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Contents

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THE PREVENTION OF DEPRESSION FROM CHILDHOOD TO ADOLESCENCE

Page

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1 Introduction to the Prevention of Depression from Childhood to Adolescence <i>Deepali Sharma and Karina Weichold</i></p> <p>2 The Effectiveness and Sustainability of Universal School-based Depression Programs for Children and Young People <i>Paul Stallard</i></p> <p>5 Emotion Regulation as the Stepping Stone for Enhancing Wellbeing <i>Caroline Braet, Laura Wante and Leentje Vervoort</i></p> <p>9 Universal Prevention of Depression in Adolescence: The Use of Skill Facilitation Approaches <i>Karina Weichold and Anja Blumenthal</i></p> <p>13 The Promise of Applied Video Games for the Prevention of Anxiety and Depression in Youth <i>Isabela Granic</i></p> <p>17 Mindfulness-Based Intervention in School: Challenges for Future Research <i>Esther Calvete</i></p> | <p>20 COMMENTARY
Adolescent Depression Prevention Growing Up: Challenges and Future Directions
<i>Sanne P.A. Rasing, Daan H.M. Creemers, Yvonne A.J. Stikkelbroek, Rowella C.W.M. Kuijpers and Rutger C.M.E. Engels</i></p> <p>23 SOCIETY
Minutes of the ISSBD 2016 Executive Committee Meeting in Vilnius, Lithuania – I and II
<i>Karina Weichold</i></p> <p>31 Notes from the President <i>Xinyin Chen</i></p> <p>33 NEWS
Special Report: The 24th Biennial Meeting of the International Society for the Study of Behavioural Development: Summary Report <i>Radosveta Dimitrova</i></p> <p>35 Major Conferences of Interest</p> |
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Introduction to the Prevention of Depression from Childhood to Adolescence

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Till recent times, depression was considered essentially an adult disorder. Developmental studies helped investigators to understand more and modify the view that children are too developmentally immature to experience depressive disorders, or that adolescent low mood is just a part of a mood swing (Maughan, Collishaw, & Stringaris, 2013). Research findings point out that experiencing the first episode of depression during childhood is likely to lead to repeated and perhaps even more severe symptoms during adolescence. What is of further concern is the evidence that suggests depression in childhood and adolescence share comparable presentation and path to adult disorders such as dysthymia and major depression. Also, closely linked to childhood and adolescent depression are adverse social and academic outcomes.

The present issue of the Bulletin on "Prevention of depression from childhood to adolescence" deliberates on approaches and programs, in schools and other settings, which can be useful in preventing depression in children and adolescents along with highlighting successful interventions which have been empirically evaluated.

We have five feature articles followed by a commentary on this topic and the first paper (Stallard) looks at the effectiveness and sustainability of universal school-based

depression prevention programs. The second paper examines emotion regulation as a mechanism to improve adolescent mental health (Braet, Wante, & Vervoort) and in the third paper Weichold and Blumenthal present findings using the skill facilitation approach towards universal depression prevention. In the fourth paper by Granic, the author presents a rationale and framework for research on the development and evaluation of video games for the prevention of depression and anxiety in youth followed by Calvete detailing mindfulness-based intervention and associated challenges and questions in the fifth paper. The commentary (Rasing, Creemers, Stikkelbroek, Kuijpers, & Engels) raises issues related to the difficulties and challenges in depression prevention and points towards future directions.

In the Society notes Minutes of the ISSBD 2016 Executive Committee Meeting in Vilnius, Lithuania by are reported by Weichold along with the President's notes. A brief report by Dimitrova provides more color to the very successfully concluded 24th Biennial Meeting.

As always, it has been our endeavor to focus on topics which are currently relevant and are evidence driven. We will be delighted to hear from members regarding topics they think are important that have not been covered in earlier issues of the Bulletin. We are also very open to receiving suggestions and reinventing our presentation style. The Bulletin aims to provide an avenue to researchers to showcase their findings and explore academic collaborations.

Cited reference:

Maughan, B., Collishaw, S., & Stringaris, A. (2013). Depression in childhood and adolescence. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*, 22 (1), 35-40.

The effectiveness and sustainability of universal school-based depression programs for children and young people

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Psychological problems in children are common with cumulative rates suggesting that by early adulthood 15-18% will have experienced an impairing emotional disorder of anxiety or depression (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003; Ford, Goodman, & Meltzer, 2003; Essau, Conradt, & Petermann, 2000). Childhood emotional problems often persist with the Dunedin birth cohort study finding that approximately three-quarters of adults with a psychiatric disorder (at age 26) had a disorder before the age of 18 (Kim-Cohen et al., 2003). Childhood emotional problems also increase the risk of other mental health problems in adulthood with the duration of the childhood episode being the strongest predictor of later problems (Woodward & Fergusson 2001; Bittner et al., 2007; Patton et al., 2014). Whilst effective interventions for child anxiety and depression are available, relatively few children are identified, with the majority remaining untreated (Merikangas et al., 2010).

School-based Prevention

A way of enhancing the psychological well-being of children is through the use of prevention programs. These are conceptualized as universal, selective or indicated with each having a different focus and aim (Mrazek & Haggerty, 1994). Universal and selective programs are concerned with primary prevention and aim to promote well-being and prevent the emergence of psychological problems. They are provided to all of a target population irrespective of current symptomatology. Universal programs, for example, might be provided for children of a particular age or attending a particular school. Selective programs are provided for those at increased risk of developing problems through exposure to risk factors, e.g. children of parents with a mental illness, or a prior child learning disability. Indicated programs are concerned with secondary prevention and are targeted at those displaying mild or moderate problems, e.g. children with raised symptoms of depression. They aim to prevent symptoms from worsening and developing into more disabling and enduring mental health disorders.

Schools provide a convenient and familiar location to deliver prevention programs for children (Fazel, Hoagwood, Stephan, & Ford, 2014). They are readily identifiable and provide access to large numbers of children. Furthermore, it is increasingly recognized that schools have an important role in promoting the psychological well-being of their students.

Effectiveness

Systematic reviews suggest that school-based social and emotional health prevention programs can have positive effects (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). However, the results of programs focusing on depression have achieved mixed results (Merry et al., 2011). Many studies are underpowered and methodologically poor with inadequate statistical analysis (Corrieri et al., 2014; Ahlen, Lenhard, & Ghaderi, 2015; Stockings et al., 2016).

(i). Primary prevention

Whilst noting these limitations, systematic reviews reach similar conclusions: The effects of depression prevention programs are often very small, and long-term effects are seldom assessed. Given that the aim of universal programs is to enhance resilience and keep children healthy it is surprising that few studies have explored their longer term effects (longer than 12 months) on maintaining health status. We therefore have no robust evidence that school-based universal depression prevention programs reduce the incidence of depressive disorders.

(ii). One-dose programs

The current approach to depression prevention typically involves one-off interventions designed to “immunize” the young person from future problems. The limited effects obtained in research to date suggest that alternative, repeated exposure models may be worth investigating (Stockings et al., 2016). For example, a theoretical model such as cognitive behavior therapy (CBT) could be used as a framework for understanding events, managing emotions and dealing with problems. This could be woven throughout the child’s schooling with sessions focused at key times upon developmental challenges that might trigger a depressive



episode, e.g. friendship issues, coping with failure, managing risk-taking or accepting physical changes.

(iii). Stepped-care prevention

An alternative is to conceptualize prevention as multifaceted involving a stepped care model of interventions (van't Veer-Tazelaar et al., 2009). For example, a universal depression screen and psychoeducation program could be provided in school for all students. Those who screen positive could be offered watchful waiting followed by a repeat mood check. A selective low intensity prevention program such as bibliotherapy or internet-based therapy could be provided for those who continue to screen positive. Finally, an indicated prevention program such as a brief face-to-face CBT intervention could be provided for those who continue to present with symptoms.

Sustainability

Universal school-based prevention has the potential to provide a low-cost option that could have a significant and far-reaching impact upon the psychological well-being of children. However, before universal prevention can be advocated as a public health option, clinical effectiveness needs to be established when delivered at scale under diverse everyday conditions. In addition, sustainability needs to be demonstrated, in particular each program's fit with schools and its capacity to provide tangible outcomes and cost-effectiveness.

(i). Fit with school

We undertook a randomized controlled trial (PROMISE) of a school-based depression prevention program (Stallard et al., 2012). We assigned 5,030 young people aged 12-16 to a cognitive behavior therapy program (Resourceful Adolescent Programme) or an attention control group or usual school provision. Although we found no differences between groups in depressive symptoms at 12 months we encountered a number of practical issues which would have limited the ongoing use of the program.

Firstly, in terms of program length, schools are very busy, timetables are full and in some instances it was not possible to find the 9 hours required. This has implications for the design of universal programs which need to be short and focused if they are to be accommodated within busy schools.

Secondly, many UK schools are already teaching some of the key elements of depression prevention such as emotional management, problem solving and interpersonal skills. Whilst depression prevention programmes sequentially develop, apply and focus these skills on improving mood, many schools thought that there was considerable overlap and questioned whether another intervention was required.

Finally, some teachers were uncomfortable about delivering a depression prevention program. They did not see themselves as mental health experts and were concerned about raising issues which they thought could potentially be harmful (e.g. self-harm). This has implications for who

delivers programs in schools and the training and support required.

(ii). Tangible outcomes

Programs are more likely to be sustainable if they are perceived as relevant and result in observable outcomes. In terms of relevance, schools are ultimately assessed on their academic outputs, i.e. the grades children achieve in standardized assessments. To date, the majority of depression programs have focused on psychological outcomes and have seldom assessed changes in educational outcomes. Future studies should assess the impact of school-based universal depression programs on both psychological and educational outcomes.

In terms of outcomes, most universal depression prevention trials report changes in symptoms of depression. Whilst reductions on questionnaires may be statistically significant it is unclear whether these are clinically meaningful and how they translate into tangible outcomes. Indeed, many questionnaires assess internal states and the changes may not necessarily be noticed by others. In our recent school-based anxiety prevention trial we achieved significant reductions in anxiety symptoms at the 12-month follow-up (Stallard et al., 2014). However, these results were based only on self-report measures with parents and teachers failing to identify any observable changes. If programs are to be sustainable the effects must be observable and result in important changes for the schools, e.g. lower absenteeism, less bullying, better homework completion rates.

(iii). Cost-effectiveness

Highly effective and acceptable universal programs will not be sustained if the costs involved in delivering them are excessive. This is even more important within a context of increasing financial austerity. However, it is unclear whether funding for prevention programs should be provided locally by schools or centrally by the Government.

Finally, universal programs need to be cost-effective, i.e. demonstrate future savings from reduced use of health, educational or social services due to improved functioning. This is problematic with universal prevention programs where the majority of participants are already healthy. Similarly, children with depression often go unrecognized and untreated and as such the cost of service use is small and potential savings are limited.

Conclusion

The majority of universal depression prevention programs have assessed changes in psychological symptoms over the short term. There is little evidence to suggest that these programs have a primary preventive effect in terms of maintaining psychological health and reducing the incidence of new disorders. Consideration of how these programs fit within busy schools and the need to demonstrate improvements on relevant educational outcomes as well as psychological benefits will improve their longer-term sustainability. This analysis needs to be conducted alongside an economic evaluation since sustainability will be affected by the ability of universal programs to reduce future health and social care

usage. However, in to enhance program effectiveness we need to explore and evaluate alternative models of delivering universal programs.

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Emotion regulation as the stepping stone for enhancing wellbeing

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Adolescents, a group at risk

The transition from childhood into adolescence is a developmental period characterized by biological, cognitive, emotional, and social challenges. These developments often coincide with stronger emotional reactivity, higher negative affect, and increased vulnerability for psychopathology (Calkins, (2010). A recent report of the WHO's worldwide Health Behavior in School-aged Children (HBSC) Study (Inchley et al. Eds., 2016) describes some alarming trends in this transition phase. First, life satisfaction and wellbeing clearly decrease during adolescence. Second, adolescents suffer from several stress-related health complaints, such as headaches and sleep problems. Given these adverse developments, it comes as no surprise that in adolescence psychopathology shows a sudden and massive increase: at least 15-20% of adolescents worldwide experience impairment from psychological problems (WHO, 2005; Coppens et al., 2015). Moreover, this transition phase is known as enhancing the risk for the development of serious clinical disorders, such as depression (Kessler, Avenevoli, & Ries, 2001), anxiety (Rapee, Schniering, & Hudson, 2009), and antisocial behavior (Moffitt, 1993).

These general observations on adolescent mental health are of specific concern since adolescents with psychological problems are very likely to develop psychopathology later in life, and run the risk of becoming adults in need of treatment (Taylor, 2010). However, despite the availability of evidence-based treatments for adolescent mental health problems (Weisz et al., 2010), adolescents are often reluctant to seek help and a vast majority of adolescents (50-70%) with severe mental health problems does not receive adequate treatment or receives no treatment at all (Coppens et al., 2015; Merikangas et al., 2011). The persistence and long-term burden of adolescent psychopathology (Kessler et al., 2012) together with the limited reach of treatment services highlight the importance of psychoeducation and early intervention to improve the mental health of adolescents, both at the level of prevention and at the level of treatment.

Towards a transdiagnostic framework for studying mental problems

Traditionally, mental health has mainly been studied from a disorder-specific approach which presumes that there are clear mental disorders (e.g. depression) which can be

distinguished by specific cognitive and behavioral processes (Dudley, Kuyken, & Padesky, 2011). However, this approach has some important limitations (Harvey, Watkins, Mansell, & Shafran, 2004; Barlow, Allen, & Choate, 2004; Wolff & Ollendick, 2006). First, holding a disorder-specific approach often obscures the common etiological and maintaining factors shared between different disorders. Second, it has been shown that for disorders with extensive symptom overlap, for example depression, anxiety, and conduct disorder, successful treatment of one disorder often reduces symptoms of the other (i.e., spill-over effects). Third, the same problems often have different clinical or subtle subclinical presentations making both the identification of adolescents at risk and the application of disorder-specific interventions to the individual case rather difficult (Girio-Herrera & Ehrenreich-May, 2014).

Considering these limitations, prevention planners should consider stepping away from the disorder-specific framework (Cicchetti Ehrenreich-May, 2006) and adopt a recently proposed alternative: the transdiagnostic framework for studying mental problems (Harvey et al., 2004; Barlow et al., 2004). According to this view, psychological problems should be conceptualized as related conditions that vary along a continuum whereby "higher order" mechanisms can explain a range of problems (Berking, & Lukas, 2015; Martinsen, Kendall, Stark, & Neumer, 2016). A first transdiagnostic perspective on mental health was initiated by cognitive behavioral theorists (CBT) who identified information processing biases as transdiagnostic mechanisms in different mental health problems (Bijttebier, Vasey, & Braet, 2003).

One transdiagnostic mechanism that is particularly relevant to adolescent mental health is Emotion Regulation (ER) (Gratz, Weiss, & Tull, 2015). ER refers to "processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (Gross & Tull, 1998, p. 275). It is assumed that powerful emotions have the potential to disorganize and disrupt multiple psychological processes; thereby modulating the experience and expression of these emotions is considered as essential for wellbeing, behavioral exploration, cognitive processing and social competence (Gratz et al., 2015). It is noteworthy that negative emotions are essential for human survival and should be seen as important signals. From this perspective, it is not the experience of a negative emotion, but the inefficient regulation of the emotion that lays the foundation for psychopathology symptoms (Gratz et al., 2015). So, after perceiving and interpreting emotions (i.e., emotional awareness), individuals need to manage and modulate the intensity of the emotions they experience. In order

to do so, specific ER strategies can be used. ER strategies are considered adaptive or maladaptive depending on their effects on affect and behavior in the long term and possible resultant psychopathology (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Braet et al., 2014). On the one hand, adaptive ER, such as reappraisal, acceptance, distraction, and problem solving, reduces negative affect and exerts protective effects against the development of psychopathology. On the other hand, maladaptive ER (such as rumination, avoidance, and suppression) is less effective in reducing negative emotion over the long term and presents a risk factor for the development of internalizing and externalizing problems and psychopathological symptoms.

Acquiring ER skills: an important developmental task during adolescence

An important developmental task during adolescence is the autonomous use of adaptive ER skills. However, developmental research on ER during adolescence shows equivocal results (Zimmermann & Iwanski, 2014). In early adolescents, there seems to be a decrease in the use of adaptive ER strategies and an increase in the use of maladaptive ER strategies (Bradley, 2000; Cracco et al., 2016; Zeman, Cassano, & Perry-Parrish, 2006), which could explain the increased risk of developing psychopathology in this age group. The mechanism for this maladaptive shift in ER is still unclear. One possible mechanism relates to cognitive control deficits. Specifically, in stressful situations the heightened emotional reactivity that characterizes adolescents might deplete their cognitive control. The lack of cognitive control in various adolescent mental health problems is well documented, (Mueller, 2011; Wante, Mueller, & Demeyer, 2015). It can be assumed that impaired cognitive control might interfere with the use of adaptive ER strategies, facilitating an increased use of maladaptive ER strategies (Hilt, Leitzke, & Pollak, 2014; Carlson & Wang, 2007).

Interestingly, some new innovative research indicates that interventions developed within a transdiagnostic framework, targeting both anxiety and depression, have a strong potential to improve adolescent mental health, both at the level of prevention and at the level of treatment (Queen, Barlow, & Ehrenreich-May, 2014; Ehrenreich-May, Bilek, Queen, & Hernandez Rodriguez, 2012; Seager, Rowley, & Ehrenreich-May, 2014; Dozois, & Seeds, 2009), thereby providing a first proof-of-concept for a transdiagnostic approach to mental health interventions (Weisz, Chorpita, & Palinkas, 2012). However, the acquisition of ER skills has not been included so far. And, although it has already been shown that transdiagnostic prevention trials successfully reduce adolescent mental health symptoms (Chu, Hoffman, Johns, & Reyes-Portillo, 2015), effect sizes in prevention trials are small and may be enhanced by incorporating new content, such as reports of ER training.

Research gaps on ER in adolescents

Before prevention programs including ER are set-up and evaluated, we need to answer some challenging research questions. Until now, most research on ER has focused on the regulation of negative emotions, while the importance of enhancing or maintaining positive emotions has only

recently been recognized. Therefore, ER strategies for up-regulating positive emotions that can be successfully adopted by adolescents need further attention (Yap, Allen, & O'Shea, 2011; Carl, Soskin, Kerns, & Barlow, 2013). Furthermore, although strong evidence suggests that even young children can regulate their emotions, and ER is thought to improve and become more efficient during development (Zimmermann & Iwanski, 2014), in adolescence there seems to be an increased use of maladaptive and a decreased use of adaptive ER strategies (Braet et al., 2014; Cracco et al., 2016). This inability of adolescents to adopt efficient ER, especially when confronted with stressful events, requires an in-depth analysis.

Next, although training children in ER strategies has received strong research support, till now only a few published studies have examined the effects of experimentally manipulating ER strategies in adolescents (Rood, Roelofs, Bögels, & Arntz, 2012; Park, Goodyer, & Teasdale, 2004; Platt, Campbell, James, & Murphy, 2015). The studies show that stimulating the use of an adaptive ER strategy (i.e., positive reappraisal) has beneficial mental health effects. Experimentally induced positive reappraisal decreases negative affect and increases positive affect in non-clinical adolescents who are instructed to think about a stressful event (Rood et al., 2012). Furthermore, it reduces negative mood in adolescents with and without clinical depression who are confronted with peer rejection (Platt et al., 2015). However, for the adoption of other ER-strategies (problem solving, distraction and acceptance) confirmation of the short-term effects on mental health parameters is still required. One notable exception evaluates the efficacy of a school-based mindfulness program relative to a control condition (Raes, Griffith, Van der Gucht, & Williams, 2014). The 8-week mindfulness program was able to produce statistically and clinically significant reductions in depression symptoms, both immediately post-intervention and at 6-month follow-up. Interestingly, the program showed both preventive and curative effects. Although mindfulness is related to the well-researched "Acceptance" ER strategy, it is nowadays assumed that people will be more resilient when they master several adaptive skills allowing flexible use of them (Yap et al., 2011), which means that we need programs that evaluate the use of different ER skills.

Besides the content of programs, the format of delivery also needs an upgrade. Despite the previously demonstrated importance of including parents in youth mental health prevention (Spence, & Sheffield, 2003), as reflected in prevention guidelines (Coppens et al., 2015), transdiagnostic prevention trials up until now have not included parents. Involving parents might further improve the beneficial effects of transdiagnostic prevention efforts when focusing on ER. First, parental support helps in coping with normative demands and, consequently, is seen as a resilience factor in the development of emotional problems (Helsen, Vollebergh, & Meeus, 2000). Convincing data shows that ER develops within the parent-child interaction (Kiel & Kalomiris, 2015). Despite the fact that acquiring autonomy is an important developmental task in early adolescence and that adolescents spend more time away from parents (Eccles, 1999), parents remain primary attachment figures in early adolescence and certain levels of distress still activate parental support seeking (Vandevivere, Braet, & Bosmans, 2015). Second, during the transition into adolescence, parents need



to find new ways of interacting with their child, searching for a balance between autonomy and supervision. This may induce a lack of confidence in their own parenting skills and uncertainty regarding the best approach. Another reason to involve parents in prevention programs is that teaching parents to model and reinforce acquired social-emotional skills has been demonstrated to improve the generalization of new skills to real-life contexts (Spence, 1983).

Taken together, a transdiagnostic approach to adolescent mental health shows great promise. Investigating the potential of common underlying processes in adolescent mental health (e.g., Why does ER sometimes fail?) is recommended. This basic scientific knowledge can guide the development of transdiagnostic prevention programs aimed at reducing the risk of developing adolescent psychopathology. Along with filling in some challenging research gaps, research on the most efficient format to deliver such programs, for example by involving parents, might maximize their potential.

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Universal Prevention of Depression in Adolescence: The Use of Skill Facilitation Approaches

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Introduction

Depression during childhood and the tremendous increase in depressive symptoms during early and mid-adolescence is a major public concern, not only in Europe and the U.S. but also in other parts of the world. In Germany, for instance, 5.2% of 7- to 13-year-olds and 5.6% of 14- to 17-year-old adolescents show clinically relevant symptoms of depression (conservative estimate based on representative data; Ravens-Sieberer, Wille, Bettge, & Erhart, 2007). Risk factors for depression in adolescence are rooted in children's biological and personality characteristics interacting with adverse environmental factors which may lead to cognitive biases (e.g., Lewis, Jones, & Goodyer, 2016). Additional negative life events and various biopsychosocial processes during puberty, such as hormonal, brain-related, and cognitive changes, increased self-awareness or peer-related risks like teasing (Nolen-Hoeksema & Hilt, 2009; Weichold & Silbereisen, 2008) seem to be responsible for the increase in mild to severe forms of depression from childhood to adolescence. Especially girls with an early timing of pubertal maturation are at risk for developing depression with an early onset and chronic progression (Weichold, Silbereisen, & Schmitt-Rodermund, 2003). Because subthreshold depression and clinically relevant forms create significant individual and societal costs (e.g., Bertha & Balázs, 2013), effective prevention strategies are urgently needed.

Types of Intervention and their Effectiveness

During the past decades, various therapeutic, selective, and indicated strategies to reduce depressive symptoms have been developed, implemented and positively evaluated, building on the assumption that adolescence creates a window of opportunity and, thus, intervening against depression may be particularly effective during this life period (for an overview: Nolen-Hoeksema & Hilt, 2009). Among them, various approaches have been found to be effective, with reasonably high effect sizes (e.g., Garber, Webb, & Horowitz; 2009). In contrast, universal prevention programs targeting depression in entire cohorts of children and adolescents and delivered mostly in the school context are

relatively rare, and evidence regarding their effectiveness is mixed (Calear & Christensen, 2010; McLaughlin, 2009). However, at least short-term effectiveness of such programs (when delivered by trained personnel in contrast to teachers) can be assumed for adolescents with high as well as low risk for depression or initial depressive symptoms (e.g., Calear & Christensen, 2010; Corrieri et al., 2014). Variations in the success of universal depression prevention programs against depression so far were primarily attributed to school-related logistic and methodological challenges (McLaughlin, 2009). In the following, we will argue that the program effectiveness may also depend on the intervention approach taken.

Approaches to Universal Prevention of Depression in Adolescence

Cognitive Behavioral Therapy (CBT). In their meta-analytic review based on 30 studies, Horowitz and Garber (2006) compared the effects of depression intervention attempts (e.g., facilitation of cognitive, social, problem solving, coping or anger management skills, and conveying information on relaxation techniques). Some of them are explicitly based on the principles of Cognitive Behavioral Theory (CBT; e.g., Merry, McDowell, Wild, Bir, & Cunliffe, 2004), widely used in depression prevention programs that can enable boys and girls to interpret negative life events more positively and respond to them effectively (Venning, Kettler, Elliott, & Wilson, 2009). For universal programs applying the CBT approach, however, Horowitz and Garber (2006) found very low effect sizes on depression (.12 at post-test; .02 at follow-up) which were significantly lower than those for selective and indicated programs. This finding matches other reviews which stress that depression prevention programs (and in particular those based on CBT) are effective, if at all, in adolescents who already show depressive symptoms (Marcotte, 1997; Venning et al., 2009). Thus, it could be argued that the low depression rates in unselected samples typically present in universal programs may hinder the detection of preventive effects of CBT-based programs (see Horowitz & Garber, 2006). However, as the vast majority of studies included in the reviews did not conduct long-term follow ups, it is still necessary to clarify by future research whether CBT-based programs are able to prevent early-onset depression at least in a small number of cases, and thus, are cost-effective prevention approaches.

Skills Facilitation: Socio-Emotional Learning (SEL) and Life Skills Education (LSE). Another set of universal prevention

programs against depression in adolescence were based on the Social and Emotional Learning approach (SEL) which integrates concepts of resiliency research and competence promotion with the Positive Youth Development concept (e.g., Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002). The primary aim of the SEL approach is to foster ability “to generate and coordinate flexible, adaptive responses to demands and to generate and capitalize on opportunities in the environment” (p. 80, Waters & Sroufe, 1983) via the promotion of self-awareness, self-management, social awareness, relationship skills, and decision-making skills (see Clarke, Morreale, Field, Hussein, & Barry, 2015; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). These SEL skills are designed to be taught, modeled, practiced, and applied (via face-to-face interactions) to everyday situations in order to prevent a wide spectrum of psychosocial adaptation problems, and to promote positive and competent development. Based on the inspection of 213 studies, Durlak and colleagues (2011) concluded that SEL-based universal programs and school-based prevention programs (with the inclusion criterion of targeting students *without* preexisting problem behaviors) can be effective in preventing internalizing problems in adolescence. Effect sizes on emotional distress (including depression and anxiety) were .24 at posttest (.25 for class by teacher intervention, 0.27 for multicomponent programs), and .15 for follow-up (median=52 weeks). Similarly, Clarke and colleagues (2015) commented that universal competence promotion programs based on the SEL-approach (as implemented in the UK) reduced symptoms of depression.

Rather recently the SEL approach was designated as an umbrella construct which also includes the well-known Life Skills approach of the World Health Organization (WHO) that has been popular within prevention and promotion circles for more than three decades. Life Skills programs promote intra- and interpersonal proficiency to enable children and adolescents to cope with the challenges of their everyday life (WHO, 1999; 2012). Life skills include communication and interpersonal skills (e.g., assertiveness, empathy, cooperation), decision-making and critical thinking skills, and skills for coping and self-management (e.g., stress management, confidence, self-esteem; WHO, 2012). Such general skills are reinforced by skills and knowledge specific to the problem behavior in focus through highly interactive, manualized programs within schools, usually facilitated by trained teachers as part of the school curriculum. Life Skills education (LSE) is an effective tool in the area of substance use prevention during adolescence; it has also been applied successfully to HIV/AIDS, violence, and suicide prevention (WHO, 1999). Using the following example, we would like to investigate whether such a Life Skills program may also positively affect depressive symptoms in adolescents.

The universal school-based Life Skills program IPSY (Information + Psychosocial Competence = Protection) against adolescent substance misuse was implemented over three years (basic program in grade 5 and booster sessions in grades 6 and 7) within the school setting via trained teachers. It was evaluated using a quasi-experimental design with an intervention and control group in secondary schools in the German federal state of Thuringia across several years. Assignment to intervention and control group was school-wise. The program has been shown to be effective regarding substance use, intra- and interpersonal skills,

and school-bonding (Weichold, 2014). Although IPSY, like other Life Skills programs, does not target internalizing problem behavior (and did not comprise depression-specific units) we also assessed self-reported severity of depressive symptoms with the anxious/depressed subscale of the Child Behavior Checklist (Working group German Child Behavior Checklist, 1998) at baseline, posttest (about half a year after baseline), and three follow-ups in 12-month intervals after the posttest. Analyses of possible intervention effects of the IPSY program on depressive symptoms revealed no effects for individuals highly depressed at baseline or for boys (which may be in part attributable to their relatively low depression scores at all). In contrast, for girls with no or only moderate severity of depressive symptoms at baseline, we found a significant group effect indicating that depression among girls in the intervention group did not increase as much over time as their control counterparts (see Figure 1).

This was true regardless of girls’ pubertal timing at baseline. However, the effect size was only small. It is likely that this effect emerged because girls as compared to boys particularly profited from the program with regards to communicative and self-confident behaviors via the interactive mode of program facilitation stimulating girls’ activity and social integration within a supportive classroom setting (Weichold, Brambosch, & Silbereisen, 2012). The promotion of close bonds to same-aged peers, in turn, may foster girls’ self-esteem during an otherwise turbulent life phase (i.e., early adolescence).

Conclusion

In sum, current approaches to universal prevention of depression in adolescence and their effectiveness suggest that the facilitation of intra- and interpersonal skills via highly interactive programs seems to be a promising strategy, in particular for subthreshold forms of depression, and especially for girls, who are more likely to develop internalizing problems through the course of puberty than boys. Additionally, universal prevention programs in that area based on CBT, if at all, exert only short-termed and weak effects (on already depressed individuals). Thus, it may be that the combination of both CBT and skills facilitation within a comprehensive program is a good strategy.

One example for such a comprehensive program is LARS&LISA, developed, implemented (in schools by psychologists), and evaluated in Germany (Pössel, Horn, Groen, & Hautzinger, 2004). The program includes 10 sessions focusing on goal-setting, and the relationship between cognition, behavior, and emotions (e.g., for the reduction of dysfunctional thoughts, as proposed by CTB). In addition, students participated in an intensive and highly interactive social competence and assertiveness training (reflecting the SEL-approach). Positive effects were found on social network interaction, and on depressive and aggressive forms of behavior (Wahl, Patak, Pössel, & Hautzinger, 2011). In line with the above mentioned results from the IPSY-program, these positive effects were found in particular for non-depressed youth, or adolescents with sub-syndromal depression (Pössel et al., 2004). Future program development in the area of universal depression prevention should

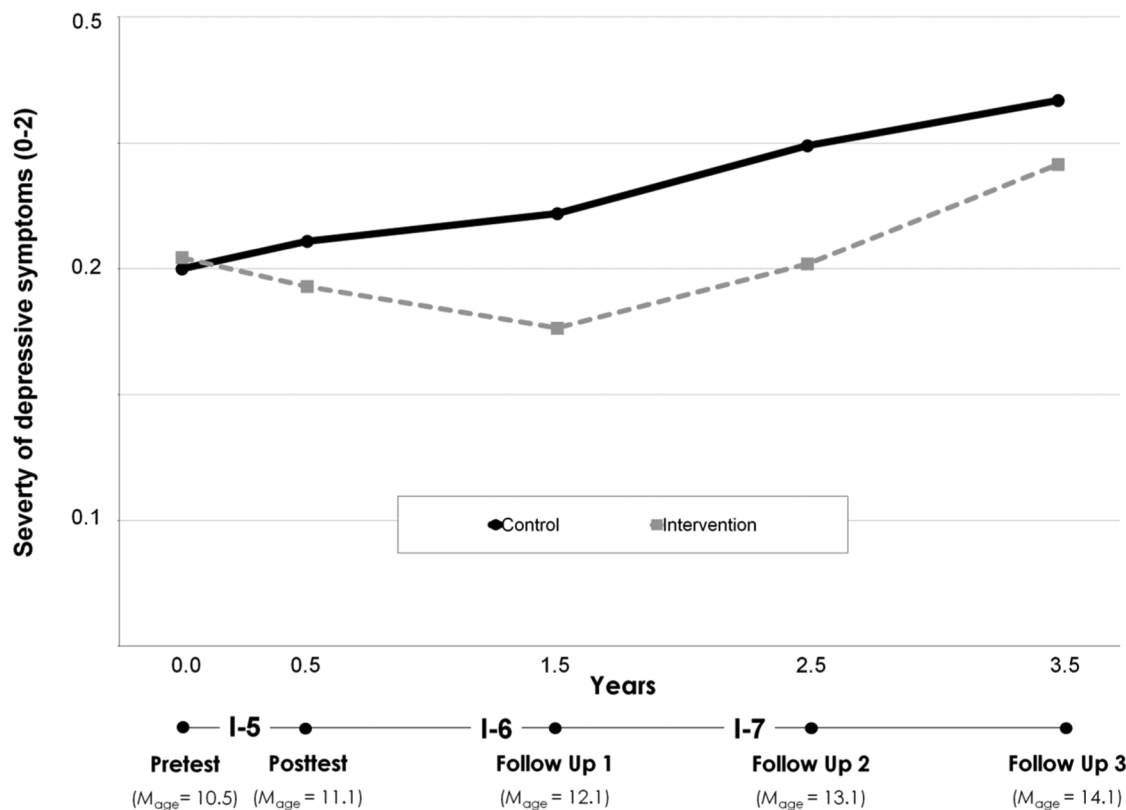


Figure 1. Group trajectories for severity of depressive symptoms for girls not highly depressed at baseline over time ($N = 322$). Results of repeated-measures ANCOVA with the baseline score as covariate indicated a significant group effect [$F(1, 319) = 6.481, p < .05$, partial $\eta^2 = .02$]. The groups did not differ significantly at baseline and results did not change when controlling for pubertal timing at baseline. I-5/I-6/I-7 indicate program implementation in respective grades.

thus consider comprehensive approaches addressing a broad range of biopsychosocial risk factors for adolescent depression as new avenue to a higher effectiveness of universal prevention of depression in adolescence. A combination of components applying CBT and skills facilitation (SEL, LSE) implemented and trained within adolescents' real life settings may be a promising first step.

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The promise of applied video games for the prevention of anxiety and depression in youth

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Anxiety and depression are the most frequently diagnosed mental health problems in youth, and they lead to debilitating, often devastating long-term outcomes for a huge proportion of teenagers across the globe. Effective prevention programs are urgently needed, especially during adolescence, when these mental health concerns peak; however, even our most advanced evidence-based programs lead to variable and often disappointing outcomes (Weisz, McCarty, & Valeri, 2006). We argue that a new approach to the prevention of these emotional disorders is urgently needed, one that meets youth in the context in which they spend a huge proportion of their time, and one that remains relevant while also integrating evidence-based principles and practices. The current paper will present the rationale and general framework for research on the development and evaluation of video games for the prevention of depression and anxiety in youth.

The average 13-year old spends more than 6.3 hours per week playing video games (both boys and girls; McGonigal, 2011). By the time adolescents reach the age of 21, they will have spent at least 10,000 hours playing these games (McGonigal, in press). The goal of our research program is to co-opt this immense energy and enthusiasm for purposes beyond entertainment, to train emotional resilience skills that will prevent the development of anxiety and depression.

A zeitgeist has emerged in the medical and educational fields for *applied games* as learning tools. Applied games (also called “serious games”) are video games used for non-leisure purposes that are expected to surpass the multi-billion-dollar entertainment games industry in the next decade (Information Resources Management Association, 2015). Across the globe, tens of millions of dollars are being spent by governments and businesses to support innovations in gaming technologies that can be shared across disciplines for diverse learning purposes. The mental health field is poised to benefit enormously from a similar transformation.

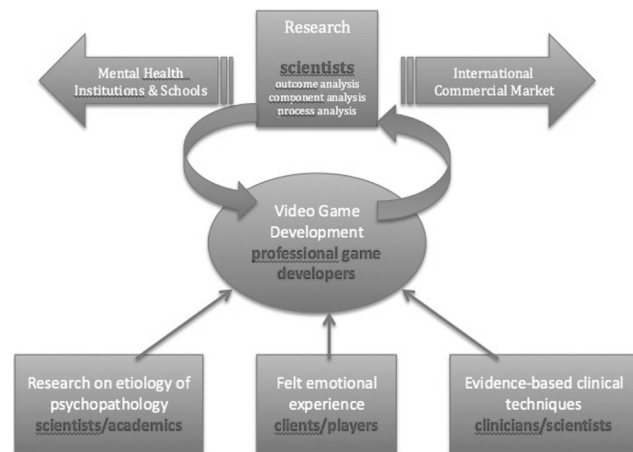


Figure 1. Framework for the partners and processes of collaboration on research, development and dissemination of games for emotional and mental health.

Recently, I have spearheaded the GEMH lab (Games for Emotional and Mental Health), an international consortium of talented academics, clinicians, commercial game designers, and entrepreneurs. Together, we are building and refining the GEMH framework (Figure 1), a framework that stipulates *how* to develop games, *with whom* to do so, the research approaches necessary for validation, and the most effective methods for dissemination of evidence-based products. The hope is that this framework will not only be relevant for games targeting anxiety and depression, but also for a wide spectrum of mental health problems (including aggressive behavior disorders, autism, and attention deficit-hyperactivity disorder).

Scope of the Problems: Anxiety and Depression in Adolescents

The two most serious mental health problems in youth today are anxiety and depression. Anxiety disorders are the most frequently diagnosed mental health problem in youth and the earliest to emerge among all forms of psychopathology, affecting up to 18% of children and adolescents (Merikangas et al., 2010). Without treatment, anxiety symptoms are stable over time and are associated with premature withdrawal from school, lowered school performance, substance use, early parenthood, behavioral problems, and suicidal behavior (Duchesne, Vitaro, Larose, & Tremblay, 2008). Clearly, effective prevention approaches, especially those designed for adolescents, are urgently mandated.

Evidence-based Interventions

Meta-analyses have established that Cognitive Behavioral Therapy (CBT) is among the most effective current approaches for the treatment and prevention of anxiety and depression (CBT; Weisz et al., 2006). CBT approaches attempt to address the varied causal mediators of depression and anxiety by teaching reappraisal and problem-solving skills to increase hope and decrease rumination and rejection sensitivity. CBT also targets avoidance and withdrawal strategies by using behavioral activation methods and exposure techniques coupled with relaxation training. Although CBT is the best evidence-based practice we have currently, outcomes remain mixed and effect sizes are consistently small to moderate (Weisz et al., 2006).

In addition, with increasing urgency, top scholars and international stakeholders have called for interventions that are more accessible and resource-efficient. E-mental health initiatives are skyrocketing as a means of addressing this call. The rationale for implementing e-mental health interventions has been reviewed in detail in several recent reports (e.g., Kazdin, 2011; Mohr, Burns, Schueller, Clarke, & Klinkman, 2013). In sum, they include cost effectiveness, improving access to care and avoiding the stigma associated with having to seek interventions in conventional face-to-face programs.

Despite the advantages of e-mental health approaches, there are also serious limitations that need to be considered. First and most importantly, there is little evidence that these approaches are effective without supervision of a coach or clinical practitioner (Granic, Purebi, Petreu, & Committee, 2015). This human-focused supervision is required because of the notoriously low adherence to e-mental health programs (e.g., Christensen, Griffiths, & Farrer, 2009). For children and adolescents who do not self-identify as having anxiety and depression problems, there is little motivation to access online or computerized interventions. Moreover, these programs stem from psychoeducational, CBT practices, so they are didactic in character, not particularly engaging, and they require a great deal of initiative from participants.

Why Games for Mental Health?

The main assumption underlying the use of video games as intervention tools is that the often disappointing outcomes of CBT prevention trials, and the emerging challenges in e-mental health initiatives, resulting from limitations in the *delivery* of CBT principles—not the principles themselves. We aim to take the science of CBT and import it into a new engine of change: Games. In our recent review in *American Psychologist* (Granic, Lobel, & Engels, 2014), we showed how applied games address the inadequacies of current approaches:

(1) **Engagement:** CBT interventions largely impart psychoeducational information, but adolescents often find didactic lessons boring. Engaging youth in therapy is one of the most challenging tasks clinicians face. In contrast, 97% of youth play video games regularly (Lenhart et al., 2008). Our goal is to hijack this enthusiasm for purposes beyond entertainment, in order to train emotional resilience skills that will prevent anxiety and depression. (2) **Motivation:** The key predictor of treatment outcomes is motivation

for change. Adolescents rarely seek professional help on their own but rather feel coerced by external pressures, which curtails efficacy. Conversely, games are intrinsically motivating because they offer a strong sense of agency, opportunities for co-creation with like-minded peers, and fun. (3) **Practice:** CBT approaches often do a good job of imparting new knowledge, but they leave a large gap between what an adolescent *knows* and actually *does*. CBT tries to address this problem through role-playing and “homework,” but these exercises are time-limited, potentially embarrassing, unconvincing as simulations, and often boring. Video games can be played for extensive periods of time, can trigger a range of increasingly negative emotions, and have become increasingly social in nature, simulating and preparing users for real-life social challenges. (4) **Stigma** is a huge barrier to prevention and treatment (Clement et al., 2015). Games have no stigma attached and can be delivered through “stealth” approaches that avoid mental health labeling (a strategy that is impossible to avoid with current e-mental health approaches). (5) **Personalization:** Conventional prevention approaches are unable to tailor interventions to the diverse needs of an at-risk population. Video games address this problem elegantly: By design, video games are complex systems that adjust dynamically to the players’ actions. Each player’s in-game progress adjusts the degree of difficulty and reinforcement, maintaining an optimal balance for each individual. (6) **Access and cost:** Approximately 80% of youths who need mental health care receive no services (Kataoka, Zhang, & Wells, 2002). Those most in need of care have a difficult time accessing programs because of geographical or life-style factors. Cost is also a major barrier to access for a large subpopulation.

Yet, not all games tap mental health variables. To optimize outcomes, it is critical that game components target causal mediators related to anxiety and depression. Game components—or *mechanics*—are rule-based systems that encourage a user to engage with particular properties of the game through a carefully designed feedback process. Each *mechanic* is a vehicle that trains a certain skill: We are interested in identifying and designing mechanics most relevant to anxiety and/or depression. Space limitations preclude a full discussion of these factors, but examples of mechanics, the CBT principles they derive from, and some of the key mediators of depression/anxiety they are hypothesized to target are summarized in Figure 2.

Component Analysis: Game-based Research Methodology for Testing Causal Mediators of Change

A commonly ignored strength of applied games is the immense potential they hold for testing mechanics of change with tightly controlled experiments. Applied games implicitly tap causal theories of emotional and behavioral change. The modularity of game design provides an unprecedented opportunity to isolate mechanics, each of which embodies a unique principle relevant to anxiety and depression. Game mechanics (for example, exposure) can be added or removed, and experiments can be run measuring outcomes with and without each component. In addition to the randomized controlled trials we run on our applied games (Schoneveld et al., 2016; Poppelaars et al.,

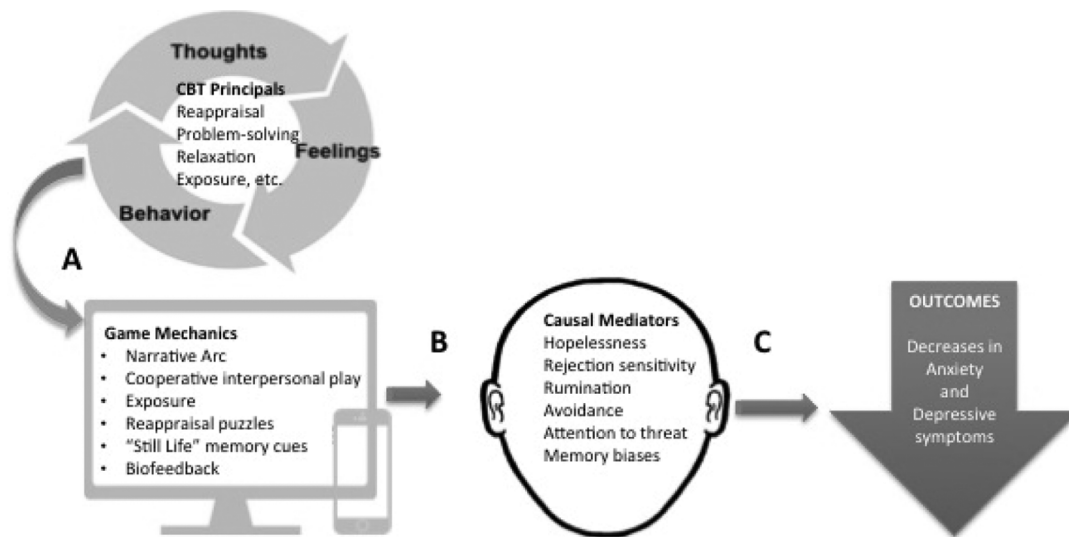


Figure 2. Model for the instantiation of CBT principles into game mechanics that, in turn, impact on causal mediators, ultimately improving outcomes.

2016; Scholten, Malmberg, Lobel Engels, & Granic, 2016), we also run concomitant tightly controlled experiments to identify precisely the causal mediators of change. With this multi-pronged approach to game design and evaluation, we are aiming to have a toolbox of validated game mechanics that reliably change causal mediators of anxiety and depressive symptoms and thus facilitate large-scale change. These evidence-based mechanics can be integrated into new games or “skinned” (the mechanic itself is retained but artwork, music and other surface features are modified) to target different psychopathologies with overlapping deficits, age ranges, and cultures.

Innovation and Impact

Importantly, our approach is fundamentally multidisciplinary so that we can produce games that are at the cutting edge of the interactive technologies that youth are engaging with *right now and will be pursuing in the near future*. This is crucial because so often the “serious games” that psychologists develop with staff programmers or relatively amateur game designers are relics before they are even tested fully. Working with visionary, commercial game developers who are passionate about using their artistic talents, developed over 20+ years in the entertainment industry, to “do good” insures the feasibility of building powerful video games with long-term impact. Our vision is to systematize and extend the GEMH framework (Figure 1)—honing a shared set of terms, stipulating the constraints and processes by which scientists, commercial game designers and clinicians can best collaborate, and setting up guidelines for the development and rigorous testing of applied games. This theory-based framework will lead the entire field of applied games towards basing its claims on science rather than media hype. Finally, we hope to provide open access to the mechanics validated by this research for use by psychologists, researchers and game designers interested in developing their own evidence-based games for a range of psychopathologies.

Using video games as prevention tools is meant to represent a true innovation for intervention delivery, not a small tweak or added component to past approaches. Our aim is to use these new tools to harness the intrinsically motivating properties of video games and their immense potential to teach new forms of thought and behavior. The games have the potential to be portable (mobile), inexpensive and therefore internationally scalable at a level no other type of prevention program has reached. If our games can be as compelling as the best on the market, adolescents will want to pick them up on their own and share them with others, potentially making games for emotional and mental health go viral, and our impact as social scientists, unprecedented. Methodological innovations are also exciting to consider. For example, the real-time recorded gameplay from game-based projects can be used to develop a systematic covert assessment approach that taps behavioral and emotional processes related to anxiety and depression. Players’ responses to game mechanics (e.g., avoiding threats, rejecting bids for cooperative play, ignoring positive cues) can be assessed instead of relying on self-report. This can be a powerful methodology that makes use of players’ actual behaviors in emotionally salient contexts, identifies degree and type of risk, and points to relevant treatment and prevention approaches—which may be embedded in other games. These are uncharted territories for mental health, but games for anxiety and depression prevention hold the promise of equipping the next generation of youth with exquisitely sensitive tools to train their own emotional resilience.

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Mindfulness-Based Intervention in School: Challenges for Future Research

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Adolescence is a period in which increases in numerous emotional and behavioral problems can occur (Polanczyk, Salum, Sugaya, Caye, & Rohde, 2015). One of the risk factors contributing to this growth in psychological problems is increased exposure to life stressors that occur during adolescence, including interpersonal events (i.e., relationships with peers, romantic partners and parents) and achievements (i.e., greater academic demands and emerging adult responsibilities). A school environment offers an excellent place to implement preventive interventions that teach students to cope effectively with their stressors. The findings from recent studies have indicated that a Mindfulness-Based Intervention (MBI) appears to be beneficial for children and adolescents; these findings have suggested that this technology can be applied in educational settings (Felver, Celis-de Hoyos, Tezanos, & Singh, 2016).

The application of MBIs in schools raises interesting unresolved questions, some of which are addressed in this paper: Who should train adolescents in mindfulness? Is it possible to train teenagers in mindfulness over the Internet? What are the mechanisms through which an MBI prevents psychological problems and develops resilience? In this paper, these issues are examined after a brief description of MBIs with regard to adolescents.

Mindfulness-Based Interventions for Adolescents

Mindfulness has been defined as the awareness that emerges through purposefully paying attention during the present moment, in a non-judgmental manner, to the unfolding of moment-by-moment experiences (Kabat-Zinn, 2003). Students learn to observe internal and external experiences, describe their inner experience, act with awareness, be non-judgmental of their inner experience, and not react to their inner experience (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006).

Two recent reviews have examined the implementation of MBIs in children and adolescents, in general settings (Kallapiran, Koo, Kirubakaran, & Hancock, 2015), and primarily in school settings (Felver et al., 2016). According to these reviews, the majority of the interventions have been concerned with Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1982) and Mindfulness-Based Cognitive Therapy (MBCT; Segal, Williams, & Teasdale, 2002) programs. MBSR develops mindfulness abilities through the practice of body scanning, sitting meditation, breathing meditation

and mindful movement, while MBCT combines the previous mindfulness meditation techniques with cognitive restructuring exercises. In both programs, adolescents learn to observe their negative emotions and thoughts, with acceptance and curiosity, which contributes to better emotional regulation.

Overall, MBIs are brief (around 8 sessions) and group-based; the majority of MBIs with adolescents have been implemented in the USA (Kallapiran et al., 2015). Although preliminary findings suggest that MBIs can induce resilience and reduce psychological problems, the reviewers agree that more research is needed to establish valid conclusions on the effectiveness of MBIs in adolescents. For instance, Felver et al. (2016) found that only half of the studies had compared an MBI with another condition (e.g., wait-list control), and only about a third had used a randomized controlled trial (RCT).

Who Should Train Adolescents in Mindfulness in School?

An important question is, who should guide teens in the process of developing mindfulness skills? Generally, an MBI in a school is guided by an outside facilitator or a trained teacher (Felver et al., 2016). In the context of MBIs, therapists themselves are expected to be experienced practitioners of mindfulness meditation. Thus, when teachers are responsible for teaching adolescents, they themselves should be trained in mindfulness meditation.

Teacher training in mindfulness meditation is, in and of itself, an indirect way of integrating mindfulness into the classroom. When teachers are trained in mindfulness meditation, they demonstrate mindful behaviours and attitudes through their presence and interactions with the students in the classroom (Meiklejohn et al., 2012). Thus, trained teachers are expected to listen deeply and display empathetic attitudes toward their students. This, in turn, could have a positive effect on the behaviour and emotions of students, and provide opportunities for adaptive behaviour modeling. Although programs developed to train teachers in mindfulness have been shown to benefit teachers' well-being (Poulin, Mackenzie, Soloway & Karayolas, 2008), further research is needed to evaluate the program's impacts on the students.

Internet-Based Interventions versus Face-to-Face Interventions

The implementation of an MBI in a school setting often involves organizational difficulties in finding appropriate times to practice it. However, the Internet can provide

resources to build emotional skills in young people, and therefore, it has been suggested that an MBI can be delivered to this population via the Internet (Monshat, Vella-Brodrick, Burns & Herrman, 2012).

The use of the Internet to deliver mindfulness meditation to adolescents can have significant advantages, because it can involve a lower cost when compared with a face-to-face intervention, may involve less stigmatization among adolescents with psychological difficulties, and seems to be preferred by young people (Wahbeh, Svalina & Oken, 2014). Nevertheless, there are also reasons why a face-to-face intervention may be preferable, and the presence of others can be an important component in learning mindfulness meditation. The face-to-face format provides opportunities for social support, and allows the sharing of experiences with the other participants. After each exercise, the participants can benefit from an investigative dialogue between the trainer and the other participants (Segal et al., 2002).

Unfortunately, there are very few studies on the benefits of Internet-based MBIs, and these have generally been conducted with adults. However, findings have indicated that the effects of Internet-based interventions may be similar to those obtained through face-to-face interventions (Cavanagh, Strauss, Forder & Jones, 2014). For example, Krolikowski (2013) reviewed online interventions with a component of mindfulness, and concluded that these were useful in reducing depression. Unfortunately, studies involving young people in MBI are scarce. Cavanagh et al. (2013) conducted an RCT to test the effects of a brief online mindfulness-based intervention with university students, and found that the intervention reduced perceived stress and the symptoms of anxiety and depression. In another study, Evans-Chase (2013) found that an Internet-based mindfulness intervention with juvenile justice-involved youth improved their self-regulatory skills.

Although preliminary results based primarily on adult samples have suggested that an MBI conducted via the Internet can be beneficial, research into its effects on adolescents and how it can be implemented in a school setting is necessary.

What Are the Mechanisms through which an MBI Develops Resilience and Prevents Psychological Problems?

There are numerous reasons to examine the mechanisms through which an MBI works. Among others, it could maximize the effectiveness of the intervention through the improvement of the active components, and could contribute to the theoretical development of the operation of mindfulness (Querstret, Cropley & Fife-Schaw, 2016). Nevertheless, very little is known about what makes mindfulness beneficial. Overall, it is expected that MBIs will help develop the traits of calm attention, which in turn act as resilience factors for coping with stress and adversity. This expectation is supported by recent research indicating that adolescents who score highly on dispositional mindfulness experience fewer psychological problems when coping with stressors (Ciesla, Reilly, Dickson, Emanuel, & Updegraff, 2012).

Unfortunately, most studies on the effectiveness of MBIs do not examine the effects of meditation training on

the development of dispositional mindfulness. Moreover, those that do only measure one general trait of mindfulness (Sibinga et al., 2013), and do not take into account the many facets of mindfulness (Baer et al., 2006). In one of the few studies to examine changes in the various facets of mindfulness after training (Boden et al., 2012), the change in acting with awareness mediated the effect of the intervention on the reduction of posttraumatic symptoms, whereas the change in being non-judgmental mediated the effect on the reduction in depression. Such results might suggest that the mechanism by which an MBI exerts its positive effects could be different for each psychological problem.

Another hypothesis is that an MBI can reduce the ruminative response that is associated with several psychological problems (Royuela-Colomer & Calvete, 2016). An MBI could help adolescents to break their ruminative cycles by making them aware of their feelings and thoughts, without judging them or being trapped by them (Nolen-Hoeksema, Wisco & Lyubomirsky, 2008). A few studies have provided support for this hypothesis in adults, indicating that mindfulness training leads to a reduction in rumination (e.g., Deyo, Wilson, Ong, & Koopman 2009). Alternative mechanisms include improvements in other resilience factors, such as prosocial skills, emotional regulation, optimism, self-esteem (Felder et al., 2016) and executive functioning (Meiklejohn et al., 2012). For instance, Evans-Chase (2013) found that an Internet-based mindfulness intervention increased the interactional self-regulatory capacities of incarcerated youth.

Conclusions

Based on this brief exploration, the following conclusions can be drawn:

1. The preliminary results on the benefits of MBIs in schools are promising. An MBI can reduce, and may prevent, the development of psychological problems, such as depression, anxiety and aggressive behavior. However, the reviews also indicate that rigorous experimental studies are needed to draw valid conclusions (Felder et al., 2016).
2. There are several reasons to involve teachers in MBIs in schools. Trained teachers can not only deliver mindfulness meditation techniques in the classroom, they themselves can also benefit from MBIs, and contribute to the transmission of positive attitudes and behaviors in the classroom.
3. The findings that are available in adult populations on Internet-based mindfulness meditation have suggested that it can be a valuable low-cost tool, and can reduce the stigmatization for individuals with psychological problems. Thus, the Internet could provide a complement to the intervention in the classroom. However, further research is needed on the use of the Internet in delivering MBIs to adolescents.
4. Very little is known about the mechanisms through which mindfulness benefits practitioners. Future research should include measures of the potential mediators, such as dispositional mindfulness; the reduction of rumination; and improvements in emotional regulation, social skills and self-esteem.



In summary, school-based MBIs can provide excellent opportunities for developing resilience in adolescents. The above points present important challenges to be addressed by future research.

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Adolescent Depression Prevention Growing Up: Challenges and Future Directions

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Consequences of Adolescent Depression

The studies described in this special issue present an excellent overview of several topics that are trending in preventing depression in youth. All authors emphasize the burden of depression and the detrimental consequences in the short and long term. For youth aged 13 to 17, lifetime prevalence of depressive disorders is estimated at 12.6% in Western societies (Kessler, Petukhova, Sampson, Zaslavsky, & Wittchen, 2012). Depressive disorders have a cascade of consequences on young people's lives, such as problems in social and family functioning, poor academic performance, higher school drop-out rate, and unemployment (Jaycox et al., 2009; Quiroga, Janosz, Bisset, & Morin, 2013). Long-term consequences on physical and mental health are increased risk of substance abuse, sleeping disorders, depressive disorders in later life, suicide attempts, and completed suicide (Balazs et al., 2013; Hölzel, Härter, Reese, & Kriston, 2011). Besides individual consequences, depressive disorders place a large burden on society (Greenberg, Fournier, Sisitsky, Pike, & Kessler, 2015). Research shows that depressive adolescents have a higher use of health care, more loss of work or school productivity, and parents of depressed children and adolescents showed more absenteeism at work (Keenan-Miller, Hammen, & Brennan, 2007). Because of the increase in depressive symptoms during this particular phase in life and its dramatic consequences on a global scale, all authors stress the evident necessity of depression prevention in adolescence.

Results of Depression Prevention

There is evidence that depression prevention programs have a reducing impact on depressive symptoms (Calear & Christensen, 2010; Merry et al., 2012). A recent meta-analysis on depression prevention showed that universal and targeted prevention programs can be effective in reducing acute depressive symptoms and depressive episodes. Effect sizes of universal prevention have been shown to be small (at best) and lasting up to three to nine months, very likely to be explained by the fact that it is difficult to detect an effect in the general population where the level of depressive symptoms is low. Targeted, i.e. selective and indicated, prevention programs have shown larger effects, but these seem to disappear after 12 months (Merry et al., 2011). All authors contributing to this volume agreed that the effectiveness of depression prevention needs to be increased and several suggestions have been made that can contribute to this result.

Difficulties and Challenges in Depression Prevention

All contributing authors underline the challenges related to prevention of depression in youth and highlight various barriers when facing depression prevention. Firstly, there are limitations in current research designs. In many studies, there is a remarkable impact in passive control conditions, implying that depressive symptoms also significantly decrease in control conditions. This indicates that we have to pay more attention to using other comparison groups, such as active control group or low attentive control groups, but also study potential placebo effects. Besides the commonly used symptom rating scales, we suggest using clinical interviews to measure reduction in, or the prevention of, the actual clinical disorders. Further, effects are measured only during a relatively small follow-up period, and effects in the longer term are often not measured. There is an urgent need for outcome measures longer than 12 months after ending the preventive intervention to determine the real preventative value of the programs in the longer run.

Secondly, despite the findings of some prevention studies, few to none of the depression prevention programs are widely implemented. Implementing depression prevention on a large scale as part of routine care in promotion of general adolescent well-being is not easy to realize. As both Stallard, and Weichold and colleague suggested, schools might be the best place to promote general well-being through universal prevention, identify adolescents at risk and deliver targeted depression prevention programs, because schools provide largescale access to adolescents



and are familiar and accessible places to both adolescents and their parents. Due to a lack of cost-effectiveness studies and implementation research, it remains hard to convince policy makers of the ultimate gain that will compensate for the current investments.

Thirdly, adolescents are often reluctant to participate in programs, regardless of whether the aim of the preventive intervention is research or regular mental health care. In addition, it is hard for professionals to keep adolescents engaged in the program and numbers of drop-out in both research and care are known to be high, which evidently has consequences for effectiveness. In order to motivate adolescents to participate in prevention programs, we have to make sure that both the content and the means of delivery match their interests and perceptions. One mismatch between current programs and adolescents arises from the large heterogeneity in depressive symptoms. In adolescence, the daily, weekly and even monthly fluctuations in depressive symptoms can be substantial. This might make it hard to convince adolescents of the need of depression prevention. Interventions such as emotion regulation training or mindfulness training aimed at broader and underlying mechanisms, as was suggested by Braet and colleagues and Calvete, are focused on promoting positive skills and might, therefore, be more motivating. Another suggestion is that we must make more use of modern technological developments as alternative means to train skills—such as applied games, as advocated by Granic—which are ubiquitous in the lives of present-day adolescents.

Fourthly, the factors on which the identification of high-risk adolescents is based should be evaluated. At the moment, it is common to screen for depressive symptoms to detect high-risk adolescents in an early stage. Yet, determining other factors that contribute to an increased risk for developing a depression or depressive symptoms, such as poverty, lack of support from caregivers, or lack of parents' care and affection, might be as essential. These can be used as factors to identify adolescents vulnerable to depression. We have to keep in mind that depression in adolescents is heterogeneous, and combinations of predictors can lead to different structures in depressive symptoms. Consequently, we should study whether it is possible to identify several "risk-profiles," containing multiple factors that are related to various developmental trajectories of depression and the heterogeneity of depressive symptoms in adolescence. This might imply that different risk-profiles require different prevention strategies.

Fifthly, in the cases in which data are available, the lasting effects of indicated prevention are disappointing, suggesting also high rates of relapse of depressive symptoms in adolescents. The duration of effects of preventive interventions needs to be improved to instigate a long-lasting effect on the mental health of adolescents.

Lastly, we need to change our perspective in how we look at depression prevention and shift from seeing it as one single program towards an integral multi-modal strategy to improve mental health. When we think of depression prevention in terms of a strategy, we take a broader range of outcomes into consideration instead of just looking at depressive symptoms, such as better general functioning, cross-over effects on anxiety, more awareness of one's mental health, less bullying, better homework completion rates, and lower absenteeism, as was suggested by several

authors. In addition, insights into the effects of depression prevention on achieving developmental milestones is scarce and needs to be further investigated (Peters et al., 2016). Depression prevention as a strategy involving a wide, more comprehensive set of stakeholders might be more appealing for schools to implement, and might be less stigmatizing when it is embedded in the school structure and supported by active stakeholders.

New Opportunities in Depression Prevention: Future Directions

The number of youngsters receiving *treatment* for depressive disorders are still quite low, yet has increased over the years and keeps growing, resulting potentially in a profound increase of societal costs. Despite the barriers to early recognition of depressive symptoms and the unsatisfying results of effectiveness studies on universal prevention, depression prevention has proven to be an alternative approach to treatment with great benefits for adolescents as well as for society. One suggestion is to combine universal with indicated prevention. Universal depression prevention programs have the potential to enhance resilience and have an impact on the psychological well-being of children by preventing psychosocial adaptation problems and promoting social competences. Indicated depression prevention trials in adolescent populations suggested that prevention aimed at individuals with elevated depressive symptoms is an effective strategy to use on a large scale. The combination of enhancing resilience in the total population and additionally reducing depressive symptoms in high-risk populations can serve as a stepped-care approach for depression prevention, and should be further developed and actually improved to increase effectiveness and create a more sustainable impact.

Suggestions for Future Research

- Importance to create awareness for mental health, as well as lower stigma, among the general population and specifically in youth in order to promote mental health. Universal prevention could be used to promote awareness, and could therefore lay a base for early detection, openness about one's feelings, and seeking help earlier in the process.
- Give thought to the settings in which prevention strategies should be implemented. Schools still seem the most logical place to promote mental health and to get in contact with adolescents at risk for depression. Schools should be held responsible and accountable not only for the educational success of students but should also play a natural role in the mental health promotion of their students.
- Universal programs that focus on teaching general "life skills" should be a first step in preventing many social-emotional problems, including depression. The second step should be early identification of high-risk adolescents and reducing the risk by means of indicated prevention programs. A package of intervention modalities, on different levels and with involvement of various stakeholders, is warranted to create optimal success.

- Explore possibilities to personalize depression prevention programs. This requires a flexible or modular approach—often involving e-mental health—to adapt the prevention strategies to individuals.
- Develop prevention programs that incorporate e-health and m-health technologies. These programs might be easier to disseminate and may be more convenient for adolescents with a lack of motivation to monitor mood, or who forget to do the homework, as is inherent in depressive adolescents. These programs also have a better potential to reach a large population, which increases dissemination opportunities. Also, direct feedback on behavior can be integrated into daily life. For example, when passive behavior is monitored through wearables, adolescents receive messages advising them to be more active. This also increases the possibility to tailor the intervention to the individual (personalizing).
- Commonly used methods of assessments (self-report questionnaires) do not seem to grasp the dynamics of depression, so different ways to monitor depressive symptoms are essential. For instance, new technologies (i.e., sensor technology) might provide a perfect platform for more real-time and accurate information about changes in behavior and activities, resulting from prevention programs.

Conclusion

Depression prevention practice and research have developed in recent years and have proven to have great benefits for adolescents as well as for society. Future research can contribute to finding solutions for improving the effectiveness of prevention programs and the implementation of innovative solutions.

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Minutes of the ISSBD 2016 Executive Committee Meeting I in Vilnius, Lithuania

July 10th, 2016, 9.00 am-5.00 pm.

Site: Radisson Blu Hotel, Vilnius, Lithuania

Present in the meeting from Executive Committee

Toni Antonucci
Charissa Cheah
Xinyin Chen, President
Nancy Galambos
Silvia Koller
Tina Malti
Livia Melandri
Marcel van Aken
Karina Weichold, Secretary General
Rita Zauskiene

Guests:

Gelgia Fetz
Renaë Giles
Thomas Kindermann
Simon Sommer
Melanie Zimmer-Gemebeck

and her organizing team for the 2016 meeting in Vilnius, Lithuania. He pointed out that the program is very impressive. One issue was that some participants had problems in gaining a visa for Lithuania, including some fellows of the Jacobs Foundation funded program. Next time, the society will keep an eye on the visa details within the hosting countries of the biennial meetings. Xinyin Chen stressed that preparations for the upcoming meeting in 2018 in Gold Coast, Australia, are in very good shape. Melanie Zimmer-Gemebeck, Bonnie Barber, and her team at Griffith University were able to put together an interesting invited program. In line with that, it was discussed in the EC Meeting, that the amount of the loan, which is currently 50,000 USD should be increased up to 100,000 USD. Most likely this would help future organizers of Biennial Meetings to avoid being personally responsible for losses that may occur as result of the Biennial Meetings. These changes could be associated with a reduction of conference fees in the future.

→ Action: The EC decided that from the 2020 meetings onwards, organizers of the biennial meetings will receive 50,000 plus 50,000 USD as loan.

With regard to the Regional Workshops, Xinyin Chen reported that in 2015 one successful workshop was conducted in Geneva, and another one in Nairobi. ISSBD will receive at least three proposals for workshops during the upcoming year (Thailand, Ghana, and Indonesia).

For the Jacobs Foundation/ISSBD Fellowship, the Jacobs Foundation Board of Trustees approved the support of the new cohort of ISSBD Jacobs Fellows, grants for ISSBD Regional Workshops in 2015 and 2017, and travel grants for young scholars travel to the 2016 ISSBD Meeting. Toni Antonucci, the Chair of the Fellowship Committee, received applications and selected 10 Jacobs Foundation/ISSBD fellows from different countries. In addition, Xinyin Chen reported that the Early Career Scholar Travel Grant Committee handled well the application of travel grants to the ISSBD Meeting. Around 60 scholars were selected.

With regard to the ISSBD Developing Country Fellowship (DCF), the President reported that Peter Smith and his committee have reviewed applications for the DCF, and they selected three new fellows from Kenya, Panama, and Romania.

The continuation into the future of the ISSBD co-sponsored international video conference on peer relations (organized by Concordia University in Canada) was also discussed. This event was co-sponsored by ISSBD (2,000 USD per year). Julie Bowker and Marcel van Aken will

1. Opening by the President Xinyin Chen

2. Approval of the Minutes ISSBD 2015

→ Action: Minutes from the ISSBD 2015 Philadelphia EC Meetings were approved.

3. Report of the President Xinyin Chen

First of all, the president thanked all members of the Executive Committee for their help. In addition, he thanked Karry Barner and Livia Melandri from SAGE, the journal and the bulletin editors, and associate editors, and the chairs of the various committees who have provided great support of his work. Overall, Xinyin Chen pointed out that ISSBD has progressed well in planning and implementing activities with regard to biennial meetings, workshops, membership, finance, publication, fellowship programs, and collaboration with other organizations.

With regard to the organization of Biennial Meetings, the President was very satisfied with the Rita Zukauskienė

explore in the future if and how this successful format will be continued, and under which topic this will occur.

Financial Office Transition: Xinyin Chen reported that SRCOD decided that the infrastructure would not support ISSBD's financial issues in the future. However, personal agreements with Rick Burdick were settled to organize ISSBD's finances in the future. This transition was also positively evaluated by the current treasurer of the society (Nancy Galambos), and all other members of the EC.

Finally, Xinyin Chen summarized new developments in the collaboration with other societies: He discussed with the APS and the EADP possible cooperation with regard to membership, joint meetings and workshops. Two special symposia have already been organized for the ISSBD 2016 meeting.

Finally, after the agreement to participate in the International Consortium of Developmental Science Societies (ICDSS), Marcel van Aken and Xinyin Chen attended a couple of meetings of this consortium. As a result, several position articles were written which will be published in the May 2017 Bulletin. At this time, however, it is still unclear in which direction ICDSS will go and what the next steps for the future are.

4. Report from the Secretary General, Karina Weichold

The Secretary General Karina Weichold has been involved in many aspects of running the society and filing and organizing materials. She prepared the Minutes of the EC Meetings in Philadelphia in March 2015, circulated them among the EC members and organized the publication process of the November issue of the ISSBD Bulletin. In addition, the Secretary General conducted in close collaboration with Kerry Barner and Livia Melandri from SAGE the nomination and election for the new positions that were available in the EC of ISSBD. Karina Weichold congratulated Toni Antonucci for her position as incoming President, Ether Akinsola, Robert Kail and Julie Robinson as incoming EC members, and Joseph Lo-Oh as incoming ECS representative.

Karina Weichold also prepared the EC Meetings for Vilnius, Lithuania, and she was collecting all reports from the President and the EC members and committee chairs on the activities of ISSBD during the past year. Finally, Karina Weichold thanked the President of ISSBD, the Past-President Wolfgang Schneider, and Kerry Barner and Livia Melandri from SAGE who helped in navigation through the various challenges related to the position as Secretary General of ISSBD. Karina Weichold prepared a list for the various committees as outlined in the web. The list was circulated and will result in the activation of the web list.

5. Report of the ISSBD Membership Secretary and Membership Committee, Tina Malti

Tina Malti reported on membership and renewal campaigns in her function as Membership Secretary. She thanked SAGE, Xinyin Chen, and the regional/national coordinators, and the Membership Committee for their

help to increase and retain the number of people joining the society. Tina Malti summarized the various membership activities during the past year, including the re-design and update of the renewal letter for 2016, and sent reminders to all regional coordinators with updated lists of lapsed members in February and April 2016. Tina reported an increase in members in Kenya, Zimbabwe, and Ethiopia. In addition, a drop of ISSBD members was observed in Cameroon, South Africa, and China.

In her function as leader of the Membership Committee, Tina Malti reported on the various activities during the past years in this matter. A new regional coordinator for Italy was appointed, and in addition the regional coordinators have sent their annual reports. The possibilities of new regional workshops were discussed in the meeting. Tina Malti also discussed with the EC the initiation of online mentoring provided by senior members of ISSBD (two mentors and two mentees were matched so far). However, the option to receive mentoring from senior ISSBD members has not been well advertised in the past. More advertising will be done in the future, e.g., via the e-newsletter.

It was also discussed with the EC that more money may be spent in the future for local activities, to invigorate regional coordinators. The idea is that regional coordinators should receive 1,000 to 2,000 USD to conduct activities in the future. The aim is to increase interest in membership in various countries, in particular in those countries with a low rate of membership, or a large drop of members in the recent past. Tina Malti plans to invite regional coordinators for these activities, she will send out a document on that topic in the near future. In addition, SAGE will be asked to send out more printed copies of the IJBD and the ISSBD Bulletin to members/regional coordinators from African countries, in order to increase the visibility of ISSBD related publications.

6. Report of the ISSBD Treasurer, Nancy Galambos

First of all, Nancy Galambos expressed her gratitude to the Department of Psychology at the University of Alberta for providing space and infrastructure for the work of the ISSBD Treasurer. In addition, she was grateful for the support from Rick Burdick, who manages ISSBD's finances from premises in Ann Arbor, Michigan. In addition, she thanked Ingrid Schoon for chairing the Finance Committee, which provides recommendations on investments. At the time of this report (June 2016) ISSBD had the following accounts:

US Accounts

1. Key Bank, Ann Arbor, MI (Account: 229681004029): Business Reward Checking
2. Key Bank, Ann Arbor, MI (Account: 229683000942): Business Gold Money Market Savings*
3. Key Bank, Ann Arbor, MI (Account 22223813567755): Certificate of Deposit
4. T. Rowe Price Mutual Fund (118289732) Investor Number 520471050
5. Merrill Lynch Wealth Management (Account: 7K5-02029).



UK Accounts

HSBC Community, London (Account: GB43MIDL40060721609564): Checking

*This account is being switched to a new savings account at Key Bank, due to a time-limited offer in which the funds will earn higher interest.

Regarding the financial review, Nancy Galambos reported that ISSBD will have the next full audit in 2017 for the 2016 tax year. In sum, the society is financially very well off with the largest amounts of income received from SAGE and the Jacobs Foundation. Nancy Galambos discussed with the EC the rental of storage facilities, for instance in Ann Arbor, Michigan to store membership documents, bank documents, etc. In addition, it was discussed that currently the society has a surplus of funds received from the Jacobs Foundation: The EC discussed how to spend this money. As a result, a decision was made that ISSBD will increase the support for regional workshops.

→ Action: ISSBD will increase the financial support for regional workshops with the amount of 50,000 USD.

The EC was very pleased with the Treasurer's Report and congratulated Nancy Galambos and her team for their excellent work.

7. Publications

7.1. SAGE, Livia Melandri & IJBD Editor Brett Laursen

Livia Melandri sent best regards from her colleague Kerry Barner. Both worked in close collaboration with the President and the EC of ISSBD, including the regional coordinators and committee members. Livia summarized SAGE's activities regarding the society and journal highlights from the past year.

Society services: The ISSBD website has been improved, featuring enhanced security levels and privacy for ISSBD members. All details on the ISSBD 2016 Meetings were kept up to date on the website. As a new feature, all payments are processed via the homepage; testing is still in process. Other new features will be included in the website during the next year. The ISSBD website will also be more interactive than in the past.

International Journal of Behavioral Development (IJBD): As a highlight, Livia reported on the journal's 40th anniversary. In 2015 the journal received 279 submissions, with a 31-day return of feedback. This is very successful, and everyone agreed that this short time window for feedback should be maintained in the future. The journal currently has its highest impact factor ever (1.69). There were also increases in downloads and other forms of usage. The IJBD has currently a backlog of 1 1/5 years. SAGE approved a temporary page increase to reduce this backlog.

Livia Melandri also reported on the video collection provided by SAGE. Members of ISSBD get free access to videos (a three-month trial). Afterwards the university can subscribe to the entire collection of videos. It was agreed that an announcement to advertise the video collection of

SAGE will be circulated via the ISSBD e-newsletter. The President and the EC thanked Livia Melandri, Kerry Barner, and the entire team from SAGE for a fruitful and effective collaboration during the past years. There was a lot of applause on the positive developments, in particular with regard to the IJBD and membership levels.

7.2. Editor of the IJBD: Brett Laursen

Brett Laursen reported on his activities as IJBD Editor. The most important issue was that the contract that ISSBD currently has with SAGE must be renewed by the end of 2016. Brett Laursen asked the EC to decide if it approves this next step. It was decided that this issue will be discussed in EC meeting II, and via email exchange during the upcoming months to come to a solid decision.

Brett Laursen also discussed with the EC a possible increase in the six Associate Editors' stipends. He pointed out that for some journals a position as Associate Editor is a well-paid activity, rather than an honor to contribute to the society. There was broad agreement on this problem in the audience. Toni Antonucci suggested preparing a list of journals and the stipends that Editors and Associate Editors receive. The EC agreed that Brett Laursen should submit a formal proposal to this effect to the President and the Steering Committee. A decision about stipends will then be made via email later this year. Brett Laursen also thanked the society and in particular SAGE for their close and positive collaboration during the past year. He was very pleased with the recent developments with regard to the journal as presented by Livia Melandri. The President of the society and all EC members congratulated Brett Laursen for his tremendous efforts in pushing the IJBD forward.

7.3. Editor of the Bulletin, Karina Weichold

Karina Weichold reported on the activities of the ISSBD Bulletin during the past years. The recent Special Sections of this publication outlet of the society focused on "Children with Special Needs: Autism" and "Successful Aging". She pointed out that the Bulletin under the lead of Deepali Sharma and herself was able to involve international authors representing all continents of the world. Thereby, the Bulletin aims to provide a vital service and a reflection of the outstanding international structure of the society. The editors are already involved in planning future issues of the ISSBD Bulletin. In addition, Karina Weichold reported on the current activities to find a new editor of the ISSBD Bulletin. In conjunction with the President and the EC, it was agreed that the search for a new Bulletin editor will be actively promoted during the next year. Finally, Karina Weichold thanked Deepali Sharma, Lucy Hahn, our copy editor, the team of SAGE, Stefanie Glaeser, the President, and the EC of ISSBD for supporting the work of the editorial team.

7.4 Social Media Editor, Josafa da Cunha (absent)

Josafa provided in advance a short report on the activities of the ISSBD social media: He successfully takes care of the ISSBD e-newsletter and also monitors the twitter account, the YouTube channel, and Facebook activities. Thereby it

is relevant to note that with the exception of the e-newsletter other social media platforms may be blocked in some parts of the world. Considering that, Josafa stimulated us to think about more accessible platforms or use of the ISSBD.org website to distribute content (e.g. videos). All these activities on the social media site are conducted in close collaboration with the personnel of SAGE. Josafa thanks them for their continuous support.

8. Early Career Scholar Representative: Josafa da Cunha (absent)

Josafa da Cunha also handed in a short report on the Early Career Scholars' activities. He summarized the new initiatives and opportunities for early career scholars with an emphasis on launching a professional development webinar series, the implementation of an online list serve for early careers scholars, and the planning of new early career scholars activities for the ISSBD 2016 meetings. More specifically, Josafa organized three online webinars and one additional hybrid event in late 2015. These activities reached members in more than 15 countries who had access to presentations focusing on publishing, methodologies and new directions in developmental research. In addition, the new ISSBD ESC List Serve was launched in early 2016 with the aim to promote exchange of resources and ideas among students and new professionals. Finally, for the 2016 meetings, the early career scholar activities were organized in three particular events, featuring a methodology workshop, career planning roundtable, and a community meeting. Josafa was thankful for the support of the society in providing opportunities for professional development and networking of the early career scholars.

9. ISSBD Biennial Meetings

9.1 2016 Vilnius, Lithuania: Rita Zukauskiene

Rita Zukauskiene described the program and framing activities of the ISSBD 2016 conference which she was hosting. Registered participants in the conference, came from 25 countries around the world. Highlights of the conference were five Keynote Addresses, six Invited Talks, three joint Symposia with EARA, EADP and APS. In addition, there were Invited Symposia. The further conference program included 90 Symposia and 733 Poster Presentations. Five parallel Pre-Conference Workshops were organized for Vilnius. In addition, a full professional development workshop program was offered during the conference, e.g., focusing on understanding and using mediation and moderation techniques. There was a consensus among the President and all EC members that Rita Zukauskiene and her organizational team did an excellent job in the preparation of the conference in Lithuania, and they congratulated her for a wonderful conference.

9.2. 2018 Gold Coast, Australia: Melanie Zimmer-Gembeck

Melanie Zimmer-Gembeck presented to the EC the current status of preparations for the ISSBD 2018 Biennial Meeting at Gold Coast, Australia. The key conference dates are the following: The 2018 conference will be already launched at the 2016 meeting in Lithuania, including the launch of the conference website, as well as a promotion table. The preparing team at Gold Coast plans to open registration in 2016 with early bird registration closing February 1st, 2018. The organizer of the 2016 Biennial Meeting, Rita Zukauskiene, raised the point that the deadline for closing submissions is most likely too early. All agreed on this issue, and projected a submission closing date around September. This relates in particular to the abstract submission date (which was planned for August 30, 2017). The Australian team also planned for the program of the conference, and reported that some of the Invited Speakers had already agreed to be part of the conference. The full conference program will be promoted from mid-January 2017. The venue of the conference will be Jupiters Gold Coast (will change name to the Star Gold Coast in late 2016). Accommodation will be provided by a block of 500 rooms across the conference dates which have been reserved at the conference venue. The discussion within the EC meeting resulted in the suggestion that options for accommodation of students and families should be explored more in detail in the future. Melanie also reported that the registration fees of the conference will include three meals (morning and afternoon tea including lunch) and that all other issues regarding marketing sponsorship and funding are also well organized. The EC congratulated Melanie Zimmer-Gembeck and her team for the excellent preparations of the 2018 Gold Coast conference. We are all looking forward to having the next Biennial Meeting at this spot.

10. Committees

10.1 Awards: Silvia Koller

Silvia Koller summarized the work of the Awards Committee during the past year. The committee organized the selection of recipients for ISSBD Awards in 2016. The announcement was sent to the homepage and the members of the society at the beginning of 2016. The deadline for receipt of nominations was June 15th 2016. At the end of the process, three awardees were identified. The "Distinguished Scientific Contribution Award" goes to Hakan Stattin. Radosveta Dimitrova is the awardee for "The ISSBD Young Scientist Award." Finally, Richard Lerner was identified as the awardee for "The ISSBD Distinguished Scientific Award for the Applications of Behavioral Development Theory and Research." The awards were given to Hakan Stattin and Richard Lerner at the Business Meeting of the ISSBD Biennial Meeting in Lithuania. Because Richard Lerner was unable to attend, there was an agreement that he will be the recipient of this award in 2018 at the next Biennial Meeting at Gold Coast, Australia.



10.2 Finance: Ingrid Schoon (absent)

Ingrid Schoon, the chair of the Finance Committee, handed in her report prior to the EC meeting, because she was unable to attend. In March 2015 it was agreed to transfer an amount from our savings account with Key Bank into investment accounts with Merrill Lynch and T. Rowe Price. Ingrid Schoon pointed to the fact that the performance of Merrill Lynch seems to be less satisfactory in the recent past. Thus, the EC should think about a decision to change the provider. Toni Antonucci volunteered to ask Rick Burdick for help to decide this matter. In addition, in her report, Ingrid Schoon suggested appointing more members to the finance committee. This will be followed up by the Secretary General, who is currently updating the lists of members on all ISSBD-related committees.

10.3 Regional Workshops: Suman Verma

During the past years, Robert Serpell, Bame Nsamenang, Suman Verma, and Anne Petersen worked on a report on "The Impact Evaluation of ISSBD African Regional Workshops 1992-2015." The results of this project were presented during the EC Meeting by Suman Verma. The report demonstrates the remarkable process achieved by ten workshops in Africa funded primarily by ISSBD. The authors not only used information gathered in the ISSBD archive, they also collected questionnaire data that were specifically designed for workshop conveners, early career scholar representatives, and presidents of ISSBD. In a nutshell, the authors demonstrated that the African Regional Workshop Series has developed research capacity in human development, attracted loyal ISSBD members from Africa to the society, and exponentially increased human development knowledge with contributions from Africa. Based on the result of the impact evaluation conducted by Serpell and colleagues, there is a strong recommendation that the series of regional workshops in Africa should be continued in the future. This seems not to be a problem because many highly enthusiastic researchers from Africa are interested in collaborating with ISSBD, and conducting workshops in the future. The President of the society and the entire EC congratulated Robert Serpell and his group and thanked Suman Verma for the excellent presentation and the profound empirical results summarized in the report and in the presentation.

10.4 ISSBD Developing Country Fellowships (DCF): Peter Smith

In 2015, as Peter Smith reported, there were 22 valid applications for the ISSBD Developing Country Fellowship Program. Out of this group, three new ISSBD DCF Fellows were selected in 2015: Annilena Meyia, Panama; Laura Alexandra Visu-Petra, Rumania; and Stephen Asatsa, Kenya. These three ISSBD DCF fellows represent the fourth cohort of fellowships. In future activities they are supported by senior mentors (Peter Smith, Silvia Koller, Suman Verma, and Anne Petersen). The three successful candidates were invited to present a poster of their research plans at the biennial meeting in Vilnius, Lithuania in 2016. Overall, the DCF program has been evaluated very

positively in the past. It is clear how well previous fellows of that program have done: For example, Joseph Lo-Oh became a new member of the EC of ISSBD, and Marine Mweru organized a regional workshop in Africa.

10.5 ISSBD Fellows: Tina Malti

Tina Malti reported on her activities as chair of the ISSBD Fellows Committee. She appointed a new group of committee members (Marcel van Aken, Nancy Galambos, Kenneth Rubin, Biao Sang, and Rainer Silbereisen). A number of recipients of the status of ISSBD members were identified, and the fellow award was announced at the Business Meeting at the Biennial Meeting in Lithuania in 2016. The list of ISSBD fellows in 2016 includes 26 members of the society. Nominations for the next cohort of ISSBD fellows are due by December 31, 2016. The Committee and members will discuss nominations in early 2017 and select the second cohort of ISSBD fellows. The results of the selection process will be announced in June 2017. With the EC it was discussed whether past bulletin editors should be also included as potential ISSBD fellows. This suggestion has been positively evaluated.

→ Action: Past Bulletin editors are also eligible to become ISSBD fellows.

10.6 Pre-conference Workshops: Marcel van Aken

Marcel van Aken gave an oral report during the EC meeting on the organization of five pre-conference workshops that were offered to the participants of the Biennial Meeting in Vilnius, Lithuania. He reported that there were 200 applications to participate in the pre-conference workshops; 137 open spaces could be offered to participants, and 40 countries were represented by the participants. Marcel van Aken raised the question of how large the society wants the pre-conferences to become in the future because the organization of pre-conferences has become very time intensive and is related to lots of organizational duties. In addition, it is not clearly defined who is doing what toward organizing the pre-conference workshops. Also, the priority of attendance for the workshops must be discussed. Obviously, high priority should be given to ISSBD members, and to those with early career status. These issues will be discussed prior to the next Biennial Meeting at Gold Coast, Australia. In sum, Marcel van Aken underscored the importance of the pre-conference workshops and reported that all participants want them to continue. The president and the EC congratulated him for his great efforts.

10.7 Early Career Development Committee: Toni Antonucci

Toni Antonucci as the chair of the Jacobs Foundation Early Development Committee reported that the second cohort of ISSBD-Jacobs Foundation fellows has been named and began their fellowships in July 2015. Ten young researchers from various countries form this cohort.

1. Tânia Abreu da Silva Victor, Institute of Psychology, University of the State of Rio de Janeiro, Brazil.

2. Lilian Ayiro, Maseno University, Kenya
3. Harmanpreet Chauhan, Wilfrid Laurier University, Waterloo, Canada
4. Zehra Gulseven, University of Missouri, USA
5. Ziyun Luan, Utrecht University, The Netherlands
6. David Martin, Pennsylvania State University, USA
7. Reuben Mashebe Mukela, University of Zambia, Zambia
8. Nayra del Carmen Rodriguez, University of Puerto Rico, USA
9. Amanda Lishan, Oxford University, Great Britain
10. Barbara Agnieszka Wachowicz, Jagiellonian University, Krakow, Poland.

All fellows of this cohort were invited to participate in the ISSBD regional workshop in Geneva, Switzerland on “Cognitive and Social and Emotional Development across the Lifespan.” In addition, they were invited to attend the Life Academy at Marbach Castle, Germany and they were also urged to attend the ISSBD Biennial Meeting in Lithuania in 2016. At this meeting, the fellows met representatives of the Jacobs Foundation. Toni Antonucci stressed that the program is in good shape financially, and funds will also be available for conference attendance, in addition to the earlier named fellows. The future of this program is, however, uncertain. At this point it is still unclear to what extent the financial support of the Jacobs Foundation will continue after 2018.

10.8 Early Career Travel Grants: Julie Bowker (absent)

The report of the Early Career Travel Grant Committee was provided by Julie Bowker in advance, and Nancy Galambos reported the status in this committee during the EC meeting. During summer and fall 2015 members were encouraged to submit their applications for travel grants. The deadline for application was December 30th, 2015. A total of 202 applications were received this year. After a complex reviewing process, based on the quality of the abstract, the CV, and reference letters, accepted presentations, and ISSBD membership, 21 scholars from low income, 25 from low to middle income, 11 from upper to middle income, and 17 from high income countries were selected. In general, the committee was very much impressed with the quality of applications during the entire process. However, the committee discussed with the EC some problems that make the decisions on travel grants difficult: Some applicants faked their applications, and there is also the issue of publications within predatory journals, with high costs

for personal scientific integrity. It was suggested that this issue be mentioned in the application outline. Therefore, a commentary by Nancy Galambos in conjunction with Livia Melandri (“Be aware of the predatory journal!”) may be directed to young scientists via the ISSBD webpage.

11. Other Issues

Several other issues were discussed at the EC I meeting. With regard to the archiving of ISSBD materials Marcel van Aken and Wolfgang Schneider reported that this endeavor is still in progress. However, the woman who is in charge of the archiving will retire in March 2017. It is still unclear what happens afterwards. Marcel van Aken will focus on this issue, and will stimulate further clarification in the near future.

Another issue concerns the collaboration of the ICDSS and ISSBD. To discuss this collaboration, and the ISSBD-Jacobs Fellowship Program, Simon Sommer and Gelgia Fetz were invited as guests of the EC meeting in Vilnius. Our representatives from the Jacobs Foundation informed the president and the EC of the recent developments at the Jacobs Foundation. Three main areas of activities were outlined for the next couple of years: 1. Research: Individual development and learning, 2. Intervention: With a focus on the Ivory Coast, and 3. Policy focus. The topics seem to be an umbrella under which different scientific societies can cooperate. In late 2017/early 2018 decisions will be made, on the societies who may be partners to follow the three lines of interest for the Jacobs Foundation. In the discussion with the President of ISSBD and the EC it was determined that during the application process one should focus on the overlap between the Jacobs Foundation and ISSBD and on the fact that ISSBD is the only truly international society in the field of psychology; this could stimulate further collaboration between the Jacobs Foundation and ISSBD. In addition, it was pointed out during the discussions in the meeting and afterwards that ISSBD should emphasize how much it has done with the financial support of the Jacobs Foundation in the past. Karina Weichold, for instance, proposed presenting portfolios of case examples showing the development of young scientists after participating in the special fellowship program of ISSBD. With regard to the international consortium (ICDSS), the representatives from the Jacobs Foundation were not positive that this will work out during the coming years.

Secretary General, Karina Weichold



Minutes of the ISSBD 2016 Executive Committee Meeting II in Vilnius, Lithuania

July 14th, 2016, 8 am–10 pm

Site: Radisson Blu Hotel, Vilnius, Lithuania

Present in the meeting from Executive Committee

Esther Akinsola
Toni Antonucci
Charissa Cheah
Xinyhin Chen, President
Nancy Galambos
Robert Kail
Silvia Koller
Tina Malti
Livia Melandri
Julie Robinson
Marcel van Aken
Karina Weichold, Secretary General
Rita Zukauskiene

coordinate an update of the committee list and contact SAGE for the changes to the webpage according to new roles and duties. In addition, the president and the Steering Committee will be active during the next year in recruiting a new Editor of the ISSBD Bulletin. It is planned that Deepali Sharma will stay on the editorial team of the Bulletin.

1. Opening by the President: Xinyin Chen

Xinyin Chen welcomed the EC, thanked everyone for an effective exchange of ideas in the first EC meeting. He welcomed the new members of the EC.

2. Report of Outcomes of the First EC Meeting: Karina Weichold

Karina Weichold as the Secretary General of ISSBD summarized the main outcomes of the first EC meeting held at the Vilnius conference. Several issues were highlighted that need further discussion with the EC, as outlined in the following.

3. Chairs, Teams, and Duties of the Various Committees

It was planned that chairs, teams and duties of the various committees will be followed up via email until the next EC meeting. The various committees are quite fluid; heads do not have to be EC members. Thus, it is sometimes difficult to keep on track. However, the work within the various committees of ISSBD is a very important task, and the work of the chairs is much appreciated. Karina Weichold will

4. ISSBD Archives

As discussed in the EC meeting I, the woman who archives ISSBD related documents is currently often ill and will retire next year. However, there are still documents that need to be archived. Marcel van Aken suggested that a list be established, to indicate the most important documents related to ISSBD, for instance the EC Minutes. He will take care of organizing the archiving process (with documents of high priority coming first), so that before the colleague retires the most important filing will be completed. There is still a concern about how to archive electronic documents. The EC discussed this issue in depth. There are some suggestions, for instance, using Dropbox or Google Drive. Rita Zukauskiene volunteered to think about this issue more in depth and to report on it at the next EC meeting.

5. Video Conference

As mentioned in the report of the EC meeting I, ISSBD has supported a video conference conducted and organized by Bill Bukowski in the past. He will not continue with the series. In contrast, the EC shares the opinion that this is an important and interesting format which should be continued, and discussed the technical support necessary to do so. Nancy Galambos volunteered to explore during the next year whether it will be possible to offer the technical support needed to conduct a video conference (possibly under another topic) at her University.

6. IJBD

The EC followed up on the possible increase in stipends for the Associate Editors of the IJBD. This will be decided later in the year via email (after a formal proposal of the journal editor). In addition, the contract with SAGE has to be renewed at the end of the year. The Publications Committee



and the EC of ISSBD will work on this issue via email during the next months. There was an agreement that collaboration with SAGE so far is extremely positive. However, other offers of other publishers will be also explored, and then a solid decision can be made. Bill Bukowski, Marcel van Aken, and Xinyin Chen will be primarily responsible to negotiate the new contract with SAGE.

7. Senior Scholars as Mentors for Early Career Scholars

Julie Robinson proposed the idea to the EC to establish a network of newly retired senior scholars who volunteer to

serve as mentors for early career scholars. In particular, early career scholars from Africa, Asia, or South America are in focus, who are not generally part of a support network at their home institution. The newly retired senior scholars would be a rich resource and could connect with young scholars in the field. The EC evaluated this idea positively and Julie Robinson will pursue it further.

8. Date of the Next EC Meeting

April 5, 2017, 9 am–5 pm at SRCD in Austin, Texas.

Secretary General, Karina Weichold.



Notes from The President

It has been a year since I reported the activities of the Executive Committee (EC) in the 2015 ISSBD Bulletin. During this period, we have been working on conferences and workshops, membership, fellowship and award programs, and some other tasks. In this President's Note, I will describe the major activities that we have planned and carried out.

Before I provide specific details, I would like to thank the past president, Wolfgang Schneider, and all the members on the previous ISSBD Committees, for their wonderful work for the last several years. I am certain that they will continue to make contributions to the society in different roles in the future. I would also like to thank Livia Melandri from SAGE who has helped with publications, membership, and many other regular activities of ISSBD.

We now have complete information about the ISSBD biennial meeting in Shanghai in 2014. Over 550 delegates from approximately 50 countries and regions attended the meeting. The final Invited Program consisted of 5 keynote presentations, 8 invited presentations, and 7 invited symposia. At the meeting, 67 symposia, 7 poster workshops, and 475 posters were presented. The organizers managed to reach a financial balance for the meeting. Congratulations again to Professor Biao Sang and his team for successfully organizing the meeting.

The preconference workshops were organized by the International Program Committee, chaired by Professors Dan Li, Junsheng Liu, Suman Verma, Marcel van Aken, and Julie Bowker. Five preconference workshops were conducted at Shanghai Normal University. More than 100 early career scholars from many different countries attended the workshops, with the support of grants from the Jacobs Foundation and ISSBD.

The 2016 biennial meeting was held in Vilnius, Lithuania. The conference chair, Rita Zukauskiene, and her organizing team put together a strong scientific program including 5 keynote and 5 invited talks, and 7 invited symposia. In addition to regular symposium and poster sessions, the scientific program included several special sessions for early career scholars and symposia jointly organized by ISSBD and other societies (the European Association for Developmental Psychology, the Association for Psychological Science). The organizer also arranged a very interesting social program including an opening ceremony, receptions, and a banquet. We will receive a full report from the organizer later, but my own experiences and the feedback I received from many delegates clearly indicated that the meeting was a great success. Thank you, Rita and the team, for your hard and effective work!

As was done for previous meetings, several preconference workshops were organized in Vilnius by the preconference workshop committee, chaired by Marcel van Aken. The workshop topics included longitudinal methods (Elisabetta Crocetti); adapting tests for use in other cultures (Fons van de Vijver); publishing (Robert Kail); policy, translating science for the public (Ariel Kalil); and new and needed directions for the study and development of emotion regulation (Pamela Cole). The Jacobs foundation has provided funds to support early career scholars from different countries to attend the workshops. Julie Bowker and the travel grant committee have handled the application, review, and communications regarding financial support. Many thanks to Marcel and Julie and their committees for the huge amount of work they have put in on workshops! Also, thanks to the Jacobs Foundation for its generous support for the events.

The 2018 meeting in Gold Coast, Australia, is in very good shape. Melanie Zimmer-Gembeck and her colleagues at Griffith University have been working hard and been quite successful in securing grants from the local organizations and promoting the

meeting. They are currently working on the invited program. We will have more information about the progress later.

We had two regional workshops in 2015. One of them was on "Behavioral Development: A Lifespan Perspective" in Geneva in September, co-sponsored by the Jacobs Foundation with a grant to cover the expenses for 10 JF/ISSBD fellows, and other aspects of the workshop. The other workshop, "Advancing Research on Vulnerable Populations by Early- to Mid-Career Scholars in Africa" (Developmental Research on Vulnerable Populations), was held in Nairobi, Kenya in November.

We have approved three workshops for 2017, one in Thailand, hosted by Prince of Songkla University, on school safety and school climate, one in Bandung, Indonesia, hosted by Padjadjaran University, on Values and the Development of Southeast Asian Youth, and the other in the Greek island of Syros, hosted by the National and Kapodistrian University of Athens on Positive Youth Development in Times of Social Change. We are expecting a couple of additional proposals for regional workshops in the next few years. I believe these workshops will be helpful in promoting ISSBD, especially its membership, in these regions.

The Jacobs Foundation Board of Trustees approved the support for the new cohort of ISSBD-Jacobs Fellows and grants for ISSBD regional workshops in 2015 and 2017 and travel grants for young scholars' travel to the 2016 ISSBD meeting. The fellowship committee, chaired by Toni Antonucci, reviewed the applications and selected 10 JF/ISSBD fellows from different countries. In addition, Peter Smith and his committee reviewed applications for the ISSBD Developing Country Fellowship (DCF). Three new fellows were selected from Kenya, Panama, and Romania. Many thanks to Toni and Peter and their committees for their help with these programs.

ISSBD recently established a new award, titled ISSBD Fellows. The Fellow status is awarded to ISSBD Members who have made sustained outstanding contributions to the field of lifespan human development in the areas of research and/or application. A major feature of ISSBD Fellows is the representativeness of international scholars and international contributions to the advancement of the field. The first cohort of the Fellows received the award at the Award Ceremony in Vilnius.

The Association for Psychological Science (APS) and the European Association for Developmental Psychology (EADP) contacted us for potential collaboration between the societies. We discussed a variety of possible activities such as helping each other on membership, and holding joint meetings and workshops. As a first step, we agreed to hold joint sessions at the meetings of our societies. As a result, we arranged two special symposia at the Vilnius meeting, co-organized by ISSBD and each of these societies. There will be similar sessions at the APS meetings and EADP meetings in the future. We will see how these sessions go and consider how to expand our collaboration with these and other societies.

We agreed to participate in the International Consortium of Developmental Sciences Societies (ICDSS). Marcel van Aken and I attended a couple of the meetings for this consortium. The first major task was to jointly write a position paper on issues related to implications of migration, climate change, and disaster for human development. Marcel organized this activity for ISSBD, and several members, including Suman Verma and Catherine Cooper (Optimizing Development Following Disasters and Traumatic Experiences among Children, Adolescents, and Adults: Useful Frameworks and Promising Research Directions), Jeanette Lawrence, Colette Daiute, and Marilza De Souza (A Developmental Science Approach To Migration), and Ann



Sanson (Developmental science's role in responding to the climate crisis) took the lead in preparing the submissions for ISSBD. Thank you all very much for your participation and help. ICDSS will hold a Consensus Conference in February 2017 in Utrecht, Netherlands, hosted by Marcel van Aken. We will receive information about this conference in the near future.

As always, I encourage all of you to actively participate in ISSBD activities, which will make a difference in ISSBD and perhaps beyond. If you have any ideas or suggestions, please do not hesitate to contact us.

Xinyin Chen
September, 2016

The 24th Biennial Meeting of the International Society for the Study of Behavioural Development Summary Report

Radosveta Dimitrov
Stockholm University, Sweden



The 24th Biennial Meeting of the International Society for the Study of Behavioural Development was held in Vilnius, the capital of Lithuania, on July 10-14, 2016. This was the first ISSBD conference in Eastern Europe, a region marked by relatively recent socio-political changes after the fall of the Iron Curtain in the 1990s. Lithuania became independent from the Soviet Union in 1991 and a member of the European Union and the NATO in 2004. The capital city with its historical center hosting 1,500 buildings and 65 churches of different architectural styles was an amazing venue for the ISSBD meeting. In addition, the ISSBD 2016 Conference Chair Rita Žukauskienė, the ISSBD 2016 Local Organizing Committee (Goda Kaniušonytė, Inga Truskauskaitė Kunevičienė, Lina Jovarauskaitė, Saulė Raižienė, Ingrida Gabrielavičiūtė and Renata Garckija), the National Advisory and International Program Committees, Mykolas Romeris University provided an excellent blend to make the meeting a real success.

A total of 840 registered delegates from 52 countries attended with 40% (337) registered as students and 42% (351) being ISSBD members. The top countries represented were the United States (118 attendees), Germany (63), China (55), Japan (38), Australia and the Netherlands (32). The event was assisted by more than 30 Volunteers from several Lithuanian universities who did a great job in assisting all delegates during the whole event, as did the conference management coordinator, Laura Kurtinaitytė.

The meeting was preceded by five Pre-Conference Workshops for early career scholars (graduate research degree/PhD holders within the past seven years or enrolled

in a graduate program) held on the day before the main ISSBD 2016 program. The workshops revolved around the topics of *Longitudinal data analysis: Applications in Mplus* (Elisabetta Crocetti, Utrecht University, the Netherlands), *Adapting tests for use in other cultures* (Fons J. R. van de Vijver, Tilburg University, the Netherlands, North-West University, South Africa, University of Queensland, Australia), *Scientific writing* (Robert. V. Kail, Purdue University, USA), *Communicating research to public policy audiences* (Ariel Kalil, University of Chicago, USA) and *New directions for the study of emotion regulation and its development* (Pamela M. Cole, Penn State University, USA and Peter Zimmermann, Bergische Universität Wuppertal, Germany).

A total of 125 early career scholars from all over the world attended the workshops and 90 of them were awarded travel grants to attend one workshop of their choice, present their work and attend the ISSBD meeting. All the workshops were attended by early career scholars who actively contributed in sharing knowledge and creating networks for improving their research experience. The multifaceted picture of competences and expertise represented a big strength of these preconference events. All participants were enthusiastic in developing and expanding a research network between young and senior scholars who participated at these great events.

At a glance, the scientific program featured a spectacular set of presentations delivered by senior and early career scholars conducting research on human development across the lifespan. Major topics included Parenting



and parent-child relations (12 symposiums and 100 posters), Social development (16 symposiums and 60 posters), School, neighborhood, community and caregiving contexts (5 symposiums and 66 posters), Cognition and cognitive science (several symposiums and 64 posters), Mental health and developmental psychopathology (7 symposiums and 67 posters), Personality, temperament and emotion (14 symposiums and 42 posters), Gender differences, development and identity (56 posters), Social cognition and moral development (4 symposiums and 43 posters), Intervention and prevention, policy and knowledge mobilization (6 symposiums and 34 posters), Cultural and cross-cultural studies (8 symposiums and 37 posters), Academic skills and instruction (39 posters), Normative and non-normative life events and transitions (5 symposiums and 34 posters), Language and communication (1 symposium and 34 posters), Development and aging in immigrant and ethnic minority groups (1 symposium and 19 posters), Biological processes, genetics, physical development and health (1 symposium and 26 posters), Development in special populations and persons with disabilities (2 symposiums and 19 posters), Family, kinship, and intergenerational relations (2 symposiums and 21 posters), Lifespan development of brain-behavior relations (5 posters), and Developmental theory and methods (2 symposiums and 1 poster).

There were relevant invited talks covering a wide range of topics in developmental science delivered by leading scholars in the field. Invited keynotes were delivered by Elisabetta Crocetti (The Netherlands), Alexandra Freund (Switzerland), Brett Laursen (USA), Rainer Silbereisen (Germany), and Melanie Zimmer-Gembeck (Australia) and five invited addresses were presented by Nirmala Rao (China), Ariel Kalil (USA), Simona Ghetti (USA), Philip D. Zelazo (USA), and Wim Meeus (The Netherlands). A novel contribution at the meeting was represented by three joint symposiums with other relevant organizations in the field

with the aim to build bridges and explore collaborations between ISSBD and EADP (European Association of Developmental Psychology) chaired by Katariina Salmela-Aro (University of Helsinki, Finland); ISSBD and EARA (European Association for Research in Adolescence) chaired by Elisabetta Crocetti (Utrecht University, the Netherlands) and ISSBD and APS (Association for Psychological Science) chaired by Dagmara Dimitriou, (University of London, United Kingdom), and Annette Karmiloff-Smith, (Birkbeck, University of London, United Kingdom).

The ISSBD meeting also hosted 7 invited symposiums with a total of 28 papers led by eminent scholars such as Xinyin Chen (China), Jeffrey Jensen Arnett (USA), Charissa Cheah (USA), Pamela Cole (USA), Jeanette Lawrence (Australia), Robert Serpell (Zambia), Brit Oppedal (Norway), and Karina Weichold (Germany). In addition, there were 90 symposiums with a total of 360 papers presented, 6 poster workshops with 37 posters and 711 individual posters grouped in 5 sessions. A relevant event was a special "Meet the Editors" session led by editors and editorial staff at the *International Journal of Behavioral Development*, *Emerging Adulthood*, *European Journal of Developmental Psychology* and *Social Development*.

In conclusion, the 24th Biennial Meeting of the International Society for the Study of Behavioural Development in Vilnius was an extremely well-organized event providing many opportunities for professional networking, and for training and learning from a well packed scientific program featuring scholars from around the world, while enjoying the lovely Vilnius and Lithuania. To see the photo gallery during each day of the event visit <https://gediminasgrazys.shootproof.com/gallery/2936547/> and do not miss the 25th Biennial Meeting of the International Society for the Study of Behavioural Development to be held on The Gold Coast, Queensland, Australia July 15–19, 2018, <http://www.issbd2018.org/>



MAJOR CONFERENCES OF INTEREST

November 28 - 29, 2016

6th EAI International Symposium on Pervasive Computing Paradigms for Mental Health

Location: Barcelona, Spain

Web: <http://mindcaresymposium.org/2016/show/home>

November 30 - December 04, 2016

XXII World Congress of Social Psychiatry

Location: New Delhi, India

Web: <http://www.wasp2016.com/index.php>

December 02 - 04, 2016

First National Congress of Behavioural and Cognitive Therapy: Health care, a holistic view of treatment.

Location: Mexico City, Mexico

Web: <http://www.congresotcc.com/>

January 27 - 29, 2017

43 rd National Annual Conference of Indian Association of Clinical Psychologists 2017

Location: Coimbatore, India

Web: <http://www.naciacp2017.com/>

April 06 - 10, 2017

Biennial Meeting of the Society for Research in Child Development

Location: Austin, Texas, United States

Web: <http://www.srcd.org/meetings/biennial-meeting>

April 26 - 29, 2017

32nd International Conference of Alzheimer's Disease International

Location: Kyoto, Japan

Web: <http://www.adi2017.org/>

April 29 - May 01, 2017

International Psychological Applications Conference and Trends 2017

Location: Budapest, Hungary

Web: <http://www.inpact-psychology.conference.org/>

May 17 - 20, 2017

18th Congress of the European Association of Work and Organizational Psychology

Location: Dublin, Ireland

Web: <http://www.eawop2017.org>