

## Eco-behavior Analysis of Child and Adolescents Mental Health Problems

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**ABSTRACT** This paper uses the framework of Bronfenbrenner's bio-ecological systems theory to conceptualize mental health problems and issues in children and adolescents. It draws five representative case vignettes from the routine clinical practice, records of interviews with key informants, direct and participant observation available with the author-clinician. Five layers of the analysis are covered with illustrative themes from their content analysis. This paper argues against symptom-based disease classification, and biology-based brain-disease models. Instead, it recommends person-in-environment framework as a needed paradigm for routine use in understanding, diagnosis, and remediation of contemporary child and adolescent mental health problems.

### INTRODUCTION

#### Eco-behavior Analysis of Child and Adolescents Mental Health Problems

Diagnostic decision-making is not a one-time stand-alone event. It takes several steps and navigation at many levels. The starting point is the presenting complaints mentioned during the first contact of an informant with a diagnostician during case history taking and initial interview. The informant, quality, length, duration of acquaintance with the client, need, motivation, and end benefits of the consultation or diagnosis are all crucial. The presenting complaints are what is outwardly apparent and of immediate concern. It is only the tip of the iceberg. It may not show what lies hidden below. If one goes by the bio-psychosocial approach, the presenting complaints must lead the diagnostician to the second layer of the dyadic relationship between the informant and the client about whom the information is being given (McGann and Hutson 2011).

The field of child and adolescent mental health (CAMH) has traditionally used a symptom-based system of disease classification, such as the Diagnostic and Statistical Manual (DSM), the International Classification of Diseases (ICD), or the Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood (DC: 0-3R 2005). Among the strengths of current

diagnostic systems are that it provides a common language for service providers, a reliable framework for researchers, a standard coding system of diseases or disorders for statistics and administration, and increased clarity in legal proceedings. However, they are faulted as being categorizing manuals for use by qualified professionals to make a diagnosis. As with physical illnesses, there are no biomarkers, genetic markers, or laboratory-based tests for most mental disorders to make a diagnosis. A lot is based on patient self-reports or key-informant reports. They lack scientific validity.

Further, diagnosis is based on symptoms, not their causes. Honestly, the causes of mental illness are unknown. However, treatments address symptoms without knowing their causes. Disease classification systems tend to decontextualize, pathologize, medicalize, consumerize, and commodify many everyday human experiences and health problems. There are ill effects of diagnostic inflation, over-diagnosis, and over-labeling (Merten et al. 2017; Brinkmann 2016; Esposito and Perez 2014; Kudlow 2013; Stein et al. 2013). In a bid to seek an alternative for diagnosing children and adolescents, attempts focus on incorporating contextual factors into the diagnostic process. A recent argument posits that parents, not children, must be made targets of disease nosology, taxonomy, labeling, or diagnostic classification (Venkatesan 2020). There is growing recognition of environmental factors, moving away from symptom-based systems of disease classification or the biology-based brain-disease models. This is exemplified by the International Classification of Functioning, Disabilities, and Health (ICF; WHO 2007). Some pro-environment theories to help

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understand mental health issues in children and youth are General Systems Theory, Erickson's Psychosocial Development Theory, Social Exchange Theory, Person-in-environment (PIE) Theory, and the Ecology Based Theory.

The Ecological Systems Theory (EST; Bronfenbrenner 1993, 1979) states that child development is helped or hindered by the web of relationships in their environment. The theory mentions "layers" in the environment, viz., a micro-system (dyads or triads of child-parent/s in closest contact), mesosystem (relationship with the extended family, school, peer group, neighborhood or immediate surroundings), exosystem (the community, culture, media, or government institutions), macrosystem (the geographical space, religion, values, customs, and laws) and chronosystem (dimensions of time or age). This theory recognizes a cascading effect across these layers. If the micro-system aids in growth in specific areas like sensory-motor and self-help, the mesosystem facilitates language, play, and social development. The macrosystem consists of the child's cultural contexts and legal policies, which influence their life. Thus, the theory captures proximal, intermediate, and distal factors that can be unravelled by Ecological Behaviour Analysis (EBA). Added to this is chronosystem as the scheme of things in contemporary times (Bronfenbrenner 1993).

The person-in-environment (PIE) perspective is another feature of EST to reiterate that the environment influences a person. Therefore, social diagnosis is the key to understanding mental health irregularities (Rogge and Cox 2002). Both these theories assume that the environmental impacts on the individual over time turn into a trait. Ecomaps help studies their relationships. Historically, official disease classifications, such as DSM and ICD, failed to capture the environmental perspectives in mental health conditions. Later versions partially included a different axis on social stressors and the global level of functioning. The EST goes beyond diagnoses to profile the proximal and distal layers in the environment that supports and acts as barriers. Behaviors are accepted as having multiple causation and multiple effects. There is also a dynamic, ever-changing interplay of causes between the person, behavior, and the environment (Lee and Niileksela 2014:14).

The EST is credited for simultaneously targeting individual, societal, and social factors as multi-layered determinants of mental health. With

the paucity of research along these lines, several questions arise. How well does the environment fit for the healthy development and effective functioning in identified cases of children or adolescents within real-life settings? What is the match between their needs, available supports, and resources in a specific case? What are the different layers in their ecological systems? Can the lack of fit/mismatch within or between layers in their ecosystem result in problematic issues? How do environments help, harm, or hinder development? Do harmful elements like deficient opportunities in family, school, or community environments inhibit developments at any layer?

Based on the preceding, by adapting Bronfenbrenner's EST as a process-person-context-time model (PPCT) within the PIE framework, this study aims to categorize findings by EBA of the contents in lived experiences of representative case-vignettes into the layers, such as microsystem (person, needs and characteristics), mesosystem (interactions with family/ professionals), exosystem (care services/systems) and macrosystem (societal influences) and chronosystem (dynamic influences of time). A qualitative study design involving in-depth interviews to derive illustrative themes reported by consolidated criteria for reporting qualitative research (COREQ-R) guidelines was followed (Tong et al. 2007).

## Objectives

The specific objectives of this study were

- To identify and outline various themes of concern as case-vignettes drawn from a clinical sample of CAMH issues or problems;
- To codify the identified themes as eco-based issues deduced from the contents of case vignettes drawn from the clinical sample of CAMH issues or problems;
- To prepare a summarized cross-tabulation of illustrative case-based issues by EBA across the identified layers using the EST or PIE paradigms;
- To determine objective measures of inter-rater agreement coefficients on specific qualitative indices between raters on the allocation of themes across as eco-based issues; and,
- To deduce suggestions or recommendations for environment-based actions.

## METHODOLOGY

This study followed the COREQ-R guidelines covering three domains, viz., research team and reflexivity, stringent study design, and robust analysis of findings.

### Sample

Five randomly selected caselets were drawn from the daily logbook of clinical cases available with the author-clinician for this study. The logbook carries complete case history details, photocopies of related medical records, if any, child observations, and parent-interview details noted immediately after daily workup using reflective practice techniques. The native language of parent respondents is known to the investigator.

### Procedure

Each informant-singly, as dyads or as a group, was interviewed by the investigator, who is a doctorate in clinical psychology with three decades of experience in consulting for the targeted population. Each interview session ranged between 30-45 minutes, covering 5-7 sessions per case. While open-ended questions were the mainstay of all interviews, occasional prompts were also used to keep the momentum of the conversation flowing. All interviews were conducted in privacy within the consulting chambers of the investigator after obtaining informed consent and assuring anonymity and confidentiality. All extraneous disturbances or distractions were kept to the least. Transcripts were prepared immediately as the respondents' first-person experiences after each clinical interview to minimize data contamination by expectancy, reporting or recall bias, retrospective falsification, or subjectivity. The participants were given the freedom to peruse the transcripts if they so desired. The transcripts were analyzed using qualitative techniques, such as thematic content analysis, by coding internal themes within cases and integrative themes across or between cases (Larkin et al. 2006). A deductive-inductive approach was adopted to identify and unpack themes and concepts that support the levels of analysis using EST.

## RESULTS

This section is presented in the same order and sequence as the objectives of this study:

### (a) Identification of Themes of Concern as Case-vignettes

The five randomized representative case vignettes of CAMH issues or problems chosen for EBA in this study are as follows.

#### *Case Vignette #1*

Sonia, 18-year old, was brought with complaints of intermittent episodes of no speech, reduced social interaction, and aggressive outbursts with intimate caregivers. Although a student with first division in high school, her stay in a residential tutorial after that turned tumultuous. The rigorous 10-14 hour daily academic training through smart classes, mock tests, group discussions, practice sessions on online apps, or social media groups combined routine shaming, scolding, taunting, and the insults of frequent comparison in front of peers brought down all sky-high aspirations. She returned home entirely shattered, frequently in tears, with disturbed sleep and appetite. She argued or fought on various matters with her parents. She seldom spoke with outsiders. The parents presumed an evil eye to explain her behavior. A week's 'treatment' was tried with religious prayers by their family guru. Someone suggested an ENT check fearing a problem in vocal cords or hearing. The medical reports turned out to be healthy. A psychiatric consultation was next undertaken, which ended with the prescription of anti-depressant and anti-anxiety drugs. Psychometric testing, case observation, and clinical interviews showed "average intelligence" with a temperamental profile of "passive dependent and avoidant" traits. Projective techniques revealed "high aspirations" backed by low "ego strength." Family interviews brought up issues of early childhood when the girl had similarly "stopped speaking" to outsiders when she was in "dire academic stress" during her primary school and later during high school years.

This vignette illustrates how the presenting complaints of "reduced or no speech, reduced social interactions, and aggressive outbursts"

is just an outward facade to a host of many other hidden problems related to academic expectations or performance at the layers below. The nature, content, type, and quality of the dyadic and triadic relationships between the informing parents and client call for attention in the second layer. The dyads can be father-child, mother-child, teacher-student, grandparent-grandchild, spousal, or any other relationship. The quality or quantity of information made available for a father-son dyad and mother-son dyad will vary considerably.

### *Case Vignette #2*

Manish, a 14-year old student of class ten, was believed to have an extraordinary knowledge of elevators. He could identify various international brands and talk at length about their manufacture, marketing, history, design, installations, operations, safety, or uses. When names like Otis, Schneider, Kone, Hitachi, Mitsubishi, Schmitt, or Toshiba and the names of their CEOs, location, research, and development kept pouring. His friend or listeners started to avoid him. He had nothing else to share. His father, an engineer by profession, was proud of his son's expertise. The mother was worried. He could not clear high school subjects. A consultation with an "expert" gave them a notion that he might be "dyslexic" or "high functioning autism." A thorough behavioral mapping revealed that he was laid-back or frankly incompetent in personal hygiene. He required reminders or even assistance for bathing, brushing, and dressing in a presentable manner. He was never sent to shop or handle money. His community living skills were awful. He never visited neighbors or entertained guests at home. He was not even part of the social networking virtual group with his classmates. The parents did not raise any of these concerns.

A diagnostic condition is only as much understood as the informants raise their concerns. It may be their unwillingness or plain ignorance that the second layer of diagnosis remains untouched. When there are more than two informants, the third person could likely supplement or even contradict available information. The diagnostic impression is then likely to change. Diagnostic errors emerge from several sources. Paying too much attention to one symptom, or single test findings, not listening

to the patient's complete story, being in a hurry, not knowing about the illness condition, fitting the diagnostic label to the individual than vice versa, failure to engage fully in information gathering, compilation, interpretation, integration, or establish an explanation or communicate that explanation (Thammasitboon et al. 2013; Watkins 2009; Gruppen et al. 1991).

### *Case Vignette #3*

Chotu, 8-year old in second grade, was born of an inter-faith marriage. The father hailed from a chaste Hindu business community. The mother was a Christian. After a period of secretive courtship and wedding, it was hoped that everything would be all right after the son was born. This did not happen. Down the timeline, when the warring families started showing signs of accepting the grandson, another storm began about which faith the boy should profess. Whether he should attend temples or a church, or whether he must be a vegetarian or non-vegetarian. As a witness to all these bickerings, his grandparents pampered the boy with whatever was demanded. He demands increased-candies, shoes, playthings, bicycles, skating shoes, movies, outings, or more play-time. It ended in school refusal. It was then the mother realized that she must consult a specialist. Everyone turned offensive against her. How could she think of such a move? Has the boy turned mad? One elder retorted that the mother needs a mental check, not the child. The mother came alone for consultation, asking if anything could be done to resolve the issues without bringing the child or other family members for treatment.

This vignette throws open issues in the next layer involving the family, school, society, and community-at-large.

### *Case Vignette #4*

Ananya, a 5-year old, single daughter of a busy businessman and post-graduate housewife, hailing from a tier-2 city, was brought with a short speech and language complaint. During the case history, the parents denied that there was no other problem. "Everything is fine," the mother affirmed, "If only she can talk like other children of her age, that would be fine." A detailed developmental assessment discovered that the child could make 1-2 word utterances and followed 5-10 personal,



situation-specific, gesture-mediated idiosyncratic commands made by the mother. She needed help in brushing, dressing, undressing, buttoning, bathing, and washing hands, face, or self after toilet use. All social interactions were restricted to her mother. There was no peer group available for the child. When left forcibly with her age peers, the girl would end pushing, hitting, or snatching things from them. Therefore, the mother thought it was best to keep her alone herself at home. The mother decided to home school the child. She taught picture reading, number counting, and naming colors, pointing to days in the week on a calendar, copying alphabets, or solving jigsaw puzzles. The child was also kept occupied with gadgets to listen to music and remain calm. The mother claimed to have an uncanny ability to read her daughter's mind. If the child was given numbers to add or subtract or asked to spell 4-5 letter words in English, the mother had to think about them merely, and the daughter would get the right answer. To demonstrate this, the mother placed a list of five words randomly in strips before the child. They were NEIGHBOR-PHOTOGRAPHY-CEILING-MISCHIEF-TREASURE. The child was then instructed to pick a word among them by the mother. And Lo! The girl picked that word correctly.

#### ***Case Vignette #5***

Anand, 4-year old, single child of a vast estate owner in a hill station, was brought with complaints of poor eye contact and social skills. This was noticed by the parents during vacations when his cousins visited them. While the cousins were busy chatting, playing, fighting, sharing, or snatching among themselves and did many more things, Anand was noticed to remain silent or aloof. He did not mingle with them nor protested when the cousins took away his things. The father felt that his son should be more assertive. A detailed assessment showed that the boy was developmentally laggard in several areas. His expressive speech was around two years, and receptive speech was a few months more than that. His self-help skills were no better. He had two paid caregivers to help him feed, dress, wash, bathe, or brush daily. A home tutor visited four days a week to teach essential reading, writing, and math. Here again, compared to his cousins, he was way behind.

The preceding two caselets illustrate a predicament of near-total social exclusion or isolation. They illustrate the non-accessibility and non-availability of service providers. They cover the outermost layers of community involvement. To provide a panoramic overview of the layers, a summarized cross-tabulation of illustrative symptom array in the sample cases derived by ecological systems or person-in environment paradigm analysis is given in Table 1.

#### **(b) Coding of the Identified Themes as Eco-based Issues**

After listing or profiling the representative and illustrative case vignettes, the next procedure involved deducing core themes reflecting eco-based issues from their contents related to the clinical sample of CAMH issues or problems. This was done by circulating the typed formats of the case vignettes between two experts (including the author), not below the rank of a doctorate in psychology with at least five years of clinical experience. The coders used steps like getting familiarized with the vignettes, coding them, generating themes, turning the codes into themes, reviewing, defining, and naming the themes before writing up. The themes listed by them covered many areas. Informant perceptions, experiences, their ideas and opinions on areas like emotional and behavior problems, school refusal or drop out, short play or peer group interactions, poor personal hygiene and self-help skills, reduced eye contact and interpersonal engagements, lack of contextual opportunities, child care customs and practices, behavioral expectations and consequences, and others. Among the environmental themes commonly raised with implications for CAMH is a history of maternal mental disease, a high level of parental anxiety, limited parental perspectives, and poor parent-child interactions (Burkey et al. 2016; Atilola 2014).

#### **(c) Cross-tabulation of Illustrative Case-based Issues**

The themes or contents derived from the expert observations were cross-tabulated (Table 1) between the caselets on the top row against the five layers recognized under EBA. Such an array helps in viewing, comparing, or contrasting similarities and differences between the cases on identified themes in the different layers.

**Table 1: Summarized cross-tabulation of illustrative symptom array in the sample cases derived by ecological systems or person-in environment paradigm analysis**

Layers	Caselet #1	Caselet #2	Caselet #3	Caselet #4	Caselet #5
Microsystem	No speech, reduced social interaction, and aggressive outbursts with intimate caregivers;	Prodigality in knowledge on elevators, father encouraging but mother apprehensive on the unique achievements;	Stubborn, refusal, negative behaviors	Emotional enmeshment in mother-daughter dyad, a busy disengaged father	Poor eye-contact,
Mesosystem	Reduced academic performance, peer group insults, and pressure;	Poor or absent peer relationships,	School refusal,	Absence of peer group and schooling,	Inadequate opportunities for peer interaction
Exosystem	Avoidance of social contacts, media hype on toppers and academic achievers,	Deficient social and community living skills,	Unresolved inter-faith marriage, competitive parenting,	Reduced or absent neighborhood social interactions, claims on splinter skills;	Isolated family living in a hill station,
Macrosystem	Academic grades are viewed as the indicative equivalent of high intelligence, the pursuit of professional courses valued highly,	Professional community diagnosing the condition as dyslexia or high functioning autism;	Divergent religious, dietary, and culinary practices,	Home schooling, the high premium placed on academic performance and achievements,	Home tutoring paid caregivers;
Chronosystem	Teenage of the case	Contemporary hype on Neurodevelopmental Disorders;	Ongoing LPG and opportunity for inter-breeding movement in the country	Elite class in tier-2 city,	A generalized or global developmental delay;

EST mentions “layers” in the environment, viz., a micro-system (which is nearest or in contact), mesosystem (which is about the relationship with the family, school, peer group, neighborhood, or immediate surroundings), exosystem (which is the community, culture, media, or government institutions), macrosystem (which is the geographical space, culture, values, customs, and laws) and chronosystem (which is the dimensions of time, or age).

- (i) For the **microsystem**, between dyads, the elicited overt complaints vary from observed: “absence of expressive speech,” poor “eye-contact,” “stubborn, refusal behaviors,” or “prodigal knowledge” on a specific topic. Each case is unique in its overt symptom presentation. No apparent commonality is observed at this layer. There is no uniformity in the depth of the professional-client engagement too. They are only based on their subjective reporting, personal attributions, and idiosyncratic views about the client.
- (ii) In the **mesosystem**, involving the triad of the father-mother-child, still deeper and better insights are derived. Thus, one gets to know how the “absence of expressive speech,” in a case has an added “reduced academic performance,” experiences “peer group insults, and pressure.” Likewise, in the next case, the apparent prodigality in the teenager hides another untold layer of “poor or absent peer relationships.” There is an absence or loss of social opportunities in all cases.
- (iii) In the **exosystem**, as one delves deeper, the deleterious consequences or effects of the micro and mesosystems on mental health become apparent further as “avoidance,” “deficient social and community skills,” “family in isolation,” “reduced or absent neighborhood,” and “unresolved inter-faith competitive parenting.” In one instance, the claims about the phenomenon of “splinter skills” in their child are ego-satisfying for the mother, although those credentials are unlikely to take the child any farther.
- (iv) In the **macrosystem**, misattributions, misconceptions, and stereotypes emerge to the fore. If one highly values the pursuit of professional courses alone as indicative of one’s high intelligence (Case vignette#1), another appears lost in the chase for a diagnosis (Case vignette#2). Similarly, where one is cowed by “divergent religious, dietary, and culinary

practices” (Case vignette#3), the others are left to experiment with paid caregivers, home tutoring, and home schooling. Despite the availability of CAMH community resources for their care and protection of rights, the case vignettes highlight how they remain underutilized.

- (v) The **chronosystem** highlights the teenage of the case, contemporary penchant for diagnosing or labeling children, the ongoing Liberalization, Privatisation, Globalization (LPG) in the country that encourages inter-faith breeding, the formation of elite classes, and secluded gated communities.

#### (d) Inter-rater Agreement Coefficients

Data gathering tools placed all efforts in place to adopt strategies that could ensure trustworthiness, credibility, dependability, confirmability, and transferability of the findings from this study. While field notes were made both during and immediately after each session for all cases, the audio-video recording was not undertaken for all of them. Data analysis used two coders, who were instructed to code the case vignettes to fit into pre-identified coding categories. Overlap of 25 percent was deemed appropriate and sufficient to be marked as a thematic category. The mean inter-rater agreement for raters was calculated as Cohen’s kappa of 0.94, which is interpreted as “almost perfect agreement” (Landis and Koch 1977; Cohen 1967).

#### (e) Environment-based Remediation

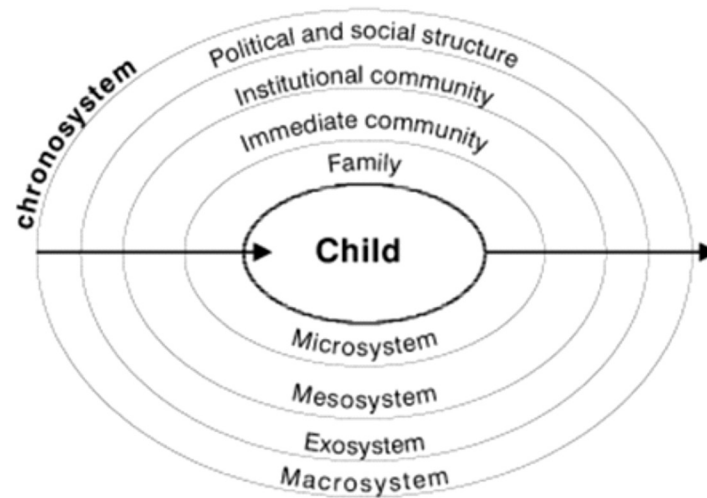
The EST and their derivative on EBA point toward planning, formulation, or execution of programs for environment-based remediation. Such a program is essentially one of education, information campaigns, or any other organized effort at confronting people’s understanding of and attitude towards CAMH. They can be a brief or long-term child, parent, or teacher-directed at home, school, community, or in nationwide settings.

In this study, barriers are identified at all levels of EBA. Beginning from parents to the family, over-protection, prejudice, social stigma of consulting mental health professionals, discrimination, and faulty stereotypes, negative consequences of diagnostic labeling, seeking to solve the problem within one’s family, recommendations or advice from friends

or other family members, and other attitudinal barriers are evident across all layers which prevent seeking help early for CAMH issues. The positive impact of early intervention, using the proactive role of media, public education through debates or declamations, meetings or lectures, engagement with noted personalities as brand ambassadors, organizing publicity events or drives, street plays or marathons, dedicated events or days, social or digital outreach media campaigns, and others are recommended.

### DISCUSSION

The term “eco-behavior” was coined in the 1970s based on dialogues between ecological psychologists and applied behavior analysts. The word was first coined by Gutkin (1993). While behavior analysis is credited with giving importance to immediate or proximate, here-and-now, functional-utilitarian, or antecedent-consequence factors in determining human behavior, it ignored distant social-ecological factors. This is where observations in the home, school, neighborhood, or community settings turn important (Lutzker et al. 1998). Since around the turn of this millennium, eco-behavioral science as a conceptual framework for assessing the environmental correlates of CAMH is gaining momentum (Simeonsson and Boyles 2001). The phrase “eco-behavioral assessment” (EBA) is used to describe day-to-day practices, describe relationships, environments, and opportunities that promote favorable mental health conditions (Pretti-Frontczak et al. 2006). Phrases like eco-behavioral consultation are beginning to be used as an integrative practice or method of providing services to children by considering one or more adults like parents or teachers (Lee and Niileksela 2014). The child is no longer the sole target of all problems, their diagnosis, and intervention. The defining feature of the EST is that growth and change occur as a result of interactions between individuals and the environment. This includes one or both parents, family, school, peers, neighborhood, community, and nation. This model is often illustrated as a series of circles within circles, each influencing the individual’s development to vary degrees (Fig. 1). The words “resilience” and “protective factors” are also invoked to explain how an individual successfully meanders his or her way through the layers to achieve mental health.



**Fig. 1. Ecological theory of development**

*Source:* Author

Empirical research applying EST has been minimally attempted on patients undergoing palliative care (Pask et al. 2018), the socio-cultural context of behavior problems (Burkey et al. 2016), child mental health (Atilola 2014), immigrant children (Yok-Fong 2013), caregivers of ageing adults (Greenfield 2012), inmates of urban high school (Leonard 2011), in specialized class settings for severely and profoundly mentally disabled adults (Greenwood et al. 1991; Odom et al. 1990; Felce et al. 1988), and to understand career choices of single- and double degree nursing students (Hickey et al. 2012). Eriksson et al. (2018) examined how different concepts of Bronfenbrenner's theory are used to help guide mental health policy and practice. Out of the 16 papers reviewed on the theme, ten of them used the concepts of ecological systems without investigating interactions between these systems, another four studied the interactions within and between these systems, and the remaining two used the later concepts of this theory. With ingenuity, the EST can be applied to any domain of human behavior. For example, as applied to dietary intake and physical activity of children, one can operationalize three types of interactions-between the childcare environment (physical, social, political, and economic), micro-systems (childcare and home settings), and macro-systems (laws and child protection policies).

## CONCLUSION

In sum, the merits of EBA are that it provides a holistic understanding of mental health. There is no diagnostic labeling and name-calling in individual cases. This approach is also against the traditional symptom-based classification. It does not scapegoat individuals. It avoids the futile search for causation and tries to move from individual towards family or community-based diagnosis and environment-mediated interventions. This study shows that there needs to be the best fit between the individual and environment. The match between their needs, available supports, and resources in specific cases in their ecological system or across layers is even more crucial in real-life settings for CAMH. Using a hypothetico-deductive approach, EBA establishes functional relationships of the behavior in its current context, including proximal and distal variables in the ecosystem and the historical context.

## RECOMMENDATIONS

Clinicians, researchers, and practitioners are recommended to view or handle child and adolescents mental health problems from a holistic perspective. The immediate situational and contextual factors are as important as the wider network of family, community, and institution-linked elements. This perspective is recommended to be incorporated as



part of naturally occurring effective procedures for different age groups of persons for a wide range of abilities. Attempts can be also be made to develop software-enabled EBA Systems.

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### ACRONYMS

CAMH: Child and Adolescent Mental Health, COREQ-R: Consolidated Criteria for Reporting Qualitative Research, DSM: Diagnostic and Statistical Manual, EBA: Eco-behavior Analysis, EST: Ecological Systems Theory, ICD: International Classification of Diseases, ICF: International Classification of Functioning, Disabilities, and Health, LPG: Liberalization, Privatisation, Globalization, PIE: Person-in-Environment, PPCT: Process-Person-Context-Time, WHO: World Health Organization.

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