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# Conduct Disorder in Malaysian Children and Adolescents: A Critical Narrative Review of Clinical Features, Risk Factors, Assessment, and Intervention

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**Abstract**

Conduct disorder (CD) is a common and costly mental disorder of childhood and adolescence, yet in Malaysia it has rarely been studied as a diagnosis. This critical narrative review compares international evidence on the clinical features, epidemiology, aetiology, assessment, and treatment of CD with the Malaysian literature, drawing mainly on Scopus- and Web of Science-indexed studies published between 2020 and 2026. Its central argument is that the two bodies of evidence do not match: international research increasingly addresses CD as a diagnosis, whereas Malaysian research has mostly examined behavioural indicators and contextual risks. To make this explicit, Malaysian studies were classified into three categories: studies measuring conduct problems directly, studies of associated behavioural indicators such as bullying and fighting, and studies of contextual risk exposures such as harsh discipline and socioeconomic disadvantage. Within the databases searched, no Malaysian study estimating the prevalence of CD with a diagnostic interview was identified. Screening data showed abnormal-range conduct problems in about 5% of preschool children in one state. National surveys showed that about one in six secondary-school students had been in a physical fight in the past year, and that 58.3% of children aged 12–59 months had experienced psychological aggression and 40.7% physical punishment in the previous month. These contextual risks are consistent with international evidence on the development of CD, but their association with CD itself has not been tested in Malaysian samples, and almost all local studies are cross-sectional. A Malay version of the Inventory of Callous-Unemotional Traits has been validated, although its criterion validity remains untested. Behavioural parent training is the best-supported treatment internationally, whereas Malaysian parenting programmes have so far provided feasibility and preliminary data in universal or non-clinical

samples rather than effectiveness data for children with CD. We outline priorities for diagnostic epidemiology, culturally informed measurement, prospective research, and indicated intervention trials in Malaysia.
**Keywords:** Conduct Disorder, Malaysia, Callous-Unemotional Traits, Parenting, Corporal Punishment, Bullying; Parent Training, Adolescents

## Introduction

Conduct disorder (CD) describes a repetitive and persistent pattern of behaviour in which a child or adolescent violates the basic rights of others or major age-appropriate social norms. DSM-5-TR groups its 15 symptoms into four domains: aggression to people and animals, destruction of property, deceitfulness or theft, and serious violations of rules (American Psychiatric Association [APA], 2022). ICD-11 uses the closely related category of conduct-dissocial disorder. Like DSM-5-TR, it allows clinicians to record age of onset and the presence of limited prosocial emotions (World Health Organization [WHO], 2022). CD matters because of what tends to follow it. Children with early-onset, persistent CD are at increased risk of school failure, substance misuse, criminal justice involvement, poor physical health, and antisocial personality disorder in adulthood (Fairchild et al., 2019).

Most of the evidence on CD comes from North America, Western Europe, and Australia. In Malaysia, behavioural problems among young people are widely discussed in public debate, through news about school bullying, gangsterism, and juvenile crime. Yet they are seldom studied as a clinical disorder. Malaysian research has instead used broad screening tools such as the Strengths and Difficulties Questionnaire (SDQ), national surveys of risk behaviour, and criminological studies of young offenders (Abd Rahim et al., 2023; Sabramani et al., 2021; Sahril et al., 2021). A qualitative Malaysian study involving 12 young male prisoners further highlighted parental non-involvement, parental separation, peer pressure, criminal gang membership, and parental involvement in crime as factors emerging from participants' accounts of delinquent involvement (Zakaria et al., 2022). This creates a gap between what is known internationally about CD as a neurodevelopmental and psychosocial disorder and what Malaysian clinicians, teachers, counsellors, and policy makers can apply with confidence.

Malaysia also differs from the settings that dominate the literature in several ways that may affect how CD develops, is recognised, and is treated. It is a multi-ethnic and multi-religious society, with Malay, Chinese, Indian, and diverse Indigenous communities in Sabah and Sarawak. Physical discipline of young children remains common and widely accepted by parents (Ganapathy et al., 2022). Mental health problems among children and adolescents remain an important public health concern in Malaysia (Abd Rahim et al., 2023; Samsudin et al., 2024), particularly as many young people face difficulties accessing appropriate support and treatment (Cham et al., 2026). According to the National Health and Morbidity Survey (NHMS) 2023, approximately 16.5% of Malaysian children aged 5–15 years experienced mental health problems, more than double the 7.9% reported in 2019 (Institute for Public Health [IPH], 2024). This increase highlights the growing need for early identification, accessible mental health services, and effective school- and community-based interventions.

*Gaps in the Existing Literature*

A critical reading of previous studies, rather than a count of them, suggests that the problem in the Malaysian literature is not simply that research on conduct problems is scarce. The research that exists was designed to answer different questions from those that matter for CD as a clinical disorder. Five specific gaps can be identified.

First, Malaysian studies have measured proxies of CD rather than the disorder itself. National and school surveys have reported the frequency of single behaviours, such as physical fighting (IPH, 2023) and bullying perpetration (Sabramani et al., 2021). A survey of 595 adolescents recruited online found that self-reported aggression was strongly associated with gaming addiction, with narcissism and low self-control as partial mediators (Pan et al., 2024). These studies show that conduct-related behaviour is common and that it is linked to individual vulnerabilities. However, none assessed the repetitive and persistent pattern of behaviour, the number of symptoms, or the functional impairment that a diagnosis requires (APA, 2022), and all relied on single-informant self-report or on school or volunteer samples. How many Malaysian children meet criteria for CD therefore remains unknown. This matters because international estimates themselves vary several-fold depending on whether cases are defined by diagnostic interview or by screening questionnaire (Mohammadi et al., 2021; Sacco et al., 2024).

Second, the instruments used in Malaysia have not been shown to measure conduct problems equivalently across informants and groups. The SDQ conduct problems subscale is the only direct measure used so far, yet in the same Selangor sample the proportion of children in the abnormal range varied threefold depending on whether parents, teachers, or children reported (Idris et al., 2019), and Malaysian cut-offs have not been established. The Malay version of the ICU retained only two of the three original factors, and its associations with conduct problems have not been tested (Mohamad Khalil et al., 2023). Without evidence of measurement invariance across informants, languages, and ethnic groups, differences between Malaysian groups, or between Malaysia and other countries, cannot be interpreted with confidence.

Third, the risk factors that international research links to CD have been documented in Malaysia as exposures but not tested as predictors of conduct problems. Harsh discipline is common (Ganapathy et al., 2022; Rosslan et al., 2026), and family disruption and socioeconomic disadvantage are associated with broad emotional and behavioural difficulties (Abd Rahim et al., 2023; Sahril et al., 2021). These studies either did not measure children's conduct problems or did not report them separately. In a Chinese sample of primary-school pupils, domestic violence, physical abuse, parental separation, and bullying were each associated with conduct problems (Tian & Motevalli, 2024), and within-family longitudinal research in Norway has shown that family aggression and children's conduct symptoms reinforce each other over time (Nobakht et al., 2023). Comparable analyses have not been carried out with Malaysian children, and almost all local studies are cross-sectional, so the strength and direction of these associations in Malaysia are unknown.

Fourth, Malaysian intervention research has concentrated on universal prevention. Culturally adapted parenting programmes have shown feasibility and preliminary benefits for parenting in community samples (Cooper et al., 2024; Lachman et al., 2023; Zulkefly et al., 2024), but

they were not designed for, and did not recruit, children with clinically significant conduct problems. The strong international evidence for parent training (Leijten et al., 2026) therefore cannot yet be assumed to transfer to Malaysian services, particularly for fathers and for non-Malay families, whose acceptance of these programmes has not been examined.

Fifth, no existing synthesis connects these two bodies of evidence. International reviews and meta-analyses (Fairchild et al., 2019; Mohammadi et al., 2021; Sacco et al., 2024) summarise diagnostic and mechanistic findings drawn largely from high-income countries. Malaysian studies, meanwhile, have been interpreted within their own fields, such as public health surveillance, school bullying, parenting, and criminology, without being related to CD as a clinical construct. As a result, Malaysian clinicians, educators, and policy makers have no account of which international findings are supported by local evidence, which are plausible but untested, and which may not apply. This review is intended to provide that account.

This review is organised around one central argument. International research has moved towards a diagnostic and mechanistic understanding of CD, supported by large epidemiological, neurobiological, and treatment studies. The Malaysian literature, by contrast, has mainly documented behavioural indicators, such as bullying and physical fighting, and contextual risks, such as harsh discipline and socioeconomic disadvantage, while rarely assessing CD itself. Describing this mismatch, and what it means for how far international findings can be applied in Malaysia, is the main contribution of this review. To keep the distinction visible, Malaysian evidence is classified throughout into three categories: (a) studies directly measuring conduct problems or disruptive behaviour; (b) studies of associated behavioural indicators, such as bullying and fighting; and (c) studies of contextual risk exposures, such as harsh parenting and socioeconomic disadvantage.

Within this framework, the review critically synthesises evidence on (a) the clinical characteristics of CD, (b) its epidemiology and comorbidity, (c) its biological and environmental risk factors, (d) diagnostic challenges, (e) assessment, and (f) psychosocial and pharmacological interventions. For each area, it asks what the international evidence shows, which category of Malaysian evidence exists, and how far international findings can reasonably be applied to Malaysia.

**Methods**

This study is a critical narrative review. A literature search was carried out in Scopus, Web of Science (Social Sciences Citation Index and Science Citation Index Expanded), and PubMed. Google Scholar was used only to trace citations from key articles. Two sets of keywords were used. For international evidence, conduct disorder, conduct problems, disruptive behaviour disorder, aggression, delinquency, and callous-unemotional traits were combined with terms for prevalence, aetiology, neuroimaging, genetics, assessment, and treatment. For Malaysian evidence, the same behavioural terms were combined with Malaysia and Malaysian, and also with bullying, physical punishment, parenting, and juvenile offenders. The search covered articles published between January 2020 and October 2026.

Studies were included if they met four criteria: (a) the sample consisted of children or adolescents aged 18 years or younger, or their parents or caregivers; (b) the outcome was CD, conduct problems, aggression, bullying perpetration, delinquency, or callous-unemotional

traits, or the study examined an established risk factor for these outcomes, such as harsh discipline or family conflict; (c) the design was a meta-analysis, systematic review, randomised controlled trial, cohort or longitudinal study, cross-sectional survey, or psychometric validation study; and (d) the article was peer-reviewed, published in English, and indexed in Scopus or Web of Science. Theses and dissertations, conference abstracts, case reports, and articles in journals not indexed in these databases were excluded.

Two exceptions were made. First, a small number of studies published before 2020 were kept when they remained the main source of evidence on an issue, such as the only longitudinal Malaysian study of conduct problems; these are labelled as background in the tables. A few classic theoretical works were also cited to explain the conceptual framework in Figure 1. Second, findings from the NHMS 2022 Adolescent Health Survey and NHMS 2023 were taken from Ministry of Health reports, because peer-reviewed analyses of these data were not identified. Titles and abstracts were screened first, and the full texts of potentially relevant articles were then read before the articles were included. Because this review is based only on published, publicly available documents, ethical approval was not required.

The evidence was organised into six areas: clinical features, epidemiology and comorbidity, aetiology, diagnostic challenges, assessment, and intervention. In each area, the international evidence is summarised first and then compared with the Malaysian evidence. This comparison considers how far international findings can be applied to Malaysia, given its multi-ethnic population, cultural attitudes toward discipline, and the structure of its health, education, and juvenile justice services. No formal risk-of-bias tool was used. Instead, the main methodological strengths and weaknesses of each study (for example, sample size, design, informant, and measurement) are discussed wherever they affect how the findings should be interpreted.

Malaysian studies were further classified according to what they measured: (a) conduct problems or disruptive behaviour measured directly, for example with the SDQ conduct problems subscale; (b) associated behavioural indicators, such as bullying perpetration or physical fighting, which overlap with individual CD symptoms but do not establish the disorder; and (c) contextual risk exposures, such as harsh discipline, family disruption, and socioeconomic disadvantage, including studies whose outcome was broad emotional and behavioural difficulty rather than conduct problems specifically. Where this review states that no Malaysian study was identified, the statement refers only to eligible studies within the databases, languages, and publication period searched.

## Findings

### Clinical Features and Subtypes

*Core Behavioural Features*

CD is defined by behaviour, but the behaviour varies. Some young people are mainly aggressive, others mainly deceitful or rule-breaking, and many show a mixture. A diagnosis requires at least three symptoms in the past 12 months, with at least one in the past six months, and clinically significant impairment (APA, 2022). Severity is graded as mild, moderate, or severe. CD often follows oppositional defiant disorder (ODD), although many children with ODD never develop CD (Fairchild et al., 2019).

Two developmental pathways are commonly distinguished. Childhood-onset CD, with at least one symptom before age 10, is associated with more aggression, more neurocognitive difficulties, and a greater risk of persistence. Adolescence-onset CD is more common and more closely tied to peer influence, but it is not benign (Fairchild et al., 2019; Frick & Kemp, 2021). In the 2004 Pelotas Birth Cohort in Brazil, early-onset persistent conduct problems were associated with the heaviest load of early risks, including maltreatment and attention problems (Martins-Silva et al., 2024). This middle-income cohort is relevant to Malaysia because it shows that trajectory models developed in high-income countries can be reproduced elsewhere. No comparable Malaysian cohort was identified in the databases searched. The only Malaysian longitudinal study we identified followed schoolchildren in Selangor for six months and found that teacher-reported conduct problems increased over that period (Idris et al., 2019). The short follow-up does not allow developmental trajectories to be examined.

*Callous-Unemotional Traits and the Limited Prosocial Emotions Specifier*

Callous-unemotional (CU) traits include a lack of guilt and empathy, shallow affect, and indifference to performance. DSM-5-TR records them with the specifier "with limited prosocial emotions" (LPE) (APA, 2022). Youth with CD and high CU traits tend to show more severe, more instrumental, and more stable aggression, and they have difficulty recognising fear and distress in others (Frick & Kemp, 2021). Frick and Kemp argue that weak affective empathy is central. This view points to parental warmth and emotional coaching as targets for intervention.

The specifier has limitations. In a Canadian sample of children with childhood-onset CD, those meeting LPE criteria did not show more severe or more persistent symptoms over four years (Déry et al., 2019). This suggests that dimensional measurement may be more informative than a yes-or-no specifier. Malaysian work on CU traits is very recent. Mohamad Khalil et al. (2023) validated a Malay version of the Inventory of Callous-Unemotional Traits (ICU) with 409 secondary-school students in Kuantan. A 17-item, two-factor model (callousness and uncaring) fitted the data, but the unemotional factor had to be dropped. Internal consistency was acceptable overall ($\alpha = .74$) but modest for callousness ($\alpha = .67$). Two critical points follow. First, the loss of the unemotional factor has several possible explanations, which the study cannot distinguish. Psychometric explanations are at least as plausible as cultural ones: several unemotional items are reverse-keyed, which can produce method effects, and weak performance of this subscale has also been reported in validations outside Malaysia. Translation and the self-report format may also have contributed. A cultural explanation, in which norms about restrained emotional expression change how adolescents interpret these items, remains a hypothesis that would require measurement invariance testing across cultural groups. Second, the authors did not test whether ICU scores were associated with conduct problems, aggression, or delinquency, so criterion validity in Malaysian youth has not yet been established.

*Emotion Processing and Regulation*

Emotional difficulties are not limited to youth with CU traits. In the FemNAT-CD study, 542 adolescents with CD showed deficits in emotion recognition, learning from punishment, and emotion regulation compared with 710 typically developing peers. These deficits were similar in girls and boys (Kohls et al., 2020). Emotion dysregulation is visible as early as age five or six

(Mitchison et al., 2020). Exposure to interpersonal violence is associated with poorer theory of mind, which partly explains the link between violence exposure and externalising problems (Heleniak & McLaughlin, 2020). This proposed mechanism may be relevant to Malaysia, where exposure to psychological aggression and physical punishment at home is common (Rosslan et al., 2026), but it has not been examined locally. No eligible Malaysian study of emotion recognition or regulation in children with clinically significant conduct problems was identified.

**Epidemiology and Comorbidity**

*International Estimates*

International prevalence estimates for CD range from below 1% to about 8%, but these figures are not directly comparable, because they rest on different definitions of a case. The highest estimate, a pooled prevalence of about 8% from 50 population- and school-based studies in 35 countries (Mohammadi et al., 2021), combined studies that used structured diagnostic interviews with studies that used screening questionnaires or symptom counts. It therefore mixes diagnosed CD, probable CD, and screen-positive cases, and its very high heterogeneity ($I^2 > 99\%$) was linked to the instrument used. The European meta-analysis by Sacco et al. (2024) pooled five community studies (N = 15,808) that applied DSM or ICD criteria and estimated a prevalence of 1.5%. This figure is closer to the prevalence of diagnosed CD, although heterogeneity was again very high. The Iranian national survey of 30,532 children and adolescents aged 6 to 18 years used a semi-structured diagnostic interview (the Kiddie Schedule for Affective Disorders and Schizophrenia—Present and Lifetime version) and reported a prevalence of 0.78% (Salmanian et al., 2020). Beyond the case definition, these studies also differ in age range, informant, prevalence period, and sampling frame. The overall range should therefore be read as evidence that method strongly shapes the estimate, not as the spread of true prevalence across countries. Studies that apply diagnostic criteria, including the impairment requirement, generally produce estimates of about 3% or lower (Fairchild et al., 2019; Sacco et al., 2024). Boys are affected about twice as often as girls (Fairchild et al., 2019).

*Malaysian Evidence*

Table 1 summarises the Malaysian studies, grouped into the three categories defined in the Methods. The most important observation concerns what is missing: no eligible Malaysian study estimating the prevalence of CD with a diagnostic interview was identified within the databases and period searched. Only two studies (Category A) measured conduct problems directly, both with the SDQ conduct problems subscale. The remaining studies measured associated behavioural indicators (Category B) or contextual risk exposures (Category C). These studies describe the wider ecological context of CD in Malaysia, but they do not by themselves show associations with CD.

Table 1

*Malaysian Studies Relevant to Conduct Disorder, Classified by Type of Evidence*

| Study | Sample and setting | Measure / informant | Key findings | Relevance to CD and critical comment |
|---|---|---|---|---|
| **Category A: Direct measures of conduct problems** | | | | |
| Idris et al. (2019) [background] | Schoolchildren, Selangor; 6-month follow-up | SDQ conduct problems subscale; parent, teacher, child | Abnormal-range conduct problems: parent 11.3%, teacher 6.0%, child 3.9%; teacher-rated problems increased over time | Screening measure, not diagnosis; threefold informant effect; pre-2020 |
| Abd Rahim et al. (2023) | 557 children aged 4–6, Kelantan | SDQ conduct problems subscale; parent | Conduct problems 5.2%; total difficulties 8.4%; single-parent family aOR 6.04 for total difficulties | Screening measure; risk factors tested for total difficulties, not conduct problems; single state |
| **Category B: Associated behavioural indicators** | | | | |
| Sabramani et al. (2021) | 4,469 secondary-school students, national multistage sample | Self-report bullying questionnaire | Perpetrators 14.4%, victims 16.3%, bully-victims 48.4%; perpetration linked to fighting, skipping class, distress | Overlaps with single CD symptoms; no persistence or impairment criteria; some CIs reported inconsistently |
| Pan et al. (2024) | 595 adolescents aged 12–18; online volunteer sample recruited through social media | Buss–Perry Aggression Questionnaire; self-report | Aggression strongly correlated with gaming addiction (r = .78); narcissism and low self-control partly mediated the association | Dimensional aggression, not CD; non-probability online sample; cross-sectional; single informant |
| IPH (2023) | NHMS 2022 Adolescent Health Survey; secondary-school students | Self-report survey | Physical fight about 16%; physically attacked 14.8%; bullied 8.6%; verbal abuse at home 41%, physical abuse 7.5% | Single behaviours; survey report, not peer reviewed |
| **Category C: Contextual risk exposures** | | | | |
| Sahril et al. (2021) | NHMS 2015; children aged 5–15, nationwide | SDQ total difficulties; parent | Broad mental health problems 11.1%; higher odds with divorced or widowed parents, parental mental illness, low SES, low paternal education | Outcome is broad difficulty; conduct problems not reported separately |

| Study | Sample and setting | Measure / informant | Key findings | Relevance to CD and critical comment |
|---|---|---|---|---|
| Ganapathy et al. (2022) | NHMS 2016; 9,496 parents of children aged 1–5 | Parent self-report | Physical punishment 54.3%; 60.0% believed it necessary; belief linked to low income and paternal education | Exposure only; child conduct problems not measured |
| Rosslan et al. (2026) | NHMS 2022; 13,288 children aged 12–59 months, nationwide | Caregiver report | Psychological aggression 58.3%; physical punishment 40.7% (past month); both higher in older children; physical punishment higher in boys | Exposure only; child conduct problems not measured; self-report may underestimate |

*Note.* Category A = studies directly measuring conduct problems; Category B = studies of associated behavioural indicators; Category C = studies of contextual risk exposures, including studies of broad emotional and behavioural difficulties. No eligible Malaysian study estimating CD prevalence with a diagnostic interview was identified within the databases and period searched. aOR = adjusted odds ratio; CD = conduct disorder; CI = confidence interval; IPH = Institute for Public Health; NHMS = National Health and Morbidity Survey; SDQ = Strengths and Difficulties Questionnaire; SES = socioeconomic status.

*Category A: Direct measures of conduct problems.* In a sample of 557 preschool children in Kelantan, 5.2% scored in the abnormal range for parent-reported conduct problems on the SDQ (Abd Rahim et al., 2023). Single-parent families, girls, and families in which only one parent worked had higher odds of total difficulties. These risk factors therefore relate to total difficulties rather than to conduct problems specifically. The higher odds for girls is unusual and should be interpreted cautiously, because the sample came from a single, predominantly Malay state. In the only longitudinal Malaysian study identified, conducted before the review period, teacher-reported conduct problems among schoolchildren in Selangor increased over six months (Idris et al., 2019).

*Category B: Associated behavioural indicators*

In the NHMS 2022 Adolescent Health Survey, about 16% of secondary-school students reported involvement in a physical fight in the past year, 14.8% reported being physically attacked, and 8.6% reported being bullied (IPH, 2023). In a nationally sampled study of 4,469 secondary-school students, 14.4% were bullying perpetrators and 48.4% were bully-victims. Perpetration was associated with fighting with peers, skipping class, mischievous behaviour in class, and psychological distress (Sabramani et al., 2021). In an online survey of 595 Malaysian adolescents aged 12 to 18 years, self-reported aggression on the Buss–Perry Aggression Questionnaire was strongly correlated with gaming addiction (r = .78), and narcissism and low self-control partly mediated this association (Pan et al., 2024). This study measured aggression as a continuous trait in a volunteer sample, so it also describes a correlate of conduct-related behaviour rather than of CD. Fighting, bullying, and truancy correspond to individual CD symptoms, but these surveys assessed single behaviours without the persistence, symptom-count, and impairment criteria required for a diagnosis. They show

how common conduct-related behaviour is among Malaysian adolescents, not how common CD is.

*Category C: Contextual risk exposures.* In NHMS 2015, 11.1% of children aged 5 to 15 years had broad mental health problems on the SDQ. Odds were higher among children whose parents were widowed or divorced, who had a parent with mental health problems, whose fathers had little formal education, or who came from lower socioeconomic groups (Sahril et al., 2021). Because conduct problems were not reported separately, this study identifies family-level correlates of general emotional and behavioural difficulty rather than of conduct problems. The national data on harsh discipline (Ganapathy et al., 2022; Rosslan et al., 2026), discussed under Aetiology, also belong to this category. They show that an established international risk factor for CD is common in Malaysia, but they did not measure children's conduct problems.

Two methodological concerns limit all of this work. First, informants disagree. In Selangor schoolchildren, conduct problems were in the abnormal range in 11.3% of children by parent report, 6.0% by teacher report, and 3.9% by self-report (Idris et al., 2019). The informant chosen therefore changes the estimate threefold. Second, most studies used SDQ cut-offs derived from Western norms, and Malaysian norms for the conduct problems subscale are not well established. Prevalence comparisons between Malaysia and other countries should therefore be treated as approximate.

*Comorbidity*

Comorbidity can be described at three levels, which are often conflated. Diagnostic comorbidity means that a young person meets criteria for two or more disorders. Symptom-level co-occurrence means that symptoms of different kinds appear together without necessarily reaching diagnostic thresholds. Shared risk factors raise the risk of several conditions without implying that those conditions occur in the same individuals.

At the diagnostic level, the strongest population evidence reviewed here comes from the Iranian national interview survey, in which 83.4% of young people with CD met criteria for at least one other disorder, most often ODD, ADHD, tobacco use, or depression (Salmanian et al., 2020). This figure comes from a single country and a single interview method, and should not be treated as an international constant. Clinical reviews confirm that ADHD and ODD are the most frequent co-occurring conditions, and that depression, anxiety, learning difficulties, and substance use are also common, particularly in adolescence (Fairchild et al., 2019). Children with both CD and ADHD tend to have an earlier onset, more aggression, and a poorer prognosis (Fairchild et al., 2019), and a Norwegian registry and genetic study found extensive co-occurrence of CD with other childhood disorders (Tesli et al., 2024).

At the level of shared risk, genetic liability for disruptive behaviour overlaps substantially with that for ADHD and aggression (Demontis et al., 2021), and childhood maltreatment is associated with conduct problems and CU traits (Todorov et al., 2023). Bullying exposure was a strong environmental risk for CD in the Norwegian registry data (Tesli et al., 2024). Trauma deserves particular attention, because irritability, hypervigilance, and reactive aggression after maltreatment can resemble or coexist with conduct problems, which complicates diagnosis.

No eligible Malaysian clinical study of diagnostic comorbidity in CD was identified within the databases searched, and the available Malaysian data are at the symptom or group level only. The association between psychological distress and bullying perpetration (Sabramani et al., 2021) and the rise in self-reported suicidal behaviour among adolescents in NHMS 2022 (IPH, 2023) show that emotional and behavioural difficulties co-occur at the population level. They cannot show that individual adolescents meet criteria for both externalising and internalising disorders; individual-level clinical assessment is needed to establish this.

These distinctions have direct clinical consequences. Assessment of a young person referred for conduct problems should routinely screen for ADHD, ODD, depression, anxiety, substance use, trauma exposure, learning difficulties, and suicide risk. Treatment planning should then address the most impairing conditions in a coordinated way. For example, treating co-occurring ADHD can reduce aggression (Seok et al., 2023), whereas unrecognised depression or trauma may limit a young person's engagement with behavioural programmes.

**Aetiology: Biological and Environmental Factors**

*Genetic Influences*

Twin studies suggest that about half of the variance in antisocial behaviour is heritable, with higher heritability for early-onset CD and CU traits (Fairchild et al., 2019). A genome-wide meta-analysis of 3,802 individuals with ADHD and comorbid disruptive behaviour disorders found higher SNP heritability for the comorbid phenotype (0.34) than for ADHD alone (0.20), and strong genetic correlations with aggression ($r_g$ = .81) (Demontis et al., 2021). These studies were based almost entirely on samples of European ancestry, and polygenic scores derived from such samples predict less well in Asian populations. Genetic findings should therefore not be applied to Malaysian children without local replication.

*Brain Structure and Function*

The ENIGMA-Antisocial Behavior Working Group pooled structural MRI data from 15 cohorts (1,185 youth with CD and 1,253 controls). Youth with CD had lower cortical surface area in 26 of 34 regions and smaller amygdala, hippocampus, nucleus accumbens, and thalamus volumes. Effects were more widespread in those with high CU traits and held after adjusting for ADHD and IQ (Gao et al., 2024). Functional connectivity is also altered across large-scale networks (Tillem et al., 2022). A meta-analysis found that inhibitory control deficits in ODD and CD were largely explained by co-occurring ADHD (Bonham et al., 2021). This suggests that some cognitive problems attributed to CD belong to ADHD, while emotion- and reward-related differences may be more specific to CD. No Malaysian neuroimaging study of CD was identified within the databases searched. These are group-level differences with generally small effect sizes and substantial overlap between youth with and without CD. They cannot be used to diagnose CD, to explain an individual child's behaviour, or to predict an individual's response to treatment. Their relevance to Malaysia is mainly conceptual: they are inconsistent with the view that conduct problems reflect only poor character or insufficient discipline, and they are consistent with, but do not demonstrate, the clinical observation that punishment-based approaches alone are often ineffective.

*Family and Social Environment*

Harsh and inconsistent parenting, low warmth, parental mental illness, and family conflict are among the most consistent predictors of conduct problems. In a seven-wave Norwegian

cohort, increases in interparental aggression predicted later increases in CD symptoms within families (Nobakht et al., 2023). Because this design controls for stable family characteristics, it strengthens, but does not establish, a causal interpretation. Childhood maltreatment is linked both to conduct problems and to CU traits (Todorov et al., 2023; S. Gao et al., 2025). A study of 168 primary-school pupils in Fujian, China, also found that childhood maltreatment and family dysfunction were associated with conduct problems (Tian & Motevalli, 2024). This finding may be relevant to other Asian settings, although its sample was small and cross-sectional.

Harsh discipline remains common in Malaysian families, especially in early childhood. In NHMS 2016, 54.3% of parents of children aged one to five reported using physical punishment, and 60.0% believed it was necessary. This belief was more common in families with several young children, lower household incomes, and fathers with less formal education. Parents who held this belief were more than twice as likely to use physical punishment (Ganapathy et al., 2022).

Data from NHMS 2022 suggest little change since then. In a nationally representative analysis of 13,288 children aged 12 to 59 months, 58.3% had experienced psychological aggression and 40.7% physical punishment in the preceding month. Both practices were more common among older children, and boys were more likely than girls to be physically punished (Rosslan et al., 2026). Exposure continues into adolescence. In the NHMS 2022 Adolescent Health Survey, 41% of secondary-school students reported verbal abuse at home and 7.5% reported physical abuse (IPH, 2023).

Taken together, these findings indicate that harsh discipline is common in Malaysian families and that its use is associated with parental beliefs about its necessity. Promoting positive, non-violent parenting is therefore a reasonable public health priority in its own right, independent of any effect on CD.

These findings should not be over-interpreted. They are cross-sectional, they did not measure children's conduct problems, and no eligible Malaysian longitudinal study of harsh discipline and conduct problems was identified. They therefore cannot show that harsh discipline contributes to CD in Malaysian children, nor can they establish temporal direction: parental beliefs may encourage harsh discipline, but difficult child behaviour may also strengthen both beliefs and practices. Internationally, within-family longitudinal evidence shows that family aggression and children's conduct symptoms influence each other over time (Nobakht et al., 2023), which is consistent with coercion theory (Patterson, 1982). Similar coercive cycles may operate in Malaysian families, but this remains a hypothesis that requires prospective investigation. If confirmed, it would suggest that interventions should address beliefs about discipline as well as parenting skills.

School and peer factors form a further layer. Malaysian adolescents involved in bullying more often skipped class, fought with peers, and were described as mischievous in class (Sabramani et al., 2021). Single-parent and economically stressed families appear repeatedly as correlates of broad emotional and behavioural difficulties (Abd Rahim et al., 2023; Sahril et al., 2021). Complementary qualitative evidence from Malaysian young male prisoners further illustrates the potential influence of family and peer environments on delinquent involvement, with

participants describing family conflict, lack of parental affection, parental separation, family members' involvement in crime, peer pressure, and criminal gang affiliation (Zakaria et al., 2022). However, these findings should be interpreted as contextual evidence of youth delinquency rather than direct evidence of conduct disorder, given that the study involved only 12 male participants aged 16–21 years, most of whom were above 18.Figure 1 brings these factors together as a conceptual synthesis; it is not an empirically tested model. Its structure draws on three theoretical perspectives. The bioecological model (Bronfenbrenner & Morris, 2006) provides the nested organisation of child, family, school and peer, and system-level influences. Coercion theory (Patterson, 1982) provides the rationale for coercive parent–child cycles as a pathway from harsh discipline and family conflict to persistent conduct problems. Social information-processing theory (Crick & Dodge, 1994) provides the rationale for hostile attributions and emotion-processing difficulties as mechanisms linking adverse experience to aggressive behaviour. The figure distinguishes three levels of evidence for each risk factor: association with conduct-related or broad emotional and behavioural difficulties in Malaysian cross-sectional studies; documentation as common in Malaysia, with links to CD shown only internationally; and international evidence only. The mediating processes are presented as hypothesised mechanisms, because none has been tested in Malaysian samples, and each intervention point is labelled with the evidence currently available for it.

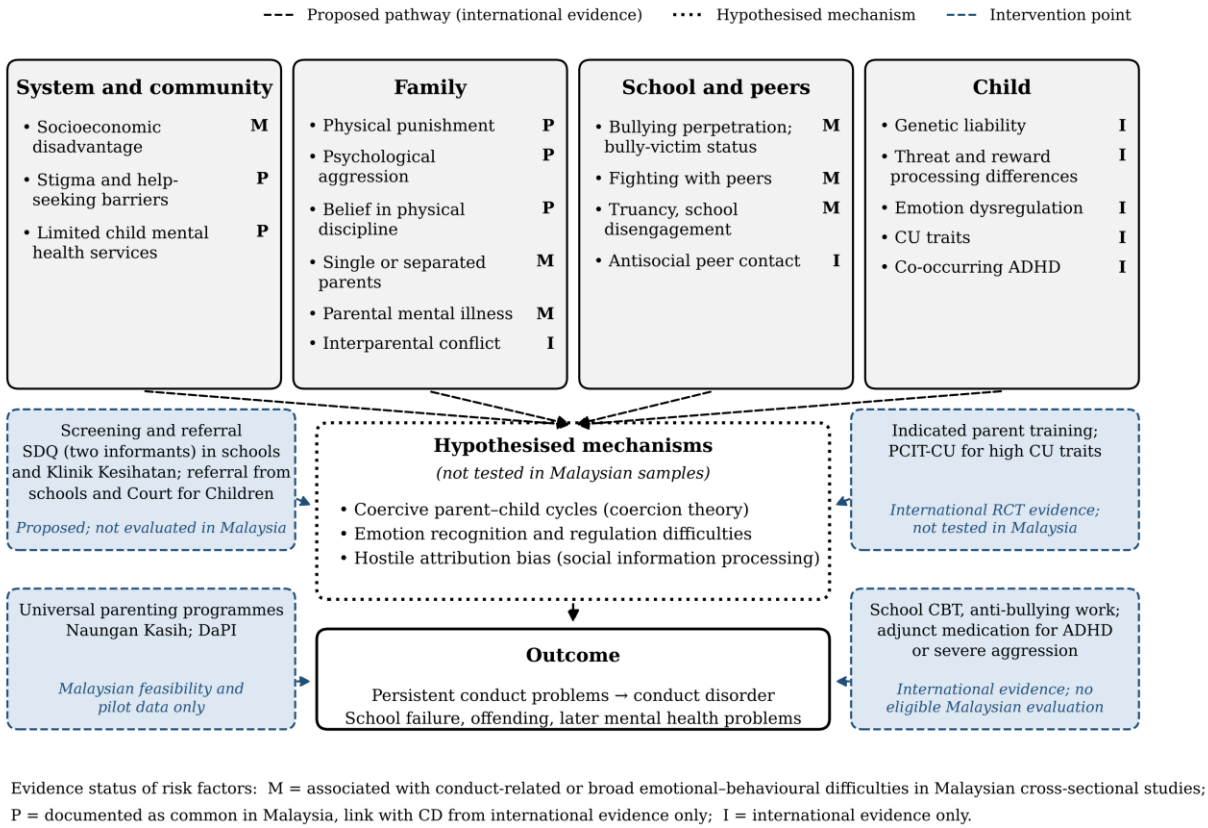



Figure 1 A Conceptual Socio-Ecological Synthesis of Risk Factors, Hypothesised Mechanisms, and Intervention Points for Conduct Disorder in Malaysia

*Note.* This figure is a conceptual synthesis of the literature reviewed and has not been tested as a model. Letters indicate the evidential status of each risk factor: M = associated with conduct-related or broad emotional and behavioural difficulties in Malaysian cross-sectional studies; P = documented as common in Malaysia, with links to CD supported by international evidence only; I = supported by international evidence only. Dashed black arrows indicate proposed pathways based on international evidence; the dotted box indicates hypothesised mechanisms not tested in Malaysia; dashed blue boxes indicate intervention points and the current level of evidence for each. ADHD = attention-deficit/hyperactivity disorder; CBT = cognitive-behavioural therapy; CD = conduct disorder; CU = callous-unemotional; DaPI = Digital-assisted Parenting Intervention; PCIT-CU = parent-child interaction therapy adapted for CU traits; RCT = randomised controlled trial; SDQ = Strengths and Difficulties Questionnaire.

## Diagnostic Challenges

### *Subtyping and Heterogeneity*

Because CD is defined by a list of behaviours, two young people with the same diagnosis may share few symptoms and have very different underlying difficulties. Masi et al. (2023) recommend that clinicians routinely describe CD by age of onset, CU traits, emotional dysregulation, and comorbidity, because each has different prognostic and treatment implications. In Malaysia, where children often first come to attention through the school discipline system or the police rather than through health services, this kind of profiling may often be missed, although no eligible Malaysian data on referral pathways were identified. A behaviour-based label such as "disciplinary case" or "juvenile offender" may then stand in for a clinical formulation.

### *Culture, Bias, and Stigma*

Diagnosis does not happen in a social vacuum. In the United States, minority youth were more likely to be diagnosed with disruptive behaviour disorders and less likely to receive an ADHD diagnosis for similar symptoms (Fadus et al., 2020). No equivalent Malaysian data were identified. To consider the role of culture more systematically, we draw on the bioecological model (Bronfenbrenner & Morris, 2006) and on the DSM-5-TR cultural formulation, which asks clinicians to consider cultural identity, cultural explanations of distress, and cultural features of the relationship between clinician and family (APA, 2022). Within this framework, culture may influence CD at five points: how symptoms are expressed, how parents and teachers report them, whether families seek help, how clinicians interpret them, and whether interventions are acceptable. For each point, we distinguish what Malaysian evidence shows from what is proposed.

*Symptom expression.* Culture may shape which behaviours are encouraged, tolerated, or punished, and therefore how conduct problems appear. The Malaysian evidence here is indirect. The failure of the unemotional factor of the Malay ICU (Mohamad Khalil et al., 2023) is consistent with cultural differences in emotional expression, but it does not demonstrate them, because psychometric explanations are equally plausible. Cultural influence on symptom expression therefore remains a hypothesis.

*Parental and teacher reporting.* Large differences between parent, teacher, and child reports of conduct problems have been documented in Malaysia (Idris et al., 2019). Measures

developed in English and translated into Malay may also not function equally across ethnic groups, school types (national, Chinese, or Tamil vernacular schools), and languages. Sabramani et al. (2021) found that ethnicity was associated with bullying involvement, but without measurement invariance testing it is unclear whether this reflects real differences or differences in how items were understood. The informant effect is an evidence-based finding; ethnic differences in reporting are a proposed mechanism.

*Help-seeking.* Malaysian young people's views suggest that cultural beliefs, stigma, and perceptions of mental health problems influence whether they seek professional support (Berry et al., 2020), and parents of adolescents with mental health conditions describe considerable challenges in obtaining appropriate care (Cham et al., 2026). These findings concern mental health problems in general. They have not been examined specifically for conduct problems, which may be framed more often as moral or disciplinary issues than as health concerns.

*Diagnostic interpretation.* Because physical discipline is widely accepted and practised (Ganapathy et al., 2022; Rosslan et al., 2026), clinicians and families may under-recognise maltreatment as a contributor to conduct problems, and behaviour may be interpreted as a disciplinary rather than a clinical problem. International research also suggests that the perceived cultural normativeness of physical discipline may weaken, although not remove, its association with children's aggression and anxiety (Lansford et al., 2005). International effect sizes therefore cannot simply be assumed to apply in Malaysia. Both points are proposed mechanisms that have not been tested in Malaysian samples, but routine trauma screening is a reasonable precaution. Parenting norms are also changing. A review of parenting in Malaysia, mainland China, and Taiwan described a gradual shift from authoritarian towards more democratic communication between parents and children (Mu et al., 2024), so the perceived normativeness of physical discipline may differ between generations and communities.

*Intervention acceptability.* The Malaysian parenting programmes reviewed below reported acceptability mainly among Malay and Muslim mothers (Lachman et al., 2023; Zulkefly et al., 2024). Acceptability among fathers, among Chinese, Indian, and Indigenous families, and among families in Sabah and Sarawak was not examined in the studies identified. This gap matters, because programmes that challenge strongly held beliefs about discipline may be received differently across communities.

*Emerging Objective Markers*

Researchers in the region have explored whether biological signals could make diagnosis more objective. A Singapore-based study applied machine learning to EEG data from 123 children and reported 97.88% accuracy in distinguishing CD, ADHD, and comorbid presentations (Tian et al., 2021). Such results should be treated with caution. The sample was small and drawn from a single clinic, and very high accuracy in small samples rarely replicates. For Malaysia, the greater priority is simple, valid, culturally appropriate behavioural measures rather than biomarkers.

*Assessment*

No single instrument can capture the complexity of CD. Good practice combines several methods and informants and assesses symptoms, impairment, comorbidity, CU traits, family functioning, and risks such as maltreatment, substance use, and harm to others (Fairchild et al., 2019). Table 2 summarises commonly used tools and the status of Malaysian evidence for each.

Table 2

*Commonly Used Methods for Assessing Conduct Disorder and the Status of Malaysian Evidence*

| Method / instrument | Informant | What it assesses | Malaysian evidence |
|---|---|---|---|
| **Interviews** | | | |
| DISCAP-5 | Parent | DSM-5 externalising disorders and comorbidities | No Malay validation identified |
| K-SADS | Parent, child | Broad DSM-based diagnoses | Used clinically; no published Malay validation for disruptive behaviour disorders identified |
| **Broad-band rating scales** | | | |
| Strengths and Difficulties Questionnaire | Parent, teacher, youth | Conduct problems, hyperactivity, emotional and peer problems, prosocial behaviour | Used in NHMS and regional studies (Abd Rahim et al., 2023; Sahril et al., 2021); large informant differences (Idris et al., 2019); local cut-offs not established |
| ASEBA (CBCL, TRF, YSR) | Parent, teacher, youth | Internalising, externalising, DSM-oriented scales | Limited recent Malaysian psychometric data |
| **CU and related traits** | | | |
| Inventory of Callous-Unemotional Traits (Malay) | Youth | Callousness, uncaring (unemotional factor dropped) | 17-item two-factor model; α = .74 (Mohamad Khalil et al., 2023); criterion validity untested |
| PSCD scale | Youth, parent, teacher | Grandiose-manipulative, CU, daring-impulsive traits and CD symptoms | No Malaysian validation identified |
| **Observation** | | | |
| Parent-child interaction coding | Trained observer | Parent and child behaviour in standard tasks | No Malaysian use identified |
| Classroom observation | Teacher, counsellor | Context of aggressive and rule-breaking behaviour | Possible within school counselling; not systematically used |

Note. ASEBA = Achenbach System of Empirically Based Assessment; CBCL = Child Behavior Checklist; TRF = Teacher Report Form; YSR = Youth Self-Report; CU = callous-unemotional; DISCAP-5 = DSM-5 Diagnostic Interview Schedule for Children, Adolescents, and Parents; K-SADS = Kiddie Schedule for Affective Disorders and Schizophrenia; NHMS = National Health and Morbidity Survey; PSCD = Proposed Specifiers for Conduct Disorder.

*Clinical Interviews*

Structured and semi-structured interviews improve diagnostic reliability. The DSM-5 Diagnostic Interview Schedule for Children, Adolescents, and Parents (DISCAP-5) has shown good reliability and validity for externalising disorders (Tissue et al., 2022), and the Kiddie Schedule for Affective Disorders and Schizophrenia (K-SADS) is widely used. No eligible published Malay validation of either interview for disruptive behaviour disorders was identified. This is a major gap, because without a diagnostic standard, Malaysian SDQ cut-offs cannot be calibrated against actual CD diagnoses. Interviews with Malaysian families should also allow for the possibility that parents under-report behaviour that would bring shame to the family, and that adolescents under-report behaviour that could lead to school or legal sanctions.

*Rating Scales*

The SDQ is the most widely used measure in Malaysia and was used in national surveys and regional studies (Abd Rahim et al., 2023; Sahril et al., 2021). It is brief, free, and has parent, teacher, and self-report versions. Its conduct problems subscale has only five items, however, and the large differences between informants (Idris et al., 2019) mean that a single informant's report should not be used to classify a child. The Achenbach System of Empirically Based Assessment offers more detailed DSM-oriented scales and cross-informant norms. The Malay ICU now allows dimensional measurement of callousness and uncaring traits (Mohamad Khalil et al., 2023), but it should be used for research rather than clinical decisions until its associations with conduct problems and its cut-offs have been established. The Proposed Specifiers for Conduct Disorder scale, which adds grandiose-manipulative and daring-impulsive traits (Muratori et al., 2021), has no Malaysian validation identified within the databases searched.

*Behavioural Observation*

Direct observation in the clinic, home, or school shows how behaviour depends on context and how parents and children interact. Observational coding is used to track treatment progress in parent-child interaction therapy (Fleming et al., 2022). In Malaysia, structured observation could be integrated into school counselling and special education referral, where teachers already observe behaviour daily but rarely record it systematically.

*Interventions*

Because CD has multiple causes, treatment usually needs to be multi-component, sustained, and coordinated across family, school, and, where relevant, the justice system (Masi et al., 2023). In reviewing the intervention evidence, we distinguish four stages: feasibility and acceptability (whether a programme can be delivered and is accepted), preliminary efficacy (early signals of effect, usually from small or uncontrolled studies), efficacy (effects in adequately powered controlled trials), and established effectiveness (consistent effects across trials and routine settings). We also distinguish universal or preventive programmes, which aim to reduce general behavioural problems or maltreatment in community samples, from treatments evaluated in children with clinically significant conduct problems or diagnosed CD. Table 3 summarises the target population, design, primary outcomes, strength of evidence, and relevance to clinically diagnosed CD for each intervention.

Table 3

*Interventions for Conduct Problems and Conduct Disorder: Target Population, Design, Outcomes, Strength of Evidence, and Relevance to Diagnosed CD*

| Intervention (key sources) | Target population | Design | Primary outcomes | Strength of evidence | Relevance to diagnosed CD |
|---|---|---|---|---|---|
| **International evidence** | | | | | |
| Behavioural parent training (Leijten et al., 2026; Tehrani et al., 2024) | Families of children up to about 12 years with disruptive behaviour | Meta-analyses of RCTs (244 trials; 28,916 families) | Child disruptive behaviour | Established effectiveness | High; best-supported first-line treatment |
| Online parenting programmes (Canário et al., 2025) | Parents of children with behavioural or emotional problems | Network meta-analysis of 27 RCTs (N = 5,312) | Child behaviour problems | Efficacy; moderate effects | Moderate; extends the reach of parent training |
| Adaptations for CU traits (Fleming et al., 2022; Perlstein et al., 2023; Waaler et al., 2024) | Children with conduct problems and elevated CU traits, mainly aged 3–7 | One RCT (43 families); meta-analyses; review of adolescent studies | Conduct problems, CU traits, maintenance of gains | Preliminary efficacy in young children; limited in adolescents | High for young children with CU traits |
| CBT and emotion-regulation training (Riise et al., 2021; te Brinke et al., 2021) | Children and adolescents with externalising problems or disorders | Meta-analysis of routine-care studies; randomised micro-trial | Externalising problems | Efficacy; moderate effects in routine care | Moderate to high for older children and adolescents |
| Family and systemic programmes (e.g., MST) | Adolescents with severe or persistent conduct problems or offending | Controlled trials (not appraised in this review) | Antisocial behaviour, offending, out-of-home placement | Not appraised here | High for severe adolescent CD |
| Pharmacotherapy (Masi et al., 2023; Seok et al., 2023) | Youth with disruptive behaviour, often with ADHD or severe aggression | Network meta-analysis of 55 RCTs | Disruptive behaviour, aggression | Efficacy for symptom reduction; adjunct only | Targets aggression and co-occurring ADHD, not CD itself; no approved CD indication |
| **Malaysian evidence** | | | | | |
| Naungan Kasih (Lachman et al., 2023) | 74 female caregivers of children aged 0–17 and 26 children aged 10–17; community, near Kuala Lumpur | Single-group pre–post mixed-methods feasibility study | Feasibility, acceptability; child behaviour problems; physical and emotional abuse | Feasibility and acceptability; preliminary uncontrolled effects | Low; universal violence prevention, not a CD sample |
| Hybrid digital Naungan Kasih (Cooper et al., 2024) | Caregivers of children aged 4–6 in KEMAS preschools | Protocol for a factorial cluster RCT (feasibility) | Recruitment, engagement, fidelity, acceptability, cost; preliminary parenting and maltreatment outcomes | Protocol; outcome results not identified | Low; universal prevention |
| DaPI (Zulkefly et al., 2022, 2024) | 24 mothers of non-clinical adolescents aged 10–14 | Pilot RCT with waitlist control | Feasibility, acceptability; parenting; adolescent behaviour problems | Feasibility; preliminary effects on parenting only; no effect on adolescent behaviour | Low; universal mental health promotion in a non-clinical sample |
| CBT, school anti-bullying programmes, juvenile justice rehabilitation, prescribing practice | — | No eligible Malaysian evaluation identified | — | — | Evidence gap |

*Note.* Strength-of-evidence stages: feasibility and acceptability; preliminary efficacy (small or uncontrolled studies); efficacy (adequately powered controlled trials); established effectiveness (consistent effects across trials and settings). Ratings are the authors' qualitative judgement. ADHD = attention-deficit/hyperactivity disorder; CBT = cognitive-behavioural therapy; CD = conduct disorder; CU = callous-unemotional; DaPI = Digital-assisted Parenting Intervention; KEMAS = Department of Community Development preschools; MST = multisystemic therapy; RCT = randomised controlled trial.

*Behavioural Parent Training*

Parent training based on social learning theory is the best-established treatment for conduct problems in children up to about age 12. A meta-analysis of 244 randomised trials involving 28,916 families found that effects declined in early decades as trials became more rigorous but have since stabilised at a meaningful level (Leijten et al., 2026). Behaviour management is the essential ingredient, with relationship enhancement adding most benefit in early childhood (Tehrani et al., 2024). Online parenting programmes also show moderate effects on child behaviour problems (Canário et al., 2025).

Malaysian evidence is emerging but limited. Naungan Kasih is a five-session social-learning parenting programme adapted from Parenting for Lifelong Health and delivered by government staff. In a mixed-methods feasibility study with 74 female caregivers and 26 children near Kuala Lumpur, parent-reported child behaviour problems and physical and emotional abuse decreased from baseline to post-test (Lachman et al., 2023). The programme has since been adapted into a hybrid digital format, delivered through a WhatsApp chatbot within the national KEMAS preschool system, and is being tested in a factorial cluster randomised feasibility trial (Cooper et al., 2024). The Digital-assisted Parenting Intervention (DaPI) is an eight-session online programme for parents of 10- to 14-year-olds (Zulkefly et al., 2022). In a pilot randomised trial with 24 mothers, DaPI improved parental self-efficacy, proactive parenting, and positive reinforcement and reduced lax control. However, it did not change adolescent behaviour problems (Zulkefly et al., 2024).

These studies are a welcome start, but they provide evidence at the earliest stages only. The Naungan Kasih study established feasibility and acceptability and gave preliminary, uncontrolled signals of effect; without a control group, the improvements may reflect regression to the mean or expectancy effects. The hybrid digital version is at the protocol and feasibility stage (Cooper et al., 2024). The DaPI pilot trial established feasibility and acceptability and showed preliminary effects on parenting, but not on adolescent behaviour. It was very small, included only mothers, and used a non-clinical sample with few behaviour problems at baseline, so a floor effect is likely. All outcomes were parent-reported, and most participants were Malay and Muslim. Most importantly, both programmes are universal or preventive: they were designed to reduce maltreatment and promote mental health in community samples, not to treat CD. They should therefore not be treated as equivalent to international trials of parent training in children with clinically significant conduct problems. No eligible Malaysian trial in children with clinically significant conduct problems or diagnosed CD was identified, so the effectiveness of parent training for CD in Malaysia remains an inference from international evidence.

*Interventions for Children with Callous-Unemotional Traits*

Children with high CU traits have more severe conduct problems before and after treatment, but they do improve, and CU traits themselves can decrease, especially with parenting interventions in younger children (Perlstein et al., 2023). In a randomised trial, parent-child interaction therapy adapted for CU traits (PCIT-CU) produced better maintenance of gains than standard PCIT (Fleming et al., 2022). For adolescents, evidence is thin (Waaler et al., 2024). Because the Malay ICU has only recently become available, no eligible Malaysian intervention study measuring CU traits was identified. Including the ICU as a moderator in future parenting trials would be a low-cost first step.

*Cognitive-Behavioural and Emotion-Focused Approaches*

For older children and adolescents, cognitive-behavioural therapy (CBT) targets problem solving, anger management, and social skills. CBT delivered in routine care is effective for externalising disorders, with effects somewhat smaller than in efficacy trials (Riise et al., 2021). Emotion regulation appears to be a useful active ingredient (te Brinke et al., 2021), and making reinforcement more immediate and salient may increase effectiveness (Matthys & Schutter, 2021). In Malaysia, school counsellors are the professionals most likely to deliver such work. Group-based CBT within schools is therefore a realistic delivery route, but no eligible Malaysian trial of CBT for conduct problems was identified within the databases and period searched.

*Family, School, and Justice-System Interventions*

For adolescents with severe or persistent CD, intensive family- and community-based interventions such as multisystemic therapy (MST) address problem behaviour across the systems that shape a young person's daily life: the family, peer group, school, and neighbourhood. In Malaysia, schools and the juvenile justice system are the two settings where most adolescents with serious conduct problems are likely to be identified. They are therefore central to both prevention and intervention. School-based anti-bullying programmes are a clear priority, given the high level of bullying involvement among Malaysian secondary-school students (Sabramani et al., 2021). These programmes should not focus only on reducing aggression. Adolescents involved in bullying, whether as perpetrators, victims, or both, often also experience psychological distress, conflict with peers, and disengagement from school (Sabramani et al., 2021). Programmes that address these underlying difficulties alongside the behaviour itself are more likely to produce lasting change.

For young people who come into contact with the law, the Child Act 2001 (Act 611) provides a framework for rehabilitation. This framework includes probation orders, community-based measures, and placement in approved schools or Henry Gurney Schools. However, little is known about whether these measures achieve their aims. We did not identify any Scopus- or SSCI-indexed study published during the review period that evaluated rehabilitation outcomes in Malaysian approved schools or Henry Gurney Schools. Longitudinal research is needed to determine whether these programmes reduce reoffending, improve psychological well-being, support continued education, and help young people return successfully to their families and communities. Such evaluation is particularly important because grouping adolescents with conduct problems in residential settings can increase their exposure to antisocial peers and, in some cases, worsen outcomes (Dishion et al., 1999).

*Pharmacological Treatment*

Pharmacological treatment should be considered in relation to three distinct targets: CD itself, severe aggression, and co-occurring conditions such as ADHD. No medication is approved specifically for CD, and medication is recommended only as an adjunct to psychosocial treatment (Masi et al., 2023). A network meta-analysis of 55 randomised trials found that second-generation antipsychotics, stimulants, and non-stimulant ADHD medications all reduced disruptive behaviour more than placebo, with antipsychotics showing the largest effects (Seok et al., 2023). These effects mainly reflect reductions in aggression and disruptive symptoms, often in samples that included youth with ADHD, rather than treatment of CD as a disorder. Stimulants are generally the first choice when ADHD is present, and improvement

in ADHD symptoms can reduce aggression. Risperidone has the strongest evidence for severe aggression, but its metabolic and endocrine side effects require careful monitoring (Masi et al., 2023). Where access to psychosocial treatment is limited, as may be the case in parts of Malaysia, medication could become a default response to aggression. However, no eligible study of prescribing practices for disruptive behaviour in Malaysian child psychiatry or paediatric services was identified.

**Discussion**

The central finding of this review is a mismatch between the international and Malaysian evidence on CD. Internationally, CD is increasingly studied as a diagnosis, through large epidemiological, neurobiological, and treatment studies. In Malaysia, the literature identified has mainly documented associated behavioural indicators and contextual risks, and only two studies measured conduct problems directly. Four conclusions follow.

First, the international evidence base is substantial. Large consortium and genetic studies show that CD is associated, at the group level, with differences in brain structure and with polygenic liability (Demontis et al., 2021; Gao et al., 2024). Within-family longitudinal studies and meta-analyses show that family conflict and maltreatment are associated with the development of conduct problems and CU traits, consistent with a contributory role (Nobakht et al., 2023; Todorov et al., 2023). More than 240 randomised trials show that parent training reduces disruptive behaviour (Leijten et al., 2026). These findings do not imply that CD is fixed, and they cannot explain the behaviour of any individual child.

Second, the Malaysian evidence is mainly about indicators and risks, not about the disorder. Category A evidence is limited to two SDQ-based studies. Category B studies show that fighting and bullying involvement are common among adolescents (IPH, 2023; Sabramani et al., 2021), and that self-reported aggression is associated with gaming addiction, narcissism, and low self-control (Pan et al., 2024). Category C studies show that harsh discipline is common and that family disruption, parental mental illness, and socioeconomic disadvantage are associated with broad emotional and behavioural difficulties (Abd Rahim et al., 2023; Ganapathy et al., 2022; Rosslan et al., 2026; Sahril et al., 2021). These patterns are consistent with international findings, but they do not demonstrate that the same factors are associated with CD in Malaysian children. Almost all of the Malaysian studies reviewed were cross-sectional, and none used a diagnostic interview. The literature reviewed therefore cannot yet answer basic questions such as how many Malaysian children meet criteria for CD, how many receive treatment, or what happens to them over time.

Third, cultural influences are likely to matter, but they have been assumed more often than tested. Within the framework set out above, the Malaysian evidence is strongest for informant differences in reporting (Idris et al., 2019) and for help-seeking barriers in mental health generally (Berry et al., 2020). Influences on symptom expression, diagnostic interpretation, and intervention acceptability across ethnic groups remain proposed mechanisms. Claims that international findings do or do not apply to Malaysia should therefore be tested rather than assumed, beginning with measurement invariance studies.

Fourth, Malaysia has begun to build a culturally adapted parenting evidence base (Cooper et al., 2024; Lachman et al., 2023; Zulkefly et al., 2024). This work is at the feasibility and

preliminary-efficacy stage and is universal or preventive in focus, which is appropriate given how common harsh discipline is. Within the literature reviewed, however, no treatment study was identified for children who already have clinically significant conduct problems or CD. Moving Malaysian research from indicators and risks towards diagnosis, mechanisms, and indicated treatment is the main priority that emerges from this review.

*Implications for Practice in Malaysia*

Early identification should combine screening with fuller assessment. The SDQ can be used in Klinik Kesihatan (public primary care clinics) and schools, but because informants disagree substantially, screening should draw on at least two informants, and positive screens should lead to clinical assessment. That assessment should cover ADHD, ODD, CU traits, trauma, and family conflict rather than end with a behavioural label. School counsellors and teachers should be trained to see persistent aggression, truancy, and bullying perpetration as possible signs of a mental health need and not only as disciplinary issues.

Parenting support should be expanded. Given the wide acceptance of physical punishment, universal programmes such as Naungan Kasih that address discipline beliefs and skills could be embedded in existing government structures, including KEMAS preschools, community health clinics, and the Department of Social Welfare. Families of children with clinically significant conduct problems need more intensive, evidence-based parent training. Digital formats may help reach families outside the Klang Valley, but they need to be tested with fathers, non-Malay families, and families in Sabah and Sarawak.

Health, education, social welfare, and justice services need better coordination. Many children with conduct problems are likely to come first to the attention of the school discipline system or the police. Clear referral pathways from schools and the Court for Children to child mental health services, and routine mental health screening in juvenile rehabilitation settings, would help ensure that underlying ADHD, trauma, or learning difficulties are identified.

*Limitations of the Evidence and of This Review*

The international evidence comes mainly from high-income Western countries, under-represents girls, and has few long-term follow-ups. The Malaysian evidence is small, cross-sectional, based on screening tools, and concentrated in Peninsular Malaysia and among Malay participants. Several key Malaysian figures come from Ministry of Health survey reports rather than peer-reviewed analyses. This review also has its own limitations. As a narrative review, it did not use a pre-registered protocol, a formal quality appraisal, or duplicate screening, and the selection of studies reflects the authors' judgement. Restricting the review to Scopus- and Web of Science-indexed English-language articles may have excluded relevant Malaysian studies published in Malay or in locally indexed journals (for example, MyCite). These studies could add to, but probably not reverse, the conclusions drawn here. Accordingly, statements in this review that no Malaysian study was identified refer only to eligible studies within the databases, languages, and publication period searched, and should not be read as evidence that such studies do not exist.

*Future Directions*

We see six priorities for Malaysian research: (a) A nationally representative diagnostic study of CD and other disruptive behaviour disorders that uses a structured interview with a

subsample of NHMS participants. Such a study could also establish Malaysian SDQ cut-offs. (b) Measurement invariance testing of the SDQ and the Malay ICU across ethnic groups, languages, sexes, and East and West Malaysia, together with tests of the ICU's associations with conduct problems. (c) Prospective cohort studies that test whether harsh discipline, family disruption, and bullying predict conduct problems over time, with designs that can separate within-family from between-family effects. (d) Adequately powered randomised trials of culturally adapted parent training for clinically referred children, including fathers and non-Malay families, with teacher- or observer-rated outcomes. (e) Evaluation of school-based CBT and anti-bullying programmes delivered by school counsellors. (f) Outcome evaluation of rehabilitation in the Malaysian juvenile justice system.

**Conclusion**

Conduct disorder is a common, heterogeneous, and costly condition associated with genetic, neural, family, and social factors. International research over the past five years has strengthened the evidence on its biological correlates, its family and social risks, and the effectiveness of parent training. The Malaysian literature reviewed here has a different emphasis. Conduct-related behaviours such as fighting and bullying are common, and contextual risks such as harsh discipline, family disruption, and socioeconomic disadvantage are widespread, but CD itself has rarely been assessed. Within the databases and period searched, no Malaysian studies were identified that provide diagnostic prevalence data, validated diagnostic interviews, longitudinal tests of risk pathways, or treatment trials for children with CD. Closing this gap between international diagnostic evidence and the Malaysian focus on indicators and risks would allow Malaysian practice to rest on local evidence rather than on assumptions borrowed from elsewhere.

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