JORDANA MUROFF & WINSLOW ROBINSON**

Tools of Engagement: Practical Considerations for Utilizing Technology-Based Tools in CBT Practice

**COGNITIVE AND BEHAVIORAL PRACTICE, VOL. 29(1), FEBRUARY 2022, 81-96p.**

Treatment engagement in cognitive behavioral therapy (CBT) is associated with positive

outcomes. Technology-based tools present an opportunity to facilitate engagement in CBT. This paper will first review specific CBT engagement-related constructs, modalities/formats for applying technology in treatment delivery, specific engagement features available in CBT-based apps, and the relationship between CBT engagement and outcome. The Fogg Behavior Model may inform a process for enhancing CBT engagement, specifically utilizing technology towards achieving perceived simplicity and activating behaviors. Two vignettes are presented that apply the Fogg Behavior Model (FBM) and Persuasive Design framework to illustrate CBT engagement related constructs and practical considerations in applying technology-based tools to support CBT engagement. The vignettes focus on homework adherence with a thought record as well as activity scheduling. This paper concludes with a brief discussion of clinician engagement with technology applying the FBM, considerations of cultural responsiveness and inclusiveness, and additional implications for future research.

**1.5.84 BETHANY A. TEACHMAN, et al.**

Digital Mental Health Services: Moving From Promise to Results

**COGNITIVE AND BEHAVIORAL PRACTICE, VOL. 29(1), FEBRUARY 2022, 97-104p.**

The papers in this special series make a compelling case for the value of digital mental health services (DMHS; including technology-based interventions, assessments, and prevention programs) to help address some of the currently unmet needs in mental health care. At the same time, the papers highlight the work that needs to be accomplished for DMHS to fulfill their promise. We review the papers' contributions in terms of (a) the imperative to increase access to evidence-informed, high-quality care, especially for underserved populations, both in the United States and globally; (b) ways to use DMHS to improve the ways that clinical care is provided to make treatment provision more effective and efficient; and (c) the current state of the research on DMHS for emotional disorders. We then consider lessons learned and recommendations to move the field forward, such as increasing (and making transparent) the research base on DMHS, adopting regulatory standards for DMHS, attending carefully to training issues for DMHS and best practices for dissemination and implementation, designing specifically for digital platforms, and being intentional about efforts to reduce disparities regarding who benefits from DMHS.

**1.5.85 ALYSSA N. DE VITO, et al.**

Cognitive Enhancement Strategies to Augment Cognitive-Behavioral Therapy for Anxiety and Related Disorders: Rationale and Recommendations for Use With Cognitively Healthy Older Adults

**COGNITIVE AND BEHAVIORAL PRACTICE, VOL. 29(1), FEBRUARY 2022, 175-184p.**

Cognitive-behavioral therapy (CBT) is widely recognized as an efficacious treatment of anxiety and related disorders—however, recent research suggests that some older adults may derive reduced benefit from CBT as compared to younger adults. Age-related declines in cognition (e.g., memory, attention) may be a contributing factor to the reduced benefit seen in this population. Augmentation strategies for optimizing CBT are now under way (e.g., exercise, medication), and indicate that cognitive support and enhancement strategies can improve both cognitive skills and treatment outcome in anxious older clients. This review discusses the current literature on enhancement strategies that target CBT aptitude directly (e.g., memory aids for therapeutic material) and indirectly (e.g., use of standardized cognitive

tasks unrelated to CBT) as methods of augmenting CBT. Recommendations for clinicians and directions for future research are provided.

#### **1.5.86 JOAN R. ASARNOW, et al.**

The Incubator Treatment Development Model: The SAFETY Treatment for Suicidal/Self-Harming Youth

**COGNITIVE AND BEHAVIORAL PRACTICE, VOL. 29(1), FEBRUARY 2022, 185-197p.**

Youths who make suicide attempts or engage in repetitive self-harm are at risk for future suicide attempts and death by suicide or self-harm. This treatment development report focuses on the Safe Alternatives for Teens and Youth (SAFETY) treatment. SAFETY is a 12-week outpatient child and family-centered cognitive-behavioral treatment, informed by dialectical-behavior therapy, and designed to promote safety following a suicide attempt or repeated episodes of self-harm. Previous reports have described results of small open and randomized treatment development trials. Here, we describe our “incubator” treatment development model. Combining scientific rigor with attention to the community context in which treatment is delivered, the incubator model emphasizes laboratory-based treatment development trials and quantitative and qualitative data generated through partnerships with community treatment sites and youth and parent consumers of care. Aims of this approach are to: (1) integrate information from our partners throughout the treatment development process; (2) create a more feasible and easily transportable “youth” and “family” centered treatment; and (3) accelerate the pace with which laboratory-based treatment advances can be incorporated into improvements in community care. We describe our incubator treatment development model and how data generated through our treatment development process and interactions between the laboratory and community teams contributed to the development of the SAFETY treatment.

#### **1.5.87 JENNIFER L. HUGHES & JOAN R. ASARNOW**

Implementing and Adapting the SAFETY Treatment for Suicidal Youth: The Incubator Model, Telehealth, and the Covid-19 Pandemic

**COGNITIVE AND BEHAVIORAL PRACTICE, VOL. 29(1), FEBRUARY 2022, 198-213p.**

The Safe Alternatives for Teens and Youth (SAFETY) treatment was developed to decrease the risk of repeat suicidal and self-harm behavior in youth presenting with elevated suicide risk. This paper uses case illustrations to demonstrate the SAFETY treatment, building upon the companion paper describing our “incubator” treatment development model and process (Asarnow et al., 2022). As illustrated in the second case illustration, the incubator model approach was particularly useful during the COVID-19 pandemic switch to telehealth. SAFETY specifically targets suicide and self-harm risk reduction using an individually tailored principle-guided approach, grounded in a case conceptualization that identifies cognitive-behavioral processes and reactions that contribute to increased suicide attempt risk and explains the youth’s suicidal/self-harm behavior within the context of his or her broader social systems. The SAFETY treatment has been tested in two treatment development trials, and results support the efficacy of SAFETY for preventing suicide attempts in adolescents presenting with recent self-harm.

**1.5.88 ALISSA C. HUTH-BOCKS, et al.**

Maternal secure base scripts predict child attachment security in an at-risk sample  
**INFANT BEHAVIOR AND DEVELOPMENT, VOL. 66, FEBRUARY 2022, 1-9p.**

Accumulating evidence indicates that individuals possess attachment, or secure base, scripts based on experiences with attachment figures, and these attachment scripts predict important outcomes such as caregiving behaviors and offspring social-emotional adjustment. However, less is known about the association between parents' secure base scripts and child attachment security within at-risk samples, i.e., those known to be at greater risk for insecurity. The current study examined the relation between maternal secure base script representations and child attachment security by extending the use of the Attachment Script Assessment (ASA; Waters & Rodrigues-Doolabh, 2004) to an at-risk sample. One-hundred mother-child pairs from a larger longitudinal study participated; the larger study focused on psychosocial risks related to parenting in a primarily low-income sample. In the present study, overall ASA script scores were first compared with two independent middle-class samples, one from a U.S. study, the other an international study. Scores and statistical patterns were comparable across all samples, indicating that the ASA was successful in tapping into maternal secure base script knowledge in our at-risk sample. The relation between maternal script scores and children's Attachment Q-Set (AQS; Waters, 1995) security scores were examined at ages 1 and 2 years. Dependency scores from the AQS were also included to establish discriminant validity for the script scores. Results indicated that maternal script knowledge predicted child security, while showing no relation to dependency scores. Findings indicate that the ASA can be an important and viable measure for assessing attachment representations in at-risk samples of caregivers.

**1.5.89 ALANA J. ANDERSON, et al.**

Context matters: Cortical rhythms in infants across baseline and play

**INFANT BEHAVIOR AND DEVELOPMENT, VOL. 66, FEBRUARY 2022, 1-11p.**

This study uses electroencephalography (EEG) to examine infants' cortical activity during baseline while they watched a dynamic audiovisual display and while engaged in play with an object and parent. Fifty-five 6- to 12-month-old infants participated in both baseline and play with their mother. We hypothesized that the baseline task recruits relatively more exogenous attention due to the dynamic audiovisual task, while the play task recruits relatively more endogenous attention when exploring the toy. We expected higher frontal theta and alpha power during play, reflecting higher endogenous control of attention compared to the baseline task. We expected the faster rhythms, beta and gamma, to have higher power during baseline at frontal locations, reflecting the salient attention-grabbing (exogenous) attributes of the baseline task in comparison to play. We also examined changes in parietal power between contexts. Our results were consistent with the expectations. Theta (3–6 Hz) and alpha (6–9 Hz) power were higher at frontal sites (Fp1/Fp2) during play relative to baseline. Beta (9–30 Hz) and gamma (30–50 Hz) power were higher at frontal (Fp1/Fp2) and frontal medial sites (F3/F4) during baseline relative to play. Alpha power was higher during baseline at frontal medial sites (F3/F4) relative to play. Beta and gamma power was higher during play at parietal sites (P3/P4). The results are discussed in terms of the potential role of different cortical rhythms over the scalp as they respond to relative endogenous and exogenous attentional demands.

**1.5.90 S.V. VACARU, et al.**

Eating in Synch: An investigation of parent-infant behaviour coordination during feeding interactions

**INFANT BEHAVIOR AND DEVELOPMENT, VOL. 66, FEBRUARY 2022, 1-12p.**

During feeding, parents have been described to move their mouth as if they were eating themselves. Such matching of behaviours between parents and their infants during face-to-face interactions represents an example of behavioural synchrony. To date, however, the function of these synchronous eating-like mouth movements by the caregiver remains unexplored. To address this question, two competing hypotheses were tested: 1) the instructional hypothesis proposing that parents make eating-like mouth movements, such as opening and closing their mouth, to demonstrate to their infants what they need to do; 2) the mimicry hypothesis suggesting that parents imitate their infant's mouth actions to enhance affiliation. To test these hypotheses, we examined the temporal dependencies between parents' and infants' mouth movements. We reasoned that parents' mouth movements would occur before their infants' if they serve an instructional purpose, but that they would happen after, if parents mimic their infants. Additionally, we expected that parents' matching mouth movements would be more likely when their infants looked at them in both cases. To examine these hypotheses, fifteen caregivers were observed as they were feeding their six-month-old infants. Time-window sequential analysis was conducted to quantify how likely parents were to display mouth opening and closing before or after their infants did. The results revealed that parents' mouth movements were more likely to follow infants' movements and are thus in line with the mimicry hypothesis. Interestingly, these mouth movements of parents were independent of infant's gaze.

**1.5.91 XI LIANG, et al.**

Sleep problems and infant motor and cognitive development across the first two years of life: The Beijing Longitudinal Study

**INFANT BEHAVIOR AND DEVELOPMENT, VOL. 66, FEBRUARY 2022, 1-15p.**

The present study examined bidirectional effects between sleep problems (nocturnal awakenings and insufficient nocturnal sleep) and infant development (gross motor, fine motor, and cognition) in a sample of 182 infants (89 girls) and their parents living in Beijing (China). Using 3 waves of longitudinal data (at 6 months, 1 year, and 2 years of age), this study (a) explored the differences in sleep patterns and developmental outcomes between infants in the current sample and infants from other cultures; and primarily examined (b) whether nocturnal awakenings and insufficient nocturnal sleep prospectively predicted infant development; (c) or whether infant development predicted sleep problems. Mothers reported their children's sleep problems, and infant development was assessed with Bayley III. Sleep patterns of Beijing infants were slightly different from those from Finland and Singapore, and most scores on Bayley III in this Beijing sample were higher than those in Danish, Dutch and Sri Lankan samples. Sleep problems and developmental measures were stable across the 3 times of assessments, but cross-lagged associations were limited in number and strength. High scores on the Bayley at 6 months predicted less nocturnal awakenings at 1 year of age. Insufficient nocturnal sleep at 1 year predicted poor fine motor development at 2 years. Thus, findings suggest some bidirectional associations between infant development and sleep problems and further highlight the need to understand these relations within specific cultural contexts.

**1.5.92 ELAINE S. BARRY & JAMES J. MCKENNA**

Reasons mothers bedshare: A review of its effects on infant behavior and development  
**INFANT BEHAVIOR AND DEVELOPMENT, VOL. 66, FEBRUARY 2022, 1-13p**

Bedsharing is controversial for nighttime caregiving in the U.S. today, as in most of the West. However, from the standpoint of evolutionary pediatrics, anthropology, and cultural psychology, bedsharing is not controversial at all, representing the context for human infant evolution and conferring a host of physiological benefits to the infant as well as the mother. In an effort to understand the rise in Western bedsharing in recent decades (and following Ball, 2002; McKenna & Volpe, 2007), Salm Ward (2015) systematically reviewed the literature on mother-infant bedsharing and identified ten reasons why mothers choose to bedshare: (1) breastfeeding, (2) comforting for mother or infant, (3) better/more sleep for infant or parent, (4) monitoring, (5) bonding/ attachment, (6) environmental reasons, (7) crying, (8) cultural or familial traditions, (9) disagree with danger, and (10) maternal instinct. The current paper offers the “review behind the review,” highlighting the scientific evidence behind the reasons mothers give for their decision to bedshare, focusing on how mothers’ decisions about infant sleep location influence infant behavior and development.

**1.5.93 LUCIA CICIOLLA, et al.**

Infant sleep and negative reactivity: The role of maternal adversity and perinatal sleep  
**INFANT BEHAVIOR AND DEVELOPMENT, VOL. 66, FEBRUARY 2022, 1-14p**

Sleep during infancy contributes to the development and maintenance of infant regulatory functioning and may be an early risk marker for more difficult temperamental traits like negative reactivity. Further, maternal adverse childhood experiences (ACEs) may predispose individuals to greater sleep disturbances in adulthood and have been linked with sleep disturbances in both mothers and infants. Thus, examining maternal history of ACEs and maternal sleep difficulties during pregnancy and postpartum may provide insight into underlying risk factors affecting infant sleep difficulties and early temperament development. Fifty-nine mothers from a diverse, community sample (44% white) completed questionnaires on ACEs, maternal sleep, infant sleep, and infant temperament at 30-weeks gestation, 6-weeks postpartum, and 16-weeks postpartum. Results indicated that maternal ACEs and sleep problems during pregnancy have long term implications for infant negative reactivity at 16-weeks, with significant indirect effects through maternal and infant sleep problems at 6-weeks. Addressing psychosocial functioning and prenatal sleep during pregnancy, particularly among women with high ACEs, may be a target of intervention to improve maternal and infant sleep health during the postpartum, and reduce the risk for difficult infant temperament.

**1.5.94 ERIN M. ANDERSON, et al.**

No evidence for language benefits in infant relational learning  
**INFANT BEHAVIOR AND DEVELOPMENT, VOL. 66, FEBRUARY 2022, 1-17p**

Recent studies have found that infants show relational learning in the first year. Like older children, they can abstract relations such as same or different across a series of exemplars. For older children, language has a major impact on relational learning: labeling a shared relation facilitates learning, while labeling component objects can disrupt learning. Here we ask: Does language influence relational learning at 12 months? Experiment 1 (n = 64) examined the influence of a relational label on learning. Prior to the study, the infants saw three pairs of objects, all labeled “These are same” or “These are different”. Experiment 2

(n = 48) examined the influence of object labels prior to the study, with three objects labeled (e.g., “This is a cup, this is a tower.”). We compared the present results with those of Ferry et al. (2015), where infants abstracted same and different relations after undergoing a similar paradigm without prior labels. If the effects of language mirror those in older children, we would expect that infants given relational labels (Experiment 1) will be helped in abstracting same and different compared to infants not given labels and that infants given object labels (Experiment 2) will be hindered relative to those not given labels. We found no evidence for either prediction. In Experiment 1, infants who had heard relational labels did not benefit compared to infants who had received no labels (Ferry et al., 2015). In Experiment 2, infants who had heard object labels showed the same patterns as those in Ferry et al. (2015), suggesting that object labels had no effect. This finding is important because it highlights a key difference between the relational learning abilities of infants and those seen in older children, pointing to a protracted process by which language and relational learning become entwined.

#### **1.5.95 MARIA M. ARREDONDO, et al.**

Attentional orienting abilities in bilinguals: Evidence from a large infant sample

#### **INFANT BEHAVIOR AND DEVELOPMENT, VOL. 66, FEBRUARY 2022, 1-15p**

A key question in studies of cognitive development is whether bilingual environments impact higher-cognitive functions. Inconclusive evidence in search of a “bilingual cognitive advantage” has sparked debates on the reliability of these findings. Few studies with infants have examined this question, but most of them include small samples. The current study presents evidence from a large sample of 6- and 10-month-old monolingual- and bilingual-exposed infants (N = 152), which includes a longitudinal subset (n = 31), who completed a cueing attentional orienting task. The results suggest bilingual infants showed significant developmental gains in latency performance during the condition that was most cognitively demanding (Incongruent). The results also revealed bilingual infants’ performance was associated with their parents’ dual-language switching behavior. Taken together, these results provide support that bilingual experiences (i.e., dual-language mixing) influence infants’ shifting and orienting of attention.

#### **1.5.96 JACQUES VAUCLAIR**

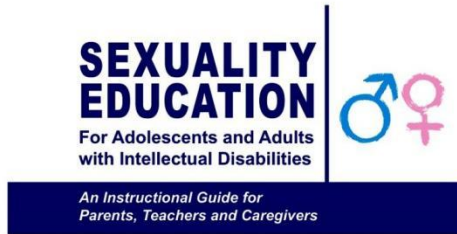
Maternal cradling bias: A marker of the nature of the mother-infant relationship

#### **INFANT BEHAVIOR AND DEVELOPMENT, VOL. 66, FEBRUARY 2022, 1-10p**

The tendency of mothers to cradle their infant on their left side was first demonstrated by Salk back in 1960, but has been the subject of renewed interest in recent years. In this paper, I examine the different aspects of this tendency, making a short detour to explore this behavioral bias in other mammals and in nonhuman primates. The left cradling bias has been investigated not only in mothers, but also in fathers, children and students, as well as in different cultures. Moreover, the origins and causes of this behavior have been explored by examining its links to hemispheric specialization and to other motor asymmetries in mothers and infants. In recent years, researchers have also explored divergent patterns of cradling in groups of mothers exhibiting stress, anxiety, or depressive symptoms during pregnancy and after delivery, as well as in children with atypical development (e.g., autism spectrum disorder). The findings reported in the past 20 years open up promising avenues for anticipating potential difficulties in the relationship between mother and child, for given that a left cradling bias has been found in about 75% of the samples tested, cradling patterns could constitute natural behavioral markers of the socio-emotional harmony between cradler and cradled.



# Books on Sexuality Education by NIEPID

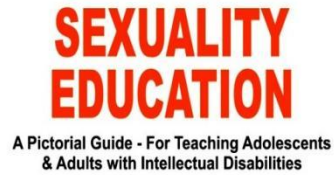


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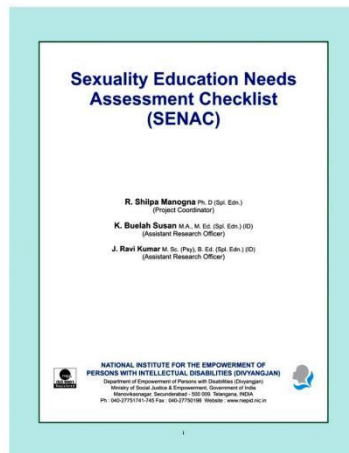


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## SAMPLE ENTRY

**D. J. FIDLER** → **Author**

Executive function and intellectual disability: innovations, methods and treatment} → **Title**

**JOURNAL OF INTELLECTUAL DISABILITY RESEARCH 66 (1), Jan 2022, 1-8p.**

→ **Name of the Journal**

Volume      Date of Publ.      Pages  
↓                      ↓                      ↓  
Issue

This editorial presents an introduction to and an overview of the current JIDR special issue on “Executive Function in Intellectual Disability.” The articles included in this special issue provide a contemporary, in depth exploration of questions regarding the nature of EF in individuals with ID. Topics include the emergence of EF during early childhood in ID-related conditions, the influence of EF on other domains of development, and the relationship between EF and adaptation throughout the lifespan. This editorial synthesizes the findings presented in this special issue and identifies methodological challenges that researchers will continue to face in future investigations of this important area.

↓  
**Abstract**



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