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Bullying in children: impact on child health

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Title

Bullying in children: impact on child health

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Abstract

Bullying in childhood is a major public health problem that increases the risk of poor health, social, and educational outcomes in childhood and adolescence. These consequences are felt by all those involved in bullying (bullies, victims, and bully-victims), and are now recognised to propagate deep into adulthood. Cyberbullying is a relatively new type of bullying in addition to the traditional forms of direct physical, direct verbal, and indirect bullying. Children who are perceived as being 'different' in any way are at greater risk of victimisation, with physical appearance being the most frequent trigger of childhood bullying. Globally, one in three children have been bullied in the past 30 days, although there is substantial regional variation in the prevalence and type of bullying experienced. The consequences of childhood bullying can be categorised into three broad categories: educational consequences during childhood, health consequences during childhood, and all consequences during adulthood. Many dose-response relationships exist between the frequency and intensity of bullying experienced and the severity of negative health consequence reported. The majority of victims of cyberbullying are also victims of traditional bullying, meaning cyberbullying creates very few additional victims. Overall, adverse mental health outcomes due to bullying in childhood most severely impact on bully-victims. Bullying prevention is vital for the achievement of the Sustainable Development Goals, with whole-school cooperative learning interventions having the strongest evidence base for successful outcomes. Clear management and referral pathways for health professionals dealing with childhood bullying are lacking in both primary and secondary care, although specialist services are available locally and online.

Key messages

- Bullying in childhood is a global public health problem that impacts on child, adolescent and adult health
- Bullying exists in its traditional, sexual, and cyber forms, all of which impact on the physical, mental and social health of victims, bullies, and bully-victims
- Children perceived as 'different' in any way are at greater risk of victimisation
- Bullying is extremely prevalent: one in three children globally has been victimised in the preceding month
- Existing bullying prevention interventions are rarely evidence-based and alternative approaches are urgently needed

Introduction

Bullying in childhood has been classified by the World Health Organization (WHO) as a major public health problem,[1] and for decades has been known to increase the risk of poor health, social, and educational outcomes in childhood and adolescence.[2] Characterised by repeated victimisation within a power-imbalanced relationship, bullying encompasses a wide range of types, frequencies, and aggression levels, ranging from teasing and name-calling to physical, verbal, and social abuse.[3] The dynamics within such relationships become consolidated with repeated and sustained episodes of bullying: bullies accrue compounding power while victims are stripped of their own and become progressively less able to defend themselves and increasingly vulnerable to psychological distress.[4]

However, only in the last decade have prospective studies been published that reveal the far-reaching effects of childhood bullying that extend into adulthood. There is now substantial evidence that being bullied as a child or adolescent has a causal relationship to the development of mental health issues beyond the early years of life, including depression, anxiety, and suicidality.[5] As such, addressing the global public health problem of bullying in childhood has received increasing international attention and is vital for the achievement of Sustainable Development Goal 4.[6] The impact of the COVID-19 pandemic on child health and education has focussed further attention on bullying in its digital form, so-called 'cyberbullying,' the prevalence of which is feared to be increasing.[7]

Types of bullying

Participants in childhood bullying take up one of three roles: the victim, the bully (or perpetrator), or the bully-victim (who is both a perpetrator and a victim of bullying).[5] Victims and bullies either belong to the same peer group (peer bullying), or the same family unit (sibling bullying),[8] although bullying frequently occurs in multiple settings simultaneously, such as at school (peer bullying) and in the home (sibling bullying), representing a ubiquitous ecology of bullying that permeates the child's life.

Three main types of bullying are observed, the typical characteristics of which are illustrated in Table 1.

Table 1. Typical characteristics of the main types of childhood bullying

Types	Typical characteristics	Examples	Reference
Traditional bullying	Direct physical (overt physical aggression or assaults)	Pushing, punching and kicking	9
	Direct verbal (overt verbal attacks that are highly personal)	Teasing, taunting, or threatening behaviour directed at the victim's appearance, abilities, family, culture, race or religion	
	Indirect (covert behaviour that damages peer relationships, self-esteem or social status)	Passing nasty notes, offensive graffiti, and defacing or damaging personal property	
Sexual bullying	Sexually bothering another person (may also be referred to as 'sexual harassment')	Inappropriate and unwanted touching, using sexualised language, and pressurising another to act promiscuously	10
Cyberbullying	Aggressive behaviour delivered through digital technology, specifically mobile phones, the internet, and social media	Spreading false stories about a victim online, posting digital media featuring a victim online without permission	11

While traditional bullying has been recognised and studied for many decades,[12] and is often accepted as an inevitable aspect of a normal childhood,[3] cyberbullying represents a relatively new phenomenon in which childhood bullying now takes place through digital modalities. The widespread uptake of electronic devices has reached almost complete saturation amongst adolescents in high-income countries, with users checking their devices hundreds of times and for hours each day.[13] While providing beneficial access to information and social support, this large and growing online exposure of young people renders them vulnerable to exploitation, gambling, and grooming by criminals and sexual abusers, as well as cyberbullying.[14] Due to the

increased potential for large audiences, anonymous attacks, and the permanence of posted messages, coupled with lower levels of direct feedback, reduced time and space limits, and decreased adult supervision, it is feared that cyberbullying may pose a greater threat to child and adolescent health that traditional bullying modalities.[15]

Factors that influence bullying

Two large-scale international surveys regularly conducted by the WHO – the Global School-based Student Health Survey (GSHS)[16] and the Health Behaviour in School-aged Children (HBSC) study[17] – provide data from 144 countries and territories in all regions of the world. These data identify specific factors that strongly influence the type, frequency, and severity of bullying experienced by children and adolescents globally. These factors, which are briefly described in Table 2, suggest that children who are perceived as being 'different' in any way are at greater risk of victimisation.

Table 2. Summary of factors that influence child and adolescent bullying[18]

Influencing factor	Description
Sex differences	Globally, girls and boys are equally likely to experience bullying.
	Boys are more likely to experience direct physical bullying; girls are more likely to experience direct verbal and indirect bullying.
	Girls are more likely than boys to experience bullying based on physical appearance.
	Globally, there are no major differences in the extent to which girls and boys experience sexual bullying, but there are regional differences.

	Girls are more likely than boys to be cyberbullied via digital messages, but there is less discrepancy between the sexes in the prevalence of cyberbullying via digital pictures.
Age differences	As children grow older, they are less likely to experience bullying by peers.
	Age differences are less pronounced for bullying perpetration.
	Older children may be more exposed to cyberbullying.
Not conforming to gender norms	Children viewed as gender non-conforming are at higher risk of bullying.
Physical appearance	Physical appearance is the most frequent reason for bullying.
	Body dissatisfaction and being overweight are associated with bullying.
Race, nationality or colour	Bullying based on race, nationality or colour is the second most frequent reason for bullying reported by children.
Religion	Compared to other factors, religion is mentioned by far fewer children as a reason for being bullied.
Socio-economic status	Socio-economic disadvantage is associated with increased risk of being bullied.
	A similar relationship is seen between self-perceived social status and cyberbullying.
Migration status	Immigrant children are more likely to be bullied than their native-born peers.
School environment	A positive school environment reduces bullying.
Peer and family support	Family support and communication can be an important protective factor.

Prevalence of bullying

A 2019 report from the United Nations Educational, Scientific and Cultural Organization (UNESCO),[18] examined the global prevalence of bullying in childhood and adolescence using data from the GSHS and HBSC studies along with addition

data from the Progress in International Reading Literacy Study (PIRLS)[19] and Programme for International Students Assessment (PISA).[20] It found that almost one in three (32%) children globally has been the victim of bullying on one or more days in the preceding month, and that one in 13 (7.3%) has been bullied on six or more days over the same period.[18] However, there is substantial regional variation in the prevalence of bullying across the world, ranging from 22.8% of children being victimised in Central America, through 25.0% and 31.7% in Europe and North America respectively, to 48.2% in Sub-Saharan Africa. There is also significant geographical variation in the type of bullying reported, with direct physical and sexual bullying being dominant in low- and middle-income countries, and indirect bullying being the most frequent type in high-income regions. Nevertheless, bullying is a sizeable public health problem of truly global importance.

Encouragingly, there has been a decrease in the prevalence of bullying in half (50.0%) of countries since 2002, while 31.4% have seen no significant change over this timeframe.[18] However, 18.6% of countries have witnessed an increase in childhood bullying, primarily amongst members of one sex or the other, although in both girls and boys in North Africa, Sub-Saharan Africa, Myanmar, the Philippines, and United Arab Emirates.[18]

Since its appearance, cyberbullying has received substantial media attention claiming that the near-ubiquitous uptake of social media amongst adolescents has induced a tidal wave of online victimisation and triggered multiple high-profile suicides amongst adolescents after being bullied online.[21,22] However, a recent meta-analysis suggests that cyberbullying is far less prevalent than bullying in its traditional forms, with rates

of online victimisation less than half of those offline.[23] The study also found relatively strong correlations between bullying in its traditional and cyber varieties, suggesting victims of online bullying are also likely to be bullied offline, and that that these different forms of victimisation reflect alternative methods of enacting the same perpetrator behaviour. Recent evidence from England also indicates difference between sexes, with one in 20 adolescent girls and one in 50 adolescent boys reporting cyberbully victimisation over the previous two months.[24]

Consequences of bullying

There is a vast range of possible consequences of bullying in childhood, determined by multiple factors including the frequency, severity, and type of bullying, the role of the participant (victim, bully, or bully-victim), and the timing at which the consequences are observed (during childhood, adolescence, or adulthood). The consequences can be categorised into three broad categories: educational consequences during childhood and adolescence, health consequences during childhood and adolescence, and all consequences during adulthood. Each will now be discussed individually.

Educational consequences during childhood and adolescence

Children who are frequently bullied are more likely to feel like an outsider at school,[20] while indirect bullying specifically has been shown to have a negative effect on socialisation and feelings of acceptance amongst children in schools.[25] Accordingly, a child's sense of belonging at school increases as bullying decreases.[19] In addition, being bullied can affect continued engagement in education. Compared with those who are not bullied, children who are frequently bullied are nearly twice as likely to

regularly skip school, and are more likely to want to leave school after finishing secondary education.[20] The effect of frequent bullying on these educational consequences is illustrated in Table 3.

Table 3. Relationship between being frequently bullied and educational consequences[20]

Consequence	Not frequently bullied	Frequently bullied
Feeling like an outsider (or left out of things at school)	14.9%	42.4%
Feeling anxious for a test even if well prepared	54.6%	63.9%
Skipped school at least 3-4 days in previous two weeks	4.1%	9.2%
Expected to end education at the secondary level	34.8%	44.5%

Children who are bullied score lower in tests than those who are not. For example, in 15 Latin American countries, the test scores of bullied children were 2.1% lower in mathematics and 2.5% lower in reading than non-bullied children.[25] Compared with children never or almost never bullied, average learning achievement scores were 2.7% lower in children bullied monthly, and 7.5% lower in children bullied weekly, indicating a dose-response relationship. These findings are globally consistent across both low- and high-income countries.[20]

Health consequences during childhood and adolescence

Numerous meta-analyses,[2,26,27,28,29] longitudinal studies,[5,30,31] and cross-sectional studies[32,33,34] have demonstrated strong relationships between childhood bullying and physical, mental, and social health outcomes in victims, bullies, and bully-victims. Some of these consequences are illustrated in Table 4. Reported physical health outcomes are mostly psychosomatic in nature. Most studies focused on the impacts

on victims, although adverse effects on bullies and bully-victims are also recognised. Many studies identified a dose-response relationship between the frequency and intensity of bullying experienced and the severity of negative health consequence reported.

Table 4. Summary of childhood health consequences of bullying during childhood

	Experienced by			Reference
	Victim	Bully	Bully-victim	
Physical health outcomes				
Unspecified psychosomatic symptoms	x			27
Feeling tired	x			27
Poor appetite	x			27
Stomach ache	x			27
Sleeping difficulties	x			27
Headache	x			27
Back pain	x			27
Dizziness	x			27
Mental health outcomes				
Depression	x		x	2,5
Anxiety	x		x	2,5,26
Psychotic symptoms	x			27,31
Self-harm	x			30
Suicidal ideation	x	x	x	5,27,28,29
Suicidal behaviour	x	x	x	27,28,29

Illicit substance misuse	x			26,27
Alcohol misuse	x	x		26,27,32
Smoking	x	x	x	32
Panic disorder	x		x	5,27
Loneliness	x		x	2,32
Low self-esteem	x			2
Hyperactivity			x	26
Disturbed personality		x	x	5,26
Social health outcomes				
Isolation			x	26
Poor school adjustment		x		26
Poor social adjustment			x	26
Externalising problems		x		26
Risky sexual behaviour	x			27
Weapon carrying	x	x		33
Disconnectedness with parents	x			34

While there is significant regional variation, the association between childhood bullying and suicidal ideation and behaviour are recognised globally.[35] Alarmingly, childhood bully victimisation is associated with a risk of mental health problems similar to that experienced by children in public or substitute care.[36] Victimisation in sibling bullying is associated with substantial emotional problems in childhood including low self-esteem, depression and self-harm,[8] and increases the risk of further victimisation through peer bullying. Overall, adverse mental health outcomes due to bullying in

childhood appear to most severely impact on bully-victims, followed by victims and bullies.[5,37]

9 out of 10 adolescents who report victimisation by cyberbullying are also victims of bullying in its traditional forms,[38] meaning cyberbullying creates very few additional victims,[39] but is another weapon in the bully's arsenal and has not replaced traditional methods.[40] Cyberbullying victimisation appears to be an independent risk factors for mental health problems only in girls, and is not associated with suicidal ideation in either sex.[41] As such, traditional bullying is still the major type of bullying associated with poor mental health outcomes in children and adolescents.[24]

Consequences during adulthood

A recent meta-analysis[42] and numerous other prospective longitudinal studies[5,36,43,44] that used large, population-based, community samples analysed through quantitative methods suggest that childhood bullying can lead to three main negative outcomes in adulthood for victims, bullies, and bully-victims: psychopathology, suicidality, and criminality. Some of these consequences are illustrated in Table 5.

Table 5. Summary of adulthood consequences of bullying during childhood

	Experienced by			Reference
	Victim	Bully	Bully-victim	
Psychopathology				
Depression	x	x	x	5,36,43,44
Anxiety	x	x	x	5, 36,43

Panic disorder	x	x	x	5,43
Disturbed personality		x		5
Suicidality	x	x	x	5,36,43
Criminality				42
Violent crime		x	x	42
Illicit drug misuse		x	x	42

A strong dose-response relationship exists between frequency of peer victimisation in childhood and adolescence and the risk of adulthood adversities.[42] For example, frequently bullied adolescents are twice as likely to develop depression in early adulthood compared with non-victimised peers, and is seen in both males and females.[44] Startlingly, the effects of this dose-response relationship seems to persist until at least 50 years of age.[36]

The impact of childhood bully victimisation on adulthood mental health outcomes is staggering. Approximately 29% of the adulthood depression burden could be attributed to victimisation by peers in adolescence,[44] and bully victimisation by peers is thought to have a greater impact on adult mental health than maltreatment by adults, including sexual and physical abuse.[45] Finally, these consequences reach beyond the realm of health, as childhood bullying victimisation is associated with a lack of social relationships, economic hardship, and poor perceived quality of life at age 50. [36]

Bullying prevention

Until not long ago, being bullied was considered a normal rite of passage through which children must simply persevere.[3] However, the size and scale of its impact on child health, and later on adulthood health, is now clearly understood and renders it a significant public health problem warranting urgent attention.[1] While parental and peer support are known to be protective against victimisation, regardless of global location, cultural norms or socioeconomic status,[46] structured programmes have been deployed at scale to prevent victimisation and its associated problems.

School-based interventions have been shown to significantly reduce bullying behaviour in children and adolescents. Whole-school approaches incorporating multiple disciplines and high levels of staff engagement provide the greatest potential for successful outcomes, while curriculum-based and targeted social skills training are less effective methods that may even worsen victimisation.[47] The most widely adopted approach is the Olweus Bullying Prevention Program (OBPP), a comprehensive, school-wide programme designed to reduce bullying and achieve better peer relations among school-aged children.[12] However, despite its broad global uptake, meta-analyses of studies examining the effectiveness of the OBPP have shown mixed results across different cultures.[48,49,50]

Cooperative learning, in which teachers increase opportunities for positive peer interaction through carefully structured, group-based learning activities in schools, is an alternative approach to bullying prevention that has recently gained traction and been shown to significantly reduced bullying and its associated emotional problems while enhancing student engagement and educational achievement.[51]

Due to the link between sibling and peer bullying, there have been calls for bullying prevention interventions to be developed and made available to start in the home, and for general practitioners and paediatricians to routinely enquire about sibling bullying.[8]

While countless cyberbullying prevention programmes, both off- and online, are marketed to educational institutions, only a small proportion have been rigorously evaluated.[52] Furthermore, as cyberbullying rarely induces negative impacts on child health independently, interventions to tackle these effects must also target traditional forms of bullying to have meaningful impact.

Addressing the global public health problem of bullying in childhood and adolescence is vital for the achievement of the Sustainable Development Goals. In recognition of this, UNESCO recently launched its first International Day Against Violence and Bullying at School, an annual event which aims to build global awareness about the problem's scale, severity, and need for collaborative action.[53] Meaningful progress on this problem is urgently needed to increase mental wellbeing and reduce the burden of mental illness in both children and adults globally. Suggestions for immediate action are briefly described in Box 1.

Box 1. Actions needed to improve child health through the prevention of bullying

- Promote the importance of parental and peer support in the prevention of bully victimisation across families and schools
- Educate health professionals about the consequences of childhood bullying, and provide training and resources to allow identification, appropriate management and timely referral of such cases (see below)

- Develop and make widely available bullying prevention interventions that tackle sibling bullying in the home
- Create and deploy whole-school cooperative learning approaches to reduce bullying within educational institutions
- Address cyberbullying with evidence-based interventions that also tackle traditional forms of bullying
- Increase awareness of the impacts of bullying on child health amongst primary care professionals

What to do if you suspect childhood bullying

GPs recognise their responsibility to deal with disclosures of childhood bullying and its associated health consequences, but feel unable to adequately do so due to the constraints of time-pressured primary care consultations, and uncertainty around the specialist services to which such children can be appropriately referred.[54]

Clear management and referral pathways for health professionals dealing with childhood bullying are lacking in both primary and secondary care. Local, national and online anti-bullying organisations, such as Ditch the Label[55] and the Anti-Bullying Alliance,[56] provide free advice for children affected by bullying, and their parents, teachers, and health professionals, along with free online certified CPD training for anyone working with children. School nurses continue to act as liaisons between primary care and education systems,[57] and should be central to the multi-disciplinary management of childhood bullying. Finally, if bullying is considered to be contributory to childhood depression, Child and Adolescent Mental Health Services, along with

primary care practitioners and educational professionals, should work collaboratively to foster effective antibullying approaches.[58]

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Title

Bullying in children: impact on child health

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Abstract

Bullying in childhood is a major public health problem that increases the risk of poor health, social, and educational outcomes in childhood and adolescence. These consequences are felt by all those involved in bullying (bullies, victims, and bully-victims), and are now recognised to propagate deep into adulthood. Cyberbullying is a relatively new type of bullying in addition to the traditional forms of direct physical, direct verbal, and indirect bullying. Children who are perceived as being 'different' in any way are at greater risk of victimisation, with physical appearance being the most frequent trigger of childhood bullying. Globally, one in three children have been bullied in the past 30 days, although there is substantial regional variation in the prevalence and type of bullying experienced. The consequences of childhood bullying can be categorised into three broad categories: educational consequences during childhood, health consequences during childhood, and all consequences during adulthood. Many dose-response relationships exist between the frequency and intensity of bullying experienced and the severity of negative health consequence reported. The majority of victims of cyberbullying are also victims of traditional bullying, meaning cyberbullying creates very few additional victims. Overall, adverse mental health outcomes due to bullying in childhood most severely impact on bully-victims. Bullying prevention is vital for the achievement of the Sustainable Development Goals, with whole-school cooperative learning interventions having the strongest evidence base for successful outcomes. Clear management and referral pathways for health professionals dealing with childhood bullying are lacking in both primary and secondary care, although specialist services are available locally and online.

Key messages

- Bullying in childhood is a global public health problem that impacts on child, adolescent and adult health
- Bullying exists in its traditional, sexual, and cyber forms, all of which impact on the physical, mental and social health of victims, bullies, and bully-victims
- Children perceived as 'different' in any way are at greater risk of victimisation
- Bullying is extremely prevalent: one in three children globally has been victimised in the preceding month
- Existing bullying prevention interventions are rarely evidence-based and alternative approaches are urgently needed

Introduction

Bullying in childhood has been classified by the World Health Organization (WHO) as a major public health problem,[1] and for decades has been known to increase the risk of poor health, social, and educational outcomes in childhood and adolescence.[2] Characterised by repeated victimisation within a power-imbalanced relationship, bullying encompasses a wide range of types, frequencies, and aggression levels, ranging from teasing and name-calling to physical, verbal, and social abuse.[3] The dynamics within such relationships become consolidated with repeated and sustained episodes of bullying: bullies accrue compounding power while victims are stripped of their own and become progressively less able to defend themselves and increasingly vulnerable to psychological distress.[4]

However, only in the last decade have prospective studies been published that reveal the far-reaching effects of childhood bullying that extend into adulthood. There is now substantial evidence that being bullied as a child or adolescent has a causal relationship to the development of mental health issues beyond the early years of life, including depression, anxiety, and suicidality.[5] As such, addressing the global public health problem of bullying in childhood has received increasing international attention and is vital for the achievement of Sustainable Development Goal 4.[6] The impact of the COVID-19 pandemic on child health and education has focussed further attention on bullying in its digital form, so-called 'cyberbullying,' the prevalence of which is feared to be increasing.[7]

Types of bullying

Participants in childhood bullying take up one of three roles: the victim, the bully (or perpetrator), or the bully-victim (who is both a perpetrator and a victim of bullying).[5] Victims and bullies either belong to the same peer group (peer bullying), or the same family unit (sibling bullying),[8] although bullying frequently occurs in multiple settings simultaneously, such as at school (peer bullying) and in the home (sibling bullying), representing a ubiquitous ecology of bullying that permeates the child's life.

Three main types of bullying are observed, the typical characteristics of which are illustrated in Table 1.

Table 1. Typical characteristics of the main types of childhood bullying

Types	Typical characteristics	Examples	Reference
Traditional bullying	Direct physical (overt physical aggression or assaults)	Pushing, punching and kicking	9
	Direct verbal (overt verbal attacks that are highly personal)	Teasing, taunting, or threatening behaviour directed at the victim's appearance, abilities, family, culture, race or religion	
	Indirect and emotional (covert behaviour that damages peer relationships, self-esteem or social status)	Passing nasty notes, offensive graffiti, defacing or damaging personal property, exclusion, ostracism and shaming	
Sexual bullying	Sexually bothering another person (may also be referred to as 'sexual harassment')	Inappropriate and unwanted touching, using sexualised language, and pressurising another to act promiscuously	10
Cyberbullying	Aggressive behaviour or emotional manipulation delivered through digital technology, specifically mobile phones, the internet, and social media	Spreading false stories about a victim online, posting digital media featuring a victim online without permission, excluding a victim from participation in an online space	11

While traditional bullying has been recognised and studied for many decades,[12] and is often accepted as an inevitable aspect of a normal childhood,[3] cyberbullying represents a relatively new phenomenon in which childhood bullying now takes place through digital modalities. The widespread uptake of electronic devices has reached almost complete saturation amongst adolescents in high-income countries, with users checking their devices hundreds of times and for hours each day.[13] While providing

beneficial access to information and social support, this large and growing online exposure of young people renders them vulnerable to exploitation, gambling, and grooming by criminals and sexual abusers, as well as cyberbullying.[14] Due to the increased potential for large audiences, anonymous attacks, and the permanence of posted messages, coupled with lower levels of direct feedback, reduced time and space limits, and decreased adult supervision, it is feared that cyberbullying may pose a greater threat to child and adolescent health than traditional bullying modalities.[15]

Factors that influence bullying

Two large-scale international surveys regularly conducted by the WHO – the Global School-based Student Health Survey (GSHS)[16] and the Health Behaviour in School-aged Children (HBSC) study[17] – provide data from 144 countries and territories in all regions of the world. These data identify specific factors that strongly influence the type, frequency, and severity of bullying experienced by children and adolescents globally. These factors, which are briefly described in Table 2, suggest that children who are perceived as being 'different' in any way are at greater risk of victimisation.

Table 2. Summary of factors that influence child and adolescent bullying[18]

Influencing factor	Description
Sex differences	Globally, girls and boys are equally likely to experience bullying.
	Boys are more likely to experience direct physical bullying; girls are more likely to experience direct verbal and indirect bullying.
	Boys are more likely to be perpetrators of direct physical bullying while girls are more likely to be perpetrators of indirect and emotional bullying.

	Girls are more likely than boys to experience bullying based on physical appearance.
	Globally, there are no major differences in the extent to which girls and boys experience sexual bullying, but there are regional differences.
	Girls are more likely than boys to be cyberbullied via digital messages, but there is less discrepancy between the sexes in the prevalence of cyberbullying via digital pictures.
Age differences	As children grow older, they are less likely to experience bullying by peers.
	Age differences are less pronounced for bullying perpetration.
	Older children may be more exposed to cyberbullying.
Not conforming to gender norms	Children viewed as gender non-conforming are at higher risk of bullying.
Physical appearance	Physical appearance is the most frequent reason for bullying.
	Body dissatisfaction and being overweight are associated with bullying.
Physical and learning disability	Physical and learning disability is associated with increased risk of being bullied.
Race, nationality or colour	Bullying based on race, nationality or colour is the second most frequent reason for bullying reported by children.
Religion	Compared to other factors, religion is mentioned by far fewer children as a reason for being bullied.
Socio-economic status	Socio-economic disadvantage is associated with increased risk of being bullied.
	A similar relationship is seen between self-perceived social status and cyberbullying.
Migration status	Immigrant children are more likely to be bullied than their native-born peers.
School environment	A positive school environment reduces bullying.
Educational attainment	Overall, educational attainment is a protective factor against being bullied.

Peer and family support	Family support and communication can be an important protective factor.

Prevalence of bullying

A 2019 report from the United Nations Educational, Scientific and Cultural Organization (UNESCO),[18] examined the global prevalence of bullying in childhood and adolescence using data from the GSHS and HBSC studies along with addition data from the Progress in International Reading Literacy Study (PIRLS)[19] and Programme for International Students Assessment (PISA).[20] It found that almost one in three (32%) children globally has been the victim of bullying on one or more days in the preceding month, and that one in 13 (7.3%) has been bullied on six or more days over the same period.[18] However, there is substantial regional variation in the prevalence of bullying across the world, ranging from 22.8% of children being victimised in Central America, through 25.0% and 31.7% in Europe and North America respectively, to 48.2% in Sub-Saharan Africa. There is also significant geographical variation in the type of bullying reported, with direct physical and sexual bullying being dominant in low- and middle-income countries, and indirect bullying being the most frequent type in high-income regions. Nevertheless, bullying is a sizeable public health problem of truly global importance.

Encouragingly, there has been a decrease in the prevalence of bullying in half (50.0%) of countries since 2002, while 31.4% have seen no significant change over this timeframe.[18] However, 18.6% of countries have witnessed an increase in childhood bullying, primarily amongst members of one sex or the other, although in both girls

and boys in North Africa, Sub-Saharan Africa, Myanmar, the Philippines, and United Arab Emirates.[18]

Since its appearance, cyberbullying has received substantial media attention claiming that the near-ubiquitous uptake of social media amongst adolescents has induced a tidal wave of online victimisation and triggered multiple high-profile suicides amongst adolescents after being bullied online.[21,22] However, a recent meta-analysis suggests that cyberbullying is far less prevalent than bullying in its traditional forms, with rates of online victimisation less than half of those offline.[23] The study also found relatively strong correlations between bullying in its traditional and cyber varieties, suggesting victims of online bullying are also likely to be bullied offline, and that that these different forms of victimisation reflect alternative methods of enacting the same perpetrator behaviour. Recent evidence from England also indicates difference between sexes, with one in 20 adolescent girls and one in 50 adolescent boys reporting cyberbully victimisation over the previous two months.[24]

Consequences of bullying

There is a vast range of possible consequences of bullying in childhood, determined by multiple factors including the frequency, severity, and type of bullying, the role of the participant (victim, bully, or bully-victim), and the timing at which the consequences are observed (during childhood, adolescence, or adulthood). The consequences can be categorised into three broad categories: educational consequences during childhood and adolescence, health consequences during childhood and adolescence, and all consequences during adulthood. Each will now be discussed individually.

Educational consequences during childhood and adolescence

Children who are frequently bullied are more likely to feel like an outsider at school,[20] while indirect bullying specifically has been shown to have a negative effect on socialisation and feelings of acceptance amongst children in schools.[25] Accordingly, a child's sense of belonging at school increases as bullying decreases.[19] In addition, being bullied can affect continued engagement in education. Compared with those who are not bullied, children who are frequently bullied are nearly twice as likely to regularly skip school, and are more likely to want to leave school after finishing secondary education.[20] The effect of frequent bullying on these educational consequences is illustrated in Table 3.

Table 3. Relationship between being frequently bullied and educational consequences[20]

Consequence	Not frequently bullied	Frequently bullied
Feeling like an outsider (or left out of things at school)	14.9%	42.4%
Feeling anxious for a test even if well prepared	54.6%	63.9%
Skipped school at least 3-4 days in previous two weeks	4.1%	9.2%
Expected to end education at the secondary level	34.8%	44.5%

Children who are bullied score lower in tests than those who are not. For example, in 15 Latin American countries, the test scores of bullied children were 2.1% lower in mathematics and 2.5% lower in reading than non-bullied children.[25] Compared with children never or almost never bullied, average learning achievement scores were 2.7% lower in children bullied monthly, and 7.5% lower in children bullied weekly,

indicating a dose-response relationship. These findings are globally consistent across both low- and high-income countries.[20]

Health consequences during childhood and adolescence

Numerous meta-analyses,[2,26,27,28,29] longitudinal studies,[5,30,31] and cross-sectional studies[32,33,34] have demonstrated strong relationships between childhood bullying and physical, mental, and social health outcomes in victims, bullies, and bully-victims. Some of these consequences are illustrated in Table 4. Reported physical health outcomes are mostly psychosomatic in nature. Most studies focused on the impacts on victims, although adverse effects on bullies and bully-victims are also recognised. Many studies identified a dose-response relationship between the frequency and intensity of bullying experienced and the severity of negative health consequence reported.

Table 4. Summary of childhood health consequences of bullying during childhood

	Experienced by			Reference
	Victim	Bully	Bully-victim	
Physical health outcomes				
Unspecified psychosomatic symptoms	x			27
Feeling tired	x			27
Poor appetite	x			27
Stomach ache	x			27
Sleeping difficulties	x			27
Headache	x			27

Back pain	x			27
Dizziness	x			27
Mental health outcomes				
Depression	x		x	2,5
Anxiety	x		x	2,5,26
Psychotic symptoms	x			27,31
Self-harm	x			30
Suicidal ideation	x	x	x	5,27,28,29
Suicidal behaviour	x	x	x	27,28,29
Illicit substance misuse	x			26,27
Alcohol misuse	x	x		26,27,32
Smoking	x	x	x	32
Panic disorder	x		x	5,27
Loneliness	x		x	2,32
Low self-esteem	x			2
Hyperactivity			x	26
Disturbed personality		x	x	5,26
Social health outcomes				
Isolation			x	26
Poor school adjustment		x		26
Poor social adjustment			x	26
Externalising problems		x		26
Risky sexual behaviour	x			27
Weapon carrying	x	x		33
Disconnectedness with parents	x			34

While there is significant regional variation, the association between childhood bullying and suicidal ideation and behaviour are recognised globally.[35] Alarmingly, childhood bully victimisation is associated with a risk of mental health problems similar to that experienced by children in public or substitute care.[36] Victimisation in sibling bullying is associated with substantial emotional problems in childhood including low self-esteem, depression and self-harm,[8] and increases the risk of further victimisation through peer bullying. Overall, adverse mental health outcomes due to bullying in childhood appear to most severely impact on bully-victims, followed by victims and bullies.[5,37]

9 out of 10 adolescents who report victimisation by cyberbullying are also victims of bullying in its traditional forms,[38] meaning cyberbullying creates very few additional victims,[39] but is another weapon in the bully's arsenal and has not replaced traditional methods.[40] Cyberbullying victimisation appears to be an independent risk factors for mental health problems only in girls, and is not associated with suicidal ideation in either sex.[41] As such, traditional bullying is still the major type of bullying associated with poor mental health outcomes in children and adolescents.[24]

Consequences during adulthood

A recent meta-analysis[42] and numerous other prospective longitudinal studies[5,36,43,44] that used large, population-based, community samples analysed through quantitative methods suggest that childhood bullying can lead to three main negative outcomes in adulthood for victims, bullies, and bully-victims: psychopathology, suicidality, and criminality. Some of these consequences are illustrated in Table 5.

Table 5. Summary of adulthood consequences of bullying during childhood

	Experienced by			Reference
	Victim	Bully	Bully-victim	
Psychopathology				
Depression	x	x	x	5,36,43,44
Anxiety	x	x	x	5, 36,43
Panic disorder	x	x	x	5,43
Disturbed personality		x		5
Suicidality	x	x	x	5,36,43
Criminality				42
Violent crime		x	x	42
Illicit drug misuse		x	x	42

A strong dose-response relationship exists between frequency of peer victimisation in childhood and adolescence and the risk of adulthood adversities.[42] For example, frequently bullied adolescents are twice as likely to develop depression in early adulthood compared with non-victimised peers, and is seen in both males and females.[44] Startlingly, the effects of this dose-response relationship seems to persist until at least 50 years of age.[36]

The impact of childhood bully victimisation on adulthood mental health outcomes is staggering. Approximately 29% of the adulthood depression burden could be attributed to victimisation by peers in adolescence,[44] and bully victimisation by peers is thought to have a greater impact on adult mental health than maltreatment by adults,

including sexual and physical abuse.[45] Finally, these consequences reach beyond the realm of health, as childhood bullying victimisation is associated with a lack of social relationships, economic hardship, and poor perceived quality of life at age 50. [36]

Bullying prevention

Until not long ago, being bullied was considered a normal rite of passage through which children must simply persevere.[3] However, the size and scale of its impact on child health, and later on adulthood health, is now clearly understood and renders it a significant public health problem warranting urgent attention.[1] While parental and peer support are known to be protective against victimisation, regardless of global location, cultural norms or socioeconomic status,[46] structured programmes have been deployed at scale to prevent victimisation and its associated problems.

School-based interventions have been shown to significantly reduce bullying behaviour in children and adolescents. Whole-school approaches incorporating multiple disciplines and high levels of staff engagement provide the greatest potential for successful outcomes, while curriculum-based and targeted social skills training are less effective methods that may even worsen victimisation.[47] The most widely adopted approach is the Olweus Bullying Prevention Program (OBPP), a comprehensive, school-wide programme designed to reduce bullying and achieve better peer relations among school-aged children.[12] However, despite its broad global uptake, meta-analyses of studies examining the effectiveness of the OBPP have shown mixed results across different cultures.[48,49,50]

Cooperative learning, in which teachers increase opportunities for positive peer interaction through carefully structured, group-based learning activities in schools, is an alternative approach to bullying prevention that has recently gained traction and been shown to significantly reduced bullying and its associated emotional problems while enhancing student engagement and educational achievement.[51] Also housed within the educational environment, School-Based Health Centres became popular in the United States in the 1990s and provide medical, mental health, behavioural, dental, and vision care for children directly in schools, and have had some positive impacts on mitigating the prevalence and impact of bullying.[52] In the UK, school nurses act as liaisons between primary care and education systems, and are often the first to identify victims of bullying turns, although their numbers in the UK fell by 30% between 2010 and 2019.[53]

Due to the link between sibling and peer bullying, there have been calls for bullying prevention interventions to be developed and made available to start in the home, and for general practitioners and paediatricians to routinely enquire about sibling bullying.[8]

While countless cyberbullying prevention programmes, both off- and online, are marketed to educational institutions, only a small proportion have been rigorously evaluated.[54] Furthermore, as cyberbullying rarely induces negative impacts on child health independently, interventions to tackle these effects must also target traditional forms of bullying to have meaningful impact.

Addressing the global public health problem of bullying in childhood and adolescence is vital for the achievement of the Sustainable Development Goals. In recognition of

this, UNESCO recently launched its first International Day Against Violence and Bullying at School, an annual event which aims to build global awareness about the problem's scale, severity, and need for collaborative action.[55] Meaningful progress on this problem is urgently needed to increase mental wellbeing and reduce the burden of mental illness in both children and adults globally. Suggestions for immediate action are briefly described in Box 1.

Box 1. Actions needed to improve child health through the prevention of bullying

- Promote the importance of parental and peer support in the prevention of bully victimisation across families and schools
- Educate health professionals about the consequences of childhood bullying, and provide training and resources to allow identification, appropriate management and timely referral of such cases (see below)
- Develop and make widely available bullying prevention interventions that tackle sibling bullying in the home
- Create and deploy whole-school cooperative learning approaches to reduce bullying within educational institutions
- Address cyberbullying with evidence-based interventions that also tackle traditional forms of bullying
- Increase awareness of the presentation and impacts of bullying on child health amongst primary care professionals

What to do if you suspect childhood bullying

GPs should be prepared to consider bullying as a potential contributory factor in presentations of non-specific physical and mental health complaints from children. While GPs recognise their responsibility to deal with disclosures of childhood bullying

and its associated health consequences, they often feel unable to adequately do so due to the constraints of time-pressured primary care consultations, and uncertainty around the specialist services to which such children can be appropriately referred.[56]

Clear management and referral pathways for health professionals dealing with childhood bullying are lacking in both primary and secondary care. Local, national and online anti-bullying organisations, such as Ditch the Label[57] and the Anti-Bullying Alliance,[58] provide free advice for children affected by bullying, and their parents, teachers, and health professionals, along with free online certified CPD training for anyone working with children. School nurses continue to act as liaisons between primary care and education systems,[59] and should be central to the multi-disciplinary management of childhood bullying. Finally, if bullying is considered to be contributory to childhood depression, Child and Adolescent Mental Health Services, along with primary care practitioners and educational professionals, should work collaboratively to foster effective antibullying approaches.[60]

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