

Early Child Development



United Way of Olmsted County
903 W. Center Street, Suite 100
Rochester, MN 55902
507-287-2000

United Way
of Olmsted County
uwolmsted.org



Child development is a broadly-defined term meant to encapsulate the various biological, psychological, and emotional changes that occur between birth and adulthood. Typical age groupings referred to include newborns (until the age of 1 month), infants (1-12 months), toddlers (1-3 years), preschoolers (4-5 years), school-aged children (6-11 years), and adolescents (12-18 years). **Early child development** refers to the development of children up to age five, often including children still in the womb and occasionally including mothers-to-be prior to conception.

The years 0-5 are a period of rapid growth and change for a young child and are referred to as a highly sensitive period, one in which children are more responsive to certain stimuli and quicker to learn particular skills. The biological, psychological, and emotional changes that a child undergoes during this time are tracked by the achievement of **developmental milestones**. These are skills that are considered both necessary and age-appropriate. Children who do not achieve age-appropriate developmental milestones are considered to be developmentally lagging. When a child experiences an ongoing delay in the process of development (as opposed to temporary lagging), the child is considered to have a developmental delay.

What are the developmental milestones?

Developmental milestones are broken into four broad categories (Minnesota Department of Education, Minnesota Department of Health, Minnesota Department of Human Services, 2018b):

Motor skills refer to an individual's ability to control his or her body to perform intentional actions. Examples of major motor milestones that occur during early childhood include crawling, sitting, walking, and toilet training. More subtle motor skills include throwing and catching, navigating stairs, and feeding oneself. General clumsiness is not generally considered a developmental delay unless it is persistent, and many motor delays can be addressed with accommodations.

Communication and language skills refer to an individual's ability to communicate verbally and nonverbally. Babies start communicating mainly by crying, but move quickly to cooing, babbling, and eventually full speech.

Social and emotional skills refer to how children express themselves, manage their emotions, and establish positive and rewarding relationships with others. At birth, a baby's social skills are limited to expressing feelings by crying and allowing themselves to be soothed by a caretaker. Soon enough, they begin to smile, play, express preferences, and interact in meaningful ways with the adults around them. By age five, children have a rich inner life which includes fantasy, performance, friendship, and personality.

Cognitive skills incorporate thinking, learning, exploring, and problem-solving – the traditional 'school skills.' Cognitive skills are highly intertwined with language and social skills, and a delay in one domain can influence skill development in the other. Early cognitive skills include the startle response, tracking objects and faces, and exploring the world with hands and mouth. By age five, children

progress to storytelling, counting, identifying colors, and may demonstrate early literacy skills such as writing their own name.

What are the criticisms against the use of developmental milestone framework?

As the United States becomes increasingly diverse, it has become evident that certain skills may be expressed differently according to cultural background (even class background), but the difference may not always be relevant or correlated to later achievement.

For example, it is commonly assumed that children raised in bilingual households often initially lag in the development of language skills, but generally catch up by age 5. Upon further inspection, it has been noted that if the developmental screening can be done in both languages (rather than English-only), bilingual children demonstrate vocabularies comparable to their monolingual counterparts and similar comprehension skills – the disparity is that their English vocabulary is smaller than a monolingual child (Scheffner Hammer et al., 2015).

Similarly, while major motor milestones such as sitting, crawling, and walking may occur at approximately the ages expected by children’s mothers, there may be up to a three-month difference of *when* those milestones are reached depending on a child’s cultural upbringing. Cultures may place emphasis on certain milestones and may even be averse to children demonstrating certain skills such as crawling or eye contact, and the children from those cultures achieve milestones more-or-less as expected (Hopkins & Westra, 1989).

Early social and emotional skills vary widely by culture, with babies from various cultures demonstrating behaviors reflective of the values of their respective culture. For example, American babies tend to be more social, more impulsive, and easy to soothe. South Korean babies, on the other hand, tend to cuddle more, be less active, and have long attention spans (Krassner et al., 2016). When screening children from a diverse population, it can become difficult to understand what should be considered normal social and emotional development when that varies by culture.

What is considered ‘normal’ timing achievement of developmental milestones may also change with time. For example, since it has become recommended practice in the United States to avoid leaving a child unsupervised on their tummy, the average age at which children begin to crawl has become later and later – with some children skipping crawling all together and moving straight to ‘cruising’ behavior (Kolata & Markel, 2001).

If early childhood development is malleable and dependent on context, what is the purpose of utilizing a developmental milestone framework?

While achievement of some developmental milestones may vary according to the culture and parenting style in which a child is raised, there remains utility in using milestones in tracking development. This is largely because there are so many commonly-accepted milestones (approximately 240 (Minnesota Department of Education, Minnesota Department of Health, Minnesota Department of Human Services, 2018b)), not all of which are culture-dependent. For example, if a child does not crawl but has hit all of his or her other developmental milestones by the age of nine

months there is likely no cause for concern – they may just skip crawling or start late. But if they do not crawl or sit or roll over on time or at all, there may be cause for concern. Most children will not be considered to have a developmental delay based on one or two lagging milestones, but a consistent lagging in one of the broad categories (motor, communication and language, social and emotional, and cognitive skills) often warrants closer observation or an intervention. Similarly, a general lack of responsiveness to stimuli or the loss of previously-learned skills are considered red flags and are cause for immediate referral to a specialist (CDC, 2017). Such referrals are not culture-sensitive.

Despite the fact that different assessment tools may focus on different milestones and children may achieve the milestones in idiosyncratic ways, the framework provides the opportunity for early interventions that work for many (if not most) children and their families. If assessments can be done with an awareness of relevant cultural considerations, unnecessary worry can be avoided more readily. The fact that child development is context-dependent is not necessarily a reason to call the use of milestones unreliable. In fact, part of the beauty of a milestone framework is that *developmental is malleable* and milestones can provide insight into which areas a child may benefit from additional support. High-quality intervention services can change a child's developmental path and some children catch up to the same developmental levels as other children their age. These interventions can be recommended and implemented by a child's family, childcare providers, medical providers, and early educators.

What negatively affects early child development?

There are a number of reasons a child may face developmental delays, but they fall into two broad categories: physical health reasons and early childhood mental health conditions. Physical health reasons for developmental delays typically lead back to three reasons: low birth weight, elevated blood lead level, and hearing loss. Mental health disorders are wide-ranging and include PTSD; prolonged bereavement and grief; regulation and adjustment disorders; anxiety and depression; deprivation and maltreatment disorder; and sleep and feeding disorders (Minnesota Department of Education, Minnesota Department of Health, Minnesota Department of Human Services, 2018a).

Low Birth Weight (Children's Hospital of Philadelphia, 2018)

Low birth weight refers to babies who are born weighing less than 5 pounds, 8 ounces (the average American newborn weighs 8 pounds). Over 8% of all newborns in the United States have low birthrate, and the rate of low birth weight has been increasing in recent years. For the most part, the increase in population-level rates of low birth weight is attributed to the greater number of multiple-birth babies (twins or more) born in recent years. The increase in multiple-birth babies in turn ties back to the societal trend of delayed motherhood and the associated increased use of fertility treatments which often result in multiple births.

The primary cause of low birthweight is premature birth, and another common cause is intrauterine growth restriction. Factors that contribute to the risk of very low birthrate are race (African American babies are disproportionately affected), having a teenage mother, multiple births, and maternal health.

Maternal health can be tied to either pre-existing health conditions or the health behavior of the mother while pregnant. Low birth weight is closely related to the use of illicit drugs, alcohol, and cigarettes during pregnancy. It is also closely linked to prenatal nutrition, access to prenatal care, and pregnancy complications – all of which disproportionately affect women of low socioeconomic status.

Elevated Blood Lead Levels (American Academy of Pediatrics, 2017; National Institute of Environmental Health Sciences, 2017)

Lead can enter the blood stream through breathing it in or by eating it. The most common sources of lead exposure are paint (in old homes), contaminated soil, household dust, and contaminated drinking water. Even low levels of lead in a child's blood have been shown to affect IQ, attention spans, and academic achievement later in life. Higher blood lead levels can lead to cardiovascular effects, nerve disorders, decreased kidney function, and future fertility problems. Even small amounts of lead in the blood of a pregnant woman can have lifelong effects on her child. While high blood lead levels can be addressed with medication, the damage done by lead is permanent and cannot be reversed.

Most adults with elevated blood lead levels are exposed to lead at work. Particularly vulnerable are those who work in mining, welding, construction, home renovation, automotive repair, and metal shops. Lead exposure is an environmental concern, and the children most likely to have elevated blood lead levels are those from low-income families. This is because they are most likely to live in homes with old paint (from before 1978) and because their parents are most likely to have blue-collar jobs that expose them to lead.

Hearing Loss

Congenital hearing loss – meaning it is present at birth- is relatively rare and affects roughly 1.4 out of 1,000 live births (Van Naarden Braun et al., 2015). Approximately 75% of these cases are genetic and cannot be prevented. Of the 25% of cases that are non-genetic, causes are largely related to maternal health and health behavior during pregnancy. Infections such as herpes, rubella, toxoplasmosis, and measles can be contributing factors to hearing loss in newborns. Maternal health behaviors such as failing to adequately address maternal diabetes, using ototoxic medications (various antibiotics and anti-inflammatories), or using drugs, alcohol, and smoking during pregnancy also puts newborns at increased risk of hearing loss. Premature birth, low birth weight, and the associated use of necessary life-saving drugs for respiration due to prematurity also increases a child's chances of hearing loss (Mroz, 2018).

While congenital hearing loss is relatively rare, acquired hearing loss is common. Approximately 15% of children will have some form of hearing loss by adulthood, with

the prevalence anticipated to increase due to the use of electronic devices and headphones becoming widespread (Niskar, Kieszak, & Holmes, 1998). Some acquired hearing loss is due to idiopathic disorders, but the majority is due to injury (such as head or ear injury) and environmental exposure (such as secondhand smoke and loud noises). Some risk factors that are especially common during early childhood are repeated ear infections and communicable diseases including meningitis, measles, mumps, and whooping cough (Mroz, 2018).

Hearing loss in early childhood is often identified when a child fails to meet a number of milestones in any of the four major skills categories. This typically includes demonstrating a startle response, babbling, and responding to their caregiver. Children with an undiagnosed hearing loss may experience a delay in brain development due to the lack of auditory input. From birth to age 3 is considered a critical window for auditory neural development, and children who regain hearing (through hearing aids or cochlear implants) after this age do not demonstrate the same level of positive outcomes as children who experienced intervention at an earlier stage (Anderson, 2012).

Early Childhood Mental Health

Newborns, infants, and toddlers are generally unable to communicate at the level needed to provide a definitive mental health diagnosis, but they can often demonstrate symptoms that point to one or more clinical disorders. For this reason, mental health in infancy and early childhood is understood in the context of relationships – how the child interacts with caregivers and others in the household. Certain diagnoses can be made based on how the child functions. These diagnoses generally correlate to disorders observed in adults despite being expressed differently (Mayo Clinic Staff, 2018).

Post-traumatic stress disorder PTSD expresses in child who have experienced either a single traumatic experience or chronic stress. Disorders of affect – such as separation anxiety, phobias, social anxiety, and depression can be used to diagnose children who have difficulty functioning effectively but have not experienced a traumatic experience or chronic stress. Adjustment disorders, difficulty with self-regulation, sleep difficulties, and eating disorders may also be used as diagnoses for children who do not display PTSD symptoms or an affective disorder (Wright & Northcutt, 2010).

Diagnosing mental illness in children is an emerging practice, and parents are often unable to distinguish genuine mental health concerns from normal childhood behavior. Moreover, symptoms may differ greatly from those expressed by adults with similar diagnoses, largely because the child does not have the vocabulary or developmental ability to explain their concerns. For example, a child with depression is likely to be irritable, whereas an adult with depression is more likely to be withdrawn (Mayo Clinic Staff, 2018).

Clinical diagnoses in children are tightly correlated to the mental health and stability of the other individuals in their households, traumatic events and experiences that occur during early developmental years, parenting skills, and other health outcomes. For example, children whose caretakers suffer from depression are more likely to be

depressed themselves, demonstrate insecure attachments, and often lack emotional self-regulation skills (England & Sim, 2009). Children who live in violent, low-income neighborhoods are 30 times more likely to have behavior and learning problems than those not exposed to trauma (Carrion, 2011). And children whose parents demonstrate extreme parenting styles are more likely to demonstrate stress, anxiety, and depression (Jahan & Suri, 2016).

Other health incomes may affect the mental health of newborns, infants, and toddlers. For example, mothers of newborns who require time in the neonatal intensive care unit (NICU) are more likely to 40% more likely to suffer from post-partum depression than the general population and experience significant challenges in bonding and caring for their babies (Vigood, Villegas, CL, & LE, 2010). Similarly, parents of children with physical and developmental disabilities are at risk of poor mental health as well as marital discord and divorce (Hung, Wu, Chiang, Wu, & Yeh, 2009; Namkrung, Song, Greenburg, Mailick, & Floyd, 2015). In each instance, the additional stress experienced by the child's caregiver puts the child at elevated risk of expressing a clinical disorder. As children with poor physical health age, even relatively minor disabilities, they often begin to experience social isolation from their peers and report lower self-esteem (Cacola, 2016).

Due to very young children's helplessness and dependence on family members for caretaking and protection, many mental illnesses in early childhood manifest as a result of caretaking practices. These mental illnesses may not have an adult analog, or may manifest significantly differently in adults. An example would include deprivation and maltreatment disorder, which manifests as a child who rarely or minimally turns to a specific attachment figure for comfort, support, protection, and nurturance. This occurs when a child has a limited chance to form a primary attachment, often the result of frequent changes in caregivers, child abuse and neglect, or the absence of a certain attachment figure due to substance abuse, incarceration, or severe depression (Minnesota Association for Infant & Early Childhood Mental Health, 2018).

Which children are most at-risk of developmental delays?

There are three primary factors that put a child at increased risk of developmental delays: poor maternal health and behavior, dangerous environmental factors, and restricted access to care and information.

Poor maternal health and behavior includes the age of the mother (whether under the age of 20 or over the age of 40), her use of chemicals before and/or during gestation, and the status of her mental health. Dangerous environmental factors include lead in the home, a crowded and/or noisy home environment, and exposure to conflict and trauma in the home (either direct or indirect).

Restricted access to care and information is perhaps the lynchpin risk factor, as access to prenatal and early childhood care and information has the potential to influence parental health and behavior, which in turn can mitigate previously-existing risk factors. For example, parents who are aware of the dangers of a noisy home environment can

work to reduce the noise level in their home. Similarly, mothers and partners who are aware of the warning signs of post-partum depression are more likely to seek treatment for themselves and their partners.

Access to care and information is tied to socioeconomic status. Children from low-income families are both more likely to be exposed to risk factors *and* their parents are less likely to have access to the information and financial resources needed to mitigate those risks. For example, a child from a low-income family may not know that their child has been exposed to dangerous levels of lead because they have missed their early childhood checkup or believed they could not afford it. Even had they known their house was contaminated with lead, they may not have had the recourse to address it or afford to move into safer housing.

Parents' Role in Healthy Development

In addition to learning about risks to their children's development and reducing exposure, parents play a key role in promoting health childhood development. Many common parenting behaviors reinforce and encourage healthy development, including games such as peek-a-boo, reading to young children, playing make-believe, cuddling, and singing together. Parents who did not learn these parenting behaviors in their family of origin are able to learn their importance and apply them in their homes. They are also to learn about developmental milestones in order to determine if their child is developing as anticipated, and to work with providers to provide interventions that will help their child reach his or her full potential. For children who need additional intervention, it is often the parents who work with the child in the home to work on reaching certain milestones or learn accommodations.

The Importance of Screening and Early Intervention

While there is widespread consensus that there is utility in using milestones to track a child's development, there is not a uniform assessment tool or practice built around doing so. At least nine screening tools exist to assess a child's development in the early years, all of which take inventory of a number of milestones. Conducted consistently, screening provides a benchmark for tracking children's development over time. However, some children are highly mobile and do not consistently interact with the same medical or childcare provider. Benchmarking for these children can become difficult if their various providers use different assessment tools, and the parents may receive conflicting advice regarding their children's development. Additionally, many children 'exist outside the system' and do not routinely interact with a provider who may provide a comprehensive assessment. Lagging development in these children may not be caught early due to the lack of benchmarking and their parents may be unaware that their children are not achieving developmental milestones on time.

Even without benchmarking, a one-time assessment can be instrumental in identifying a child who would benefit from additional intervention. For this reason, developmental screenings are scheduled at 9 months, 18 months, and 30 months of age during

preventative pediatric visits. Developmental surveillance and psychosocial/behavioral assessment is ongoing at routine medical visits throughout childhood, and can be instrumental on generating referrals to specialized assessments and interventions (Bright Futures, American Academy of Pediatrics, 2018).

Development screening and up-to-date immunizations are required by law for children to enter kindergarten, but the *timing* of these events are not mandated. In Rochester, only 42% of students are screened at or by age three. For 17% of children in Rochester Public School district, the first time they are screened by the school district is when they are five years or older (Minnesota Department of Education, 2017). While the school district is not the only provider who does screenings, a great number of children with existing developmental needs do not have interaction with a service provider at the early stages of their delay, when intervention is most effective. Some interventions – such as those that address hearing loss – can be dramatically more effective when undergone earlier. The best time to implement any intervention is the earliest possible moment – as soon as a developmental delay is noticed. When detection is early, interventions can often be simple, implemented by parents and primary care providers, and dramatically change the child’s developmental path. Early intervention reduces the incidence of future problems and are generally both more effective and less costly than later interventions.

Sources:

- American Academy of Pediatrics. (2017, August 30). Blood Lead Levels in Children: What Parents Need to Know. Retrieved March 5, 2018, from <https://www.healthychildren.org/English/safety-prevention/all-around/Pages/Blood-Lead-Levels-in-Children-What-Parents-Need-to-Know.aspx>
- Anderson, K. L. (2012, February 17). Brain Development & Hearing Loss: We Hear with Our Brains, Not Our Ears. Retrieved March 5, 2018, from <https://successforkidswithhearingloss.com/for-professionals/brain-development-hearing-loss/>
- Bright Futures, American Academy of Pediatrics. (2018). *Recommendations for Preventative Pediatric Health care*. Itasa, Illinois: American Academy of Pediatrics. Retrieved from https://www.aap.org/en-us/documents/periodicity_schedule.pdf
- Cacola, P. (2016). Physical and Mental Health of Children with Developmental Coordination Disorder. *Frontiers in Public Health*, 4(224), 1–6. <https://doi.org/10.3389/fpubh.2016.00224>
- Carrion, V. (2011, June 8). Childhood Trauma Linked to Higher Rates of Mental Health Problems and Obesity. Retrieved from <https://med.stanford.edu/news/all-news/2011/06/childhood-trauma-linked-to-higher-rates-of-mental-health-problems-and-obesity-says-stanfordpackard-psychiatrist.html>
- CDC. (2017, October 16). Learn the Signs. Act Early. Retrieved from <https://www.cdc.gov/ncbddd/actearly/milestones/index.html>
- Children's Hospital of Philadelphia. (2018). Low Birthweight. Retrieved March 5, 2018, from <http://www.chop.edu/conditions-diseases/low-birthweight>
- England, M. J., & Sim, L. J. (2009). *Depression in Parents, Parenting, and Children: Opportunities to Improve Identification, Treatment, and Prevention*. Washington, DC: The National Academies Press. Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK215117/pdf/Bookshelf_NBK215117.pdf
- Hopkins, B., & Westra, T. (1989). Maternal Expectations of Their Infants' Development: Some Cultural Differences. *Developmental Medicine and Child Neurology*, 31(3), 384–390. <https://doi.org/10.1111/j.1469-8749.1989.tb04008.x>
- Hung, J.-W., Wu, Y.-H., Chiang, Y.-C., Wu, W.-C., & Yeh, C.-H. (2009). Mental Health of Parents Having Children with Physical Disabilities. *Department of Rehabilitation, Chang Gung Memorial Hospital*. Retrieved from <https://pdfs.semanticscholar.org/2e03/aa99e663b50bb64aa013b3590a5374e5cb2a.pdf>
- Jahan, A., & Suri, S. (2016). Parenting Style in Relation to Mental Health Among Female Adolescents. *Abnormal and Behavioral Psychology*, 2(3). <https://doi.org/10.4172/2472-0496.1000125>

- Kolata, G., & Markel, H. (2001, April 29). Baby Not Crawling? Reason Seems to Be Less Tummy Time. *The New York Times*. Retrieved from <http://www.nytimes.com/2001/04/29/us/baby-not-crawling-reason-seems-to-be-less-tummy-time.html>
- Krassner, A., Gartstein, M. A., Park, C., Wojciech, L. D., Lecannelier, F., & Putnam, S. P. (2016). East-West, Collectivist-Individualist: A Cross-Cultural Examination of Temperament in Toddlers from Chile, Poland, South Korea, and the U.S. *European Journal of Developmental Psychology*, 14(4), 449–464. <https://doi.org/10.1080/17405629.2016.1236722>
- Mayo Clinic Staff. (2018, March 1). Mental Illness in Children: Know the Signs. Retrieved March 5, 2018, from <https://www.mayoclinic.org/healthy-lifestyle/childrens-health/in-depth/mental-illness-in-children/art-20046577>
- Minnesota Association for Infant & Early Childhood Mental Health. (2018). *Deprivation/Maltreatment Disorder of Infancy and Reactive Attachment Disorder*. St. Paul, MN: Minnesota Mental Health. Retrieved from <http://mnmentalhealth.org/early-childhood/fact-sheets/>
- Minnesota Department of Education. (2017). *2017 School Year Early Childhood Screening - Annual Counts (Source: MARSS)*. St. Paul, MN: Minnesota Department of Education. Retrieved from <http://w20.education.state.mn.us/MDEAnalytics/DataTopic.jsp?TOPICID=290>
- Minnesota Department of Education, Minnesota Department of Health, Minnesota Department of Human Services. (2018a). Disgnosed Conditions Affecting Development. Retrieved March 5, 2018, from <http://helpmegrowmn.org/HMG/HelpfulRes/ResourcesProf/DiagCondAffectDev/index.html>
- Minnesota Department of Education, Minnesota Department of Health, Minnesota Department of Human Services. (2018b). What Are Milestones? Retrieved from <http://helpmegrowmn.org/HMG/DevelopMilestone/index.html>
- Mroz, M. (2018). Hearing Loss in Children. *Healthy Hearing*. Retrieved from <https://www.healthyhearing.com/help/hearing-loss/children>
- Namkrung, E. H., Song, J., Greenburg, J. S., Mailick, M. R., & Floyd, F. J. (2015). The Relative Risk of Divorce in Parents of Children with Developmental Disabilities: Impacts of Lifelong Parenting. *American Journal on Intellectual and Developmental Disabilities*, 120(6), 514–526. <https://doi.org/10.1352/1944-7558-120.6.514>
- National Institute of Environmental Health Sciences. (2017, June 15). Lead. Retrieved March 5, 2018, from <https://www.niehs.nih.gov/health/topics/agents/lead/index.cfm>
- Niskar, A. S., Kieszak, S. M., & Holmes, A. (1998). Prevalence of Hearing Loss Among Children 6 to 19 Years of Age: The Third National Health and Nutrition Examination Survey. *Journal of the American Medical Association*, 279(14), 1071–1075. <https://doi.org/10.1001/jama.279.14.1071>

- Scheffner Hammer, C., Hoff, E., Uchikoski, Y., Gillanders, C., Castro, D., & Sandilos, L. E. (2015). The Language and Literacy Development of Young Dual Language Learners: A Critical Review. *Early Child Research Quarterly*, 29(4), 715–733. <https://doi.org/10.1016/j.ecresq.2014.05.008>
- Van Naarden Braun, K., Christensen, D., Doernberg, N., Schieve, L., Rice, C., Wiggins, L., ... Yeargin-Allsopp, M. (2015). Trends in the Prevalence of Autism Spectrum Disorder, Cerebral Palsy, Hearing Loss, Intellectual Disability, and Vision Impairment, Metropolitan Atlanta, 1991–2010. *PLOS One*. <https://doi.org/10.1371/journal.pone.0124120>
- Vigood, S., Villegas, L., CL, D., & LE, R. (2010). Prevalence and Risk Factors for Postpartum Depression Among Women and Low-Birth-Weight Infants: A Systematic Review. *British Journal of Obstetrics and Gynaecology*, 117(5), 540–550. <https://doi.org/10.1111/j.1471-0528.2009.02493.x>
- Wright, C., & Northcutt, C. (2010). *DC: 0-3R Disagnostic Guidelines - Axis I: Clinical Disorders* (No. DC: 0-3R). Washington, DC: Zero to Three Policy Center. Retrieved from <https://www.zerotothree.org/resources/111-dc-0-3r-disagnostic-guidelines-axis-i-clinical-disorders>