

collaborative learning. Next, at the elementary and junior high schools which experienced collaborative learning, as a result of a student's receiving effective support from a friend, the feeling of effect to a life at large was increasing. Finally, the causal relationship to the feeling of effect to a life at large was not accepted from the feeling of effect about study at both the elementary and junior high schools which carried out collaborative learning, and general elementary and junior high schools. It could be concluded that collaborative learning showed clearly that the effective support enjoyment consciousness from a juvenile student's teacher is raised, or that an effective mutual support relation with friends is raised putting the above knowledge together.

### **Music training and sentence comprehension**

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This study examined the effect of music training on sentence comprehension, on the basis that music shares some common cortical representations with language in terms of pitch, syntactic and semantic processing. Thirteen undergraduates who had experience in formal music training were compared to 27 controls on various musical abilities and a sentence picture matching task that relied heavily on syntactic accuracy for comprehension. Results indicated no significant group differences in sentence comprehension and overall musical ability. The sensitivity of the test used and the use of undergraduates might explain the lack of significant findings. Music training seems to benefit language learning more at young age, especially when language skills can be improved using some other channels.

### **Physical activity: Its implication on attention span and quality of life in children with autism spectrum disorder**

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The current study was designed to partially extend previous research (Nicholson, Kehle, Bray, & Heest, 2011; Rosenthal-Malek & Mitchell, 1997) by examining the effects of physical activity on the 1) attention span and 2) health-related quality of life (HRQoL) of autism spectrum disorder (ASD) children in Singapore. Male participants ( $N = 12$ ) aged 2-6 years, diagnosed with ASD were randomly assigned to either a physical activity (experimental) or non-physical activity group (control). In the physical activity group, participants were administered 8 tri-cycling sessions; together, both groups of participants were measured for their attention span, and their parents completed the HRQoL questionnaires. The results revealed that as the exercise session increases, participants in the physical activity group demonstrated increasingly longer duration of attention span compared to the control group. These results further extended the findings of Nicholson et al. (2011) and Rosenthal-Malek and Mitchell (1997) that physical activity enhances cognition of ASD children. However, the results do not support the effects of physical activity on the overall HRQoL and instead revealed the improvement on the social functioning subscale. In general, these results suggested the beneficial effects of physical activity on ASD children and its incorporation into the early intervention should be recommended.

## **POSTER SESSION 4**

### **On seeing things differently: re-envisioning psychology**

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I propose that psychology, as a discipline, needs almost to reinvent itself in order to be crucially relevant in our precariously balanced and dynamically interwoven world. Reinvention comes from revising assumptions and seeing things differently. This paper starts from seeing connection and relationship as being at the core of the complex human life process. Aside from our DNA-driven biology and physical environments humans form through experienced relationship and its meanings, and live in relation externally and in their inner lives. We are co-creative agents but are not freestanding beings who can properly be understood outside and apart from context. Expressed in one sentence, the human person is understood by the author as an embodiment of relationship in an intricately connected living world of relation. Several associated implications are carefully explored. These include: (1) an assumption of dynamic complexity in almost any human phenomenon of interest; (2) the adoption of a systemic way of thinking as opposed to the idea of simple or context-free regularity of association of variables; (3) an awareness of the broad principle that combinations result in new wholes with their own emergent properties, of which human relationships are a special case; (4) a view of human difficulties as interconnected and multi-level phenomena, this implying a vital necessity to trace and respond preventively to societal and other systems helping to generate 'personal' difficulties, as against only treating the 'symptoms' on individual or family/group levels; and (5) a recognition that research itself is vulnerable to orthodoxy and there is need for inventive qualitative methodology,