

Behavioural consequences of child abuse

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Abstract

Objective To discuss the consequences of abuse on childhood behavioural development, to highlight some behavioural clues that might alert physicians to ongoing child abuse, and to explore the specific role of the family physician in this clinical situation.

Sources of information A systematic search was used to review relevant research, clinical review articles, and child protection agency websites.

Main message A child's behaviour is an outward manifestation of inner stability and security. It is a lens through which the family physician can observe the development of the child throughout his or her life. All types of abuse are damaging to children—physically, emotionally, and psychologically—and can cause long-term difficulties with behaviour and mental health development. Family physicians need to be aware of and alert to the indicators of child abuse and neglect so that appropriate interventions can be provided to improve outcomes for those children.

Conclusion Child abuse might cause disordered psychological development and behaviour problems. Family physicians have an important role in recognizing behaviour clues that suggest child abuse and in providing help to protect children.

Child abuse has serious consequences for child development and family health throughout the life cycle, and it might be detected in the family practice office.¹⁻⁵ While universal screening is not recommended,¹ family physicians should be aware of the various presentations and sequelae of child abuse, so that appropriate interventions can be instituted. This article will focus on the behavioural aspects of child abuse as they apply to primary health care providers.

Case scenario

Sara brought her 3-year-old son, John, to the family doctor, mentioning that the child had been complaining of recurrent abdominal pain. She stated that the abdominal pain came usually at night or during temper tantrums. This was John's third clinic visit for the same complaint, although findings of his physical examination and his laboratory test results were normal. During the visit, the doctor noticed that Sara frequently yelled at, scolded, and berated John, saying he was a "bad boy and very stubborn," sometimes grabbing him forcefully or speaking loudly when he wanted to talk or move around the room. She told the doctor that the day-care worker had told her that John was aggressive at day care, with frequent "meltdowns" and fighting with his peers.

Sources of information

Data for this review were identified by a search of MEDLINE, PsycINFO, EMBASE, and CINAHL (January 1980 to December 2010) using the search terms *child abuse*, *violence*, and *child development*. All relevant papers were selected for review, limited to those published in the English language, and additional articles were identified from their bibliographies. Child protection agencies' websites were viewed for current statistics.

EDITOR'S KEY POINTS

- Child abuse is a common problem worldwide, and its physical and psychosocial effects are felt by abused children, their families, and their communities. It has been linked to changes in victims' mental and behavioural development throughout their lives, putting them at risk of engaging in potentially dangerous behaviour in the future.
- Family physicians have an important role in identifying cases of child abuse in their practices, reporting such cases to child welfare agencies, preventing further harm to identified children as well as to other children in the families, and providing further ongoing support and education to families.

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Main message

While there is no single definition of child abuse, the definition from the World Health Organization is the most comprehensive:

[Child abuse is] all forms of physical and/or emotional ill-treatment, sexual abuse, neglect or negligent treatment or commercial or other exploitation, resulting in actual or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, trust or power.²

Approximately 40 million children worldwide are abused each year.² Abuse occurs at every socioeconomic level, across all ethnic and cultural lines, within all religions, and at every level of education.² In 2008, Statistics Canada⁶ reported the following:

- In 2006, the rate of sexual assaults against children and youth reported to police was more than 5 times higher than it was for adults (190 compared with 35 per 100 000 persons).
- For every 100 000 persons younger than 18 years of age, 334 were victims of physical or sexual violence by friends or acquaintances, 187 experienced violence at the hands of family members, and 101 were victimized by strangers.

Effects of violence and neglect on attachment and brain development. A strong and secure attachment bond with a primary caregiver is the core of developing resilience and a healthy personality.^{7,8} It strengthens a child's ability to cope with stress, regulates emotions, provides social support, and forms nurturing relationships.⁹ The world is experienced as a safe place in which to explore and develop independence. The child finds comfort and support from his or her caregiver when under stress. When children are abused, they might display disturbed forms of attachment and abnormal patterns of emotional response toward their caregivers. This might subsequently lead to a serious attachment disorder with symptoms such as those shown in **Box 1**.⁵⁻⁸

The Early Years Study 2 summarized the research on the effects of violence and neglect on early brain development.⁵ Poor caregiver-infant interactions compromise the formation of neural circuits and pathways. A series of studies spanning 2 decades shows that neglect, abuse, or parenting compromised by depression or substance abuse influence the development of the child's brain and biologic pathways.¹⁰

Research has shown that the quality of exchanges between caregiver and infant serves as the foundation for the infant's signaling system and influences the child's subsequent mental and physical health, especially the child's capacity to interact with others and the development of neural pathways for language and

Box 1. Symptoms of attachment disorder

The following are symptoms of attachment disorder.

- An aversion to touch and physical affection: The child might flinch, laugh, or even say "ouch" when touched; rather than producing positive feelings, touch and affection are perceived as threats
- Control issues: The child might go to great lengths to prevent feeling helpless and remain in control; such children are often disobedient, defiant, and argumentative
- Anger problems: Anger might be expressed directly, in tantrums or acting out, or through manipulative, passive-aggressive behaviour; the child might hide his or her anger in socially acceptable actions, like giving a high-5 that hurts or hugging someone too hard
- Difficulty showing genuine care and affection: The child might act inappropriately affectionate with strangers while displaying little or no affection toward his or her parents
- An underdeveloped conscience: The child might act like he or she does not have a conscience and might fail to show guilt, regret, or remorse after behaving badly

Data from McCain et al,⁵ Statistics Canada,⁶ Rutter,⁷ and Bretherton.⁸

higher cognitive functions.⁷ Children are more likely to have learning and behaviour problems when living with parents who struggle with mental health or substance abuse problems. Maternal depression is a key determinant of poor early child development; it is related to and as important as family functioning, parenting style, and engagement.

Young children are highly sensitive to other people's emotions, particularly those of their family members. Witnessing scenes of verbal or physical violence and discord has direct negative effects with long-lasting consequences. Similarly, children who experience parental abuse or neglect are more likely to show negative outcomes that carry forward into adult life, with ongoing problems with emotional regulation, self-concept, social skills, and academic motivation, as well as serious learning and adjustment problems, including academic failure, severe depression, aggressive behaviour, peer difficulties, substance abuse, and delinquency.¹¹⁻¹³

Types of child abuse. The current literature discusses many kinds of child abuse, each with implications that have been shown to harm child development. An abused child often suffers from more than one type of abuse; however, some types of abuse are more frequently seen than others.¹⁻⁵

Physical abuse: Physical abuse is direct harm to a child's body. It might be a single act or repeated acts. The physical injuries might be external (eg, a laceration or burn) or internal (eg, bruised organs). There are different methods of inflicting physical abuse; for example, strongly shaking an infant, hitting a child, cutting a child's skin, or

burning the skin with a hot implement. Additionally, in some social cultures, certain abusive behaviour is legitimated by religious beliefs; for example, badly cauterizing a child or inserting sharp objects into a child's body in order to heal disease or to force out evil spirits.

Emotional abuse: Emotional abuse is inflicted by ignoring or dismissing a child's emotional reaction or by shaming and humiliating a child. It might be verbal, in the form of derogatory words or hurtful names, or putting a child down by comparison with a sibling or friend. It could also be nonverbal, such as not acknowledging a child's needs, ignoring cries for help, or treating the child as unlovable or as a "bad child."

Neglect: Neglect is the most common type of child abuse. Not providing a child with adequate food, clothing, or shelter to survive and to grow has important effects on the child's future and puts a child at greater risk of disease, infection, retardation, or even death. Neglect also includes not providing access to health and educational services. Emotional neglect is also common and can have negative long-term effects on brain development and future mental health.

Sexual abuse: Sexual abuse is identified as engaging in any sexual act with a child. It can be sexual penetration or acts that are sexually suggestive, such as inappropriate touching or kissing. Some specific examples of sexual abuse include inducing or coercing a child to engage in any sexual activity, the use of a child as a prostitute, or use of children in pornography. Children are generally sexually abused by people they know, often close relatives.

Effect of child abuse on the stages of behavioural development

Infancy: Infancy is a critical period in a child's development. During infancy, the brain, which is approximately one-quarter of the size of the adult brain, is one of the most undeveloped organs and it is highly susceptible to both the positive and the negative effects of the external environment. For instance, shaken baby syndrome, a result of physical abuse,¹⁴ damages the brain structure, which can have severe consequences for the health of an infant—namely mental retardation, hearing problems, visual problems, learning disabilities, and cognitive dysfunction.¹¹ Some studies show that physically abused children have structural brain changes, including "smaller intracranial and cerebral volume," smaller lateral ventricles, and smaller corpora callosa.¹⁵ The consequences of abuse might not manifest clinically until later in life. For example, the outcomes for infants who suffer brain damage from shaking can range from no apparent effects to permanent disability, including developmental delay, seizures or paralysis, blindness, and even death. Survivors might have substantially delayed effects of neurologic injury resulting in a range of impairments seen

over the course of their lives, including cognitive deficits and behavioural problems. Recent Canadian data on children hospitalized for shaken baby syndrome showed that 19% died; 59% had neurologic deficits, visual impairment, or other health effects; and only 22% appeared well at the time of discharge. Data also indicate that babies who appear well when discharged from hospital might show evidence of cognitive or behavioural difficulties later on, possibly by school age.¹⁴

High cortisol and catecholamine levels, which increase as a response to stress that results from abuse, have been linked to the destruction of brain cells and the disruption of normal brain connections, consequently affecting children's behavioural development. Sleep disturbances, night terrors, and nightmares can be signs of infant abuse.⁵

Toddler age: By the second year, a child will usually react to stress with a display of angry and emotional expression. Stress accompanying any kind of abuse causes children to feel distress and frustration.¹⁶ The excessive anger is displayed in the form of aggressive behaviour and fighting with caregivers or peers. This form of response is intensified more with physical abuse.

Preschool age: At this stage, children have similar reactions to the different types of abuse as younger children do. However, by ages 4 and 5, children might express their reaction to abuse through different behaviour. Boys tend to externalize their emotion through expression of anger, aggression, and verbal bullying.¹⁷ Girls are more likely to internalize their behavioural attitudes by being depressed and socially withdrawn, and having somatic symptoms such as headache and abdominal pain.¹⁸

Primary school age: At this age, children develop through peer interaction. Abused children often have difficulties with school, including poor academic performance, a lack of interest in school, poor concentration during classes, and limited friendships.⁹ They are often absent from school.

Adolescence: Adolescents who have experienced abuse might suffer from depression, anxiety, or social withdrawal. In addition, adolescents who live in violent situations tend to run away to what they perceive to be safer environments.^{19,20} They engage in risky behaviour such as smoking, drinking alcohol, early sexual activity, using drugs, prostitution, homelessness, gang involvement, and carrying guns.^{17,21,22} Psychiatric disorders are often seen in adolescents who have been abused.^{18,23,24} In one long-term study, 80% of young adults who had been abused met the diagnostic criteria for at least 1 psychiatric disorder by the age of 21.²⁴

Common behavioural indicators of abuse. Identifying indicators of child abuse is usually challenging. Family members and family physicians should be very watchful

of children who have unusual psychosomatic complaints or behavioural changes. In such cases, more in-depth assessment of the child and family might be indicated.²⁵ It should be noted that not all maladaptive behaviour is an indication of abuse, and the indicators listed in **Box 2** are not indicative of abuse only.

Box 2. Behavioural indicators of abuse

The child might

- be afraid or reluctant to go home, or might run away;
- show unusual aggression, rages, or tantrums;
- flinch when touched;
- have changes in school performance and attendance;
- withdraw from family, friends, and activities previously enjoyed;
- have poor self-esteem (eg, describe himself or herself as bad, feel punishment is deserved, be very withdrawn); or
- have suicidal thoughts or exhibit self-destructive behaviour (eg, self-mutilation, suicide attempt, extreme risk-taking behaviour)

The child might also demonstrate

- hyperactive or unusual behaviour;
- clinging to adult strangers;
- apathy and withdrawn behaviour;
- no reaction to painful treatments;
- failure to thrive;
- signs of general neglect;
- wariness of physical contact; or
- manipulative behaviour to get attention

Physically abused children might have unusual injuries to particular sites on their bodies that are not usually subject to injury, such as wounds on the genitals, on the thighs, or around the eyes. Physical abuse might even manifest as serious trauma without adequate justification, such as fracture with minimal trauma. In clinical practice, physically abused children might stare at their parents or caregivers and appear apprehensive, as if they are waiting for the next abusive event to occur.²³ In addition, the way clothing is worn can indicate physical abuse; for example, a child wearing a long-sleeve dress or clothing that covers parts of the body that are not normally covered—ie, hands, legs, and neck—especially in hot weather.

Emotional effects of abuse often stem from insecure relationships with caregivers and affect child attachment development (**Box 3**). Such effects might be destructive to their confidence and self-esteem and to relationships with peers or partners later in life. Emotionally abused children might also persist with age-inappropriate habits and repetitive behaviour such as rocking and thumb-sucking.¹⁸ When emotional abuse is chronic and persistent, it can result in emotional harm to the child. Under the Child and Family Services Act, a child is defined as emotionally harmed if he or she demonstrates severe

Box 3. Emotional abuse and deprivation

Emotional abuse is the continued scapegoating and rejection of a child by his or her caregivers. The diagnosis of emotional abuse can be made when 1 of the following diagnostic criteria is present among other factors:

- severe psychopathology and disturbed behaviour in the child, documented by a psychiatrist; or
- situations in which the only parent is floridly psychotic or severely depressed and hence incapable of caring for the child

Emotional deprivation is the deprivation suffered by children when their parents fail to provide the normal experiences that would produce feelings of being loved, wanted, secure, and worthy. Emotional deprivation might be suspected in the context of the following:

- failure to thrive;
- refusal to eat;
- antisocial behaviour (aggression or withdrawal);
- anxiety or depression;
- attention-seeking behaviour;
- delinquent behaviour; or
- behaviour suggestive of emotional turmoil, such as compulsion, rigidity, or noncommunication

anxiety, depression, withdrawal, or self-destructive or aggressive behaviour.²⁶

The child's condition and behaviour in general might indicate abuse. The history might reveal multiple emergency admissions and multiple visits to different physicians. Also, undue delay in obtaining treatment of injury should raise concern.

In the case of neglect, a child might exhibit poor hygiene such as an unwashed body or hair, or an unpleasant body odour. He or she might live in unhealthy conditions, be left unsupervised, or be allowed to play in unsafe situations. Such children are frequently late for or absent from school (**Box 4**).

Box 4. Indications of neglect

Any of the following might indicate child neglect:

- failure to thrive and poor growth patterns;
- wasting of subcutaneous tissue;
- poor hygiene;
- persistent rashes;
- unattended needs (eg, immunization, glasses, or dental and medical care);
- abdominal distension in infants;
- inactive babies;
- expressionless facial appearance;
- underachieving;
- lack of energy and drive;
- delinquency and substance abuse;
- inconsistent attendance and performance at school; or
- stealing or begging for food

Sexual abuse also has serious negative effects throughout children's lives, ranging from physical injuries to emotional destruction.¹⁷ Indicators of sexual abuse are outlined in **Box 5**. Sexually abused children might have trouble walking or sitting because of disabling pain or injuries. Additionally, they might be afraid to change their clothes in front of other people because they do not want others seeing their bodies. They might also avoid sitting with peers or engaging in physical exercises that could lead to being touched. Sometimes, they behave in a seductive manner, which shows knowledge about sexual relationships. Teen pregnancy and a history of sexually transmitted diseases might be signs of ongoing sexual abuse.

Box 5. Indications of sexual abuse

Disclosure is the most obvious indication of sexual abuse. Age-inappropriate sexual behaviour or excessively sexualized behaviour might be an indicator of abuse. Indirect signs can include any of the following:

- acting out (with aggression or anger);
- withdrawal;
- regression;
- fears, phobias, and anxiety;
- sleep disturbance or nightmares;
- changes in eating habits;
- altered school performance;
- mood disturbances;
- enuresis or encopresis;
- running away;
- self-destructive behaviour; or
- antisocial behaviour (eg, lying, stealing, cruelty to animals, fire-setting)

Case discussion

There is a documented association between all types of child abuse and development of physical complaints and emotional responses.⁷ John presented with somatic symptoms in the form of recurrent abdominal pain; however, he also manifested some psychological problems or even psychiatric disorders. Verbal abuse toward John has produced a strong negative emotional response. Hostility and anger⁵ might become obvious in stressful situations, possibly as a result of early neurotransmitter disturbances in John's developing brain. Severe punishment has also been linked to development of dissociative personality disorder, anxiety, and depression in later life. Recurrent abdominal pain is a common somatic symptom seen in children who suffer from stress. Emotions are often expressed as physical symptoms in order to justify suffering or to seek attention.¹³ The role of family physicians begins with an awareness of the effects of child abuse on a child's physical and psychological health and identification of the abuse. In this case,

the family physician's management might focus on re-educating the parent on appropriate discipline and parenting techniques, as well as assessing the family, including the father and other important caregivers, to determine areas of stress that might benefit from counseling or psychotherapy. The doctor-patient relationship is important to maintain; however, child safety remains the priority. As always, the physician must consider the risk of child abuse and report any identified or suspected case to the appropriate agency, if indicated, for further child safety assessment and evaluation.^{18,27} In this case, counseling the family about the connection between their parenting approaches and John's symptoms would be important. Referral to a parent education program and early follow-up would also be beneficial.

Role of the family physician

Family physicians should be sensitive when acquiring history about domestic violence and child abuse. Because of ongoing and continuous contact with children and families over time, family physicians will usually have intimate knowledge of the strengths and challenges faced by the families under their care, and be able to provide anticipatory guidance and educational intervention in all areas of child development and parenting. Physicians also need an understanding of some of the risk factors for child abuse for the children and families in their practices, such as maternal depression, substance abuse, and previous contact with child protection agencies.

Management of suspected child abuse is summarized in **Box 6**.²⁷ Physicians should be aware that negative

Box 6. Management of suspected child abuse

Suspected or confirmed child abuse must be reported to the CAS.

- Determine if there is a pre-existing file with the CAS
- Send the child to the ED if there is a question of injury or sexual abuse
- Alert the ED physician when making a referral to the ED.
- Determine the religion of the parents to refer them to the appropriate CAS
- Be aware of the potential for injury or abuse in other children in the family
- Maintain detailed documentation for future legal proceedings
- Have a camera ready to document evidence of physical abuse (eg, bruising)
- Be prepared to provide ongoing psychological reassurance and support to the child and parents, and do not abandon them

CAS—Children's Aid Society, ED—emergency department.
Data from Pressel.²⁷

behaviour changes in a child (eg, aggressive behaviour) might be the tip of the iceberg of ongoing child abuse, neglect, or domestic violence involving other family members.²⁵ More attention should be paid to other children in the family and appropriate screening should be completed. Finally, there is a critical need for the physician to be knowledgeable about mental health resources in their communities for treating and supporting families. The use of a multidisciplinary team approach produces the most positive results.¹⁻³

Conclusion

Child abuse is a common problem worldwide, and its physical and psychosocial effects are felt by abused children, their families, and their communities. It has been linked to changes in the victims' mental and behavioural development throughout their lives, putting them at risk of engaging in potentially dangerous behaviour in the future. Family physicians have an important role in identifying cases of child abuse in their practices, reporting such cases to child welfare agencies, preventing further harm to identified children as well as to other children in the families, and providing further ongoing support and education to families.

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Contributors

All authors contributed to the literature search and to preparing the article for publication.

Competing interests

None declared

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