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### SPECIAL ISSUE:

#### Early Personality and Later Development: Basic Research and Its Application

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# Introduction to the Special Section: Early Personality and Later Development: Basic Research and Its Application

Personality development research, a combination of two research traditions - personality psychology and developmental psychology - is the focus of the present issue of the ISSBD Bulletin. Gordon Willard Allport, one of the first psychologists to focus on the study of personality and often referred to as one of the founding figures of personality psychology, mentions, 'Every personality develops continually, from the stage of infancy until death, and throughout this span it persists even though it changes.' Given the relevance and importance of early personality on later development in interaction with contextual experiences, we feel privileged to present this special issue of the ISSBD Bulletin featuring cutting-edge research by authors on 'Early personality and later development: basic research and its application'.

There has been a paradigm shift in personality science in the past two decades and we believe the articles in this issue of the Bulletin will provide significant evidence and extend earlier research synthesis for the lifespan development of personality while continuing to acknowledge the role of cultural context. The Bulletin remains committed to presenting relevant research and we are hopeful that the articles represent a unifying vision of personality development research in the 21st century.

Our first feature article connects childhood and adolescent personality to later adult outcomes (Hill, Kwak, & Allemand) and reiterates the lasting influence of childhood personality on adult development. In the second article, Radobuljac and Sharp provide a fascinating account of the development of

personality disorders with implications for intervention. In the third article, Shiner provides a review of current research on impulsivity and its links with psychological disorders and potentially underlying processes. The developmental regulation is the focus of the final article by Greve and Kappes. We also have a country-focus section in this issue of the Bulletin where Hapunda and Chansa-Kabali deliberate on the current research findings on the care systems and management of children with cerebral palsy in Zambia. Cinzia and Hapunda present an interesting update on behalf of the Early Career Scholars committee and it is wonderful to note that the committee is organising various pre-conference workshops and four special workshops at the forthcoming 2024 ISSBD Biennial Meeting in Lisbon, Portugal.

We are very much looking forward to a productive and engaging biennial ISSBD conference in Portugal in June 2024 and wish the organisers much success. The conference will also be a great opportunity to network with other members and have in-person interactions. We welcome the ISSBD membership to contribute to the Bulletin by letting us know about the work you are involved in and to consider the Bulletin to showcase your research. We encourage inputs from you to improve the Bulletin and make it more approachable for the members. We hope you enjoy reading this special issue of the Bulletin.

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# Connecting Childhood and Adolescent Personality to Later Adult Outcomes

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Interest in personality psychology frequently grows from people interested in whether they are going to turn into their parents or wondering whether their childhood personality will be the same as in adulthood. However, childhood personality may hold the key to much more in adulthood beyond these discussions. Namely, research suggests that the kind of person someone is in childhood may predict their health and wellbeing into adulthood (Moffitt et al., 2011; Richmond-Rakerd et al., 2021; Steiger et al., 2014). Questions abound regarding why these associations may hold such lasting influence, which will serve as the center for the current article.

The current article will address three primary aims. First, we will describe example studies wherein personality trait levels assessed in childhood predict later adult developmental outcomes. Moreover, we discuss some preliminary evidence that changes in one's characteristics during childhood may have an additional influence later in life. Second, we will consider the potential mechanisms and reasons underlying the connections between childhood personality and adult development. Third, we outline future directions for research, centering on niche selection and how personality influences the situations and environments people select into across the lifespan.

## Childhood Personality and Later Life Outcomes

Personality traits are a robust predictor of developmental and health outcomes in adulthood (Beck & Jackson, 2022; Ozer & Benet-Martinez, 2006; Roberts et al., 2007). Thus far, this literature has focused on how adult personality assessments predict later outcomes. Three primary reasons present for this focus on adult personality to adult health associations. First, one should naturally expect a better predictive value for predictors more proximal to the outcome of interest. Second, assessing personality traits during childhood has proven notoriously complicated, including differences across measures and raters (Göllner et al., 2017; Shiner et al., 2021; Soto & Tackett, 2015). Third, the advent of trait taxonomies like the Big Five traits (Goldberg, 1999; John & Srivastava, 1999) has been relatively recent. As such, any efforts to link personality to later health outcomes before

that point had to rely on whatever personality inventories were available at that time.

Addressing these challenges, our recent work has considered personality characteristics that do not perfectly align with the traditional taxonomies employed in adulthood. Using data from the Life Study (in English, Pathways from Late Childhood to Adulthood; Fend et al., 2002), we have explored how adolescent personality from ages 12-16 predicts later adult health and wellbeing for those children. In that study, participants reported on their emotional reactivity and self-control. Our recent findings show that adolescents lower in emotional reactivity (Allemand, Fend, & Hill, 2024) and higher in self-control (e.g., Allemand, Steiger, Fend, 2015; Allemand, Job, & Mroczek, 2019; Allemand, Grünenfelder-Steiger, Fend, & Hill, 2023) tend to experience better social, health, and emotional outcomes later in adulthood.

Moreover, these studies are unique in the field due to their ability to consider multiple assessments of these two characteristics taken during adolescence (Allemand, Fend, & Hill, 2024; Allemand, Grünenfelder-Steiger, Fend, & Hill, 2023; Allemand, Job, & Mroczek, 2019). Using latent growth modeling to estimate individual-level trajectories of personality change from ages 12-16, we were able to consider how initial levels and changes over time on these characteristics uniquely predicted later adult outcomes. Across both emotional reactivity and self-control, we found evidence that how youth changed mattered in addition to how they “started” on these two characteristics. That is, greater increases in self-control and greater decreases in emotional reactivity during adolescence could be adaptive, whereas the opposite pattern of change could be maladaptive. These findings support one of the central tenets of lifespan development – it is not enough to study individuals at a single time point; we need to know *how* they change over time as well.

## Mechanisms Linking Childhood Personality to Adult Outcomes

Demonstrating the unique predictive value of personality change yields critical implications for explaining why childhood personality matters. A logical argument for why childhood personality relates to later outcomes is simply that research shows that personality dispositions show moderate stability over decades (Bleidorn et al., 2022; Roberts et al., 2006). Therefore, it may simply be that childhood characteristics build into adult dispositions, which then influence healthy lifestyle choices. However, if childhood personality level and change both predict later outcomes uniquely, it suggests that we need additional explanations beyond simply that personality is stable.



We have proposed at least three reasons childhood personality holds unique value in understanding future adult outcomes (Hill, Edmonds, & Jackson, 2019). First, childhood personality plays a role in the situations one selects into as they transition into adulthood. Having greater self-control during childhood predicts a wide variety of important life outcomes later in adulthood (Allemand, Job, & Mroczek, 2019; Moffitt et al., 2011; Richmond-Rakerd et al., 2021), which results in part because more self-controlled children are going to avoid the “snares” that befall their peers, such as early substance use and greater risk-taking behavior. These snares can hold lasting consequences. For instance, early substance use may beget later substance use, and the safety risks taken in adolescence potentially can impact one’s health for decades to come. Moreover, childhood self-control is linked to better educational outcomes (for a review, see Duckworth et al., 2019), which can open new opportunities for positive development. Attaining higher education “on time” can set the course for a more enriched environment later, highlighting why childhood personality can hold unique value compared to being more self-controlled later in adulthood.

Second, this point reflects something often critically missed by personality psychology. Namely, the same personality disposition may yield consequences for health and well-being through different pathways across adulthood. Our work has provided greater detail about these age-differential pathways for trait conscientiousness (Hill & Roberts, 2011; Shanahan et al., 2014). Examples also abound with respect to emotional reactivity, which we captured in our studies using items such as, “There are days when everyone gets on my nerves,” and “Sometimes I can hardly fight against my moods” (Allemand et al., 2024). During adolescence, individuals higher on these characteristics may suffer consequences in the classroom, have more maladaptive parent-child relationships, and/or fail to develop the broad social networks typical of this developmental period. In adulthood, high emotional reactivity also may hold social consequences, but with different manifestations, including poorer romantic relationships and more limited job success. As such, it is critical to know one’s level of emotional reactivity during both developmental periods to gain a more holistic perspective on developmental adaptation.

Third, adolescence presents a critical time for understanding *patterns* of personality change over time as well. Researchers have noted that personality maturation is often not linear (e.g., Borghuis et al., 2017; Durbin et al., 2016). Put differently, even if adults tend to score higher on traits like self-control than adolescents, that does not mean people will incrementally gain on self-control in a normative fashion. Instead, research studies have shown the capacity for personality *disruption*, often characterized by a downward shift in traits like conscientiousness during adolescence, before returning to an upward age-graded trajectory (Brandes et al., 2021; Soto et al., 2011). Understanding individual-level trajectories of personality change thus may provide critical information for later development, such as knowing which youth were more susceptible to “disruption” versus those who exhibit more consistent personality maturation. Playing upon the earlier points, youth who exhibit sharper and steady increases in self-control will experience educational benefits earlier and be more likely to avoid the snares faced by their peers who mature less quickly.

## Moving Forward

These non-orthogonal mechanisms provide clear arguments for studying personality from childhood to adulthood. However, given the paucity of longitudinal studies spanning these decades, the pathways described above have received limited empirical attention. As such, there is a critical need for considering how childhood personality predicts later outcomes through (A) motivating people toward developmental opportunities or snares, (B) developmentally-specific mediators such as academic success and substance use onset, and (C) providing insights into which youth mature more quickly than others.

One commonality across these potential mechanisms is that childhood personality will play a role in the situations available to youth and which ones they ultimately select. Situation selection (or niche-picking) has been discussed frequently as an explanation for both personality stability and change across the lifespan (Caspi et al., 2005; Roberts et al., 2008). Namely, individuals may be motivated by their dispositional characteristics to select into specific roles, environments, and situations across their lifespan, which may deepen and strengthen those dispositions. Contrarily, the environments we choose can shape us in ways counter to our original dispositions when we recognize that our previous personality tendencies may not yield success in that setting. This latter point may help explain why our research shows personality change during childhood matters uniquely from initial levels. Namely, personality change trajectories may pick up on how youth are entering more or less adaptive situations and environments, and they are shifting their personalities accordingly. Future research thus is necessary for uncovering what personality change during adolescence reflects, or perhaps better put, what *all* does it reflect.

While we have primarily discussed situation selection at the macro-level above, future research is needed to understand how situation selection plays a role at the daily level as well. Self-control is integrally linked to making better or worse decisions in the moment, leading people to select into or out of situations that may heed their impulses. Building from process models of self-control (Duckworth et al., 2016; Milyavskaya et al., 2021), situation selection presents a “forward-looking” strategy that can help one avoid impulsive and risky behavior by not putting oneself in potentially tempting situations. A primary reason why self-control during adolescence yields such consistent benefits downstream in adulthood (e.g., Allemand et al., 2019; Moffitt et al., 2011; Richmond-Riekert et al., 2021) is that self-controlled youth avoid problematic situations, including ones that may pressure them into illegal or illicit activities. With regard to educational opportunities, momentary assessment research suggests that self-control predicts adolescents’ ability to avoid distractions while doing homework (Galla et al., 2015). Contrarily, more emotionally reactive youth may cope with their emotions through engagement with risky and problematic strategies, placing themselves in daily situations that may yield problems for their future. Only recently have researchers begun examining situation selection in daily life, concluding that personality traits, daily affect, and situation perception interact to predict behavior (Horstmann, Sherman, Rauthmann, & Ziegler, 2021). Yet the exact nature of *how* people make decisions to approach or avoid situations to

manage their emotions proactively is unclear. As such, more research is needed to understand the daily and momentary processes, like situation selection, that may underlie the long-term associations between self-control and emotional reactivity during youth with later adult outcomes.

## Conclusion

In conclusion, although much attention has centered on child-to-adult personality, less work has focused on how childhood personality holds a lasting influence on adult development. In this article, we have presented both evidence and rationale for why childhood personality matters, in hope of motivating future researchers to incorporate personality more into their studies of childhood and adolescence. Moreover, it appears critical to measure personality across multiple childhood occasions to capture how people shift over these formative developmental years. Such work will set the stage for the next generation of research, capturing how youth operate in daily life to unlock the personality-relevant processes underlying adaptive (or maladaptive) development.

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# The Development of Personality Disorder: From Traits to Identity with Implications for Intervention

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## Temperamental and personality traits from childhood to adolescence

We are all born with basic behavioral traits that set us apart from others from an early age. These are referred to as temperamental traits, defined as »early-emerging basic dispositions in the domains of activity, affectivity, attention, and self-regulation« (Shiner et al., 2012). In contrast to the assumption that temperament traits are mostly biologically predisposed and that personality traits develop only after environmental influences interact with these predispositions, recent research suggests that personality is the result of lifelong interactions between biological and environmental factors that probably begin at conception (Bridgett et al., 2015; Shiner, 2015; van IJzendoorn et al., 2011). It is also very likely that temperamental and personality traits, respectively, are the earlier and later developmental manifestations of the same basic characteristics (Sharp, 2020; Shiner, 2015). We believe that ongoing research, particularly in the field of behavioral genetics and gene-environment-development interactions, can further support this model.

To explain the developmental trajectory from early childhood temperament to adult personality, McAdams and Olson (McAdams, 2015; McAdams & Olson, 2010) describe a gradual development through three lines or layers, depending on the subject's developmental abilities or stage of development: from the individual as *actor*, in which we act out our primary characteristics, to the individual as *agent*, in which we realize our evolving goals, values and motivations, to the individual as narrator of our life story, an *author*. Personality development begins with the most biologically determined layer of "dispositional traits", which are under the greatest influence of the early caregiving environment in the first years of life (Bridgett et al., 2015). In the first weeks of life,

we can therefore observe what McAdams (2015) refers to as "rudiments of psychological individuality", which are reflected in differences in characteristic mood, soothability, attention, response intensity and inhibition. During this period, the child is an actor, acting out their temperament (the "social actor"), showing their characteristic emotions and behaviors and reacting to their first audience – their immediate family and later others in the wider environment. The responses of the "audience" and co-regulation of emotions influence the child's emotions and behaviors and, consequently, the expression of genes in the child's developing brain through epigenetic mechanisms that form neural networks associated with the behavioral manifestations of the trait (specifically, the parts of the brain responsible for emotions and social behaviors) (Bridgett et al., 2015). Different early temperamental traits, in turn, provide alternative opportunities for secondary experiences with the environment (e.g., a child with a mild temperament is less demanding in parenting and has more opportunities for favorable parental/social experiences than an irritable, difficult-to-soothe child). These external influences, which are also triggered by the genotypically determined individual characteristics of the child, regulate the subsequent development and consolidation of temperamental traits in a complex interaction (McAdams & Olson, 2010). At around 2 years of age, when most children are able to distinguish themselves from others and observe their actions and those of others in a social context, young children begin to show more consistent individual differences in temperament (McAdams & Olson, 2010). With increasing mental maturation and cognitive development at the end of the preschool years, children show more or less stable temperament traits that, according to factor analytic studies, are highly consistent with the »Big Five« personality traits (Sharp et al., in press; Shiner, 2015). These are intellect (openness to experience), effortful control (conscientiousness), positive emotionality (extraversion), negative emotionality (neuroticism) and agreeableness. In early childhood, the mean levels of the traits increase and become aspects of the child's individuality. In the preschool years, children become more extraverted, self-controlled, empathic, active and emotionally negative. During the transition to elementary school, the mean levels of positive and negative emotionality tend to decrease (intense emotional traits), while self-control and agreeableness continue to increase (Shiner, 2015). Even though the intensity of the trait changes over the course of development, the position of a particular child in comparison to same-age peers (rank-order) remains moderately stable during pre-school, and stability continues

to increase thereafter until adulthood (McAdams & Olson, 2010; Shiner, 2015).

By the age of 5-7, the second layer of personality develops. During this developmental phase, some years before the onset of puberty and adolescence, children develop individual differences in goals (Massey et al., 2008) and values (Daniel et al., 2012) that shape their motivations and behaviors (McAdams, 2015; Sharp, 2020; Sharp et al., in press). Goal development begins as early as “the terrible twos” when a child begins to express their desires in an egocentric way (“I want!”), but it's not until several years later that clear goals become apparent and the contours of the second layer of “characteristic adaptations” of personality become visible (McAdams & Olson, 2010). The school-aged child begins to pursue goals that correspond to internalized values influenced by the environment and evaluates his or her own success in terms of these motivations (Sharp et al., in press). At this stage, increased self-esteem in response to progress and success in achieving one's goals is an important marker of successful development (McAdams, 2015; McAdams & Olson, 2010).

### **The pathway to maladaptive personality development**

In all these phases, the interplay of environmental influences and basic (genetic and) biological characteristics can create the possibility of unfavorable development. This can begin in childhood with a child exhibiting high levels of traits such as neuroticism, impulsivity, fearfulness, and negative emotionality that evoke different responses from the environment. These dispositional traits do not necessarily lead to a personality disorder, but, consistent with the developmental psychopathology principle of multifinality, represent a risk factor for many forms of psychopathology from the internalizing, externalizing and psychotic spectrum as well as for a maladaptive personality (Sharp, 2020; Sharp et al., in press; Sharp & Wall, 2018). The consolidation of goals, values and motives provides the basis for the development of self-directedness, and acting on them influences the developing relationships with others, that is, interpersonal functioning. From the age of 5-7, children can be expected to exhibit some normative interpersonal behaviors. If they follow their desires without taking other children or adults into consideration, this can mean the occurrence of behavioral disorders and an increased risk of unfavorable personality development from this age, but as such, it still is not sufficient to justify a diagnosis of personality disorder. Other aspects of personality must first develop (Sharp et al., in press; Sharp & Wall, 2018). Only with the development of “theory of mind” at the age of 4-5 years can children begin to understand different points of view (that others can see reality differently), and here we can observe the acceleration of the ability to mentalize. While this rudimentary mentalizing capacity provides the building blocks for decoupling what is in the mind from reality (that is, representational capacity), it would take several more years of cognitive development for the consolidation of identity to become

possible. It is only with the emergence of metacognition, after puberty, that an adolescent acquires sufficient reflective capacities to integrate their experiences together with an awareness of their own characteristics, goals, values and motives into a coherent self-narrative. And with the development of this so-called »reflective self«, we can begin to observe the defining characteristics of personality disorder (dysfunctional self- and interpersonal functioning) (Sharp, 2020; Sharp et al., in press).

### **Implications for diagnostic classifications**

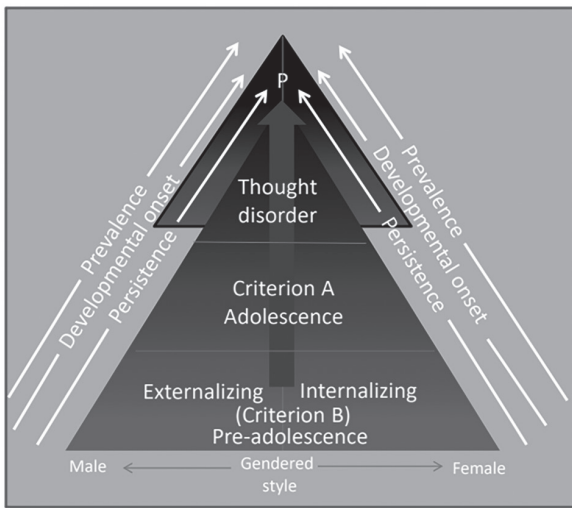
While the 10 categorical DSM-IV diagnoses for personality disorders have been retained in Section II, the Alternative Model for Personality Disorders (AMPD) in Section III of DSM-5 (similar to the new ICD 11) presents a more developmentally sensitive model of personality dysfunction (American Psychiatric Association, 2013; World Health Organization, 2019/2021; Sharp & Wall, 2021). Firstly, both classifications now unquestionably allow the diagnosis of a personality disorder at the age of 12 (if the required criteria are met). Secondly, Level of Personality Functioning represented in Criterion A of the AMPD describes the basic dysfunction shared by all personality disorders as maladaptive self (stability and coherence of one's identity and their self-direction) and interpersonal functioning (empathy and intimacy) on a continuum from healthy to severely impaired. From a developmental perspective, impairment in these domains is the result of impaired development of the organizational structure and function of the self, leading to incoherence of the narrative self, a skill that is only acquired in adolescence (Sharp, 2020). The degree of identity incoherence can fluctuate, with periods of relative coherence and dysintegration in emotionally challenging situations, especially in intimate relationships, which may translate into a disruption of the capacity for intimacy if present (Erikson, 1950; Kernberg, 1967; Sharp et al., in press). This developmental delay prevents the young person from fulfilling their developmental tasks, assuming adult roles and gaining independence and autonomy (Sharp, 2020). Thirdly, by applying AMPD Criterion B (the evaluation of maladaptive trait domains), the new classifications take into account individual differences in temperamental/dispositional traits, the basic forms of which can already be observed in early childhood. For the clinical staging of the severity of personality pathology, which is of crucial importance for clinical decision-making (e.g. whether and which interventions should be used), maladaptive personality traits alone (DSM-5 AMPD Criterion B), although they have been extensively studied in children and adolescents, provide an incomplete picture. The process by which dispositional traits transform into a personality disorder in adolescents (which is also used to classify severity) is better explained by failed developmental milestones in understanding self and interpersonal functioning, represented in Criterion A/Level of Personality Functioning of the AMPD (Sharp, 2020).

While research confirms that temperamental traits can be explained by the underlying two-factor model of internalizing and externalizing behaviors (Sharp, 2020), research in adolescents also shows that personality disorders (on a



model of Borderline personality disorder) are preceded by internalizing and externalizing psychopathology, and high comorbidity with these disorders persists after the onset of a personality disorder (Sharp & Wall, 2018; Stepp et al.,

2016). This had led us to propose a developmental psychopathology model for the development of personality pathology, as illustrated in Figure 1 (Sharp et al., 2021; Sharp & Wall, 2018).



**Figure 1.** An ICD-11 and AMPD informed clinical staging model for the development, assessment, and treatment of personality disorders in childhood and adolescence. Adapted from Sharp & Wall (2018) and Sharp et al. (2021).

Figure Notes. Criterion A (Level of Personality Functioning) refers to the DSM-5 Section III alternative model criterion shared by all personality disorders and defined as maladaptive self and interpersonal function. Criterion B refers to the five maladaptive trait domains described in the AMPD. “P” refers to the psychopathology (or severity) factor as suggested by Caspi et al. (2014).

### Implications for (pre)intervention

The prevention of maladaptive personality development can begin in any of the phases of personality development described above, ideally as early as conception. It can also start with both pillars of possible dysfunction: AMPD Criterion B (development of personality traits) and Criterion A (development of self- and interpersonal functioning). For example, there is research showing that intervention as early as the first year of life can effectively improve emotion regulation, externalizing and internalizing behaviors, increase normative developmental functioning, and attachment quality in high-risk children (welfare-involved children) (Grube & Liming, 2018), and there is growing evidence of effective interventions for personality disorders in adolescence (Table 1) (for a comprehensive AMPD-informed clinical staging model of personality pathology across the life course with potential interventions, see Sharp et al., 2021). There is also evidence that the capacity for self-regulation in children is passed on intergenerationally (Bridgett et al., 2015), which opens up many possibilities for work with expectant parents (Cristea et al., 2017; Fonagy et al., 2017; Stoffers-Winterling et al., 2022). Considering the different pillars of emerging pathology and the different levels of prevention (e.g. primary, secondary and tertiary prevention), there is also a wide range of possibilities for further research (Stepp et al., 2016).

**Table 1.** An ICD-11 and AMPD informed clinical staging model for the development, assessment, and treatment of personality disorders in childhood and adolescence. Adapted from Sharp et al. (2022) and Sharp et al. (in press).

| Stage     | Stage definition   | Clinical presentation and target population  | Assessment   | Intervention  |
|-----------|--|--|--|---|
| <b>0</b>  | Increased risk of disorder<br>No current symptoms                  | Elevated scores on maladaptive traits*. Sub-threshold elevation on measures of internalizing and externalizing. No functional impairment. Likely target population: First-degree relatives, youth in adverse contexts; Infancy, preschool, elementary school age, adolescence.   | Trait measures: HiPIC, DIPSI<br>Temperament measures: BSQ, EAS, CBQ<br>Int-Ext measures: CBCL, TRF, YSR, BASC-3, SDQ                                   | Mental health literacy<br>Self-help<br>Community-based intervention   |
| <b>1a</b> | Mild or non-specific symptoms<br>Mild functional change or decline | Symptoms of both internalizing and externalizing disorder/high scores on maladaptive traits*. Mild issues in social and school function that can be handled by parents or teachers. Some problems in empathy, theory of mind and self-regulation. Likely target population: Community screening; Preschool, elementary school age, adolescence.                      | Stage 0 measures PLUS<br>Functioning measures: CBCL/YSR/TRF functioning scales, CAFAS or MAFS, BASC-3 self-regulation scales, ToM/mentalizing measures | Mental health literacy<br>Family psychoeducation, parenting skills, supportive counseling/problem solving<br>Community based intervention |
| <b>1b</b> | Ultra high risk: moderate but sub-threshold symptoms               | Confluence of internalizing and/or externalizing disorder/high scores on maladaptive traits*. Escalation in social and educational challenges; may struggle in peer group. Significant problems in empathy, theory of mind, self-regulation, self-direction. Likely target population: Referrals from primary care; Elementary school, adolescence, early adulthood. | Stage 1a measures PLUS<br>Additional maladaptive trait measures: PID-5<br>ICHOM measures   | Stage 1a interventions PLUS<br>time-limited evidence-based intervention (e.g. CBT)<br>Outpatient services                                 |

(Continued)



**Table 1.** (Continued)

| Stage | Stage definition  | Clinical presentation and target population   | Assessment  | Intervention  |
|-------|---|---|---|---|
| 2     | First episode of threshold disorder with moderate to severe symptoms and functional decline | High levels of maladaptive self and interpersonal dysfunction (LPF): significant problems in self-reflection and self-directedness, identity development, intimacy, empathy and theory of mind. Internalizing and externalizing disorder/high levels of maladaptive traits* maintained. Moderate to severe problems in social, educational and/or work function; problems in maintaining mutually rewarding relationships.<br>Likely target population: Referrals from primary and specialist care;<br>Early, mid-, late adolescence; early adulthood; adulthood. | Stage 1b measures PLUS<br>LPF measures: PDS-ICD-11, AIDA, LOPF-Q 12-18, STiP 5.1<br>BPD measures: CI-BPD, BPF5-C-11, BPF5-P-11, PAI-A-BOR<br>ICHOM measures | Stage 1b interventions PLUS case management, educational/vocational intervention/rehabilitations, family psychoeducation and support, time-limited psychotherapy, targeted psychopharmacotherapy<br>Outpatient services             |
| 3     | Recurrence of subthreshold symptoms and/or relapse of disorder                              | Recurrence of internalizing and/or externalizing disorder/high levels of maladaptive traits*; moderate to severe or chronic challenges in maladaptive self and interpersonal functioning (LPF) and social and educational settings.<br>Likely target population: Referrals from primary and specialist care;<br>Early, mid-, late adolescence; early adulthood; adulthood.  | Stage 2 measures PLUS<br>Additional severity measures: WHODAS 2.0, SASPD, functioning measures from ICHOM.  | Stage 2 interventions PLUS emphasis on maintenance medication and psychosocial strategies for full remission.<br>Outpatient services.   |
| 4     | Persistent, unremitting disorder  | Persistent, unremitting self and interpersonal dysfunction (LPF) and comorbid internalizing and externalizing disorder/high levels of maladaptive traits*. No or very limited participation in social and professional life.<br>Likely target population: Referrals from specialist care;<br>Early, mid-, late adolescence; early adulthood; adulthood.   | Stage 2 measures PLUS<br>Additional severity measures: WHODAS 2.0, SASPD, functioning measures from ICHOM.  | Stage 3 interventions PLUS intensive psychosocial intervention (e.g. DBT/MBT) and psychopharmacological intervention.<br>Intensive outpatient services and/or short intensive inpatient treatment (stabilization if danger to self) |

Note. \*After assessing severity with the AMPD Criterion A (LPF), the Criterion B describes »maladaptive traits« as the Big Five variants: negative affectivity (neuroticism), detachment (introversion), antagonism (low agreeableness), disinhibition (low conscientiousness) and psychoticism (openness). The ICD-11 allows in addition to the coding for severity for one or more of the following »trait domain specifiers« to be coded: negative affectivity, detachment, disinhibition, dissociality, anakastia, borderline pattern specifier. AIDA: Assessment of Identity Development in Adolescence; AMPD: Alternative DSM-5 Model of Personality Disorders; BASC-3: Behavior Assessment System for Children, third edition; BPF5-C/P-11: the Borderline Personality Features Scale for Children/parent report/11-item version; BSQ: Behavioral Styles Questionnaire; CAFAS: Child and Adolescent Functional Assessment Scale; CBCL: Child Behavior Checklist; CBQ: Child Behavior Questionnaire; CI-BPD: the Childhood Interview for DSM-IV Borderline Personality Disorder; DIPSI: Dimensional Personality Symptom Item Pool; EAS: the Emotionality, Activity and Sociability Temperament Questionnaire; HiPIC: the Hierarchical Personality Inventory for Children; LPF: Levels of personality functioning; PDS-ICD-11: ICD-11 Personality Disorder Severity Scale; ICHOM: International Consortium for Health Outcomes Measurement; LOPF-Q 12-18: the Levels of Personality Functioning Questionnaire; MAFS: Multidimensional Adolescent Functioning Scale; PAI-A-BOR: the Personality Assessment Inventory for adolescents borderline scale; PID-5: the Personality Inventory for DSM-5; SASPD: Standardized Assessment of Severity of Personality Disorder; SDQ: Strengths and Difficulties Questionnaire; STiP-5.1: the Semi-structured Interview for DSM-5 Personality Functioning; ToM: theory of mind; TRF: Teacher Report Form; WHODAS 2.0: World Health Organization Disability Assessment Schedule 2.0; YSR: Youth Self-Report.

**Authorship statement**

CS conceptualised the work, MDR drafted the article, CS revised it critically for important intellectual content, CS and MDR approved the version to be published and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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# Negative and Positive Urgency in Children and Adolescents

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Negative urgency and positive urgency are personality traits that reflect impulsivity in response to intense negative and positive emotions, respectively. Together they form an overarching trait reflecting impulsive reactivity to emotions. This paper offers a brief review of research on these traits in children and adolescents: assessment of the traits, links with psychological disorders, and potential underlying processes. Developmental research on negative and positive urgency in young people has the potential to illuminate the origins of the traits in temperament; their stability and change over time; the mechanisms underlying the traits; and the development of urgency in cultural context.

## Introducing Negative and Positive Urgency: Why Should Developmentalists Care About Them?

In the video *Behavior Disorders of Childhood*, viewers are introduced to 14-year-old Paul, who is living in a treatment-focused foster home after being diagnosed with a disruptive behavior disorder because of a recent history of stealing cars (Alvin H. Perlmutter, Inc., 1992). Paul's mother attributes Paul's disruptive behavior to his tendency toward acting impulsively when he gets angry: "We both had tempers. We'd yell, we'd scream, we wouldn't get anywhere, we'd just go around in circles. He'd get so mad, he'd go out and break, steal, rob, whatever, because he was so angry." Paul concurs with his mother, noting that sometimes his impulsive behaviors were fueled by jealousy about a brother who had newly returned to the family: "I got really mad and jealous about it, and I started getting in trouble. At first it started off small, but it just grew bigger and bigger and bigger, and I ended up finally getting taken away from home."

The personality trait underlying Paul's impulsivity is *negative urgency*—the tendency to respond to negative emotions like anger, sadness, and distress with rash, poorly regulated action (Whiteside & Lynam, 2001). A comparable trait termed *positive urgency* reflects similar rash impulsivity in the face of positive emotions like joy and euphoria (Cyders & Smith, 2008). Together, negative and positive urgency make up an overarching *urgency* dimension reflecting impulsive reactivity to emotion (Carver & Johnson, 2018; Cyders & Smith, 2008). Children, adolescents, and adults all vary in the extent to which they respond to their emotions with impulsive, reflexive, and reactive behaviors.

Negative and positive urgency have received widespread attention in the clinical psychology literature because both traits are robustly associated with many different psychological disorders, as I review here. Developmental psychologists outside the clinical field may be less familiar with research on negative and positive urgency, however, despite the traits' likely importance for youth's outcomes in domains besides psychopathology. In this brief review, I offer a brief review of research on negative and positive urgency in childhood and adolescence and suggest some promising research directions that would deepen our developmental understanding of these traits.

## What Are Negative and Positive Urgency, How Are They Assessed, and How Are They Related?

The concept of negative urgency was introduced by Whiteside and Lynam (2001) in a seminal paper empirically parsing impulsivity—the tendency toward rash action—into its constituent components. Whiteside and Lynam created the Urgency-Premeditation-Perseverance-Sensation Seeking (UPPS) Impulsive Behavior Scale to assess negative urgency, as well as several other components of impulsivity. Several years later, Cyders and Smith (2008) made the theoretical and empirical case for a positive urgency trait and created a new questionnaire scale to assess it (Cyders et al., 2007); the broadened impulsivity measure was named the UPPS-P ("P" for positive urgency").

Various self-report questionnaire versions of the UPPS and UPPS-P have been developed for use with children and adolescents (Guerten et al., 2021; Watts et al., 2020; Zapolski et al., 2010). Interviews can also be used to assess the UPPS-P constructs in children and adolescents (Kim et al., 2023; Zapolski et al., 2010). Versions of the UPPS for youth have been translated from English into Chinese, Dutch, French, German, Portuguese, Spanish, Swedish, and Turkish, and research has demonstrated internal consistency and construct validity for these measures (Sonmez et al., 2024). Table 1 presents the self-report questionnaire items assessing negative and positive urgency from a new abbreviated youth version of the UPPS-P that was created for the Adolescent Brain Cognitive Development (ABCD) Study (Watts et al., 2020); the ABCD Study included this measure when participants were 9-10 years old.

Consistent evidence points to the conclusion that negative urgency and positive urgency may represent two facets of an overarching urgency trait. The two traits are typically highly correlated with each other in samples of youth (Watts et al., 2020) and adults (reviewed in Billieux et al., 2021), and some authors have argued that it may not be necessary to distinguish between negative and positive urgency (e.g., Berg et al., 2015; Billieux et al., 2021; Kim et al., 2023).



**Table 1.** Items Assessing Negative Urgency and Positive Urgency in the Abbreviated UPPS-P-Youth Version (Watts et al., 2020).

| Negative Urgency  |
|---|
| 1. When I feel bad, I often do things I later regret in order to make myself feel better now. |
| 2. Sometimes when I feel bad, I keep doing something even though it is making me feel worse.  |
| 3. When I am upset, I often act without thinking.   |
| 4. When I feel rejected, I often say things that I later regret.                              |
| Positive Urgency  |
| 1. When I am in a great mood, I tend to do things that can cause me problems.                 |
| 2. I tend to act without thinking when I am very, very, happy.                                |
| 3. When I get really happy about something, I tend to do things that can lead to trouble.     |
| 4. I tend to lose control when I am in a great mood.  |

However, some studies of children (e.g., Watts et al., 2020) continue to find different links between the two traits and external criteria, so the distinctiveness of the two traits remains unresolved.

### How Are Negative and Positive Urgency Related to Psychological Disorders?

Not surprisingly, young people like Paul who respond to intense emotions with impulsive behavior are at a heightened risk for disruptive behavior disorders; what may be more surprising is that negative urgency is associated with internalizing and psychotic-spectrum conditions as well. A meta-analysis of the associations between the UPPS-P dimensions and psychopathology (Berg et al., 2015)—which included 11 samples of secondary-school students—found that negative urgency was moderately to strongly associated with aggression, alcohol/substance use, suicidality/non-suicidal self-injury, depression, anxiety, borderline personality disorder, and disordered eating. Positive urgency was associated with alcohol/substance use (the only outcome for positive urgency with enough studies to be included). Of note, compared to other aspects of impulsivity (besides positive urgency), negative urgency had the largest effect sizes for every psychological disorder.

Studies of children and adolescents have likewise demonstrated that negative and/or positive urgency are associated with symptoms of ADHD, conduct disorder, oppositional defiant disorder, substance use, panic disorder, depression, generalized anxiety, separation anxiety, prodromal psychotic symptoms, and mania (different symptoms reported in Geurten et al., 2021; Marmorstein, 2013; Watts et al., 2020). A new systematic review of studies using the UPPS and UPPS-P in childhood and adolescence (Sonmez et al., 2024) documented those same associations, as well as links between negative and/or positive urgency with self-harm, suicidal ideation, eating behaviors, and weight. Most studies linking negative and positive urgency with psychopathology have been cross-sectional, although some have shown that urgency predicts later symptoms.

Negative and positive urgency are clearly associated with an extremely broad range of disorders, encompassing

symptoms from the externalizing, internalizing, and psychotic spectra of symptoms. It is striking that the tendency toward dysregulated, rash behavior in the face of intense emotion is associated not just with the disinhibition seen in externalizing conditions like conduct disorder but also with the withdrawal and inaction seen in internalizing conditions like depression (Carver & Johnson, 2018). Even the propensity toward impulsive responses to positive emotions is linked with depression in young people (Smith et al., 2013).

These findings have led some researchers to argue that urgency assesses general problems with reflexive responses to distress, rather than disinhibited, impulsive behaviors only (Carver & Johnson, 2018; Smith et al., 2013). Other researchers have taken this argument a step further and have suggested that urgency may be a critical contributor to the *p-factor*, which is the general factor that indexes a person's overall propensity toward psychopathology (Lahey et al., 2021). The *p-factor* captures all the co-variance across many psychological disorders (Caspi et al., 2014). The basic deficits in controlling both negative and positive emotions seen in the urgency traits may thus have widespread effects on psychopathology (Lahey et al., 2021).

### Critical Next Steps: Future Research on Negative and Positive Urgency

Negative and positive urgency are clearly important for understanding a wide range of psychological disorders among children, adolescents, and young adults. Despite the importance of negative and positive urgency, our developmental understanding of these traits remains shallow. A recent systematic review (Sonmez et al., 2024) found 45 papers assessing negative and/or positive urgency in youth ages 5 to 21 years old; however, most of the studies only assessed the constructs at only one point in time. Several important developmental questions remain unanswered regarding these traits, and I elaborate on those questions here.

1. Negative and positive urgency can be assessed by age 9 (Watts et al., 2020), but their possible origin in temperament remains poorly understood. In their paper making a theoretical case for the existence of positive urgency, Cyders and Smith (2008) suggested that negative and positive urgency may derive from temperament-based emotional traits (e.g., surgency and negative emotionality) and regulatory traits (e.g., effortful control). Thus far, the only study testing these claims was a longitudinal study assessing temperament at ages 5-8 and negative urgency at ages 13-18. In this study, anger reactivity in childhood predicted negative urgency in adolescence, but effortful control did not. However, negative urgency was predicted by a latent factor capturing the overlap between anger reactivity and (low) effortful control. These results suggest that the associations between specific temperament traits and negative urgency may not be simple ones. Intense negative emotionality may undermine people's capacities for self-regulation (Shiner, 2019)—a possibility worthy of further study.

2. We know very little about stability and change in urgency in young people. As noted, the new systematic review of studies using the UPPS or UPPS-P in young people found virtually no studies assessing urgency at more than one time point (Sonmez et al., 2024). The biological and psychological changes that take place during adolescence make it likely that negative and positive urgency both increase in the transition to adolescence (Cyders & Smith, 2008). An accelerated longitudinal study of negative urgency, positive urgency, and sensation seeking found that all three traits increased between ages 11 and 13 and then remained stable until age 16 (Littlefield et al., 2016). More studies are needed on the rank-order and mean-level stability of these traits in childhood and adolescence to understand their patterns of development.
3. The biological and psychological mechanisms underlying negative and positive urgency need greater attention. Negative and positive urgency highlight the importance of investigating the role of emotion as a driver of impulsive behavior. What are the processes through which negative and positive emotions might both result in impulsive, harmful behavior for some young people? Children and adolescents vary on several individual differences that may shape their propensity toward emotion-based impulsivity—including their basic motivations and goals and their emotion-regulation skills (Shiner et al., 2021). Youth's temperament and personality traits may also interact with their default coping strategies in a way that may make them more vulnerable to impulsive action (Shiner et al., 2023). The ABCD Study is yielding some evidence for the biological underpinnings of negative and positive urgency (Owens et al., 2020); preliminary work suggests substantially overlapping biological correlates for the two traits, although results are more robust for positive urgency.
4. As noted previously, the UPPS and UPPS-P have been translated into numerous languages, suggesting that researchers in many different places in the world are interested in better understanding these traits. A recent study of mothers from the U.S. and China showed that mothers from these two countries are very concerned about a set of undesirable outcomes in their children—including social insensitivity, aggression and disruptiveness, and motivational difficulties (Ip et al., 2024); all of these negative outcomes seem likely to be related to negative and positive urgency. Research on these traits in different cultures has the potential to illuminate whether the traits are affected by different contextual factors and have different outcomes in different populations.

I hope that this brief review inspires more developmental psychologists from varied cultures to study negative and positive urgency, the mechanisms underlying the traits, and the implications of these traits for healthy versus problematic development. Young people like Paul need help learning to manage their propensity toward impulsive responses to emotions, and developmental research has much to offer those efforts.

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# The Development of Developmental Regulation

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The lifespan perspective of developmental psychology is certainly not a new approach. It was formulated and postulated in its current form almost four decades ago (Baltes, 1987), following on from previous work (for example by Charlotte Bühler, Erik H. Erikson or Robert Havighurst), but in many respects going substantially further. The developmental psychology of the lifespan assumes that development is not characterized by continuous progress, but rather has many directions and many dimensions at every age, is shaped biologically, culturally (historically, socially) and individually, and is highly flexible ("plastic") (Baltes, 1987). It might be worth mentioning that the lifespan approach is not a revision of older theories focused on childhood and adolescence forced by empirical data (it had not escaped Sigmund Freud that people do change beyond adolescence), but a conceptual proposal to use the term "development" more encompassing (Piaget would not have labeled the changes during adulthood and in old age "development"). The lifespan perspective of developmental psychology is, in a word, not a theory but a proposal of a broader understanding of the concept of development. Yet, definitions, unlike theories, cannot be proven wrong. Whether the extended use of the term 'development' is fruitful remains to be seen.

## The lifespan perspective on human development: An unfinished project

Alas, although the constitutive starting point of the lifespan perspective is precisely that there is no privileged life stage for development, work on the lifespan perspective has focused almost exclusively on later (and occasionally middle) adulthood. This is perhaps partly a consequence of the fact that the actional perspective (the claim that we are co-producers of our own development: Brandtstädter & Lerner, 1999) entails demanding assumptions with regard to the cognitive and motivational abilities of the acting person (hierarchically differentiated goals, a complex self, elaborate cognitive competencies, etc.). Very rarely have lifespan approaches been linked to childhood-related theories and models. Therefore, irrespective of a generally positive reception it is fair to say that this approach has produced very few actual cross-lifespan theories (Moersdorf et al., 2022). Reviews or textbooks arguing in favor of a lifespan perspective often just add sections or chapters on adulthood and old age; even lifespan approaches on, for instance, cognitive processes (e.g., Baltes et al., 2006) or emotion (Labouvie-Vief, 2015), at first glance hardly go beyond the generalized description of trajectories across the lifespan.

However, perhaps the most fruitful aspect of the lifespan perspective was not the extension of the period under

consideration beyond adolescence, nor the associated expansion of the concept of development, but the "processual turn" in developmental psychology (Greve, 2023). Following Baltes' (1987) theses, several theories have described developmental dynamics and phenomena in middle and older adulthood as resulting from interaction of personal (intentional, controlled) and subpersonal (automatic) regulatory processes (Brandtstädter & Rothermund, 2002; Freund et al., 1999; Heckhausen et al., 2010). The starting point and common focus of these approaches is to understand how to deal with blockages and losses that are increasingly likely to jeopardize the achievement of important life goals or the maintenance of quality of life and identity from later adulthood onwards.

## Accommodative adaptation as a sample case of developmental regulation across the lifespan

One of the common features of the regulation theories mentioned above is that, in addition to active goal pursuit and intentional compensation strategies (Baltes & Baltes, 1990; Heckhausen et al. 2010, 2019), adaptive processes that maintain quality of life in old age, even when confronted with threats and losses, must also be examined. These theories postulate a family of goal adjustment processes (letting go of or devaluing and reevaluating blocked goals, compensatory upgrading of alternative goals, etc.; Brandtstädter & Renner, 1990; Heckhausen et al., 2010, 2019; Wrosch et al., 2003 a and b), which can be referred to as "accommodative" coping (Skinner & Zimmer-Gembeck, 2007; 2016; Zimmer-Gembeck & Skinner, 2011; Greve & Kappes 2023). The prospect of being able to better understand the connection between early individual differences for later development within the framework of these approaches and to develop perspectives for a developmental theory that actually spans lifespans will be outlined using the example of the two-process model of developmental regulation (Brandtstädter & Rothermund, 2002).

The fact that there are individual differences in the availability of these adaptative processes indicates that they not only regulate development, but are in turn dependent on developmental conditions and processes. However, this perspective - the explanation of the developmental regulatory processes - has so far received little attention. Firstly, it would be important to investigate which developmental conditions and processes in childhood and adolescence can explain (individual differences in) availability of flexible goal adjustment processes in adulthood. However, the investigation of such adaptive processes in early and late childhood (and adolescence) would also be informative: because children are also confronted with losses and goal blockages, it would be important to know to what extent (and under what conditions) processes of goal adjustment are already available in the first and second decade of life. This might open up further



approaches to explaining developmental regulation in middle and late adulthood (Brandtstädter et al., 1993) from a lifespan perspective. While numerous studies have demonstrated the positive effects of goal adjustment on health and well-being (Brandtstädter & Rothermund, 2002), neither trajectories of development nor developmental conditions of the adaptive resources mentioned in the two-process model have yet been theoretically or empirically elaborated. Although the two-process model refers to an increase in accommodative processes in later adulthood (Brandtstädter, 1992; Brandtstädter & Rothermund, 2002), there are hardly any theoretical considerations or empirical findings on developmental trajectories in childhood and adolescence and their developmental conditions (Greve & Kappes, 2023).

It is worth distinguishing between forms of coping and regulation that are directly functional or relevant for childhood and adolescence on the one hand, and the developmental processes that must inevitably be undergone in childhood and adolescence in order to build up (the components of) accommodative forms of coping and regulation in adulthood on the other. Accordingly, the former perspective of an age-related functionality of early forms of accommodative coping would not only examine the developmental course of accommodative coping resources from early childhood to adulthood, but would also consider them as a resource that may already be relevant or useful in childhood and adolescence for dealing with goal blockages and problems. Logically and possibly also empirically independent of this, the second perspective on the development of the conditions or components necessary for adult accommodative regulation would examine the development of a complex regulatory resource in (later) adulthood. From this perspective, it is not necessary to assume that early or pre-forms of accommodative regulation exist in childhood, or that, if they do exist, they continue into middle and older adulthood. It is conceivable that childhood forms of goal adjustment processes do not occur systematically (as a coping resource), or are ineffective, or keep changing (e.g. change significantly again in adolescence). It is very plausible to assume that constitutive components (e.g. the ability to change perspective) of adult accommodative regulatory abilities are formed in the course of cognitive or emotional development, with individual differences occurring that can (partially) explain individual differences in adult flexibility of goal adjustment.

Several studies show stabilizing effects of accommodative regulation for self and well-being in adolescence and young adulthood in longitudinal studies (Marek et al., 2023; Thomsen et al., 2015). The question of whether flexible goal adjustments can also be demonstrated for earlier childhood is more complex. Although younger children will also have had experiences with blocked goals, and it is not implausible that they show or develop individual differences in their reaction to such experiences, it is questionable whether more complex goal adjustment processes can already be seen here, and it is even more open whether such dispositions are already sufficiently stabilized in childhood (Greve & Kappes, 2023). The tendency and ability of children to engage in an accommodative coping process was recorded in a playful assessment format (Lessing et al., 2015); however, longitudinal data on the functionality of this form of accommodative coping is not yet available.

It is plausible to assume that the frequently demonstrated individual differences in the ability and tendency to regulate

one's own development "accommodatively" (Brandtstädter & Rothermund, 2002; Heckhausen et al., 2010; Wrosch et al., 2003) can in turn be explained by developmental conditions. In childhood and adolescence, this includes the development of cognitive components (prerequisites) (Lessing et al., 2019), the availability of adult models (Kappes & Thomsen, 2022; Thomsen et al., 2017), but also stimulating, in particular heterogeneous developmental conditions that favor or force the development of adaptive regulatory processes (for initial cross-sectional evidence for this, see: Greve & Thomsen, 2013, 2016; Greve et al., 2014; Thomsen & Greve, 2013; Greve et al., 2021; Koch et al., 2023). This approach includes the necessity to examine the microprocesses of accommodative reactions (Leipold et al., 2014; Rühs et al., 2022).

The aim of this essay is to argue that the lifespan perspective has so far underutilized the investigation of the development of developmental regulatory processes (whose relevance for adult development has been shown many times). The approach of focusing on developmental regulation as the explanandum (not just the explanans) of developmental psychological explanations opens up several promising perspectives. On the one hand, methodological difficulties (such as the equivalent recording of identical competencies or dispositions across the lifespan: Moersbach et al. 2022) can perhaps be avoided if—plausibly—it is not assumed that the same competence is involved. Instead, a theoretically plausible developmental theory should be formulated that specifies the development of pre-forms and of components and developmental prerequisites for "adult" regulatory processes (this would then, of course, have to be tested in sufficiently long longitudinal studies). The focus on these regulatory processes opens the perspective to explain not only (continuous or discontinuous) changes, but also stability—depending on the respective realized conditions and the level of analysis. This implies the possibility of actually arguing across the lifespan and, in particular, of systematically including adulthood - which is largely characterized by stability. Furthermore, this opens the view of possible integration of developmental processes in childhood and adolescence that not just explain the basic conditions for later stages but rather provide necessary and constitutive components of adult regulatory processes. It is the latter aspect that is of particular importance both for a true lifespan approach and the explanation of the (development of) developmental regulatory processes.

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# Promising Care Systems and Management of Children with Cerebral Palsy in Zambia. Where Are We Now?

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## What this paper adds

- Prevalence of cerebral palsy (CP) remains unknown in Zambia
- Perinatal factors and birth methods are major risk factors for CP
- Nutrition and cognitive stimulation remain challenges.
- Psychosocial challenges and abuse are common among children with CP
- Access to care and support remains a challenge, especially in rural areas
- CP research remains scant and few studies apply the International Classification of Functioning (ICF) framework.

## Introduction

The typical developmental trajectory of children after birth is the expectation of many parents and caregivers. However, developmental science has experienced an upsurge of atypical development. The 2011 world disability report of the World Health Organization estimated that 150 million children globally have some form of disability, of which 80% live in resource-poor settings, where rehabilitation services are extremely limited. Of these, an estimated 52.9 million children under the age of five have developmental disabilities, and 95% of these reside in low- and middle-income countries (LMICs) (Olusanya et al., 2018).

A more recent systematic review revealed a fluctuating global prevalence rate of neurodevelopmental disorders (NDDs) of 4.70 and 88.50%, with higher rates recorded in poor resource areas such as Zambia (Francès, et al. 2022). One of the leading causes of disability in childhood is Cerebral Palsy (CP), “a group of permanent, but not unchanging, disorders of movement and or posture and of motor function, which are due to a non-progressive interference,

lesion, or abnormality of the developing or immature brain” (Sadowska, Sarecka-Hujar & Kopyta, 2020). Its presentation in terms of core symptoms is heterogeneous, differing from child to child and is often accompanied by disturbances in sensation, perception, cognition, communication, and behaviour.

## Causes of Cerebral Palsy

CP is caused by a myriad of factors, 75% being prenatal in origin (brain malformations or maternal infection), perinatal, 10-15% (problems during labour and delivery such as antepartum haemorrhage or cord prolapse, compromising the foetus), and 10% postnatal, including infections such as meningitis (Reddighough, 2011). The damage to or abnormalities inside the developing brain disrupt the brain's ability to control movement and maintain posture and balance limiting functionality (National Institute of Neurological Disorders and Stroke, 2013). Additionally, it also has a higher propensity to co-occur with other NDDs like epilepsy, and intellectual and learning disabilities (Murugasen et al., 2014; Reddighough, 2011). Due to a lack of knowledge of good feeding practices for children with CP, malnutrition is often apparent (Kuperminc & Stevenson, 2008; Cerebral Palsy University of Virginia, Zambia, 2014).

## Prevalence of Cerebral Palsy

In terms of prevalence, CP occurs 2.0–2.5 per 1000 live births in developed countries (Odding, Roebroek, Stam, 2006; Oskoui, Joseph, Dagenais, & Shevell, 2013) and in a range of 0.8–10 per 1000 children in Africa (Murugasen et al., 2014), but its prevalence in Zambia is not known. The CP incidence in Zambia should be in the upper range considering perinatal complications such as oxygen deprivation and infections of newborns with early brain injury are common or inadequately treated (Donald et al., 2014). An estimate of disability cases in Zambia is guided by the National Disability Survey conducted in 2015, which indicated child (2–17 years) disability at 4.4%, with 90% being neurodevelopmental disabilities (Central Statistical Office & Ministry of Community Development and Social Services, 2018). In-country evidence shows varied estimates in provinces, the highest being Luapula, followed by Copperbelt, among both children and adults. These statistics give an indicative picture of the prevalence of CP, considering that it is the most common

neurodevelopmental disability in children (Chiluba & Moyo, 2017; Central Statistical Office & Ministry of Community Development and Social Services, 2018), and are significant for planning intervention programs.

### **Psychosocial Problems Associated with Cerebral Palsy**

The existence of a child's atypical developmental trajectory and the family challenges of raising children with disabilities like CP compel developmental practitioners to action. This call to action is strengthened by evidence showing a substantial knowledge gap in intellectual stimulation (Cerebral Palsy University of Virginia, Zambia, 2014) and in nutrition interventions for children with CP in LMICs (Jahan et al., 2022), and more often developmental milestones are wasted (Mvula, 2021). Psychosocial support for families with children with CP remains underdeveloped. Guardians with children with CP have reported being overwhelmed, feeling inconvenienced, tired and failing to adjust or find a balance between work and taking care of their children (Chiluba & Moyo, 2017). Due to a dearth of facilities that absorb children with CP and also the cost of enrolling children in special needs schools, parents end up taking care of these children 24 hours a day, and it is not surprising that the most pressing need when asked is “help” (Chiluba & Moyo, 2017). Social and emotional isolation, as well as uncaring and accusatory attitudes from family, friends, community members, and health-care professionals, remain a challenge for parents (Singogo, Mweshi & Rhoda, 2015). Female guardians tend to bear the burden more than their spouses, who often desert them. Furthermore, mobility of CP children is limited due to lack of sidewalks, ramps, functioning lifts and small indoor spaces (Singogo, Mweshi & Rhoda, 2015), further exacerbating isolation and self-stigmatization.

Capacity support for service providers has been suboptimal. Organisations like Cerebral Palsy Africa have been supporting Zambian physiotherapists since 2006 with skills covering the assessment and handling of children with cerebral palsy and the development of equipment by local workshops to aid children's support (Cerebral Palsy Africa, nd). To ensure sustainability and scalability, trainers of trainers have also been trained by Cerebral Palsy Africa. Despite such initiatives delays in starting children on physiotherapy due to finances, late referral for physiotherapy, caregiver's knowledge about CP and the importance of physiotherapy and people's attitude towards CP have been a bottleneck (Kanyembo, Chiluba & Moyo, 2022). Further, access to assistive devices for children remains a challenge with less than 45% of households able to afford them (Mvula, 2021).

Despite the prominent challenges of the absence of formal rehabilitation care systems, there has been a drive to implement more sustainable family-centred rehabilitation programs for children with CP. This call centres on community-based rehabilitation (CBR) programs where families play an active role in the rehabilitation process. For example, organisations like Christian Blind Mission have developed factsheets and counselling cards on how to best feed, develop skills and achieve better positions in children with CP in countries like Tanzania and Zambia (CBM, 2012). This shifts from the traditional facility-based rehabilitation

to empowering caregivers using local resources with skills for rehabilitation at home considering the inadequate human resources in facilities (Iemmi *et al.*, 2013). The CBR models like the get to know cerebral palsy (GTKCP) implemented in Ghana showed gains in child functionality (posture control, sitting, walking, playing, feeding, chewing, sleep patterns etc) and caregiver-increased quality of life scores were reported as a result of the CBR model (Zuumound *et al.*, 2018). This CBR model trains caregiver groups of ten core domains of practice including positioning, eating and drinking, play, everyday activities, learning to move, communication, togetherness and belonging, our community and assistive devices. This model was extended to Zambia, using an “Ubuntu” approach and in this case, caregivers of children with other NDDs were included but, CP was the highest nature of disability at 58% of the sample (CBM, 2023). The Ubuntu approach (see. <https://www.ubuntu-hub.org>) emphasises practice targeted at improving child functional outcomes, caregivers psychosocial functioning and engagement in the community where exclusionary practices are most experienced (ACPF, 2011; Central Statistical Office & Ministry of Community Development and Social Services, 2018; Lusaka Time, 2021; Scherer *et al.*, 2024;).

### **Evidence to Support CP Care and Management**

Research on Cerebral Palsy remains scant and outdated with little detail on psychosocial nuances to inform more robust interventions and policy direction. A recent scoping study on disability research in Zambia showed a dearth of research on the subject with a third of included articles focused on education for children with disabilities ( $n = 41$ , 34%) and the majority conducted in Lusaka ( $n = 73$ , 60%), the capital city where most physiotherapy and psychosocial support programmes and amenities are located (Scherer et al, 2024). This has created a bias in the evidence produced given that locations with the highest disability prevalence rates and peri and rural nuances are missed when decision and policy directions are formulated. Furthermore, a literature review study showed that studies on CP in Africa do not explicitly use the International Classification of Functioning, Disability and Health as a guiding framework, further affecting the formulation of interventions. The ICF framework conceptualizes functioning and disability across four interconnected domains: body functions and structures, activities and participation, environmental factors, and personal factors and it's a good entry point for decision-making and policy direction.

### **Conclusion**

In conclusion, although there is traction towards the improvement of care and management of CP in Zambia, lack of evidence on its prevalence, lack of well-trained service providers, education and awareness programmes, cheap and easily accessible psychosocial interventions and the implementation of the ICF framework is suboptimal. More concerted effort and advocacy to improve these areas is urgently needed to improve the quality of life for the families and children with CP in Zambia.



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# Introductory message from the outgoing ECS Representatives **Cinzia Di Dio and Given Hapunda**

*Cinzia Di Dio and Given Hapunda*

The ISSBD Early Career Scholars Committee aims to foster unity and enhance connections among the Society's members who are in the early stages of their careers. The committee promotes the careers of emerging scientists by providing them with the best possible resources and encourages the generational change needed to keep the Society vibrant. In line with these objectives, multiple initiatives have been implemented and positively received by Early Career Scholars (ECSs). The Committee is determined to continue and expand these efforts with initiatives that inform, educate, and encourage exchanges between ECSs.

## **Events: webinar**

### ***April 25 2024 - Panel discussion. Post-PhD career path: consultancy and research positions***

Jia Montgomery, Lead Data Scientist at Booz Allen Hamilton, was invited to share new career paths beyond traditional academia with Early Career Scientists (ECSs). This invitation responded to concerns raised by ECSs in a survey conducted by the Committee between 2022 and 2023.

During the webinar, Jia introduced herself and her current role outside academia, explaining what led her to pursue this career. She highlighted the transferable skills she acquired during her academic training that have been valuable in her current role. Jia also discussed the challenges she faced when transitioning from academia to her new career and how she overcame them.

Jia also explained how she went about exploring and researching non-academic career options during her academic training and gave advice to early career scholars who are considering transitioning to a non-academic career path including consulting, highlighting the importance of networking in finding opportunities outside of academia and the strategies that can be used to expand the network. Finally, she advised the ECSs about potential resources or programs that early career scholars can access to explore non-academic career paths or gain relevant experience and the misconceptions and myths about non-academic career paths that need to be debunked.

The event was very well received by the participants, and in this spirit, the ECS committee is working on organizing future events with the aim of meeting the priorities highlighted by the ECSs during the survey.

## ***The 2024 Biennial Meeting Preparations in Lisbon***

This year, Early Career Scholars (ECSs) will receive special attention with a full day dedicated to specialized pre-conference workshops. These workshops will cover topics such as publishing, intervention research, open developmental science, dyadic and network approaches to peer relationships, trans-disciplinary developmental science to address global societal challenges, and cross-cultural research in human development. These themes will also be explored during lunch workshops organized throughout the conference.

Additionally, ISSBD has provided travel support to a select group of qualified ECSs, enabling them to participate in one of these pre-conferences and attend the ISSBD 2024 Meeting.

The ECS Committee played a crucial role in the organization by providing guidelines and recommendations on visas and regularly meeting with the Biennial organizers to discuss issues related to ECS participation.

The Biennial represents a unique opportunity for real cross-cultural and transdisciplinary interaction, allowing us to meet in person, exchange ideas, and establish potential collaborations. We hope that this year's Biennial will once again be a success, demonstrating the values that drive ISSBD's educational and professional initiatives, with a particular focus on Early Career Scholars.

## ***ECS Events During the Biennial Meeting in Lisbon***

In addition to the pre-conference workshops, the ECS Committee, in collaboration with the organizing committee of the 2024 Biennial Meeting, has organized four special workshops for Early Career Scholars. Additionally, a meet-and-network reception has been planned for ECSs during the Biennial Meeting. You won't want to miss this event.



### **Concluding Remarks**

In conclusion, the ECS Committee is persistently working to strengthen the ECS community through networking and structured activities. Besides the mentioned initiatives, there will be further opportunities for seminars and global events. The Society is dedicated to supporting young researchers and those facing challenges in advancing and publishing their

research. With this proactive attitude, the aim is to foster a global community, and the hope is for everyone to approach the future with optimism. Finally, the committee congratulates and welcomes the incoming ECS representative. The outgoing committee looks forward to working with the new ECS representative.

On behalf of the ECS Committee - *Lilian Ayiro, Ella Daniel, Federico Manzi, Zelma Mokobane, Yao Sun*

## MAJOR CONFERENCES OF INTEREST

### **June 16-20, 2024**

*27th Biennial Meeting of the International Society for the Study of Behavioural Development*

**Location:** Lisbon, Portugal

**Web:** <https://2024biennial.issbd.org/>

### **July 10-13, 2024**

*11th European Conference on Positive Psychology*

**Location:** Innsbruck, Austria

**Web:** <https://www.ecpp2024.com/>

### **July 21-26, 2024**

*33rd International Congress of Psychology*

**Location:** Prague, Czech Republic

**Web:** <https://icp2024.com/>

### **August 8-10, 2024**

*American Psychological Association 2024 Convention*

**Location:** Seattle, WA, USA

**Web:** <https://convention.apa.org/>

### **September 21-24, 2024**

*37th ECNP Congress*

**Location:** Milan, Italy

**Web:** <https://www.ecnp.eu/Cong>

### **September 23-25, 2024**

*7th International Congress on Borderline Personality Disorder and Allied Disorders 2024*

**Location:** Antwerp, Belgium

**Web:** <https://www.borderline-congress.org/>

### **November 08-10, 2024**

*5th International Conference on Research in Psychology*

**Location:** Bangkok, Thailand

**Web:** <https://www.icrpconf.org>

### **November 22-24, 2024**

*The 2024 Bright Start International Conference*

**Location:** London, England

**Web:** <https://conferencebrightstartfoundation.org/register>