



Indonesian Teachers' Effectivity in Identifying Students' Mental Health Problems

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*To My Beloved Family and My Self:
Thank You.*

Abstract

Early identification of mental health problems in students can ensure that vulnerable children receive appropriate interventions. Within school, teachers have been actively involved in identifying students' mental health problems and providing referrals for interventions. Studies mainly conducted in high-income countries have found that teachers effectively identify mental health problems. Nevertheless, the effectiveness of Indonesian teachers in identifying mental health problems is unknown.

Three studies were performed to investigate the effectiveness of Indonesian teachers in identifying mental health problems in their students (aged 13 – 18 years). Study One explored Indonesian teacher's perceived confidence, barriers, and needs in identifying mental health problems using qualitative methodology. The study found that teachers were confident in identifying students' mental health, but they faced barriers due to their lack of knowledge and time constraints. They required mental health training and support to enhance their ability to recognize mental health problems. Study Two investigated teachers' accuracy in identifying mental health problems in a mixed-methods approach. This study showed that by using vignettes, teachers could accurately identify the presence or absence of mental health problems but were less accurate in assessing the severity of the problems. Study Three investigated the relationships between teacher reports of common student psychopathology with student and parent reports in Indonesian schools and compared these relationships to those previously found in the UK. This study found that in Indonesia, teacher reports had small correlations with student and parent reports. These correlations were weaker than the correlations found in the UK sample.

Findings indicated that teachers in Indonesia were suitable informants for school-based mental health screening, but collaboration was required to identify mental health problems. Providing mental health training for teachers would be beneficial as they lack knowledge in this area. The findings underscore the need to design and evaluate teacher training programmes and encourage collaboration to identify mental health problems.

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Chapter 1: Introduction

Indonesia is a lower-middle-income country (LMIC) in South East Asia. As an archipelago country, Indonesia consists of 16,766 islands with five main islands. Based on the BPS-Statistics Indonesia (2022), the population of Indonesia is more than 272 million, with 44 million children and adolescents aged 10-19 years. The Indonesian people are heterogenous with 1300 ethnic groups, six official religions (Islam, Catholicism, Protestantism, Buddhism, Hinduism, and Confucianism), and 2500 languages (Badan Pusat Statistik, 2010). To promote unity within the nation, the people of Indonesia learn and utilize Bahasa Indonesia as their national language.

Indonesia's diversity often leads to social conflicts, such as ethnic-political conflict or inter-religious conflict in several regions (e.g., Ambon and Poso). These conflicts may affect people's mental health. In a study conducted in Ambon, a post-conflicted area, 99.4% of participants were exposed to violence, and 45.2% experienced mental health problems (Fausiah et al., 2019). Furthermore, a socio-economic issue, such as poverty (10.1% of people living in poverty) (BPS-Statistics Indonesia, 2022), was associated with poor mental health, especially depression (Christiani et al., 2015; Tampubolon & Hanandita, 2014). Due to geography and geology, Indonesia is at risk of natural disasters, such as earthquakes (e.g., Yogyakarta in 2006), tsunamis (e.g., in Aceh in 2004), and volcanic eruptions (e.g., Mount Semeru in 2021). The victims of these natural disasters have mental health problems that persist for years after the incidents, such as depression, anxiety, stress, and post-traumatic stress disorders (Musa et al., 2014; Warsini et al., 2015). Based on the Indonesian Ministry of Health's 2018 national survey, 7% of households in Indonesia had a family member with schizophrenia or psychosis. In the population aged ≥ 15 years, the prevalence of mental-emotional disorders was 9.8% and 6.1% of depression (Kementerian Kesehatan Republik Indonesia, 2019).

Mental health issues in Indonesia are widespread, affecting both adults and adolescents. A recent survey conducted in Indonesia found that one out of three adolescents experienced mental health problems, and one out of twenty adolescents experienced mental health disorders within the past year (Center for Reproductive Health, University of Queensland, and Johns Hopkins Bloomberg School of Public Health, 2022). Adolescence is the transition period from childhood to adulthood, usually between the ages of 10 and 19, as defined by the World Health Organization. Mental health problems during adolescence can persist into adulthood if left untreated. It is estimated that half of all mental health disorders in adults originate during adolescence (Belfer, 2008). Therefore, there is an urgent need to address them.

One way to reduce the burden of mental health and promote mental wellbeing is to focus on adolescents to intervene early with mental health problems. Improving the quality of human resources through developing children's health is one of the Indonesian government's priorities, as stated in the National Long-Term Development Plan 2005-2025 Law Number 17 of 2007. Furthermore, according to the Law of the Republic of Indonesia Number 18 of 2014, the government and the community provide mental health care through promotive, preventive, curative, and rehabilitative activities in an integrated, comprehensive, and sustainable way to achieve optimum mental health. However, the implementation is not optimal with limited access to mental health facilities, limited human resources in health care (psychiatrists, psychologists, nurses, social workers), and mental health programmes that emphasize treatment rather than prevention (Idaiani & Riyadi, 2018). Even in treatment, only 9% of people with depression received medication (Kementerian Kesehatan Republik Indonesia, 2019). Other barriers to accessing mental health services were service affordability (e.g., distance, transportation cost and service cost) and stigma related to mental health problems (Into the Light Indonesia, 2021; Tristiana et al., 2018). A study of women in four major cities in Indonesia found depression was prevalent in groups with a lower economic status that hindered

their ability to access treatment (Christiani et al., 2015). Therefore, a more accessible mental health service is needed, especially for children and adolescents.

A national survey of Indonesian adolescents found only a few (2.6%) adolescents with emotional and behaviour problems were accessing mental health services, and most used services provided by schools (Center for Reproductive Health, University of Queensland, and Johns Hopkins Bloomberg School of Public Health, 2022). Schools can be considered ideal for promoting children's mental health and preventing mental health problems because this is where children spend most of their time (Pulimeno et al., 2020). As demonstrated in high-income countries (HICs), early identification of mental health problems can increase the opportunities for children to receive the treatment they need (Nemeroff et al., 2008). Early identification, however, relies heavily on informants' ability to recognise symptoms of mental health problems. Researchers typically rely on reports from teachers, parents, and adolescents when assessing adolescent mental health (e.g., Genachowski et al., 2022). Each informant may offer different perspectives on adolescent functioning in various settings, such as school and home (Achenbach et al., 1987). In school settings, studies conducted in HICs found that teachers effectively identified students' mental health problems (Honkanen et al., 2014; Splett et al., 2019). In Indonesia, the education system places significant importance on teachers' role in supporting their students' mental health. However, there is no systematic practice of screening for mental health problems. Teachers identify potential mental health problems by observing their students and referring those who are at risk for further intervention. This thesis focuses on the effectiveness of teachers in Indonesia in identifying mental health problems in their students. This current chapter gives an overview of adolescent mental health problems, teachers in school-based mental health problems identification, and presents the research objectives.

1.1 Mental health problems

1.1.1 Overview of mental health problems

Identifying mental health problems is not a simple task. First, teachers need to know the differentiation between typical adolescents' behaviour and symptoms of mental health problems or mental disorders. However, laypeople such as teachers and adolescents may have different views about mental health problems. For example, Indonesian adolescents perceived mental health problems as an incapability to cope with stress, a lack of interpersonal skills and relationship problems that impact a person's life, which can be deduced from their appearance (e.g., having tattoos, being dirty) (Willenberg et al., 2020). Meanwhile, Swedish adolescents viewed mental health as an emotional experience consisting of positive (e.g., being happy, being loved) and negative emotions (e.g., being unhappy, being depressed), inferring that mental health problems are part of mental health (Johansson et al., 2007). Furthermore, based on a study of homeroom teachers in China, insufficient mental health training led teachers to conceptualise mental health problems based on their subjective perceptions; some teachers identified symptoms of mental health problems that were in accordance with symptoms of mental health problems (e.g., self-harm, depression), some considered typical adolescents' issues as mental health problems (e.g., learning fatigue, interpersonal problems), and some regarded symptoms of mental health problems as common adolescents' behaviour (e.g., anxiety) (Yao et al., 2021).

Understanding the scope of mental health problems is essential for teachers to identify mental health problems effectively. Unfortunately, there is no gold standard and consensus on what constitutes mental health problems or mental disorders (Manwell et al., 2015). Furthermore, there is no clear differentiation between mental health and mental disorder (Pierre, 2012; Public Health Agency of Canada, 2006). Nevertheless, some definitions help to make a clear distinction between the terms. According to the World Health Organization

(WHO) (2022), mental health refers to a condition of well-being that allows an individual to function properly. Any deviation from the individual's condition of well-being is considered a mental health problem (Public Health Agency of Canada, 2006). Meanwhile, a mental disorder is a clinical condition characterized by significant disturbances to an individual's cognition, emotion, or behaviour reflected in impairment in psychosocial functioning (American Psychiatric Association [APA], 2022; Public Health Agency of Canada, 2006; WHO, 2022). Throughout this thesis, generally, I used the term mental health problems when referring to symptoms of emotional and behavioural issues, while the term mental disorders was reserved for presentations that meet the diagnostic criteria.

Understanding various mental health conditions ranging from mental health and mental health problems to mental disorders supports mental health promotion and mental health problems intervention. Taking a categorical perspective, the classification of mental disorders is based on several standard criteria or symptoms, such as the Diagnostic and Statistical Manual of Mental Disorders (DSM), a mental disorder classification by the American Psychiatry Association (APA), and International Classification of Diseases and Related Health Problem (ICD) a medical classification by the WHO. Classification systems such as the DSM and ICD categorize a person having a mental disorder if they meet the criteria given based on the number of symptoms present, such as major depressive disorders. This clinical categorization can differentiate a person with or without mental disorder (Baumeister & Morar, 2008).

Symptoms of several mental disorders share common features and are clustered into two broad syndromes labelled as internalizing and externalizing problems (Achenbach, 1966; APA, 2022). Internalizing problems represent symptoms directed toward the self (e.g., anxiety, depression, somatic symptom). On the other hand, externalizing problems represent symptoms directed toward external or conflicted with the environment (e.g., antisocial, delinquent, substance use) (Achenbach, 1966; APA, 2022; Willner et al., 2016).

1.1.2 Prevalence of mental health problems

Mental health problems can occur at any age, but often have an onset before a person reaches adulthood. Indeed, studies found half of adult mental disorders have their first onset in childhood and adolescence (Kessler et al., 2007; Belfer, 2008). About 10-20% of children and adolescents worldwide have mental health disorders (Kieling et al., 2011). Globally, a meta-analysis on children and adolescent studies in 27 countries found the prevalence of mental disorders was 13.4%, with anxiety disorders having the highest rate of 6.5%, followed by disruptive disorders (5.7%), attention-deficit hyperactivity disorder (3.4%), and depressive disorders (2.6%) (Polanczyk et al., 2015).

The findings are similar in Indonesia, where anxiety is the most common mental health problem. A first national survey on common mental health problems in Indonesian adolescents (10 – 17 years), known as the Indonesian-National Adolescent Mental Health Survey (I-NAMHS), found that in the past year, one in every twenty adolescents (5.5%) had mental disorders. Of all adolescents in Indonesia, anxiety disorders are the most prevalent (3.7%), followed by major depressive disorders (1%), conduct disorders (0.9%), attention deficit hyperactivity disorder and post-traumatic stress disorders (both 0.5%) (Center for Reproductive Health, University of Queensland, & Johns Hopkins Bloomberg School of Public Health, 2022). In this survey, a mental disorder is defined as *a clinically significant behavioural or psychological syndrome or pattern that occurs in an individual and is associated with present distress, disability, and/or a significantly increased risk of suffering death, pain, disability, or an important loss of freedom*. A mental health problem is defined as *similar to a mental disorder in that it also interferes with how a person thinks, feels, and behaves, but to a lesser extent than a mental disorder. They can be experienced temporarily or as an acute reaction to the stresses of life*. Therefore, I-NAMHS classified adolescents as having mental disorders if they met the diagnostic criteria outlined in DSM-5. Those whose symptoms did not

meet the criteria or only displayed at least half of the symptoms assessed by the Diagnostic Interview Schedule for Children or DISC-5 were considered to have mental health problems. Based on the I-NAMHS, the prevalence of mental health problems is substantially higher than mental disorders (34.9%), the most common being anxiety (26.7%), inattention and hyperactivity problems (10.6%), depression (5.3%), conduct problems (2.4%), and post-traumatic stress (1.8%) (Center for Reproductive Health, University of Queensland, & Johns Hopkins Bloomberg School of Public Health, 2022). These figures show that many adolescents in Indonesia need support for their mental health problems.

1.1.3 Burden and impairments of mental health problems

Globally, mental disorders (conduct disorders, anxiety disorders, major depressive disorders, and autism syndrome, respectively) are among the five leading causes of the loss of adolescents' disability-adjusted life years (Baranne & Falissard, 2018). Mental health problems are associated with adolescents engaging in endangering behaviours. The global school-based student health surveys (GSHS) in the WHO South-East Asia region found suicidal behaviour, including suicide ideation, plan, and attempt, is a common issue in adolescents. Specifically in Indonesia, among students aged 13 – 17 years, 5.4% seriously considered to commit suicide, 5.6% planning to commit suicide, and 3.9% attempted suicide once or twice in the past year (World Health Organization. Regional Office for South-East Asia, 2017). Supporting the findings above, the I-NAMHS found that most adolescents with suicidal behaviours and self-harm had mental health problems (Center for Reproductive Health, University of Queensland, & Johns Hopkins Bloomberg School of Public Health, 2022). Moreover, children's mental health disorders may affect their families. For instance, the Great Smoky Mountains Study found that mental health disorders affect parents' perceived burdens, such as financial issues, relationship problems in the family and society, limitation in activity, and diminished

perception of well-being and competence, which are associated with the adolescents' use of mental health service (Angold et al., 1998).

Adolescents with mental health disorders may experience impairments in their life functions and are associated with several risky behaviours. Numerous studies reported mental health disorders related to social, psychological, and physical impairments in several domains, such as school domain (e.g., poor attendance, academic achievement, poor school task completion), family domain (e.g., conflict with parents, physical abuse), social domain (e.g., antisocial behaviour, interpersonal conflict, physical assault), personal/ psychological domain (e.g., unhappiness, sleep problems, loneliness, reduced quality of life) and health behaviour (e.g., sedentary activity, smoking, alcohol and drug abuse) (Finning et al., 2020; Katon et al., 2010; Leijdesdorff et al., 2023; Ormel et al., 2017; World Health Organization. Regional Office for South-East Asia, 2017; Wille et al., 2008). In addition, mental health problems were found to be related to adolescents' physical health, including experiencing somatic symptoms such as perceived pain and headaches. For example, a study of Australian adolescents found an association between emotional and behavioural problems with perceived back and neck pain (Rees et al., 2011). A meta-analysis of ten studies found that children and adolescents who were migraine and tension type-headache patients had more psychopathological symptoms compared to their healthy counterparts (Balottin et al., 2013).

1.1.4 Diagnostic comorbidity and continuum approaches

Classifying symptoms into a specific disorder is challenging because someone may exhibit symptoms that meet the criteria of several disorders. Thus, more than one diagnosis may be given to the same individual, indicating that they have comorbid disorders. Many studies found that the presence of comorbidity between disorders is common. Angold et al. (1999) raised two types of comorbidity patterns, namely homotypic (studies on the comorbidity of disorders within the same diagnostic cluster) and heterotypic comorbidity (studies on the

comorbidity of disorders from different diagnostic clusters). An example of homotypic comorbidity is a study in Spain that found 30.3% of patients in primary care had more than one disorder, particularly depressive, anxiety, and somatoform disorders (Roca et al., 2009). On the other hand, examples of heterotypic comorbidity are studies that found depression as an internalizing disorder also co-occurs with externalizing disorders, such as conduct disorders, oppositional defiant disorder, or antisocial behaviour (Maughan et al., 2004; Rowe et al., 2006). In addition, another study of children aged 8 – 17 years in Spain revealed that many children had comorbid depressive and conduct disorders, and this co-occurrence increased the severity of disorders (Ezpeleta et al., 2006). Comorbidity may indicate a problem in categorical frameworks; nevertheless, its occurrence helps us understand mental disorders' development (Angold et al., 1999).

In contrast to the categorical perspective, the proponents of the dimensional perspective argue that many individuals seek treatment with subthreshold disorders or overlapping syndromes with no precise diagnoses, thus supporting the concept of a spectrum of mental disorder (Lobo & Agius, 2012). Subthreshold is a state where the symptoms or duration of problems do not meet the criteria of a mental disorder (Okasha, 2009). According to the DSM-5, subthreshold disorders are classified as "other specified" or "unspecified" disorders as determined by the clinician's judgment in providing evidence of not meeting diagnostic criteria (APA, 2022). There is no consensus on shared criteria or the quantity of symptoms required to define a subthreshold condition (Rodríguez et al., 2012). For example, subthreshold depression has been defined in various ways based on a literature review of 64 studies. These definitions include validated instruments such as PHQ-9, CESD, and BDI-II, as well as DSM-IV diagnostic criteria for depressive disorders (Volz et al., 2023). Similar to full diagnosed mental disorders, adolescents with subthreshold disorders may have comorbid of other subthreshold or full diagnosed mental disorders (Haller et al., 2014; Shankman et al., 2009). The comorbidity

in subthreshold disorders also demonstrate homotypic and heterotypic pattern (Scott et al., 2021)

Subthreshold disorders are prevalent in adolescents (Bertha & Bala'zs, 2013). At some point in their life, 52.5% of adolescents and young adults experience subthreshold disorders conditions (Lewinsohn et al., 2004). It has been found that adolescents with subthreshold disorders were two to three times more common than adolescents diagnosed with the disorder, especially anxiety disorders (Haller et al., 2014; Roberts et al., 2015; Bosman et al., 2019).

Numerous studies found that although not qualified for a full-scale diagnosis, people with subthreshold disorders experience impairments and risks similar to those who meet full diagnostic criteria (Okasha, 2009). In a systematic review focusing on generalized anxiety disorders (GAD), people with subthreshold GAD experienced a similar level of impairment to people with a diagnosis of GAD (Haller et al., 2014). Another systematic review found that subthreshold symptomatology in adolescents negatively affected their quality of life (Bertha & Bala'zs, 2013). A study conducted in Austrian schools found adolescents with subthreshold disorders had impairment in school functioning (lower academic achievements compared to mentally healthy peers) and issues with the law similar to those diagnosed with mental disorders (Philipp et al., 2018). The degree of impairment increases with the number of comorbidities of subthreshold disorders, as found in the Australian study by Scott et al. (2021). A similar result was found in the prior study on Virginia twin children, which suggested that the degree of impairment relates to the number of symptoms of disorders (Pickles et al., 2001). In addition to impairment to life functioning, many studies suggested the subthreshold disorder was not only a risk factor but a precursor to a corresponding diagnosed mental disorder (Bertha & Bala'zs, 2013; Bosman et al., 2019; Haller et al., 2014; Shankman et al., 2009).

The aforementioned risk and impairments of subthreshold disorders endorse early intervention to prevent the development of mental disorders by reducing symptomatology.

However, successful prevention relies on accurate identification of symptoms. Many adolescents with subthreshold disorders have been found not to receive proper access to intervention (Haller et al., 2014; Philipp et al., 2018).

1.2 Mental health interventions

1.2.1 Types of Mental Health Intervention

Mrazek and Haggerty (1994) describe the intervention spectrum for mental disorders: prevention, treatment, and maintenance. While maintenance refers to interventions that include long-term treatment and after-care to decrease the disability associated with the disorders, prevention includes interventions that occur before the initial onset of a disorder. Prevention differs according to the target of intervention:

(1) Universal prevention targets the general population group, disregarding individual risk (Singh et al., 2022). Some advantages of universal prevention are that participation is free from stigma, covers the total population, and changes the distribution of mental health problems in the general population in a positive direction (Cuijpers, 2022). Universal school-based prevention programmes can be targeted to promote well-being, train psychosocial skills (e.g., resiliency, help-seeking, emotion regulation) and prevent mental health problems (e.g., anxiety, depression) (e.g., Johnstone et al., 2018; Mackenzie & Williams, 2018). For example, the Boost Camp programme for adolescents in Belgium targeted emotion regulation skills (Volkaert et al., 2022). Universal school-based prevention programmes have been implemented in HICs but there is limited evidence of effectiveness in LMICs (Bradshaw et al., 2021; Hayes et al., 2022).

(2) Selective prevention targets individuals or subpopulations who are at high risk of developing mental disorders (Singh et al., 2022). High-risk individuals or groups can be identified by risk factors associated with mental disorders (Mrazek & Haggerty, 1994). For example, a selective alcohol preventive programme targeted adolescents with personality risk factors, such as anxiety sensitivity and impulsivity (Conrod et al., 2013); The Saving and

Empowering Young Lives in Europe (SEYLE) programmes, including school staff's training in identifying suicidal behaviours, students' training to raise suicide awareness, and professional assessment to refer at-risk students (Wasserman et al., 2015); programmes aimed at preventing substance consumption problems among children from families affected by substance abuse focus on enhancing knowledge about substances, promoting problem-solving and social skills, and building self-esteem (Bröning et al., 2012); and a programme targeted children whose parents had depression (Bühler et al., 2011).

(3) Indicated prevention targets high-risk individuals identified as having minimal detectable symptoms or a predisposition to mental disorders that do not meet diagnostic criteria. These individuals can be referred for early intervention or early forms of clinical treatment (Mrazek & Haggerty, 1994). For example, a school-based intervention programme targeted children and adolescents with elevated levels of anxiety, including those with sub-threshold anxiety symptomatology (Hugh-Jones et al., 2021).

1.2.2 Barriers to mental health services

A large number of at-risk youths require mental health services and the availability of services is limited, especially in LMICs (Morris et al., 2011). Based on a meta-analysis that mainly included studies from HICs, more than 50% of adolescents who needed them did not receive mental health services (Ghafari et al., 2022). According to Juengsiragulwit (2015), in LMICs, the barriers to providing youth mental health services are few governmental policies in the area of children's mental health, ineffective primary care service (e.g., lack of funds, overworked personnel, less understanding of the importance of children's mental health); limited access to mental health services due to stigma, low socioeconomic status, specialist mainly in the urban area; shortage of human resources (lack of mental health professionals, limited skill and motivation of the laypeople about mental health); preferring support from

indigenous healers and lack of children mental health records. Schools may be crucial to overcoming these barriers. This is because the school is convenient for children to get the intervention they need as they spend substantial time in school.

1.2.3 School-based mental health provision

The school environment is considered ideal for youth's health and well-being promotion programmes that improve academic achievement (Pulimeno et al., 2020). In addition, the school's structured setting provides easy access and is less stigmatized to implement intervention programmes (Morris et al., 2011; Cuijpers et al., 2016). Schools provide access to the unmet mental health needs of students with socioeconomic disadvantages and minority backgrounds to receive the mental health services they need (Armbruster et al., 1997). According to a meta-analysis of studies conducted in the United States, most youths received mental health services in school settings (Duong et al., 2021).

School-based mental health services are defined as “any mental health service delivered in a school setting” (Kutash et al., 2006, p. 2). Schools vary in the provision of mental health service in terms of the approach to mental health provisions (type of intervention, target group), the programme provided (e.g., anti-bullying, individual therapy), and support provision for parent and staff (e.g., parent and staff training) (Patalay et al., 2017). For example, in the UK, schools provide human resources to support student mental health, including pastoral care teams, teachers trained in mental health, trained mental health staff (e.g., school counsellors, educational psychologists), external therapeutic support (e.g., well-being workers), mental health education embedded in the curriculum, such as mental health in personal, social, health and economic (PSHE) education and mental health promotion in physical education or science, working with parents (e.g., workshops, referral to mental health professionals), some provide peer mentoring and link to volunteer agencies (Garside et al., 2021).

In Indonesia, where this thesis is focused, the provision of school-based mental health services is limited. Schools provide a school health programme named *Usaha Kesehatan Sekolah (UKS)* to support students' health. According to a 2014 Joint Ministerial Decree of the Minister of Education and Culture, Minister of Health, Minister of Religion, and Minister of Home Affairs of The Republic of Indonesia (number 6/X/PB/2014, number 73, number 41, and number 81), UKS consists of activities (e.g., health screening and periodic health checks, fostering clean and healthy living behaviour, health education and counselling, health referrals to health centres/hospitals) to improve the health of children, including physical, mental, spiritual, and social health which enables everyone to live productively socially and economically. Considering the scope and aims of the programme, UKS has the potential to support students' mental health (Nurochim, 2020). Nevertheless, UKS focuses more on physical health, such as the implementation of clean and healthy behaviours, adolescent reproductive health, or provision of clean water facilities, and less on promoting mental health (e.g., Irawan & Prasetyo, 2020; Novariana & Hermawan, 2018). A school-based mental health intervention programme has not been set up. However, there has been a growing interest in developing school-based mental health programmes, such as developing an Integrated Mental Health Information System as an instrument to screen and diagnose mental health problems (Kumara et al., 2017); and an Indonesian adaptation of the Roots intervention programme developed in the USA aimed at anti-bullying in schools using peers as an agent of change (Bowes et al., 2019). In addition to UKS, most schools in Indonesia have guidance and counselling teachers responsible for supporting students in achieving optimal development and autonomy in their personal, academic, social, and career aspects, based on a 2014 regulation implemented by the Minister of Education and Culture Republic of Indonesia (number 111, article 4). As part of their responsibility, guidance and counselling teachers support students'

mental health and collaborate with other school staff, such as homeroom and subject teachers (e.g., Musyirifin, 2016).

1.2.4 School-based mental health intervention

Developing school-based mental health services, including early detection and intervention for youth, is one way to implement part of the WHO's Comprehensive Mental Health Action Plan for 2013 – 2030 (WHO, 2021). Objective 3 of the plan is to implement strategies for promoting well-being and preventing mental health problems. According to WHO (2021), a global target for 2030 is for 80% of countries to have a minimum of two national functioning programmes addressing (1) promotion and (2) prevention. These programmes should be multisectoral and supported by financial and human resources, a specified plan and documented evidence. In 2020, 72 (51%) countries reported implementing school-based mental health prevention and promotion programmes, mainly in Europe (WHO, 2021).

In the implementation of school-based mental health programmes, each country has a different approach and focus. For example, a study from 10 European countries found that schools' provision was focusing more on children who already have problems or treatment-oriented, such as learning disabilities (78%) and students who already identified having (66.6%) or developing mental health problems (66.2%), other than preventing the problems. Nevertheless, each country has a different focus on intervention. Poland has the highest percentage of schools focusing on preventing mental health problems (71.6%), and 70.1% of schools in the UK were focusing on the promotion of wellbeing (Patalay et al., 2017).

The effectiveness of school-based mental health intervention programmes for students varies between types of interventions (universal, selective, indicated interventions), methods of intervention (e.g., cognitive behavioural therapy [CBT], mindfulness), and target of interventions (e.g., anxiety, depression, conduct disorders) (Caldwell et al., 2021; Werner-

Seidler et al., 2021). For example, a meta-analysis of school-based prevention programmes aimed to reduce symptoms of internalising problems in USA adolescents found that school-based interventions could reduce symptoms of depression and anxiety but did not effectively reduce stress symptoms (Feiss et al., 2019). Another meta-analysis of 39 studies in LMICs found that school-based interventions using CBT significantly reduced symptoms of post-traumatic stress disorders but were ineffective in reducing anxiety, depression, and ADHD symptoms (Grande et al., 2023). Some studies delivered in Indonesia have shown that school-based interventions can be effective. For example, Tol et al.'s (2008) study of Indonesian children exposed to armed conflict found that post-traumatic stress symptoms were significantly reduced after 15 sessions using a classroom-based intervention. These encourage further and wider implementations of school-based mental health intervention programmes in Indonesia.

Learning from studies in HICs, universal interventions were more often implemented than targeted interventions. A study by Weare and Nind in 2011 reviewed 52 systematic reviews and found that 48 focused on universal approaches while only 14 reviewed universal and targeted approaches allowing comparison between the two approaches. Both universal and targeted interventions had positive effects, with small to moderate effect sizes. The interventions were particularly effective in children with a high risk of experiencing mental health problems (Weare & Nind, 2011). Numerous studies suggested that targeted interventions, including selective and indicated prevention, are more effective than universal interventions. For example, Werner-Seidler et al. (2021) conducted a comprehensive review of 118 studies with 45,924 participants examining school-based prevention programmes in reducing anxiety and depression symptoms and included 108 studies in a meta-analysis. The result was that targeted intervention had a significantly greater effect on reducing symptoms of depression ($g = 0.29$) than universal prevention programs ($g = 0.17$). However, there was no

significant difference in the effect size between targeted and universal interventions in reducing anxiety symptoms (Werner-Seidler et al., 2021). Thus, it is pivotal to identify at-risk students accurately. Early identification of children's mental health problems can help at-risk children receive appropriate intervention.

1.3 The teachers' role in school-based identification of mental health problems

In a school setting, common mental health problem identification methods are universal screening methods and teacher or school staff nomination, among other methods such as traditional school identification (e.g., students' attendance, academic performance), staff in-service training, and based on curriculum (Anderson et al., 2019). These methods usually involve teachers in the process of identification of children requiring intervention (e.g., Auger, 2004; Eklund & Dowdy, 2014).

Among school staff, teachers have been actively engaged in mental health interventions. Many researchers have studied teachers' roles in school mental health. Their functions vary from mental health promotion to delivering mental health interventions. A systematic review of 49 studies found that teachers engaged in many mental health interventions, mainly using a universal approach in a classroom setting, either in collaboration with mental health professionals or on their own in providing mental health services (Franklin et al., 2012). Teachers' perspectives regarding their roles and responsibility in assisting students' mental health differ. According to studies in Norway, Australia, and the UK, many teachers agreed that supporting students' mental health is part of the role and responsibilities of being a teacher (Ekornes, 2015; Mazzer & Rickwood, 2015; Mælan et al., 2018).

Nevertheless, teachers perceived their roles as different from mental health professionals, such as therapists or psychologists that provide counselling or mental health treatment (Ekornes, 2015; Mazzer & Rickwood, 2015; Shelemy et al., 2019). Teachers were more confident in supporting students personally rather than professionally (Graham et al.,

2011). Some teachers were even hesitant to handle students' mental health problems due to a concern that it may disrupt their academic work and mental health needs (Kidger et al., 2010). Many teachers mentioned some barriers in supporting students' mental health, such as a lack of relevant knowledge, making them inadequate to handle students' mental health problems, time barriers and conflict in balancing their roles. This indicated the need for mental health training, specifically in identifying mental health problems and the importance of support from colleagues, parents, and mental health professionals (Graham et al., 2011; Mælan et al., 2018; Shelemy et al., 2019).

Teachers positioned their role in supporting students' mental health in preventive interventions, such as educating on mental health and identifying mental health problems (Mazzer & Rickwood, 2015; Shelemy et al., 2019). According to Ekornes (2015), teachers consider themselves as 'gatekeepers' who support students' mental health by identifying mental health problems and making referrals if needed. Teachers' everyday interaction with the students (e.g., observing and engaging with children in class or during extracurricular activities) made them an appropriate source of information for identifying students' mental health problems. Teachers can identify mental health problems using standardized screening tools or nominate at-risk students based on everyday interaction or gathering information from others (e.g., parents, students' peers). The choice of assessment methods depends on several factors, such as purpose, timing, teachers' competence, or the availability of resources. Alternatively, mental health problems can be identified by more formal school-based screening programmes.

1.3.1 Teacher ad hoc nomination

Teacher ad hoc nomination is a common practice in identifying mental health problems, particularly when standardized screening tools are not available. In this practice, teachers identify students that exhibit symptoms through their interaction in the classroom. Teachers

recognize that effective nominations are supported by establishing solid relationships with the students that enable teachers to observe students' behaviours and notice when their behaviour changes (Dimitropoulos et al., 2022).

Several studies have investigated teachers' accuracy in identifying students' mental health problems using ad hoc teacher nominations. Research conducted in HICs has yielded diverse findings. For example, in Cunningham and Suldo's (2014) study, elementary school teachers in the USA were asked to nominate students exhibiting symptoms of anxiety and depression or both without discussing it with their colleagues. After comparison with students' self-reports, the study found that teachers accurately identified half of the students with depression and less than half with anxiety, suggesting some students were overlooked and some incorrectly identified as having mental health problems. In a similar study by Neil and Smith (2017), teachers in the UK described students with impairing anxiety as unable to regulate emotion (e.g., crying, short temper), lacking confidence, showing anxious cognition (e.g., constantly worrying, unable to focus), expressing physical symptoms, and showing anxiety in academic or peer context (e.g., anxious in math, isolating from others). Some of the indicators were not specific to anxiety disorders (Neil & Smith, 2017). Another study of middle school teachers found that many teachers made false positive identification and failed to identify students with high-level depression symptoms (Auger, 2004). A study of high school teachers found that using teacher nomination was adequate for determining the presence or absence of mental health problems, and teachers were better at assessing externalizing problems compared to internalizing problems (Kalberg et al., 2011).

Previous studies have shown that teachers had some difficulties in assessing internalizing problems. This may be due to internalizing problems being less noticeable to teachers in contrast to externalizing problems that attract teachers' attention, for example, through class disruption (Kalberg et al., 2011). In addition, many teachers were not equipped

with mental health training (Cunningham & Suldo, 2014). Relying on teacher nominations as a method of identifying students for intervention could result in overlooking those at risk of internalizing problems; thus, an additional assessment, such as systematic screening, may be required (Kalberg et al., 2011).

1.3.2 Mental health problems screening

In a general health context, screening is a systematic programme of testing people who either do not have or have not recognized symptoms of the condition being tested for (Raffle et al., 2019). Regarding mental health, screening can detect potential emotional or behavioural problems. In the USA, universal screening and referring students to internal support staff have been strongly recommended in school settings to identify students' behavioural and emotional problems (Briesch et al., 2020). The key informants for mental health screening are teachers, parents, and youth themselves (Levitt et al., 2007). Schools emphasize teachers' contribution to school-based mental health screening. Teachers are considered convenient informants for screening because of the natural interaction between teachers and students in the classroom. Teachers are also part of schools, so it is easier for schools to manage the teachers to do the screening.

School-based mental health screening is an excellent alternative to school nomination methods (e.g., teacher nomination) in identifying students' mental health problems, as demonstrated by several studies. For example, a study by Eklund et al. (2009) assessed the effectiveness of teacher referrals versus universal mental health screening in American schools. The universal screening was achieved through the completion of the BASC-2 Behavioral and Emotional Screening System by teachers, while teacher referrals were based on identifying students who needed interventions due to being considered at-risk. The study found that universal screening identified more students at risk of behavioural and emotional issues than teacher referral practice, indicating that universal screening could identify students who were

not detected by teacher referrals (Eklund et al., 2009). Although further assessment is needed to determine whether the students need additional interventions, the results suggest that more at-risk students may have a better chance of receiving mental health services. A further study by Eklund and Dowdy (2014) compared teacher screener identification using mental health screening tools (BASC-2 Behavioral and Emotional Screening System Teacher Form) to school referrals and found that teacher screeners could identify more at-risk students than the traditional school referrals. Other mental health screening approaches produce similar results where school-based screening is more effective than school referrals. In a USA study, students were asked to complete a targeted screening (Columbia Suicide Screen) that assessed suicide behaviours. This resulted in identifying students with a high risk of suicide and internalising behaviours. The results were then compared to identification from school professionals (e.g., psychologists and principals). The study found that targeted screening detected more students at risk for suicide than school professionals (Scott et al., 2009). A meta-analysis of 27 studies suggested that school-based universal screening is the most effective mental health problem identification method than other methods, such as teacher nomination or staff in-service programmes (Anderson et al., 2019). In conclusion, school-based mental health screening supports early identification of students at risk of mental health problems, enabling them to receive mental health care.

Despite this effectiveness, school-based mental health screening is not as commonly used as other methods for identifying mental health problems. In UK institutions, the most common method to identify students' mental health needs was ad hoc identification by school staff and the least common method was universal screening (Marshall et al., 2017). Most schools (87.4%) in the USA did not use school-based mental health screening (Bruhn et al., 2014). Consistent with this finding, another study of school principals in the USA demonstrated that most schools did not conduct universal mental health screening and relied on office

discipline referrals to identify students at risk of experiencing behavioural and emotional problems (Wood & McDaniel, 2020).

In the USA, school-based screening raised some concerns regarding the family's acceptance and feasibility of the screening. Some families were concerned over government intrusion and a violation of the family's right to privacy (Weist et al., 2007). Some questioned the accuracy of the screener and believed that school staff do not have proper training in mental health screening (Soneson et al., 2018). In a systematic review of thirty-three studies on school-based screening, the availability of time, lack of school resources, and cost concerns are barriers to the feasibility of school-based screening (Soneson et al., 2020). According to Bruhn et al. (2014), the concern over the cost of mental health screening was related to the cost of the instruments and the cost of time, personnel, and delivering mental health service for students identified with mental health problems. Other reasons include awareness and access to mental health screening. In the USA, the majority of schools did not use mental health screening due to a lack of awareness of mental health screening, did not have access to mental health screener, and the majority of school principals were not aware of the availability of free resources for mental health screening (Bruhn et al., 2014; Wood & McDaniel, 2020).

Based on a Delphi survey of mental health experts, several issues should be considered when implementing mental health screening in LMICs, such as an adaptation of screening instruments to fit with culture and context, considering most mental health instruments are developed in Western countries (Salamanca-Buentello et al., 2020). The evidence of school-based mental health screening practice in Indonesian schools was unavailable. Nevertheless, there has been an increasing interest in evaluating the adaptation of mental health screening instruments, such as the Strength and Difficulties Questionnaire (SDQ) and the Kessler psychological distress scale (e.g., Tran et al., 2019; Valentia & Turnip, 2022; Wimbari et al., 2019).

1.3.3 Indonesian context

In Indonesia, the government requires schools to provide guidance and counsellor teachers with academic qualification of Bachelor of Education in the field guidance and counselling and have passed the Guidance and Counselling Teacher Professional Education/ counsellor, based on 2014 Regulations of the Minister of Education and Culture of The Republic of Indonesia (number 111). According to the Indonesian Education and Cultural Ministry (2016), the main task of guidance and counsellor teachers is to help achieve the goal of national education and help students reach optimal development, be independent, be successful, and have good levels of well-being and happiness in their lives. As part of their job, guidance and counsellor teachers provide counselling services to students with general and mental health problems.

However, not all schools in Indonesia have guidance and counsellor teachers. In addition, with only a few guidance and counsellor teachers, they could not attend to all students. Mental health screening in schools is not a common practice in Indonesia. Identifying students at risk of mental health problems commonly relies on information from homeroom or subject teachers and parents. Homeroom teachers are subject teachers with additional responsibilities in class management and administration, communicating with parents/students' guardians, and reporting students' learning progress. Homeroom teachers have a more significant responsibility to recognize students' mental health problems in schools. However, it is not known how good Indonesian teachers are at identifying mental health problems in their students.

1.4 Rationale and research objectives

1.4.1 Rationale

As outlined above, mental health problems among adolescents in Indonesia are prevalent, but mental health service resources are limited. School is a convenient place to

provide mental health intervention. The first vital step in mental health intervention is identification of individuals who would benefit from it. Indeed, early identification of mental health problems is crucial to help at-risk students reach appropriate help. Learning from high-income countries, teachers can be effective informants in mental health screening. However, the effectiveness in the Indonesian context is unknown. Therefore, the overall aim of the thesis is to build a better understanding of Indonesian teachers' effectiveness in identifying students' mental health problems.

1.4.2 Research objectives

In considering the prevalence and severity of mental health problems among children and adolescents in Indonesia as well as the lack of research evidence on teachers' effectiveness in identifying mental health problems, the specific objectives of this thesis are:

1. To explore the confidence, needs, and barriers of Indonesian teachers in identifying mental health problems in their students and their perception of the feasibility of mental health screening in school.
2. To determine the accuracy of Indonesian teacher identification of mental health problems in children, identify factors that contribute to accuracy, and explore how teachers identify mental health problems.
3. To determine the agreement between teacher reports in mental health screening to the reports from parents and students.

1.5 Thesis outline

This thesis is divided into five chapters. Chapter 1 introduces the Indonesian context, provides an overview of mental health problems and their identification, and outlines the objectives of the thesis. Chapters 2 to 4 present empirical studies based on the thesis objectives. Chapter 2 describes a qualitative study using semi-structured interviews that explored

Indonesian teachers' confidence, needs, and barriers in identifying mental health problems. Chapter 3 presents a study using a mixed-methods approach investigating Indonesian teachers' accuracy in determining the presence or absence as well as the severity of mental health problems of children as presented in vignettes in a quantitative phase. Then it explores how teachers identified mental health problems in a qualitative phase. Chapter 4 presents a quantitative study that correlated teacher reports on students' mental health problems with reports from students and parents, and then compared them with UK data. The final chapter summarises the main findings from the three empirical studies and synthesises their contribution as well as discussing their limitations, and providing suggestions for future work.

1.6 Acknowledgement of collaborative works

Chapters 2 to 4 are written following a format suitable for submission to peer-reviewed journals. Three educational psychologists from Indonesia contributed to the analysis of qualitative data in Chapters 2 and 3 and were included and are named as co-authors on arising manuscripts. Details of contributions are explained in the manuscripts. As the candidate, I planned, analysed, and wrote the manuscript while the supervisors reviewed and provided comments as co-authors.

Chapter 2: Teachers' Confidence, Barriers, and Needs in Identifying Adolescent Mental Health Problems in Indonesia: A qualitative study

2.1 Abstract

Teachers play an important role in identifying their students' mental health problems through their interaction in school. This study aimed to investigate teachers' confidence, barriers, and needs in identifying varying forms of mental health problems, their opinions about the feasibility of structured mental health screening in schools, and their opinions regarding training to improve their ability to identify difficulties. Thirty-three Indonesian Junior and Senior high school teachers participated in individual online semi-structured interviews. The data were analysed using reflexive thematic analysis. Seven themes were developed: (1) confidence in assessing student mental health, (2) observable behaviours being easier to assess, (3) teachers use a personal approach to identify mental health problems, (4) reliance on personal experience to deal with students' mental health problems, (5) the need for social support, (6) the need for a skill improvement programme, and (7) mental health screening would be feasible in schools. The findings provide an impetus for designing future training for school-based mental health problem identification for teachers.

2.2 Introduction

Young people's mental health problems and the school context

According to the World Health Organization (WHO, 2021), approximately 14% of children and adolescents worldwide have mental health problems. The prevalence may be particularly high in Low- and Middle-Income Countries (LMICs) such as Indonesia. A recent national survey on adolescent mental health by the Center for Reproductive Health, University of Queensland, and Johns Hopkins Bloomberg School of Public Health (2022) found that

approximately 34.9 % of Indonesian adolescents had suffered mental health problems in the past twelve months, with anxiety being the most prevalent. The survey further found substantial psychosocial impairments were related to the identified mental health problems, including self-harm and suicidal ideation. These results highlight the urgent need for intervention in adolescent mental health problems.

However, the mental health resources for these youths, including facilities and mental health professionals (nurse, psychiatric, psychologist), are scarce, especially in LMICs (Juengsiragulwit, 2015; Morris et al., 2011; WHO, 2021). In addition, public and policymakers' awareness of children and adolescents' mental health problems has been reported to be low, meaning that governmental policies to address adolescent mental health are insufficient (Zhou et al., 2020).

This situation demands more accessible community-based services, including those based in schools (Morris et al., 2011). The school offers an ideal setting to promote health and well-being as children and adolescents spend substantial time there (Pulimeno et al., 2020). A number of studies indicate that teachers and parents agree that it is appropriate for schools to play a key role in supporting students' mental health, including identifying mental health problems (Graham et al., 2011; Maclean & Law, 2022; van Vulpen et al., 2018).

Implementation of school-based mental health interventions

School-based mental health interventions have been implemented widely in high-income countries (Fazel et al., 2014; Patalay et al., 2017). It has been found that programmes targeting students identified as having mental health problems are more effective than universal intervention programmes targeting all students. For example, a meta-analysis of thirty-eight studies conducted in the United States found that targeted programmes were more effective in reducing depression symptoms than universal programmes (Feiss et al., 2019). In addition, a multilevel meta-analysis found that targeted school intervention programmes effectively

reduced adolescents' stress (van Loon et al., 2020). To effectively implement such strategies, it is critical that school staff can identify mental health problems in their pupils to ensure that the interventions are targeted to the students who can benefit from them most.

The role of teachers in identifying mental health problems

Regular interaction with students provides teachers with an appropriate viewpoint to identify their mental health problems. A number of studies have reported that teachers perceived themselves as being at the frontline in supporting student mental health, from identifying mental health problems to making referrals to more specialist services (Beames et al., 2020; Bowman et al., 2022; Ekornes, 2015). Many studies in High-Income Countries (HICs) have reported teachers' effectiveness in identifying mental health problems (Green et al., 2022; Kalberg et al., 2011; Splett et al., 2019) and teachers' willingness to support students' mental health (Graham et al., 2011; Reinke et al., 2011). Nevertheless, teachers perceived barriers such as limited skill in addressing student mental health needs, a lack of mental health training, role conflict, large class sizes, and limited time (Mazzer & Rickwood, 2015; O'Farrell et al., 2023).

School-based mental health screening

An alternative to relying only on ad hoc referrals from teachers is to introduce whole-school screening to identify mental health problems (universal screening). This has been trialled in HICs using broad mental health screening instruments. For example, U.S. school studies found that universal screening effectively identified students at risk of mental health problems (Eklund & Dowdy, 2014; Husky et al., 2011). One of the screening instruments that has been translated into different languages and used in many countries is the Strengths and Difficulties Questionnaire (SDQ), a brief questionnaire measuring: hyperactivity, emotional problems, conduct problems, peer problems, and prosocial behaviour (Goodman, 1997). In

Indonesia, the SDQ has been used in public health centres and hospitals (Oktaviana & Wimbari, 2014; Wiguna et al., 2010). It would be possible for the SDQ to also be used in school-based universal screening in Indonesia, and teachers could provide this information as the teacher-report version of the SDQ is well-validated (Goodman et al., 2003).

Soneson et al.'s (2020) systematic review of thirty-three studies based in HICs found that mental health screening was in line with school priorities and preferred by parents and school staff. However, despite this acceptance, schools had concerns over delivering the screening, such as the resources (financial, human, and material) involved and the time used in the screening process. The situation may differ in LMICs due to differences in resourcing, policy, and school structures. Therefore, exploring its feasibility in Indonesian schools before implementing mental health screening is essential.

Current study

In Indonesia, there has been no system or policy to support students' mental health in school (Kumara et al., 2017). Meanwhile, of all adolescents with mental health problems who accessed mental health services, 38.2% used services provided by school staff (Center for Reproductive Health, University of Queensland, & Johns Hopkins Bloomberg School of Public Health, 2022). Indonesian teachers play an essential role in recognising mental health problems in their students, but it is not known how effective teachers are in doing this. Efficacy may vary between different forms of psychopathology. For example, there is evidence from HICs that externalizing problems (e.g., hyperactivity, conduct problems) may be more easily identified by teachers than internalizing problems (e.g., anxiety, depression) (Soles et al., 2008; Zee & Rudasill, 2021). Understanding teachers' perceptions of their abilities to identify forms of psychopathology is important. If teachers appreciate which forms of psychopathology they are best able to identify, then this can facilitate their uptake of targeted training to aid the identification of forms of psychopathology where they require support. Furthermore, research

has not previously explored Indonesian teachers' perceived barriers to identifying their students' mental health problems via ad hoc referral or universal screening and the support they perceive they need to overcome them.

The present study addresses these gaps. A qualitative methodology explores the confidence, needs, and barriers of Indonesian teachers in identifying varying forms of mental health problems in their students, their opinions about the feasibility of mental health screening in schools using the SDQ and mental health training programmes that aim to increase their ability to identify students' needs.

2.3 Method

2.3.1 Participants and procedure

Ethical approval was granted by the Department of Psychology Research Ethics Committee University of Sheffield (number 036290) and the study was preregistered on the Open Science Framework (<https://doi.org/10.17605/OSF.IO/7PK52>). Participants were recruited from schools in Indonesia with the following inclusion criteria: teachers permanently employed working in a junior (students aged 13-15 years) or senior high school (students aged 16-18 years). We included junior and senior high school teachers as students at these levels corresponding to adolescence.

We sent invitations via social media platforms to headteachers and teachers already known to the research team and asked them to share the invitation with other teachers. Written and verbal consent were obtained from all participants prior to interviews. We provided participants with a telephone voucher worth Rp. 100.000 (around £5 or \$7) to compensate for the online data allowance that participants would have used during the online interview.

Thirty-four teachers responded, but only 33 teachers were interviewed and one participant was unavailable. The participants are identified by pseudonyms (see Appendix A). Nineteen participants were female, and 14 were male. Their ages ranged from 23 – 56 years.

They were from five junior high schools ($n = 16$) and six senior high schools ($n = 17$), with teaching experience ranging from 1.5 to 33 years. Teachers were based in four of Indonesia's 34 provinces: Riau ($n = 2$), East Kalimantan ($n = 1$), Banten ($n = 1$), and West Java ($n = 29$). Three participants were guidance and counselling teachers (who provide counselling services to students in need). The rest were subject teachers (who deliver specific subject teaching) and homeroom teachers (subject teachers with additional responsibilities in class management and administration, communicating with parents/students' guardians, and reporting students' learning progress).

2.3.2 Data Collection

A qualitative research methodology was utilised. We used semi-structured interviews to explore teachers' perceptions and experiences in identifying mental health problems. Due to COVID-19, we conducted the interviews online. Before the interview, we sent teachers a link to Qualtrics, an online platform (<https://www.qualtrics.com>), consisting of a survey of demographic information (age, gender, length of time being a teacher, and employment status) and the Indonesian version of the Strengths and Difficulties Questionnaire (SDQ). The SDQ is a 25 items questionnaire that rates children presented under five categories: 1) emotional problems; 2) conduct problems; 3) hyperactivity/inattention; 4) peer relationship problems; 5) pro-social behaviour. In the survey, participants were asked to consider their confidence in their ability to identify each item from 1 ("not confident at all") to 5 ("very confident"). Each participant completed the survey online and downloaded it so it was available for discussion during the interview.

Interviews were conducted individually via online video meetings in Indonesian, which was the first language of the teachers and the interviewer. The interviewer (ARS) initially explained the study objectives, read the informed consent, and asked for permission to record the interview. The interviews were based on a semi-structured topic guide (see Appendix B)

which contained key questions and suggested probes (e.g., “*Based on your experience, how do you usually recognize a problematic student?*”; “*How confident did you feel about your ability to recognize a student with mental health problems?*”). Interview duration ranged from 25 – 52 minutes (mean = 33). Interviews were audio and video recorded, then transcribed by ARS. The recordings were deleted following data analysis. Transcripts with pseudonyms are available via the OSF (OSF web address to be added).

2.3.3 Reflexivity

ARS is a postgraduate student at the University of Sheffield, UK, and a lecturer at Universitas Jenderal Achmad Yani, Indonesia. ARS is also a clinical psychologist with experience as a practitioner in an Indonesian school. ARS was familiar with the issues faced by teachers in identifying mental health problems. Some participants came from the school where ARS had worked, which helped build trust in the interview. Nevertheless, this could also cause bias. There was a possibility that knowing the interviewer's background as a psychologist could influence some participant's responses in the interview. They might give socially acceptable answers. To minimize bias, ARS considered participants' backgrounds, the relevance of questions and answers, the consistency of data across interviews and involved other mental health experts (WAH, VAJ, RR, AD) in reviewing the coding and themes. ARS developed a coding framework from the data and engaged other Indonesian psychologists (WAH and VAJ) in reviewing the coding. WAH and VAJ are educational psychologists and lecturers at Universitas Jenderal Achmad Yani, Cimahi City, Indonesia. As supervisors, RR and AD reviewed the coding framework and emergent themes. RR and AD are mental health researchers. At the time of publication, RR is a professor of psychology at the University of Sheffield, UK. AD was a lecturer in psychology at the University of Sheffield, UK, at the time of data analysis and is currently an associate professor at the Faculty of Psychology, SWPS University of Social Sciences and Humanities, Warsaw, Poland.

2.3.4 Data Analysis

We conducted the six phases of thematic analysis recommended by Braun and Clarke (2006):

Phase 1. Familiarisation with data. ARS listened to the recording and transcribed the interview. The transcriptions were in Indonesian and analysed by ARS, WAH, and VAJ. ARS, WAH, and VAJ began their immersion in the data by (re)listening to the recording, highlighting some critical data, and adding notes to the transcription.

Phase 2. Generating initial codes. Open coding was performed using NVivo 12 Pro. Codes were assigned to information (sentences or paragraphs) focused on the semantic and latent meaning. A coding example is provided in Table 2.1. This coding was completed by ARS and reviewed by WAH and VAJ. The researchers produced a compiled list of codes from all transcriptions at the end of coding. The list of codes and interview citations were translated into English by ARS.

Table 2.1

Example of Coding

Data	Codes
<p><i>"Difficulty to identify at the beginning. So, sometimes it needs time. Is it a health problem? Mental health problem? Or maybe it is just a bad mood, or maybe it is only a temporary problem. It needs time, and sometimes, I personally regret that I am not sensitive, so I cannot recognise that it is actually a mental health problem. (...)"</i> (Opik)</p>	<ul style="list-style-type: none"> -Difficulty in identifying mental health problems -Needed time to understand the problems -Teacher felt insensitive to recognising mental health problems

Phase 3 to 5. Developing themes. ARS examined the codes list and created initial themes by clustering codes with similar concepts or meanings related to the research questions. We used a flexible approach by continuously engaging with codes and data. After generating initial themes, ARS reviewed them and confirmed whether they worked well with codes, datasets,

and research questions by (re)reading the transcriptions and codes. RR and AD then reviewed the themes.

2.4 Results

Seven themes were developed (see Table 2.2) concerning the research questions.

Table 2.2

Themes, Sub-themes, and Question Addressed

Themes	Sub-themes	Question addressed
Theme 1. Confident in assessing student mental health	1. Teachers are well-placed to identify students' mental health problems.	Teachers' confidence
	2. Teachers as 'parents' in school	Teachers' confidence
	3. Being confident is important.	Teachers' confidence
	4. Barriers to identifying mental health problems.	Teachers' barrier
Theme 2. Observable behaviours are easier to assess	5. Identification through student school performance.	Teachers' confidence
	6. Confident in assessing visible behaviour.	Teachers' confidence
	7. Time and space limitations.	Teachers' barrier
Theme 3. Teachers use a personal approach to identify mental health problems	8. Personal conversations.	Teachers' confidence
	9. Closeness with students contributes to confidence.	Teachers' confidence
	10. Need to improve communication skills.	Teachers' need
Theme 4. Teachers relied on personal experience to deal with students' mental health problems	11. Experience contributes to confidence.	Teachers' confidence
	12. Experience should be supported by knowledge.	Teachers' need
Theme 5. Teachers need social support	13. Informational support.	Teachers' need
	14. Suggestions from colleagues and professionals.	Teachers' need
Theme 6. A skill improvement programme	15. Workshop with actual problem practice	Training programme
	16. Programme continuity	Training programme
Theme 7. Mental health screening is feasible to be conducted in school	17. Teachers support mental health screening	Feasibility of mental health screening
	18. Benefits of mental health screening.	Feasibility of mental health screening
	19. Concerns about students' accuracy.	Feasibility of mental health screening
	20. Screening as the first phase.	Feasibility of mental health screening
	21. Parents' acceptance.	Feasibility of mental health screening

Theme 1. Confidence in assessing student mental health

Teachers are well-placed to identify students' mental health problems. Most participants thought teachers play an important role in preventing mental health problems due to their substantial time interacting with students. Moreover, subject teachers are well-placed to identify students' mental health problems because one of their tasks is to formally record a learning attitude assessment and an academic evaluation for each student every semester. One of the teachers mentioned keeping a journal to note students' learning attitudes. The journal has helped her to recognise students with problems.

"When I teach, I also make, uhm, an attitude assessment. There is an attitude assessment in the 2013 curriculum. I also pay attention to the attitude of the children at school in the classroom while studying. So, I usually make notes in the form of a journal about the development of their attitudes while studying. Actually, this guide is from the 2013 curriculum, where there is also an attitude assessment for grades on the report card. So, all subject teachers must also have a journal. It records the behaviour of children in both positive and negative terms... So, having a journal really helps me to identify my students with problems." (Brigitta)

Teachers as 'parents' in school. Many teachers perceived themselves as performing the role of parents in school. They cared for and treated their students as their own children. As described by one of the teachers, this included giving motivation, identifying students' problems, listening to their problems, or giving solutions to academic and personal problems.

"Teachers' role is important because teachers are second parents to the students. Of course, besides teaching, the teacher's role is important to give learning motivation for the students or give solutions to their problems in school and personal problems (laugh). Teachers are usually involved. "(Putri)

Some teachers felt they knew their students better than their parents. Some teachers reported that some parents had communication problems with their children. For example, children were not open about their problems and listened to the teachers more than their parents.

"There is a tendency, do not know why children listen to teachers' words more than parents' words. Parents said that. Some of them. So, sometimes parents also ask for help with their children's problem, (...) Or sometimes even parent ask for help with things at home that is not school-related. Maybe because there is a tendency to listen to teachers more than parents." (Lukman)

Being confident is important. When reviewing the SDQ, many teachers felt confident in their ability to identify mental health problems. Some assumed confidence was important for teachers to do their tasks well. Apart from their capability, they felt the confidence energized them to give their best effort in managing the students' mental health problems. Some teachers believed that the effort was more important than the results.

"I am very confident. Because if we are not confident, how can we get involved in students' problems? So, as a teacher, confidence is needed and very important. If we are not confident, how can we handle the variety of children's problems? Mental health also has many types, so if we are not confident, we cannot handle problems to the root of it. "(Putri)

Barriers to identifying mental health problems. Teachers identified some barriers to identifying mental health problems. First, some teachers had time constraints due to the demands of their other duties, such as delivering the lessons and other academic tasks, resulting in late identification of their students' mental health challenges.

"(...) because there are many tasks to do and many other activities that need to be prioritized, sometimes we are late to identify the student." (Ian)

The second barrier was a lack of knowledge of mental health problems. Limitations in mental health knowledge meant teachers perceived that they needed more time to identify mental health problems because they had difficulties differentiating between typical adolescents' problems and mental health problems.

"Difficulty to identify at the beginning. So, sometimes it needs time. Is it a health problem? Mental health problem? Or maybe it is just a bad mood, or maybe it is only a temporary problem. It needs time,

and sometimes, I personally regret that I am not sensitive, so I cannot recognise that it is actually a mental health problem. (...)" (Opik)

Theme 2. Observable behaviours are easier to assess

Identification through student school performance. Teachers identified students' mental health problems from their classroom observations. Most described the identification of mental health problems as developing over time. They first tended to notice students' difficulties in academic or school performance, including poor academic scores, not completing school tasks, and truancy. As mentioned below:

"First, I see it from academic scores, then attitude or their behaviour." (Putri)

"To identify? How to identify? First, from attendance, uhm, from students' attendance in my class. (...) Second, from the school tasks. Usually, the one with problems will be late or not attend school. The last is from behaviour; the student tends to withdraw in class, quieter. Then another behaviour, uhm, the children are often truant. Then from other behaviour: troublemaker, mischievous." (Karin)

The teachers believed that problems of this sort correlated with mental health problems.

"I am from the disciplinary division, so I know students' problems that happened in class or outside the class. We have a red or green card system, so every teacher will give a red card to students who violate it. (...) Most students who had problems, uhm, personality problems must have problems in disciplinary, mostly like that, it is usually like that. So, I can see it from that. I see the violation, then check the child." (Gani)

Teachers also identified students' mental health problems from negative changes in their behaviours.

"Usually, for students who are not first-year students, we see it, for example, from the behavioural change, or for example, what incident previously happened, usually like that, for example, the loss of a family member. Usually, there is a trigger, behavioural change in students. Later on, the change of behaviour will cause a problem, usually the negative change, for example, sudden withdrawal, or sudden bursts of emotion." (Lulu)

Confidence in assessing visible behaviour. Teachers felt more confident identifying problems that could be seen, for example, fidgeting or moving around in the class. Teachers tended to give more attention to active students and could more easily identify when these sorts of behaviours indicated that the student was experiencing mental health difficulties.

Based on the SDQ, teachers felt more confident assessing hyperactivity, prosocial behaviours, peer problems, and conduct problems than emotional problems.

"Uhm, more confident, probably this, restless, overactive, easily distracted. These are things that can be seen directly by teachers when they teach, for example. Then, what else. Rather solitary, it is obvious. Very visible in the class. That is where I am most confident. For me, it is very visible." (Nana)

"Easier to assess were prosocial with the point on top, and peer problem also easy. But not as easy as prosocial. (...) Prosocial was behaviours toward others. So, without being asked, we can observe. Sometimes, in recess, uhm, look from afar, it can be seen, or for example, it is spontaneous sometimes, like helping people. It is spontaneous, so it is easier to see than something related to their own feeling. It needs, needs more effort." (Cici)

Teachers felt that emotional problems were more difficult to assess because the symptoms were difficult to see. Teachers needed more effort to communicate further with the students. As explained by one participant, homeroom teachers responsible for managing students in the class were more likely to do that.

"(...) emotional problems are difficult to see with my eyes. It is more, for example, about fear (...) Uhm yes, many fears, easily scared. They were very difficult. It needs further communication. Uhm, I think homeroom teachers can explore that." (Edi)

Nevertheless, a few teachers felt emotional problems were the easiest to assess. They could be inferred from the students' facial expressions. As mentioned by Juna:

"For me, mostly number sixteen (often complains of headaches, stomach aches or sickness) and twenty (many fears, easily scared). I mean, it is obvious from how they behave daily in class. For example, in point eighteen: often unhappy, downhearted, and tearful. We saw that the child was gloomy in class or

feeling down when getting a bad mark, or crying. Obvious from their facial expression. So, for me, point D (emotion problems) was easy to observe." (Juna)

Time and space limitations. Although school observation was convenient, teachers felt there were some restrictions on their opportunities to spot mental health problems. Teachers observed the students' interaction in school and gave more attention to students with distinctive behaviours or who behaved differently from others. With the demands of academic tasks, teachers found it difficult to observe all students individually in class, given limited time.

"Oh, this, on hyperactivity problem. I felt less, what is it called, a little bit difficult to assess. Because these were too specific; restless, overactive, uhm, cannot stay still for long, uhm, these were very specific. So, to observe, uhm, these behaviours or child conditions needed special attention. For example, when we targeted one child to really see whether he was restless, overactive, then moving, or distracted. I usually gave little attention to class observation because it needs special time for one child, for example." (Heru)

Teachers could only observe students in school areas. Some students' behaviour problems were not seen in school. As described by participants, some students acted differently in school and at home. They thought that parents were responsible for giving information about their children to teachers.

"My difficulty in identifying students' mental health was maybe, uhm, sometimes, our students in school, some students in the school were different, at home they were different. "(Brigitta)

"... there should be information from the parents first because teachers have many limitations in knowing children in detail. Sometimes, we know the child from the class, and in the class, sometimes it is not apparent whether the child is good or not in mental health. It is the parents. ... parents have a responsibility to inform the teachers about things related to their child so that teachers can properly treat the child in the learning process. "(Candi)

Theme 3. Teachers use personal conversations to identify mental health problems

Personal conversations. Teachers reported that they tried to identify the rationale of students' behaviour to avoid misinterpreting problems. This was achieved by having personal conversations with students in formal or informal settings. Some teachers used formal school meetings, such as individual appointments, to discuss academic or personal issues. Other teachers preferred informal meetings, such as having lunch, watching movies, or playing sports. Although, some teachers felt opportunities for these activities were limited since they had to do their work and achieve a balance between work and family time.

"I usually ask them to eat. Eat, then once, twice, three times, usually when we eat, in a relaxed atmosphere, no tension, in the atmosphere not as formal as school, usually; students will be more at ease to tell me their problems or what is bothering them. Actually, it happens a lot to my students. Usually, when we eat, or for example, even when they have problems with their friends in class, it will pour out when we ask them to eat. We converse, relaxed. So, my approach is more like an approach that diverts them from the formality of school into a more relaxed situation. So, they can express their burden and let it out. "(Mulya)

Closeness with students contributes to confidence. A personal approach helped teachers to get closer to students. Teachers felt more confident identifying mental health problems when they know their students well. Frequent interaction made them closer to the students and helped them to understand their personalities. This helped them recognize when the students were having problems. As explained by a teacher:

"Well, factors that contribute, first, definitely our closeness with the children. So, if we are close with the child, we will immediately know, 'Oh, he is ok or not ok.' So, it is more about our closeness. If we come to a new class and do not know them in daily life, then I cannot immediately know whether the child is having problems." (Ima)

Need to improve communication skills. However, teachers found that some students were not open, and some were reluctant to talk about their problems to teachers. Some participants

perceived that this was related to trust. They said some students were concerned about confidentiality and worried the teachers would not take their side. Teachers felt they needed knowledge to communicate effectively with the students to overcome this barrier.

"I am very cautious when I ask the children because some of them feel 'will be reported.' In fact, not everything I heard must be reported to homeroom teachers or guidance and counsellor teachers... If it is for me, I need to be close to the children. Of course, I need some kind of advice, knowledge to communicate smoothly with the children. So, I know, 'Oh, I have to ask this. When the children say this, probably because of this.' So, there are some probabilities. So, I can understand the children. I actually need the knowledge." (Mia)

Theme 4. Teachers relied on personal experience to deal with students' mental health problems

Experience contributes to confidence. Most of the teachers did not have formal training or education in mental health, and they were concerned about their lack of knowledge. Teachers felt this was a barrier that could lead to misinterpretation of problems. Thus, teachers informally studied mental health and relied on their experiences to identify mental health problems.

"Uhm, difficulty, sometimes I got different information. Everyone had a different version. (...) sometimes my conclusion could be wrong or could be right. If it is wrong, it means that I made a wrong diagnosis. (...) So, sometimes because of the limitations of my knowledge, I made the wrong conclusion that led to the wrong diagnosis and wrongly took steps. That is what I am most afraid of." (Dian)

Teachers felt that the experience of interacting with the students contributed to their confidence. Teachers explained that the teaching length related to their interaction duration with the students. They could understand the students' behaviour. This experience helped them to identify problems in students that exhibited similar behaviour to previous students. The experience of successes or failures in handling students' problems also affected teachers' confidence. Teachers' personal experiences influenced how they perceived and understood

students' problems. Learning from their own experiences made them empathetic to students' problems and treated students the way they wanted to be treated. One of the teachers mentioned that teachers' ways of handling students' problems were shaped by years of experience.

"The factors probably were several years of teaching experience, seeing the child's characters and the changes over time. (...) The main point is probably the experience of seeing children from time to time. The tendency, for example, last year, I saw a child who acted in a certain way, so probably this child is acting the same way. "(Bagus)

Experience should be supported by knowledge. Although teachers used their experience to identify mental health problems, they thought it should be accompanied by knowledge. Teachers thought that they needed knowledge about the student's mental health. Thus, combining experience with knowledge could increase their confidence.

"Uhm, of course, experience. Experience, the experience that taught me a lot about many kinds of problems that I faced, especially with the students. Unfortunately, maybe this experience was not supported by the science (laugh) that I got. (...) Apparently, after I went through this, the knowledge about students was that I needed more. So, my confidence could increase, not only, not only experience that I got but also I should get the knowledge." (Putri)

Theme 5. Teachers need social support

Informational support. As summarised above, teachers faced several barriers in identifying mental health problems. They needed social support to overcome these. Most teachers felt their information about the students should be supported by information from other sources, namely parents, colleagues, and children's peers. The information that confirms their findings influenced their confidence.

"Uhm, besides that, the confidence may be because there were inputs from friends, the environment. From teachers or others. For example, when I had already assessed (a student), then there were similar responses from other teachers, ' Oh, the assessment was the same.' Then, ' Oh, right, with those

characters, the child should be treated like this.' Uhm, from sharing with friends or other teachers."

(Bagus)

Suggestions from colleagues and professionals. Some teachers needed suggestions from their colleagues. They discussed their students' problems with other teachers in regular meetings or in other settings. Attending these meetings gave them a new perspective on the problems and helped them find practical solutions.

"Yes, maybe I need to learn more. Sometimes, I like to converse with other homeroom teachers, especially at our Tuesday meeting. Usually, the homeroom teachers' meeting is on Tuesday. Usually, we confide there, for example, 'We have problem A with this student. Do you sense it in your class?' Sometimes, there were teachers who felt the same. Usually, from that discussion, there was an alternative solution. I usually think, 'Oh yes, why didn't I think that way?' So, by conversing, ideas usually came up to deal with the problems. It is like that." (Mulya)

Teachers also needed professional support that could guide them to handle students' problems, such as input from psychologists.

"We really need a guide. It does not have to be the student who talks to the psychologist. However, maybe the homeroom teacher or teacher who knew the problems can consult with the psychologist or someone who can give suggestions." (Putri)

Theme 6. Skill improvement programme

Workshop with actual problem practice. Previously, teachers mentioned several barriers to identifying mental health problems, including a lack of mental health knowledge and skills. When being asked about what programme they considered effective to help them increase their ability to identify mental health problems in their students, most teachers preferred training programmes involving workshops. Teachers suggested that workshops should be interactive with videos, discussion of real cases, role-playing, and real practices.

"Maybe a workshop, uhm, we try to recognize it with their friends, the teachers, maybe the closest one, then we practice in our own class. We must find one, two, three students that we must help, so not only

training but also practice, to know active children, help them uhm find their problems and find a solution for them, should be like that. So, first workshop, we are given the knowledge, then practice with colleagues, and then to the students directly. It is my opinion." (Femmy)

Programme continuity. Some teachers suggested that the workshop should be a routine programme for schools. Some suggested the continuity of the programme through supervision. This would help them keep their motivation and maintain their skill.

"(...) Sometimes, people after a training or workshop were passionate, after a month or two, it disappeared (laugh). I do not need it to be long but hold it frequently, like a routine programme. Either it is once every semester or twice every semester. Actually, the theory was good. It was just that sometimes the teachers often forgot, and the spirit was down, maybe for a lot of reasons. So, it does not have to be long, but frequent." (Brigitta)

Theme 7. Mental health screening can feasibly be conducted in schools

Teachers support mental health screening. Teachers agreed that it is feasible to screen for mental health problems in school using a questionnaire like the SDQ. Teachers would support and fill out the screening questionnaire. Teachers considered screening as the first phase in identifying mental health problems.

"The teachers will support. Because it is very helpful for early identification of children's conditions in their classes. " (Opik)

Benefits of mental health screening. Most teachers accepted mental health screening because of a number of benefits: (1) early identification of mental health problems, (2) facilitating students' expression of mental health problems, (3) as evidence for parents, (4) as additional information for teachers, and (5) recording in a student archive. Teachers thought screening was an early identification of mental health problems that could indicate which students should be a priority for support.

"First step, because to specifically identify, we need to screen first. After the screening, we sort out because we do not have enough time to support all students to get the service. I am sure there are

children who really need it, and the urgency is more than for other children. With this method, ... it is necessary to sort out who will get the support first to recover soon." (Opik)

Teachers explained that some students were uncomfortable having a personal conversation with teachers about their problems. Teachers argued that using a questionnaire could facilitate children unable to communicate their problems directly to a teacher.

"It is good. We could know something that they could not express through words. There were children who did not feel comfortable having a one-on-one meeting with their teacher, and with this, maybe they could have written communication. Because it is a questionnaire, they might fill it in." (Lulu)

Teachers reported that some parents needed evidence that teachers had done something to ensure their children's mental health, such as screening for mental health problems.

"(...) It is a good form of early detection in one phase. And usually, parents will appreciate it when there is evidence. If, for example, 'Mam, I have done one-to-one,' but sometimes they are not sure. But, for example, if the evidence is in physical form, for example, a questionnaire or something, the parents will say, 'Oh, yes, it turned out there was a step that has been done at school.' The form is more real than a one-to-one meeting." (Lulu)

Due to the lack of mental health knowledge, teachers thought the questionnaire was a useful guide for identifying mental health problems.

"(...) For me, it is good. With the questionnaire, I know things that I previously did not know, so I know the indicators. We did not know many of the points or indicators. With the questionnaire, 'Oh, these are the indicators, these are the indicators.' So, it added to our knowledge." (Brigitta)

Teachers saw an opportunity to use the results of the questionnaire as a database to understand their students.

"It is very possible. I even encourage it. As a headteacher's policy, I want to have the screening in the early year. Uhm, we should have data about children's emotions so the teachers could get input to get to know their students closer. For me, I really, really need it. I approve of it." (Ovi)

Concerns about students' accuracy. Teachers predicted that students would be willing to fill in a self-report questionnaire because it would be a school programme. However, some teachers

had concerns about the accuracy of the results. First, they were worried about some students' honesty. Second, they worried that students' literacy skills would affect how they answered the questionnaire. They suggested using the questionnaire as a guide to converse with students with low literacy skills.

“The students, so far never, never questioned something new, especially if it related to educational activity, in our school. They will follow, but there was a concern about how the data will be answered based on their own honesty. We cannot guarantee 100 per cent that it can describe them.” (Opik)

“Use a questionnaire for students. To students, uhm, probably, to students, in my opinion, it is better if we talk to them directly. We hold the questionnaire, uhm, ... Especially to junior high school students; the questionnaire is not given directly. Sometimes, as I did, uhm, sometimes the children may say, ‘Oh, these are almost similar (the questions).’ So, maybe it is confusing for them. If, for example, we communicate directly with them and explain it, that may be more effective. In my opinion.” (Kiki)

Screening as a first step. Some teachers viewed the questionnaire as the first phase that should be followed up. They suggested accompanying the questionnaire with an interview to understand the students better.

“For me, it is ok. I think the questionnaire only assesses the surface. If only the questionnaire. In my opinion, it will be better if the questionnaire is accompanied by this conversation. If we converse, we can be deeper in telling. In the questionnaire, we can only choose from available options without explaining other things that are not represented by the options.” (Mulya)

Parents' acceptance. When asked about the possibility of parents accepting screening, teachers predicted that parents would be supportive if they were given a proper explanation about the programme. According to teachers, some parents did not really know their children's personalities, and they needed to understand their children from a different point of view.

“About parents, from us, so far, anything that we did and if it conveyed and given a good explanation about the programme that we did, the parents were very supportive. Especially about this, that is really needed by the parents. Most of the students in our school, their parents really wanted to know about their children's condition personally, as personality.” (Opik)

2.5 Discussion

This study explored teachers' confidence, needs, and barriers regarding identifying mental health problems, their opinion of the feasibility of mental health screening in schools, and a programme to increase their ability to identify mental health problems in students. We highlight that teachers perceived a lack of mental health knowledge as a fundamental barrier and that the implementation of mental health screening in Indonesian schools would be acceptable.

Teachers' confidence

Similar to prior studies from the USA and Australia (Graham et al., 2011; Mazzer & Rickwood, 2015), teachers in this study were confident in supporting students' mental health. Our findings indicate that most teachers had medium to high confidence in their ability to identify mental health problems. Results suggest that the teacher's task of recording student learning behaviour makes the teacher familiar with observing student behaviour in class. Thus, supporting them in identifying students' mental health problems. In addition, teachers perceived themselves as fulfilling the role of parents for their students in school. This is consistent with Shelemy et al.'s (2019) finding that teachers in the UK showed parental-like caring and sympathy for students. As parents in the school, teachers in this study cared about their students and were willing to support them beyond their academic work, although they felt that they lacked mental health knowledge. Teachers in this study thought that regardless of their limited mental health knowledge, they must be confident in supporting their students, thus motivating them to do well in their tasks. Meanwhile, some teachers were reluctant to engage in activities supporting students' mental health due to a lack of training, experience, and confidence, conflict with academic tasks, or concerns over their mental health (Graham et al., 2011; Kidger et al., 2010). These findings encourage incorporating teachers' parental-like caring into mental health training and encouraging teachers to support student mental health.

The teacher-student relationship has been considered important in supporting students' mental health (Krane et al., 2016; Mælan et al., 2018). In this study, teachers were more confident identifying mental health problems when they were close to and knew their students. Teachers used a personal approach to understand their students. In line with a prior study (Dimitropoulos et al., 2022), building strong and positive relationships with the students could help teachers to identify and respond to students' behavioural changes and open communication with the students.

This study found that teachers were more confident in assessing overt behaviour. As demonstrated when considering the SDQ sub-scales, teachers felt more confident identifying hyperactivity, prosocial behaviours, peer problems, and conduct problems than emotional problems. They recognized negative behavioural change among students as a sign of the onset of mental health problems. Teachers were more likely to observe students in a school setting and base indicators of mental health problems on their change of behaviours in addition to poor academic performance (Abidin et al., 2002; Dimitropoulos et al., 2022; Green et al., 2017).

In the current study, teachers reported that frequent interaction with the students, especially in handling students' problems, increased teachers' confidence in identifying mental health problems. Teachers used their personal experiences to deal with students' mental health problems. The accumulation of teachers' experiences shaped their perception of mental health problems and how to identify them. Nevertheless, teachers' personal experiences may differ from one another. This may lead to a different interpretation of the same behavioural cues. Moreover, we found that teachers needed more time to identify mental health problems without sufficient mental health knowledge. As many schools in Indonesia rely on teachers' nominations, further studies should be conducted to investigate teachers' effectiveness in identifying mental health problems.

Barriers and needs

The teachers reported that they faced several barriers when identifying mental health problems. We highlight the lack of mental health knowledge as a major barrier and the competing demands of teachers' academic tasks as another barrier. Most teachers in this study reported insufficient knowledge of mental health problems. They felt they were not equipped with mental health knowledge before becoming teachers, which made them worried about misinterpretation in identifying mental health problems. Many prior studies from other world regions reported insufficient preparation among teachers to deal with students' mental health and the importance of mental health training for teachers (Graham et al., 2011; Kidger et al., 2010; Reinke et al., 2011; Rothi et al., 2008; Shelemy et al., 2019). For example, teachers in Australia felt incompetent in dealing with students' mental health problems due to limited mental health knowledge. They expressed the need for mental health training covering the symptoms of mental health problems (Graham et al., 2011).

Meanwhile, the teacher's primary responsibility to effectively deliver the lessons raised another barrier. In this study, teachers' focus on delivering lessons led to time constraints in observing students in school. This barrier was also found by Rothi et al. (2008) among teachers in England. The teachers felt unable to support students with mental health problems because of their teaching responsibilities. Moreover, teachers were limited to observing students in school settings during school hours. Without enough mental health knowledge, teachers preferred to gather information from the students as the primary source. However, teachers found that some students were reluctant to tell of their problems due to a lack of trust. This adds another barrier for teachers.

Teachers expressed the need for support and a programme to overcome the barriers. More specifically, they needed information from parents, colleagues, and children's peers, input or suggestions from colleagues or mental health professionals, and guidance from mental

health professionals. This study supports a Canadian study to endorse collaboration between teachers, parents, students, and school administrators (Dimitropoulos et al., 2022). These findings highlight the need for collaboration in managing students' mental health problems.

Teachers' improvement programme

In this study, teachers recognised the usefulness of workshops to develop their mental health literacy and ability to identify mental health problems. They suggested an interactive workshop with real cases and practice under expert supervision. They preferred a continuous routine programme. The result is consistent with the findings from a systematic review emphasising the need for intensive training and ongoing supervision to ensure school staff's fidelity in delivering mental health services (Gee et al., 2021). Therefore, based on findings from the current study and those reported in the literature, an adequate programme to enhance Indonesian teachers' skills and knowledge is suggested. This might cover child development, mental health and identifying mental health problems, interviewing students, and their families (Juengsiragulwit, 2015), and effective communication with the students.

Feasibility of school-based mental health screening

In the current study, teachers indicated that mental health screening was feasible in schools. Teachers noted the benefits of using a screening questionnaire. They suggested using a questionnaire such as the SDQ as the first phase of mental health problem identification, then continuing with a further assessment by the teachers. The questionnaire could also facilitate children having difficulty communicating their problems.

Participants believed teachers, parents, and students would accept mental health screening in schools. However, despite its acceptance, the selection of informants for screening poses another issue. In a school setting, informants that are commonly used in mental health screening are teachers, students, and parents. However, using all three as multiple informants

may be costly and time-consuming. Levitt et al. (2007) suggested that self-report provides a key perspective because adolescents are reliable sources for reporting their emotions and behaviours. In addition, self-report may be more efficient, especially in universal screening. However, some teachers in this study raised a concern about the validity of students' answers. The existing literature contains mixed findings on teachers and parents as better informants to predict child psychopathology (Honkanen et al., 2014; Karlberg et al., 2011; Kuhn et al., 2017; Verhulst et al., 1997). Hence, further studies should be conducted investigating the efficacy of teachers, parents, and students as informants. It is possible this will vary by context, for example, determined by the extent and richness of student-teacher interaction.

2.6 Strengths and limitations

To our knowledge, this is the first qualitative study exploring teachers' confidence, needs, and barriers in identifying mental health problems in Indonesia. Using a qualitative approach enabled us to gain more understanding of teachers' perceptions and experiences in managing mental health problems. Our findings can be used in the development of school-based mental health programs to increase teachers' competency in promoting students' mental health in Indonesia.

There are limitations to the current study. The nature of the qualitative method meant that the findings were based on teachers' introspection. This provides a unique perspective on the teachers' perceptions of identifying mental health problems in school children. This is an angle that must be considered in order to develop service provision. However, corroboration from quantitative studies, for example, regarding how well teacher identification of mental health problems relates to other informants, would be beneficial.

Chapter 3: Teachers' Accuracy in Identifying Mental Health Problems: A Mixed-Method Study

3.1 Abstract

Accurate identification of mental health problems could lead at risk students to receive appropriate intervention. Numerous studies found mixed results on teachers' ability to identify mental health problems. The current study investigated teacher accuracy and how teachers identified mental health problems. A mixed-methods sequential explanatory design was used consisting of two phases. The first phase used a quantitative method. Data was collected using a vignette questionnaire completed by 131 homeroom teachers from junior and senior high schools. Results from the first phase determined participant for the second phase. The second phase was a qualitative method using a semi-structured interview. Twelve teachers participated in this phase. This study found teachers accurately identified the presence of mental health problems, but were less accurate in assessing severity of the problems. Based on the interview, two themes and nine sub-themes emerged. The first theme, identification of mental health problems, consisted of comparing the situation presented in the vignettes with personal experience, observing behavioural and emotional responses, identifying disturbances in a child's functioning, family life and adverse experiences affecting a child's mental health, need to explore the cause of mental health problems and mental health knowledge versus sensitivity. The second theme, assessing the severity of mental health problems, consisted of assessing the impairment in the child's functioning, assessing from teachers' experience and the need to explore the problems.

3.2 Introduction

Half of lifetime mental disorders onsets in childhood or adolescence (Kessler et al., 2007). To reduce this burden, early intervention for mental health problems is important. Accurate identification of mental health problems as a first intervention phase could lead at-risk adolescents to receive appropriate help. Studies found that youth with mental health problems in the general population commonly received mental health care in school (Center for Reproductive Health, University of Queensland, & Johns Hopkins Bloomberg School of Public Health, 2022; Duong et al., 2021).

Teachers' role in identifying mental health problems

Daily interaction in school settings allows teachers to observe students' mental health conditions, and some students share their issues with them (Phillippo & Kelly, 2014). Systematic reviews indicate that teachers are actively involved in school-based mental health intervention (Franklin et al., 2012; Pulimeno et al., 2020). Even though many teachers accepted responsibility for taking care of student mental health (Rothi et al., 2008), teachers responded differently concerning their role in supporting student mental health. Some teachers perceived supporting students' mental health, such as identifying mental health problems, as part of their role as a teacher (Mazzer & Rickwood, 2015; Rothi et al., 2008), whilst others believed mental health professionals, such as school psychologists, had a more important role (Reinke et al., 2011). Teachers' perceptions of their ability to identify mental health problems seemed to be related to how they perceived their role. Some teachers were not confident in their ability to manage mental health problems. Several factors, such as insufficient training in mental health and difficulty in identifying mental health problems, contributed to their lack of confidence (Reinke et al., 2011; Walter et al., 2006). Many teachers relied on their intuition to identify students facing mental health difficulties based on their experience with the students (Greif Green et al., 2017; Trudgen & Lawn, 2011).

Studies in high-income countries have reported mixed findings on teachers' ability to identify mental health problems. For example, some studies have found teachers could recognize the presence of mental health problems and identify severe internalizing (e.g., depression, anxiety) and externalizing (e.g., acting out) problems (Headley & Campbell, 2011; Loades & Mastroyannopoulou, 2010; Splett et al., 2019). Furthermore, teachers were less sensitive in recognizing moderate or subclinical problems (Headley & Campbell, 2011; Splett et al., 2019). In contrast, other studies found that teachers were better at identifying externalizing problems and had more difficulty spotting internalizing problems (Kalberg et al., 2011; Neil & Smith, 2017; Suldo et al., 2019).

Studies have shown that teachers' ability to identify mental health problems accurately was influenced by students' demographic characteristics, such as gender. Loades and Mastroyannopoulou (2010) found that children's gender and type of symptoms influenced teachers' accuracy in recognizing mental health problems. For example, teachers were more accurate in identifying boys with oppositional defiant disorder and girls with separation anxiety disorder than vice versa (Loades & Mastroyannopoulou, 2010). In addition to children's characteristics, teachers' demographic characteristics may influence their ability to assess students' mental health problems. Studies found that teachers' gender influenced their level of concern and their accuracy in identifying students' mental health problems (Green et al., 2020; Karabey & Arslan, 2020). Furthermore, many studies highlight teachers' lack of mental health knowledge and need for mental health training in recognizing the symptoms of mental health problems (Graham et al., 2011; Kidger et al., 2010; Rothi et al., 2008; Shelemy et al., 2019). Lack of mental health training could lead to inadequacy in supporting students' mental health problems. Ekornes (2017) found that the combination of teachers' feelings of incompetence and the perceived demand to manage students' mental health problems led to stress and the feeling of helplessness. These feelings might influence teachers' appraisal of students' mental

health problems. There has been limited exploration of how teachers' demographic characteristics and stress influenced their ability to identify mental health problems in their students.

The Indonesian context

In Indonesia, based on a 2014 regulation implemented by the Minister of Education and Culture Republic of Indonesia (number 111, article 5d), guidance and counsellor teachers are identified to provide services to support students in developing their potential and personality. Currently, guidance and counsellor teachers primarily assist students experiencing mental health problems who have been referred to them by homeroom teachers. However, due to an insufficient number of guidance and counsellor teachers, schools in Indonesia usually emphasize that all teachers have a role in identifying mental health problems. Daily interaction with students in the classroom allows teachers to observe students' behaviour and notice when students are experiencing mental health problems. The effectiveness of teachers' identification of student mental health problems has not been explored so far in an Indonesian context.

The current study

The current study investigated the effectiveness of Indonesian junior high (students aged 13-15 years) and senior high (students aged 16-18 years) teachers in identifying mental health problems in students. The effectiveness was addressed through teachers' ability to identify mental health problems accurately and how teachers identify mental health problems, which was explored through a mix of quantitative and qualitative methods. Thus, this study employed a mixed-methods sequential explanatory design where quantitative data was collected and analysed first, followed by qualitative data collection based on the results of the quantitative data (Creswell & Clark, 2017).

In this study, students' mental health was represented through the vignettes. Prior studies have used vignettes to investigate teachers (elementary, junior high, and senior high schools) in identifying mental health problems (e.g., Green et al., 2018; Loades & Mastroyannopoulou, 2010).

The main aims of the current study were to investigate teacher accuracy in identifying mental health problems in students and to explore factors, including child and teacher characteristics, that might contribute to teacher accuracy. Prior studies explored child's sex in relation to teachers identifying mental health problems and the referral process to mental health professionals (Loades & Mastroyannopoulou, 2010; Percy et al., 1993). The previous studies focused on elementary school teachers; however, different results may occur for teachers assessing adolescents. For example, a study conducted by Green et al. (2018) indicated that junior high school teachers perceived male externalizing problems as more concerning than elementary school teachers. Unlike child characteristics, the influence of teachers' demographic characteristics, such as sex, age, and length of teaching experience, on teachers' accuracy in identifying mental health problems has been understudied. Further exploration of the effect of teachers' stress on their accuracy in identifying mental health problems would provide helpful information for designing teachers' development programmes.

As shown in Figure 3.1, this study collected data in two consecutive phases: the quantitative phase followed by the qualitative phase. The quantitative phase aimed to investigate:

- (1) How accurately do teachers identify mental health problems using a vignette methodology?
- (2) Do teachers' demographic characteristics (age, sex, length of teaching), teachers' stress, and child's sex contribute to teachers' accuracy in identifying mental health problems?

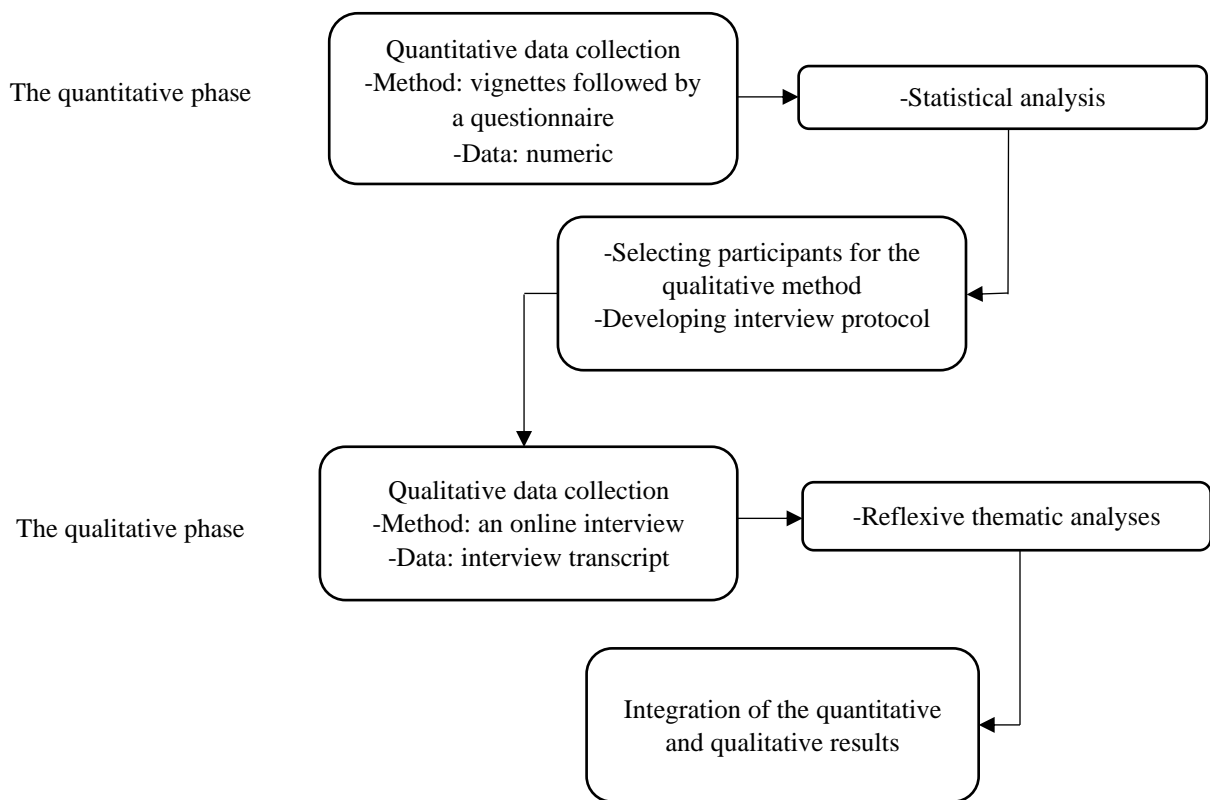
Previous vignette studies have focused on teachers' ability to identify mental health problems and teachers' referral practice in a quantitative approach. Loades and Mastroyannopoulou (2010) recommend that more research be conducted to better understand how teachers identify mental health problems to understand this issue better. Thus, the qualitative phase aimed to explore the following research question:

(3) How do teachers identify the mental health problems of a child in a vignette?

We addressed research question 3 using a qualitative approach to gather teachers' perspectives and experiences in identifying mental health problems.

Figure 3.1

Visual Model for Mixed-Methods Sequential Explanatory Design Procedures



3.3 The quantitative phase

3.3.1 Method

Participants and procedure

Participants. We invited homeroom teachers (subject teachers that had additional responsibility for managing students in class) and subject teachers (who are responsible for delivering specific subjects in class) in junior (students aged 13-15 years) and senior (students aged 16-18 years) high schools with permanent employment in Indonesia to participate in this phase. Participants received compensation for the expenses they incurred in the form of an e-wallet covering their costs for internet usage while completing the questionnaire.

Sample size. We conducted a power analysis using G*Power 3.1.9.7 to estimate the sample size (Faul et al., 2009). We aimed for a power of .8 ($\alpha = 0.05$) to detect an effect size of $d = 0.5$ in the difference between two independent means (two samples t-test). The power analysis was conducted to power the comparison of the vignette scores of male and female teachers and not to power the correlation between teachers' demographic characteristics (age, length of teaching), stress, and accuracy scores. No existing data was available from which to estimate the population effect size, so we chose $d = 0.5$ as a medium effect size (Cohen, 1988), powering the study to be able to detect effects that might have substantial real-world impact. The power analysis indicated that 128 participants were required.

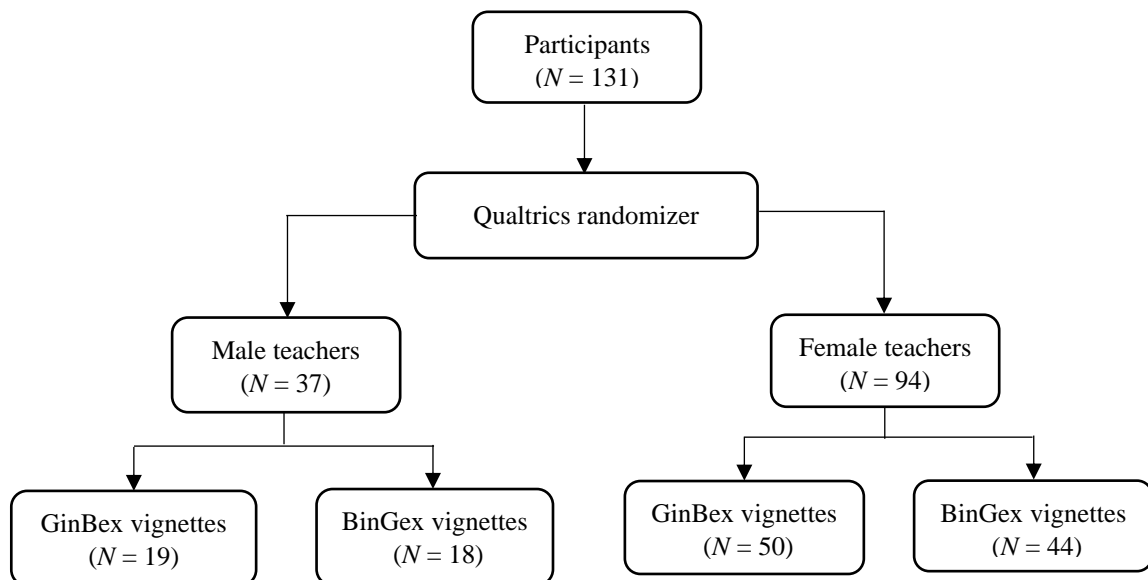
Procedure. Due to the COVID-19 pandemic, data were collected online (November 2021 – May 2022). Thus, non-probability sampling was conducted. Ethical approval was granted by the Department of Psychology Research Ethics Committee University of Sheffield (number 041078). The study protocol was preregistered in the Open Science Framework (<https://doi.org/10.17605/OSF.IO/N3BKQ>).

Participants were invited via text message on social media (WhatsApp), commonly used in Indonesia. We sent the invitation to headteachers and teachers in Bandung and Cimahi

city of West Java province, known to the first author. We used a snowball strategy where we asked participants to forward the invitation to other teachers that met our inclusion criteria, and those teachers forwarded it to other teachers until the targeted sample size was achieved. The invitation included a link to our study questionnaire, which was hosted on Qualtrics (<https://www.qualtrics.com>). Each participant was asked to complete questions following the six vignettes that tested their recognition of common forms of child psychopathology. Two versions of the vignettes were developed, each featuring different boys and girls presenting symptoms. These versions will be referred to as GinBex and BinGex vignettes. In GinBex, girls exhibit internalizing problems while boys exhibit externalizing problems, while in BinGex, boys exhibit internalizing problems and girls exhibit externalizing problems. Participants were randomly assigned to one of the versions using Qualtrics Randomizer (See Figure 3.2). Randomisation was stratified by participants' sex to achieve an equal teacher sex distribution across groups. After completing the questionnaire, the participants were asked to give their contact details, so the researcher could send the gratuity and contact them if they were selected to participate in the interview.

Figure 3.2

Participants' Randomization of GinBex and BinGex Vignettes



Note. GinBex = girls displaying internalizing problems, boys displaying externalizing problems vignette;

BinGex = boys displaying internalizing problems, girls displaying externalizing problems vignette

Materials

The questionnaire included six fictional vignettes, followed by closed and open-ended questions to assess teachers' ability to recognize mental health issues. Additionally, demographic information such as age, gender, teaching experience, school level, role, mental health training, and experience handling student mental health problems was collected. The Perceived Stress Scale was also utilized to determine the level of stress experienced by teachers.

Vignettes. The vignettes described fictional children followed by questions about whether the child in the vignette has mental health problems (yes or no), the severity of their mental health problems (not a serious problem, moderate, severe), and the urgency involved in referring the child to a mental health specialist (not urgent at all, a little urgent, rather urgent, urgent, very urgent). The urgency to refer was rated 1 – 5, with a higher rating indicating a great urgency to refer the child in the vignette for mental health services.

Accuracy in identifying the presence or absence of mental health problems was derived from performance on all six vignettes. Correctly identifying whether the child in the vignette has a mental health problem scored 1, with a total score of 6 indicating 100% accuracy in assessing the presence or absence of mental health problems across all vignettes. Accuracy in identifying severity, internalizing, and externalizing problems was based only on the four vignettes depicting children with psychopathology. Therefore, each of these scales had a maximum score of 4.

Vignette construction. We gathered eight vignettes from two previous studies (Green et al., 2018; Loades & Mastroyannopoulou, 2010). In addition, we asked teachers and psychologists whom researchers knew to send their student cases to be used in this study,

generating eight further cases. Out of the eight received cases, we selected two cases to develop into vignettes due to the representativeness of mental health problems and the appropriate amount of information. We sent a vignette draft consisting of 10 vignettes to five clinical psychologists in Indonesia known to the researcher.

The clinical psychologists reviewed the vignettes draft to ensure face and content validity based on Diagnostic Statistical Manual 5 (DSM-5) criteria (American Psychiatric Association, 2022) and the extent to which they were representative of mental health problems in Indonesian adolescents (age appropriateness, language used, and the situation portrayed). They assessed the severity of the vignettes using The Children's Global Assessment Scale (CGAS), which scores impairment from 1 to 100, with lower scores signifying more severe impairments (Shaffer et al., 1983). The experts rated the vignettes individually and discussed the results with the researcher in a focus group. After the focus group, six vignettes were selected; two related to internalizing problems, two to externalizing problems, and two displaying no symptoms of mental disorders (one vignette mainly describes the child's emotion, and one vignette describes the child's behaviour), moderate and severe (similar to Loades and Mastroyannopoulou, 2010). The vignettes represent adolescent mental health problems: internalizing problems (displaying anxiety disorders) and externalizing problems (displaying oppositional defiant disorder and internet gaming addiction) at severe and moderate levels; and problem-free adolescent vignettes. Although five vignettes were taken from the existing literature, some wordings and child names were modified to fit the Indonesian context, and the questions following the vignettes were developed for this study. We designed separate versions of each vignette (GinBex and BinGex vignettes), varying the sex of the described child, following Loades and Mastroyannopoulou (2010).

We conducted a pilot study with five teachers to ensure the questionnaire's feasibility. We asked participants to evaluate the situation portrayed in the vignettes, the instruction, the

language used, and the time to complete the questionnaire. Based on this evaluation, the questionnaire was feasible for teachers. Most teachers felt connected to the vignettes because the mental health problems were relevant to their classroom experiences. They found the instructions and language easy to understand, and the number of vignettes was considered appropriate. Participants could complete the online questionnaire at their own pace and convenience.

Perceived Stress Scale (PSS). The scale consists of 10 statements about everyday thoughts and feelings in the last month (e.g., *“In the last month, how often have you been upset because of something that happened unexpectedly”*). Participants were asked to rate how often they felt a certain way from 0 to 4 (0 = Never, 1 = Almost Never, 2 = Sometimes, 3 = Fairly Often, 4 = Very Often). Reversed scores were given to four items (items 4, 5, 7, and 8). We summed scores from all items to obtain the total scores (range 0 – 40). Higher scores indicated higher perceived stress. In this study, the reliability of the scale was 0.82.

Teachers’ socio-demographic characteristics. Teachers’ socio-demography information was collected, including their age (in years), sex (female or male), length of teaching experience (in years), school level (junior high or senior high school), and teachers’ role (homeroom or subject teacher). Teachers were asked if they had any mental health training (yes or no) and had experience working with students with mental health problems (yes or no).

Data analysis

We used IBM SPSS Statistics (version 29) to perform statistical analysis. First, to explore whether teachers could identify students’ mental health problems, we calculated mean accuracy scores, standard deviation, and mean percentage scores. The teachers’ ability to identify mental health problems was indicated by their accuracy in determining the presence or absence of psychopathology in the vignettes and in identifying the severity of mental health problems when psychopathology was present. Then we further explored accuracy in

determining the presence and severity of internalizing and externalizing problems. We conducted paired samples t-tests to compare the accuracy scores of teachers in identifying internalizing and externalizing problems. In addition, a series of Wilcoxon signed-rank tests were used to explore differences in teachers' urgency to refer a child with internalizing problems compared to a child with externalizing problems in moderate and severe degrees of psychopathology.

Second, to explore factors that contributed to teachers' accuracy in identifying mental health problems, we performed several statistical analyses. Independent samples t-tests were performed to compare teachers' accuracy in identifying mental health problems between the two versions of the vignettes that vary in the sex of the described child and between teachers' sex. Finally, we performed Pearson correlational analysis to explore the relationship between demographic data (age, length of teaching) and level of stress with teachers' accuracy in identifying the presence and severity of mental health problems. Then, we planned to perform a multiple regression model to explore the contribution of teachers' age, length of teaching, and stress level as independent variables to teachers' accuracy in identifying the presence and severity of mental health problems (dependent variables).

3.3.2 Results

Participant characteristics (age, gender, school level, length of teaching, experiences in mental health training, and handling students' mental health problems) are presented in Table 3.1. A total of one hundred and thirty-one teachers participated, with more female teachers participating than male teachers. The mean age of teachers was 39 years, with an average of 13 years of teaching experience. Of all participants, less than half were homeroom teachers. More junior high school teachers participated than senior high school teachers. Most teachers had not received mental health training (93.3%). The majority (73.3%) reported having no experience dealing with students' mental health problems.

Table 3.1*Participant Socio-Demographic Characteristics*

Socio-demographic	Criteria	<i>n</i>	%	M	SD
Gender	Male	37	28.2%	-	-
	Female	94	71.8%	-	-
Age	-	-	-	39.3	9.4
School-level	Junior high school	74	56.5%	-	-
	Senior high school	57	43.5%	-	-
Role	Homeroom teacher	46	35.1%	-	-
	Subject teacher	85	64.9%	-	-
Length of teaching	-	-	-	13.7	8.6
Mental health training experience	Yes	8	6.1%	-	-
	No	123	93.9%	-	-
Experience in handling students' mental health problems	Yes	35	26.7%	-	-
	No	96	73.3%	-	-

Teachers' accuracy in answering the vignettes

Table 3.2 shows that teachers correctly answered 80.8% of the presence or absence of mental health problems in children based on the information in the vignettes. Nevertheless, teachers were less accurate in assessing the level of severity of mental health problems. Regarding the type of mental health problems, teachers correctly identified 73.1% of the presence and the severity of internalizing problems and 67.4% of the presence and severity of externalizing problems.

A paired-sample t-test was conducted to compare teachers' accuracy in identifying the presence and severity of internalizing and externalizing problems. There was a significant difference in accuracy scores between internalizing ($M = 2.9$, $SD = 0.9$) and externalizing problems ($M = 2.7$, $SD = 0.8$); $t(130) = 2.29$, $p = .023$, *Cohen's d* = 0.2. These results suggested

that teachers had better accuracy in identifying the presence and severity of internalizing problems than externalizing problems.

Table 3.2

Teachers' Accuracy in Identifying Mental Health Problems

Accuracy in	Mean	SD	% Correct
Mental health problem presence or absence	4.8	0.9	80.8%
Mental health problem severity	2.0	0.9	50%
Internalizing problems (problem presence and severity)	2.9	0.9	73.1%
Externalizing problems (problem presence and severity)	2.7	0.8	67.4%

N = 131

The need to refer

Following the vignette, the teachers were asked how urgent it was to refer the described child to a mental health specialist. A Wilcoxon signed-rank test analysis showed there was a significant difference in teachers' rank of urgency between moderate and severe internalizing problems, $z = -6.79, p < .001$. The result indicated that teachers perceived a child with a severe internalizing problem as more urgent to refer to a specialist than a child with a moderate internalizing problem. In contrast, teachers ranked a child with a moderate externalizing problem as significantly more urgent to refer than a child with a severe externalizing problem, $z = -2.72, p = .006$. Furthermore, for moderate severity cases, teachers perceived internalizing problems as significantly more urgent to refer to than externalizing problems, $z = -7.58, p < .001$. However, there was no difference in urgency rank between severe internalizing problems and severe externalizing problems, $z = -1.23, p = .220$.

Factors related to teachers' accuracy

Child sex. In this study, teachers were randomly assigned to one of two versions of the vignettes (GinBex and BinGex). An independent-samples t-test was conducted to examine whether the child's sex displayed internalizing or externalizing problems affected teachers'

accuracy in identifying mental health problems. The results showed that teachers' accuracy in identifying the presence or absence of mental health problems was similar regardless of the child's sex (See Table 3.3). Furthermore, similar accuracy in identifying the presence and the severity of mental health problems was found for both internalizing and externalizing problems. Nevertheless, there was a significant difference in teachers' accuracy in assessing the severity of mental health problems in GinBex and BinGex. This indicated that teachers were more accurate in identifying the severity of girls displaying internalizing problems and boys displaying externalizing problems than the reverse.

Table 3.3

Mean Comparison between GinBex and BinGex Vignette Versions

Accuracy in	GinBex		BinGex		<i>t</i> (129)	<i>p</i>	Cohen's <i>d</i>
	Mean	SD	Mean	SD			
Mental health problem presence or absence	4.8	0.9	4.9	0.9	-0.29	.39	0.05
Mental health problem severity	2.2	0.9	1.8	0.9	2.34	.01	0.41
Internalizing problems (problem presence and severity)	3.1	0.8	2.7	1.0	2.16	.16	0.38
Externalizing problems (problem presence and severity)	2.8	0.8	2.6	0.8	1.28	.10	0.22

Note. GinBex *n* = 69, BinGex *n* = 62; significant comparison in bold; *p* < .05

GinBex = girls displaying internalizing problems, boys displaying externalizing problems vignette

BinGex = boys displaying internalizing problems, girls displaying externalizing problems vignette

Teacher Characteristics and Perceived Stress. Table 3.4 shows that male and female teachers had similar accuracy in determining the presence or absence of mental health problems. When broken down by type of problem, male and female teachers were similarly accurate in identifying externalizing problems. Female teachers were more accurate in assessing the severity of mental health problems and the presence and severity of internalizing problems than male teachers.

Table 3.4*Comparison between Male and Female Teachers*

Accuracy in	Male		Female		<i>t</i> (129)	<i>p</i>	Cohen's <i>d</i>
	Mean	SD	Mean	SD			
Mental health problem presence or absence	4.8	0.9	4.9	0.9	-0.74	.231	0.14
Mental health problem severity	1.7	1.0	2.1	0.8	-2.38	.009	0.46
Internalizing problems (problem presence and severity)	2.7	0.9	3.0	0.9	-1.95	.027	0.38
Externalizing problems (problem presence and severity)	2.6	0.8	2.7	0.8	-0.63	.265	0.12

Note: Male (*n* = 37), Female (*n* = 94); significant comparison in bold, *p* < .05

Correlation analysis was performed before regression analysis to explore which factors (age, length of teaching, perceived stress) might contribute to teachers' accurate assessment of mental health problems. As shown in Table 3.5, age and length of teaching had small and non-significant correlations with accuracy in identifying the presence and the severity of mental health problems. A similar result was found regarding the correlation between perceived stress and accuracy in identifying severity of mental health problems. Teachers' perceived stress was significantly negatively correlated with accuracy in determining the presence or absence of mental health problems. However, no regression analysis was performed, considering most of the correlations were statistically non-significant. The only significant correlation was between teachers' perceived stress and accuracy scores.

Table 3.5

Pearson Correlation of Age, Length of Teaching, Perceived Stress and Accuracy in Identifying the Presence or Absence and Severity of Mental Health Problems

Variables	Accuracy in Identify Presence				Accuracy in Identify Severity			
	<i>r</i>	<i>p</i>	95% Confidence Interval		<i>r</i>	<i>p</i>	95% Confidence Interval	
			Lower	Upper			Lower	Upper
Age	.084	.342	-.089	.252	.074	.398	-.098	.243

Length of Teaching	.036	.685	-.137	.206	.094	.287	-.079	.261
Perceived Stress	-.184*	.035	-.345	-.013	-.005	.959	-.176	.167

*Significant correlation in bold; *p <.05 (2-tailed); n=131.*

3.4 The qualitative phase

3.4.1 Method

Participants and procedure

Participants. We aimed to include participants with a range of accuracy scores from the quantitative phase. A research team member (RR) made a list of interview participants based on teachers' accuracy scores in identifying the presence or absence and the severity of mental health problems. First, the sample was sorted into groups scoring low (4 - 7), medium (8 - 9), and high (10 - 12) and ordered randomly within each group. Then, the first seven from each group were selected to make a list of participants in the qualitative phase. Before creating the list, the sample was re-randomised so the interviewer (ARS) was blind to their score to avoid bias. Considering the scope of our study was specifically to explore how teachers identified mental health problems based on vignettes, we predicted that after twenty participants, we would achieve data saturation. In fact, we reached data saturation after interviewing twelve participants and invitations were terminated at this stage. The final sample included 5 participants who scored low in the quantitative phase, 4 with a medium score and 3 with a high score. A pseudonym identifies each participant to ensure anonymity.

Procedure. ARS contacted participants and conducted online one-on-one interviews. Prior to the interviews, we sent research information, informed consent, and the vignette questionnaire that they had previously completed so that this could be discussed during the interview. Both verbal and written consent was obtained prior to interview. A semi-structured interview guide was used to ask participants how they assessed children's mental health depicted in the vignette, the severity of the mental health problems, and which children they

would refer to a mental health specialist (see Appendix C). The average interview duration was 49 minutes. The interviews were conducted using Zoom video conferencing (Zoom Video Communications Inc., 2021), which allows audio and video recordings. ARS transcribed the recordings and ensured anonymity by removing all potentially identifying details, such as mentioning names or schools. The transcriptions can be accessed through the OSF (web address to be added), and pseudonyms were used to identify the participants. After analysing the data, ARS deleted the recordings.

Data analysis

We conducted the six phases of thematic analysis recommended by Braun and Clarke (2006):

(1) *Familiarization with data.* The initial step involved transcription, which ARS, WAH, and NC then analysed. WAH and NC are educational psychologists with experience addressing mental health issues in educational settings. Initially, each team member thoroughly read and re-read the transcriptions, took notes, and highlighted critical information directly on the transcriptions.

(2) *Generating initial codes.* Open coding was conducted in NVivo 12 Pro. ARS, WAH, and NC discussed each transcription and focused on the semantic and latent meaning of the information. The codes were data-driven and applied to the whole data set. Some data might have more than one code. Once the coding was completed, a comprehensive list of codes was generated from all the transcriptions.

(3) *Searching for themes.* After reviewing the codes list, ARS, WAH, and NC grouped codes with similar concepts or meanings to create potential themes. ARS then translated the list of codes and potential themes into English.

(4) *Reviewing themes.* After reviewing the potential themes, ARS evaluated their alignment with relevant codes, datasets, and research questions. This was achieved through thorough (re)reading the transcriptions and codes.

(5) *Defining and naming themes.* ARS named the themes, analysed each theme, and identified sub-themes accordingly. Furthermore, ARS defined the themes and included data best portrayed the themes. RR and AD then reviewed the themes.

(6) *Producing the report.* ARS wrote the report and reviewed and commented on by RR and AD.

3.4.2 Results

Twelve teachers, nine female and three male teachers aged 23 – 54 participated. They came from six junior high schools and six senior high schools, with teaching years ranging from 1 – 30 years. Participants’ details, including pseudonyms, sex, age, length of teaching, school levels, vignette versions, and accuracy level, are provided in Appendix D.

When asked how they identified children’s mental health problems in the vignettes, all teachers elaborated by comparing the vignettes with their everyday practices with their students. Based on reflexive thematic analysis, two themes and nine sub-themes were developed (See Table 3.6).

Table 3.6

Themes and Sub-Themes

Themes	Sub-Themes
1. Identification of mental health problems.	1. Comparison of the situation presented in the vignettes with personal experience 2. Observing behavioural and emotional responses 3. Identifying disturbances in a child’s functioning 4. Family life and adverse experiences affecting a child’s mental health 5. Need to explore the cause of mental health problems

	6. Mental health knowledge versus sensitivity
2. Assessing the severity of mental health problems	7. Assessing the impairment in the child's functioning 8. Assessing from teachers' experience 9. The need to explore the problems

Theme 1. Identification of mental health problems

Sub-theme 1. Comparison of the situation presented in the vignettes with personal experience

Many teachers considered that the mental health problems presented in the vignettes were similar to those experienced by their students. Therefore, teachers compared the children's behaviours in the vignettes with their students' behaviours they previously found, which led them to identify whether the children in the vignettes had mental health problems. Some teachers mentioned that their experience developed their sensitivity when assessing students' mental health.

"This is a psychological problem. Because the child is addicted, addicted to playing an online game, that affects his learning motivation. There are many cases like this in our school.

He will do everything to fulfil his satisfaction. In this case, it is stealing money. Similar cases happened here. The children did wrong things to the family and school." (Gading, male teacher)

"So, for me, yeah, from experience. When starting as a teacher, yes, I was not sensitive. I learned more from senior teachers if, for example, students were like this. That was trained. Trained for so long by teaching and meeting the students. For a long time, that sensitivity was trained on its own." (Eka, female teacher)

Apart from experiences with students, some teachers compared their mental health problems and family's or friend's mental health problems with the children in the vignettes.

“I have a personal experience. I feel anxious. When the level of anxiety is too high, I have cramps in my stomach, like stomach pain. However, it is not a stomach ache that makes me want to go to the toilet or something. It is our stomach is tense; that is it. So, it means that Maya (the child in the vignette) is so paranoid that she thinks about her mother's safety. It means that if it is like that, it will automatically disrupt the learning process.” (Celine, female teacher)

Sub-theme 2. Observing behavioural and emotional responses

Teachers mentioned that they identified mental health problems by observing students' behaviours in schools and focusing on the children's behaviours in the vignettes.

“Initial identification is certainly by looking at how they interact and their attitude in the classroom, whether during or outside class hours.... I can see their interactions with their friends or me during class. Then after class, maybe during recess, after school, at lunchtime, or in the afternoon, I can still see the children around the school.” (Omar, male teacher)

Teachers explained that mental health problems could be indicated by drastic or extreme changes in behaviours, repetitive negative behaviours, destructive behaviours, or abnormal behaviours compared to their peers.

“So, if there is a problem, it usually can be seen there. Either they are suddenly quiet or change drastically, suddenly become a troublemaker or something like that. So, visible behaviour is an early indication for... "Oh, this kid has a mental health problem" or a psychological problem.” (Omar, male teacher)

“Joko (the child in the vignette) is too possessive. So, maybe this is not normal. So yes, we can identify that Joko is sick.” (Kintan, female teacher)

“(Discussion of Joko, a child in the vignette). Some thoughts are beyond; what is it called? Outside normal limits, that is it. So, for example, there is information (in the vignette) that there will be murder and others. That is already outside the normal range. So, if we see cases like

this, we see it from the attitudes shown by children in their everyday life, which are outside the normal limits.” (Gading, male teacher)

In addition, some teachers assessed mental health problems from the child’s emotional responses in the vignettes. For example, a teacher considered negative emotional responses and anhedonia to indicate mental health problems. Some teachers considered excessive or unwarranted worries to indicate mental health problems.

“So, she (the child in the vignette) also seems to have lost interest in many of her friends and is awkward, cannot enjoy and so on. She often feels tired. So, we have to find the cause. So, probably, one of the reasons is related to mental health.” (Omar, male teacher)

“There is a sense of pressure here, right? Feeling depressed. If you are mentally healthy, that means you are happy physically and mentally, right? (smiles). If you are mentally healthy, you are happy physically and mentally, right? Here, Joko seems depressed, hmm, unwarranted worries, in my opinion.” (Rina, female teacher)

Sub-theme 3. Identifying disturbances in a child’s functioning

Many teachers identified mental health problems by the degree of impairment in several of the child’s life functions: academic function (e.g., below-average school grades, disturbance in school performance, difficulty concentrating in school), violation of school rules (e.g., truancy, juvenile delinquency, come late to school, school attendance), or social function (e.g., stealing, attack others, reluctant to socialize with others).

“I see it from how he reacts and reacts to their social environment. This child can still be embraced if he can interact well, get along well with his friends, and communicate with the teachers. But if he commits violence, cannot concentrate in class, and is reluctant to go to school, the problem is severe.” (Celine, female teacher)

Sub-theme 4. Family life and adverse experiences affecting a child’s mental health

Teachers perceived that problems in family life and the child’s adverse experiences

could cause mental health problems. Teachers explained that problems in the family, such as parental divorce depicted in the vignettes, negatively influenced the child's mental health. Based on their experience with the students in their schools, many problematic students came from a family with parental divorce. In addition, some teachers thought that further exploration was required if the child from a divorced family is not showing any problems.

“Raka (the child in the vignette), because his parents were just divorced. No matter how soft the divorce is, it would cause trauma to the child. So, if Raka does not show worry or even show happiness, for me, it is questionable.” (Bestari, female teacher)

In addition to family life, some teachers mentioned that adverse experiences such as bullying can affect children's mental health.

“Well, this is hard. This is not a light matter. Moreover, he was bullied in the past, so he experienced bullying.” (Kintan, female teacher)

Sub-theme 5. Need to explore the cause of mental health problems

Many teachers thought some mental health problems were difficult to identify and some problems were not as they seemed. So, they thought that they should further explore the cause of a child's mental health problems to be more certain of the issues and understand them. Some teachers mentioned they use a personal approach to get close to the students. Teachers mentioned that sources of useful information included the students, parents, peers, and other teachers.

“Rani (the child in the vignette), the one who changes the attitude... I am not a psychologist, so I can only guess. My suggestion for this kind of child would be better if we find out why and what happened. I give an example from my previous student. There must be something when the child has an attitudinal change, from A to B or B to A. Something that causes it, and we try to find out. It does not mean that we interrogate them.” (Ina, female teacher)

Sub-theme 6. Mental health knowledge versus sensitivity

Some teachers explained that they identify students' mental health problems based on their knowledge of mental health. They mentioned that they acquired mental health knowledge by attending mental health webinars or online courses, reading psychological books and journals, following psychologists on social media (such as Twitter) or searching from an online platform (such as Google).

“So, the mental health issue has been discussed more or less often, both at school and because I usually take online classes. So, I am already familiar with the term mental health, especially in the last two years online. So, one of the effects of online courses or online learning is mental health problems. So more or less, we at school are also often introduced to these terms, so when you see that problem in children, maybe it has something to do with mental health.”
(Omar, male teacher)

Meanwhile, another teacher explained about using sensitivity to identify mental health problems. The sensitivity helped them to be more aware if there was a change of behaviour that led to mental health problems.

“The teacher sees more with the heart. With sensitivity, if the teacher is sensitive, there are changes in facial expressions, from gestures you can see from the appearance side. ... The sensitivity is more to the heart. Well, it is like this: there is more than one teacher at school. When there is one insensitive teacher, there are still other teachers. So, for example, of the many teachers, some must be sensitive. There must be keen teachers, at least homeroom teachers, because the homeroom teacher is the second parent of the children at school. There is also responsibility there for the homeroom teacher. The homeroom teacher will definitely pay attention to each of his students.” (Ina, female teacher)

Theme 2. Assessing the severity of mental health problems

Sub-theme 1. Assessing the impairment in the child's functioning

Many teachers explained that they determined the severity of mental health problems by assessing impairments to the child's everyday functioning, such as in the personal, academic, and social functioning spheres. For example, teachers perceived that a child's mental health problems are severe if the condition affects or harms the child themselves or harms others, which impairs personal (e.g., self-harm, psychosomatic), academic (e.g., lack of concentration, reduced interest to study, truancy, reluctant to go to school), or social (harm others, destructive behaviours, rules violation, abnormal behaviours) functioning.

“Is there any action or not? What kind of action? Is it criminal, reduced school achievement, or is there any effect on physical health? Next, is it influence their relationship with friends, teachers, or others? So, it is more to behaviour.” (Omar, male teacher)

“As long as he does not disturb other friends or cause chaos in class, does not cause trouble, and does not show upheavals that endanger their friends, I do not think it is that bad. But that means he is the only one we need to treat. What is worse is that he can harm other people and has an impact on other people. Yes, it is more; I think it is worse. If he impacts others, it will automatically be even worse for him because there are kids like that. He is harmful to others because of his nature.” (Eka, female teacher)

Sub-theme 2. Assessing from teachers' experience

Some teachers mentioned that their experience handling students' mental health problems helped them to assess the severity of the problems.

“Maybe I can answer because I have experience in school. So, it is not zero. I began to understand a little, although I am not a psychiatrist or a counselling teacher. However, from my experience, I can differentiate which has severe, medium, or not a problem.” (Damar, male teacher)

They explained that from their experience, the severity of mental health problems could be evaluated by whether students feel guilty after doing something wrong. A teacher explained that if there is no guilty feeling, the child can do anything without any consideration. On the contrary, guilty feeling shows they still have a chance for treatment.

“Moreover, the perpetrator (the child in the vignette) did not feel guilty; it was terrible. The severity is already very severe. So, when he has lost his sense of guilt, he can do anything without consideration because he does not think about anything anymore. Now when there is still guilt, now that there is still what is the term brake, it can still be pulled to the right path. To be repaired, maybe it can still be when he feels guilty or can still be made aware, in my opinion.” (Omar, male teacher)

Sub-theme 3. The need to explore the problems

Some teachers thought that they needed to further explore the problems before determining the severity of mental health problems. They explained that some students are good at keeping their problems to themselves.

“The severity? Of course, after I study the case first.” (Bestari, Female teacher)

“The case of Raka (the child in the vignette) is medium. Medium to mild, but medium. Why? Because who knows behind that? Maybe we can say that it is a mild problem. But we must call him one day. As a homeroom teacher, I need to have an interview scheduled. Maybe from the interview, we found that the child keeps something heavy. It is just that he is good at hiding it. That is dangerous.” (Kintan, Female teacher)

Several teachers mentioned gender-specific symptoms that needed further investigation, such as girls displaying moodiness or self-harm and boys destroying objects. One of the teachers mentioned that boys are more direct in expressing themselves when they have problems, unlike girls, so they need to investigate girls further.

“Hmm, I might be a little affected by gender, too. It is for severity. So, if you look at my answer, for the boys, they are all severe. But for the girls, maybe it is not too urgent but relatively moderate. Because, yeah, it needs to be explored more. Because the girls are not straightforward. It could be that, or it could just be a projection to hide other problems.”
(Omar, Male teacher).

“As for the girls in this vignette, they are fine. In fact, what we worry about the girls is if they are not destroying objects but harming themselves. Once, there was a case at my school. It was an uproar. She slashed her hand. She was reported by her friends. ... Whether it is seeking attention or a trauma. Sometimes, there is an attention-seeking child. Then, after exploration, it turns out that they just need attention. So, the girls self-harm, and the boys break objects. That is what I noticed at school.” (Ina, Female teacher)

3.5 Discussion

The present study aimed to investigate the effectiveness of teachers in Indonesia in recognizing mental health problems. Compared to prior vignette studies that used quantitative methodology (Loades & Mastroyannopoulou, 2010; Splett et al., 2019), this study focused on teachers' accuracy in identifying adolescent mental health problems using a mixed-methods approach.

This study found that teachers were accurate in identifying the presence or absence of mental health problems in children in the vignettes, despite the fact that most of the teachers had no formal mental health training. In accordance with the present result, previous vignette studies have demonstrated that teachers could recognise children with mental health problems, particularly those with severe problems (e.g., Splett et al., 2019; Vieira et al., 2014). This result may be explained by the fact that teachers were presented with information identifiable as symptoms of mental health problems in the vignettes. However, such information may not always be available to teachers in real-life situations, where teachers must decide among

various behaviours or emotions displayed by students that are considered the appropriate information to identify as symptoms of a mental health problem. In a class, teachers may be unable to observe each student closely (Pearcy et al., 1993). Based on the interviews, teachers identified the child's mental health problems in the vignette by comparing them with their experiences with students who exhibited similar behaviours or their own experiences. The teachers stated that they indicated mental health problems from observation of negative behaviours and negative emotions, information of disturbances in child life function, problems in the family, and adverse childhood experiences.

In this study, teachers demonstrated moderate accuracy in identifying the severity of mental health problems, indicating teachers might have difficulty distinguishing between moderate and severe problems. Based on the interview, teachers assessed mental health problems' severity from their experience and by assessing the impairments of the problems. Previous studies reported mixed findings regarding teachers' capabilities in assessing the severity of mental health problems. For example, Loades and Mastroyannopoulou (2010) found that teachers could accurately assess moderate and severe mental health problems; meanwhile, Splett et al. (2019) found that teachers could identify severe mental health problems but had difficulty identifying moderate internalizing problems. The results of this study have highlighted the challenges teachers face in accurately assessing the severity of students' mental health problems. This indicates a need for further research in this field.

In this study, teachers tended to base their assessments of students' mental health more on students' background information than their observations. Based on the interview, teachers stated their need to investigate further the underlying reasons behind students' mental health issues to assess and address them accurately. This could be due to a lack of mental health training and experience in dealing with such issues. Therefore, teachers could benefit from a

training program to identify the severity of internalizing and externalizing problems to support appropriate referral to mental health services.

As a result of identifying mental health problems in their students, teachers are expected to follow up by referring at-risk students for mental health services. Accuracy in assessing the severity of mental health problems may influence the teachers' perception of urgency in referring students for further treatment. In a study of young Dutch children, teachers' perception of mental health severity predicted the children's need for mental health service use (Bevaart et al., 2014). In children displaying similar mental health problems, teachers in this sample perceived severe internalizing problems as more urgent for referral than moderate internalizing problems. In contrast, in externalizing problems, teachers perceived moderate problems as more urgent referrals than severe problems. It seems possible that this result may be due to teachers having difficulty distinguishing between moderate and severe externalizing problems. Thus, it led them to perceive children with moderate externalizing problems as needing more mental health services than children with severe mental health problems. However, there is no data available to test this assumption. Therefore, further study is required to investigate teachers' accuracy in identifying the severity of externalizing problems and the effect on teachers' referrals.

In terms of mental health problem type, prior studies found that teachers could identify externalizing problems more than internalizing problems (e.g., Vieira et al., 2014). In a class situation where teachers have to give attention to all students, externalizing problems may be more apparent (e.g., through classroom disturbance), while internalizing problems may go unnoticed due to the characteristics of the symptoms (Pearcy et al., 1993; Vieira et al., 2014). However, this study unexpectedly found that teachers were more accurate in identifying internalizing problems than externalizing problems. A possible explanation for this might be that by using a vignette, teachers were provided with symptoms of internalizing problems that

might be unnoticed in real life unless given further exploration, such as *'lost interest in many of her friends'* or *'expressed concerns that her mother will be killed in a car crash.'* This explanation is in line with the interview data, which indicated that teachers seemed to know which information was considered an indication of internalizing mental health problems. In addition, although there was no difference in perceived referral urgency between severe internalizing and externalizing problems, teachers in the present study perceived children with moderate internalizing problems as more urgent for referral to mental health services than moderate externalizing problems. This finding aligned with the results reported by Green et al. (2018), showing that US teachers considered moderate internalizing problems in females as more concerning than moderate externalizing problems in males.

We found that factors such as the child's sex, the teachers' sex, and the teachers' perceived stress differed in affecting teachers' accuracy in identifying mental health problems presented in the vignettes. Teachers accurately distinguished children with or without mental health problems in most vignettes, regardless of the child's sex. This finding contrasts with Loades and Mastroyannopoulou's (2010) finding that sex differences contributed to teachers' ability to recognize the presence of mental health problems. However, we did find that the child's sex and type of mental health problems displayed in the vignettes affected teachers' accuracy in assessing the severity of mental health problems.

In this study, teachers more accurately assessed the severity of vignettes where girls displayed internalizing problems and boys displayed externalizing problems than vignettes where girls showed externalizing problems and boys displayed internalizing problems. The sex differences in mental health problems might explain this finding. Studies usually find that girls report more internalizing problems than boys, and boys report more externalizing problems than girls (Kovess-Masfety et al., 2021; Leadbeater et al., 1999). A study on Indonesian adolescents reported similar findings; girls more frequently exhibited internalizing problems

(e.g., feeling anxious and depressed, somatic complaints, social withdrawal) than boys, and boys more frequently displayed externalizing problems (e.g., rule-breaking) than girls (Ediati, 2015). Based on our interview data, some teachers noted that gender-specific symptoms, such as mood swings in girls and breaking objects in boys, may indicate that girls' symptoms are less apparent than boys' symptoms. Therefore, teachers needed further exploration of girls when evaluating severity. Hence, we assumed that teachers might be biased by this sex difference influencing their assessment of mental health severity.

In this study, teachers' sex was related to their accuracy in identifying mental health problems in the vignette. We found that female teachers were more accurate than male teachers in determining the severity of mental health problems and identifying internalizing problems. This result has not previously been described in another study. Several studies mentioned the difference between female and male teachers' perspectives of students' behaviour (e.g., Hopf & Hatzichristou, 1999). Green et al. (2022) found that female teachers in the US assessed internalizing and externalizing problems as serious and concerning more than male teachers. In the interview, a female teacher emphasized the importance of having sensitivity in identifying students' mental health problems. We suggest further investigating whether female teachers are more sensitive than male teachers in identifying the severity of mental health problems and internalizing problems.

We found that teachers' age and length of teaching did not contribute to teachers' accuracy. In this study, the length of teaching was calculated based on how many years they have been teachers. This result supports Trudgen and Lawn's (2011) findings that teachers' length of teaching was not correlated with knowledge of students' mental health. In combination, these findings indicate that the length of the teaching period was not a significant factor in identifying mental health problems. One possible explanation could be that the duration of teaching does not necessarily equate to teachers' understanding of their student's

mental health. Instead, a teacher's experience dealing with their student's mental health issues may enable them to recognize such problems. In the current study, most teachers had no formal mental health training. They gained mental health knowledge from webinars and online courses, reading psychological books and journals, and from searching social media and online platforms. Consequently, they tended to rely on their experience with students. As mentioned in the interview, teachers assessed the vignette by reflecting on their experience observing students' behaviours and their encounters with students with mental health problems that appeared similar to the vignettes. Teachers thought that their experience shaped their sensitivity to identifying mental health problems. Trudgen and Lawn (2011) found that without formal guidance, teachers in their study build intuition due to their experience with the student. Green et al. (2017) reported a similar finding that certain teachers rely on their intuition when identifying students experiencing emotional issues. Based on the findings, designing and evaluating training programs that use teachers' experience is recommended. In addition, considering that many teachers rely on their experience to identify mental health issues, further investigation of the effectiveness of teachers' experience on their accuracy in identifying mental health problems would be worthwhile.

Teachers' perceived stress had a small significant correlation with their accuracy in identifying the presence or absence of mental health problems. Kokkinos et al. (2005) showed that teachers' burnout affected their appraisal of students' mental health severity. This differs from the current study's findings that teachers' stress affected teachers' accuracy in identifying whether the child in the vignette has mental health problems but not on the severity of mental health problems. Nevertheless, the effect was small.

According to this study, there were no significant correlations between teachers' age, length of teaching experience, and accuracy in identifying mental health problems. However, there was a small significant correlation found between teachers' perceived stress levels and

their accuracy in identifying mental health problems. Another possible explanation could be that the sample size used for the correlation analysis may have been insufficient, affecting the results.

3.6 Limitation and future direction

There are a few limitations to consider in this study. First, which was also addressed by Green et al. (2018), is that teachers may react differently when presented with real-life cases than when given a simulation of students' cases in the vignette. Furthermore, this study used written vignettes that described explicit symptoms that could assist teachers in recognizing mental health issues, particularly internalizing problems. Future vignette studies might consider using other vignettes to depict real-life situations, such as video vignettes. Second, a sequential explanatory design resulted in a considerable time gap between the quantitative and qualitative phases due to the time required to conduct statistical analysis. This may affect teachers' recollection of their previous responses. In this study, responses from the initial phase were shared with the participants before the interview. However, teachers required some time to recollect their earlier answers. In the future, considering the time gap between phases is recommended when adopting a mixed-method approach. Third, the researcher only considered comparing mental health problems in teachers of different sexes while performing power analysis to estimate the sample size. As a result, the study was not adequately powered to perform correlation analysis, and the analysis for correlation might not have been conducted appropriately. Future studies should consider proper sample size calculations for more robust results. Fourth, the current study investigated the influence of students' and teachers' sexes to teachers' accuracy in identifying mental health problems in the vignettes. Nevertheless, interaction between female and male students and female and male teachers has not been explored yet. Future research might consider investigating this interaction to understand better its impact on identifying mental health problems accurately.

Chapter 4: Teachers' Identification of Adolescents' Mental Health Problems in Indonesian Schools

4.1 Abstract

A body of evidence indicates that school-based mental health screening is effective in identifying students at risk of mental health problems. Teachers frequently provide reports in screening programs. Currently, the efficacy of teacher reports in Indonesia has not been examined. This study investigated the relationships between teacher reports with student and parent reports in Indonesian schools and compared correlations to those previously found in the UK. Data was collected on 732 adolescents from 11 junior and senior high schools in Indonesia using the Strength and Difficulties Questionnaire (SDQ) and utilised SDQ data from the 1999 and 2004 sweep of the UK's Mental Health of Children and Young People studies (n = 4997). Correlations of Indonesian teacher reports with student and parent reports were weaker than the correlation observed between British parents and teachers. The finding supported using multi-informants in school-based screening in Indonesia.

4.2 Introduction

School can play an important role in promoting children's and adolescents' mental health. As an institution where students spend much time, school provides an opportunity to identify mental health problems in young people and is an ideal setting for mental health prevention or intervention programmes. Globally, 10% of mental health prevention or intervention programmes have been delivered in a school-based format (WHO, 2018). There have been increasing evaluations of the effectiveness of school-based programmes in terms of process and effectiveness in improving adolescents' mental health. In high-income countries (HICs), such as the UK, there is a national investment in young people's mental health through support for school-based intervention programmes (e.g., incorporating a mandatory health

education curriculum, such as relationships, health, and sex education) or providing child and adolescent mental health services to work with schools. Meanwhile, in lower- or middle-income countries (LMICs), such as Indonesia, implementing school-based programmes to promote youth mental health is less developed, although there has been an interest in providing such programmes (Bowes et al., 2019; Craddock et al., 2021; Fausiah et al., 2019; Niman et al., 2021).

A number of studies in HICs have reported the effectiveness of indicated or targeted programmes (which focus intervention on individuals identified to have symptoms of mental ill health) in reducing symptoms of emotional and behavioural problems (Calear & Christensen, 2010; Feiss et al., 2019). A key element of delivering an indicated or targeted programme is identifying mental health problems in students. Traditionally, schools use information from teachers without a standardized method to detect at-risk students. A common problem is that at-risk students are referred to mental health services when the problems are elevated or manifested overtly. This practice can result in many vulnerable students being unnoticed and not accessing proper treatment. This may be especially problematic for those with internalizing problems (depression and anxiety), as externalizing (acting out) problems may be more easily identified (Weist et al., 2007). Studies have supported school-based screening as an efficient method to identify students at risk of emotional and behavioural problems more effectively than ad hoc referrals by teachers or school professionals (Dowdy et al., 2013; Eklund et al., 2009; Scott et al., 2009). On this basis, schools are recommended to proactively implement universal school-based mental health screening (Dowdy et al., 2010; Severson et al., 2007).

Despite the many benefits of universal school mental health screening, there is an unresolved problem concerning which informants can provide the most accurate information about adolescent mental health functioning. Choosing informants in mental health screening is

complicated as many studies report discrepancies between informant reports (e.g., mean r s = .28 between diverse informants and .22 between children and other informants) (Achenbach et al., 1987; De Los Reyes & Kazdin, 2005). Based on the Attribution Bias Context Model, the cause of informant discrepancies include: (1) differences among informants regarding the causes of the behaviours being assessed, (2) different thresholds on deciding whether certain behaviours need treatment, and (3) the contexts where the informant observed the behaviour or where behaviour reports were taken (De Los Reyes, 2011). In clinical settings, informant discrepancies can yield important information about children's psychopathology, reflecting variation in children's behaviour across settings. Nevertheless, informant discrepancies can also represent measurement errors (De Los Reyes & Kazdin, 2005; De Los Reyes, 2011; De Los Reyes et al., 2019).

Given the discrepancies between informant reports, a number of studies have found that using multiple informants is necessary to obtain an adequate assessment of an adolescent's problems, whether in clinical or community settings (Goodman et al., 2003; Goodman et al., 2004; Kuhn et al., 2017; Lauth et al., 2010). However, many schools report that barriers to school-based screening include budget, time, and personnel (Bruhn, 2014; Wood & McDaniel, 2020). Therefore, resource constraints may prohibit screening programmes that combine information from all potential informants.

Many studies have investigated which informant (parent, teacher, self) provides the most accurate report of mental health problems. As adolescents may be thought to have the best insight into their own emotions and behaviour, and in terms of efficiency, it has been suggested to use self-report as a key informant (Levitt et al., 2007). However, there is a possibility that the adolescent would lie about their problems due to stigma or to avoid punishment. In addition, self-report is based on the adolescents' perceptions of their feelings, thoughts, and behaviours; hence, subjectivity influences what they consider a problem. Kuhn

et al. (2017) reported that self-reports predict adolescents' mental health problems less than parents' reports. Kuhn et al.'s recommendation, therefore, has been that parent reports should be preferred over self-reports. Nevertheless, teachers and students can be more easily invited to act as informants in a school setting than family members.

Schools tend to place an emphasis on teachers' contribution to mental health screening. Practically, schools can easily organize teacher assessments, so compliance is likely to be high. A number of studies have reported the efficacy of teacher reports, where teachers' assessments predict adolescent mental problems (Honkanen et al., 2014). Furthermore, compared with parent reports and self-reports, teacher reports were better at predicting the presence of internalizing problems and adolescents' need for help (Verhulst et al., 1997). Another study by Loades & Mastroyannopoulou (2010) found that teachers could identify children's mental problems and rate their severity. Teachers were better at recognizing severe mental health problems and identifying externalizing than internalizing problems (Kalberg et al., 2011; Splett et al., 2019). However, most reviewed studies were conducted in high-income countries, and fewer were conducted in LMICs.

In LMICs, such as Indonesia, teachers play an important role in the ad hoc identification of mental health problems and making referrals for at-risk students, with systematic screening being a rarity. The present study examines the potential for screening for mental health problems in the Indonesian context, focusing on the appropriateness of teacher reports for this purpose. We investigated the relationship between Indonesian junior and senior high school teachers' ratings of pupil psychopathology and ratings generated by self- and parent reports. In order to provide a comparison to a HICs context, the correlations of Indonesian teachers' ratings with parental and self-report were compared to correlations in a large-scale UK community data set using the same measure. The research questions were the following: (1) How well do teacher reports of child psychopathology correlate with the reports of parents and

adolescents in Indonesia? (2) Do Indonesian teachers have a stronger correlation with students and parents in identifying externalizing than internalizing behaviour problems? (3) How do the correlations between informants in Indonesia compare to the UK? Given that mental health programs in Indonesian schools are less developed compared to the UK, we predicted that the the correlations of teacher reports of child psychopathology with the parent and adolescent reports in the UK are stronger than in Indonesia. (4) Does student-teacher contact time moderate the relationship between teacher reports with parent and student reports in Indonesia? Indonesian data was collected during the COVID-19 pandemic. Indonesian schools conducted online learning from early 2020 to early 2022, thus limiting face-to-face interaction between teachers and students. At the time of data collection, schools were permitted to conduct in-person learning with study hours determined by each school's policies, resulting in various study hours across different schools. Therefore, to test whether variations in contact time might influence our results, we explored whether student-teacher contact time moderated the relationship between teacher reports with parent and student reports.

4.3 Methods

4.3.1 Sample and procedure

We aimed to recruit a sufficient sample size to test whether the correlation between teacher and parent/child reports is significantly different between Indonesia and UK. We used Stata 17 software (StataCorp. 2021. Stata Statistical Software: Release 17. College Station, TX: StataCorp LLC) to estimate the required sample size using a two-sample correlations test Fisher's z test. Based on a study of the British and Adolescent Mental Health Survey years 1999 and 2004, the minimum correlation between informants was $r = .34$ (Collishaw et al., 2009). Therefore, we expected a correlation of approximately .3 in the UK, which is a medium effect size according to Cohen (1988). According to Cohen, a substantially smaller correlation in Indonesia would be $r = .1$ (a small effect). A sample of 597 in the UK and 597 in Indonesia

would provide approximately 0.95 power to identify a significant difference between correlations with population values of .3 and .1, respectively. As described below, the achieved samples were 4997 UK and 732 Indonesia, meeting the minimum sample size requirements.

Indonesian data

Ethical approval was granted by the Department of Psychology Research Ethics Committee University of Sheffield (number 034936). The study protocol was preregistered in the Open Science Framework (<https://doi.org/10.17605/OSF.IO/6PY9F>). Permission for data collection was obtained from West Java Provincial Education Office, West Java National and Political Unitary Body for data collection in senior high schools, and Cimahi City Education Office and Cimahi City National and Political Unitary Body for data collection in junior high schools.

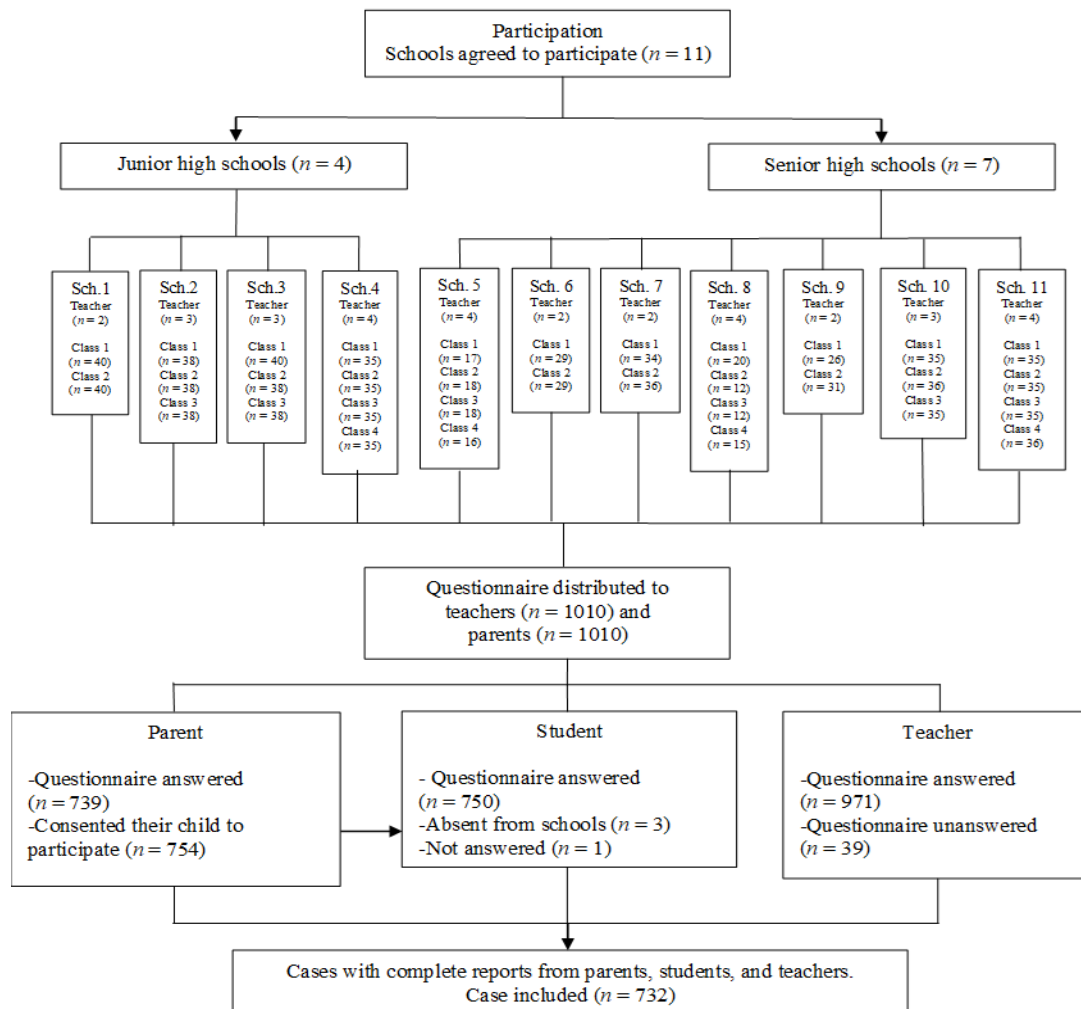
We used convenience sampling, given the limitation of the COVID-19 pandemic. At the time of data collection (May 2022), the Indonesian government had implemented community activity restrictions enforcement, including school learning activities. The level of restriction was determined based on the number of confirmed cases and the number of vaccinated senior citizens (over 60 years old) in a district or city per week and on the vaccination attainments of educators and education staff. Schools recruited to the study could carry out face-to-face learning for all students by following COVID-19 health regulations (such as wearing a face mask and maintaining a safe distance of 1.5 meters) with study hours depending on the school policy.

Data were collected in Indonesian schools (junior and senior high schools), including institutions funded by the government (public) and privately funded institutions. In Indonesia, senior high schools include general schools (aiming to prepare students for higher education) and vocational schools (aiming to prepare students to enter the workplace). This study focused on students in junior (aged 13 – 15 years) and senior high schools (aged 16 – 18 years).

We invited 36 junior and 40 senior high schools in Cimahi City, West Java province, Indonesia. Eleven schools consisting of four junior high schools (three private and one public school) and seven senior high schools (four private vocational schools, one public vocational school, and two general public schools) agreed to participate. Other schools did not participate due to time constraints related to Covid-19 restrictions. In all participating schools, all homeroom teachers were invited to participate. Thirty-three homeroom teachers were interested in participating. Then, students and parents of the participating homeroom teacher classes were invited to participate, with 12 to 40 students in each class, including 1010 students (see Figure 4.1).

Figure 4.1

Participant Recruitment in Indonesian Schools



Each teacher received an envelope containing an information sheet, a consent form, a list of students' names and codes, questionnaires stamped with students' codes, and a study information sheet. Teachers completed the questionnaire themselves at a time and place that suited them. Thirty-three teachers answered a total of 971 questionnaires. Thirty-nine questionnaires were not answered due to the unavailability of parents' consent for the students being assessed. The parents' questionnaire and opt-in consent for student participation were distributed via students. The information sheet described the study and asked whether parents would consent for their child to participate. Seven hundred thirty-nine parents completed the questionnaires, and 754 parents consented to their children participating in this study. The students completed the questionnaire in the classroom. The researcher was present in the classroom to assist (give instruction and answer questions) students in filling out the questionnaire. A total of 750 students answered the questionnaires, one student refused to answer, and three students were absent when data were collected. Our analyses included 732 cases with complete reports from teachers, parents, and students.

UK data

We utilised data from the Mental Health of Children and Adolescents (MHCA) in Great Britain 1999 (Office for National Statistics [ONS], 2000) and the Mental Health of Children and Young People (MHCYP) survey in Great Britain 2004 (Ford et al., 2005), available from the UK data service (<https://beta.ukdataservice.ac.uk/datacatalogue/studies/study?id=4227> for the 1999 data and <https://beta.ukdataservice.ac.uk/datacatalogue/studies/study?id=5269> for the 2004 data). Ford et al. (2020) described the procedures and data profiles. The National Health Service Research Ethics Committee had approved ethical approval of the original data collection for the MHCA and MHCYP.

We focused on data from children aged 11-17 years from 1999 ($n = 4525$) and 2004 ($n = 4052$) datasets. In the present study, we included children who provided complete SDQ

reports from teachers, parents and via self-reports without any missing data ($n = 4997$). Teacher data had the most missing values resulting in lower data used in this study than the original data.

4.3.2 Measures

The Strengths and Difficulties Questionnaire (SDQ). All participants were given the Indonesian translation of the SDQ in the form of a paper and pencil obtained from www.sdqinfo.org. The SDQ is a brief questionnaire that can be administered to adolescents (11-17 years) (Goodman et al., 1998), parents, and teachers (Goodman, 1997) and is commonly used worldwide. It contains 25 items inquiring into adolescents' positive and negative psychological functioning. It has five subscales, each made of 5 items: 1) emotional problems, 2) conduct problems, 3) hyperactivity/inattention, 4) peer relationship problems, and 5) prosocial behaviour. All items are rated on a 3-point Likert-style scale (0 = not true, 1 = somewhat true, and 2 = certainly true). The total score for each subscale ranges between 0 - 10. An internalizing problem score was obtained by adding up the scores on emotional and peer problems scales, ranging from 0 - 20. The externalizing problem score was obtained by adding the scores on conduct problems and hyperactivity scales, ranging from 0 - 20 (Goodman et al., 2010). A higher score indicates more mental health problems, with the exception of the prosocial behaviour scale.

Teacher–student contact time. Teachers were asked to indicate the length of their contact time with students in the class (“*How many days do you meet the students over the last month?*” and “*How long is the duration of each meeting on average? (In hours)*”). We calculated a total contact time measure by multiplying the number of meeting days by the length of each meeting.

4.3.3 Data analysis

We analysed the data using IBM SPSS Statistics (version 26). We calculated the internal consistency of each scale using Cronbach's Alpha (α). We included scales with a

satisfactory range of internal consistency in the analysis (Taber, 2018). We tested the association between parent, teacher, and student reports using Pearson correlations. Then, we compared the coefficients between teacher-adolescent reports, teacher-parent reports, and parent-adolescent reports using Fisher's r to Z transformation (Lenhard & Lenhard, 2014). We tested whether teacher-student contact time moderated the prediction of student-reported SDQ and parent-reported SDQ from teacher-reported SDQ score reports using moderation analysis PROCESS Procedure for SPSS Version 4.1 (Hayes, 2012). Changes to the data analysis plan were made following submission of the OSF preregistration. These changes involved excluding specific data analyses from the main analysis, such as students' well-being, the SDQ subscale, the SDQ cut-off of Indonesian data, and the moderation of the length of teaching and teachers' mental health training experience to the correlation of teacher reports with student and parent reports. We also modified the statistical analysis used to test the moderation of student-teacher contact time. Details of changes are described in the Appendix E.

4.4 Results

Participants characteristics

Participant characteristics are described in Table 4.1. More female teachers participated than males. For parent participants, the average age was 45 years, and more female parents participated than male parents. Two parents did not report their age, and one parent did not indicate their gender. The average age was 15 years among the student participants, with more girls participating than boys.

Table 4.1

Demographic Information of Participants

Characteristic	N of participants (%)	Mean	Std. Deviation
Teacher	33 (100%)		
Age	-	40.8	11.7
Gender:			

-Male	10 (30.3%)		
-Female	23 (69.7%)		
Length of teaching (years)	-	15.8	10.2
Contact time with students (hours)	-	18.7	22.3
Student	732 (100%)		
Age	-	15.4	1.7
Gender:			
-Male	314 (42.9%)		
-Female	418 (57.1%)		
Parent	732 (100%)		
Age	-	45.1	7.0
Gender:			
-Male	239 (32.7%)		
-Female	492 (67.2%)		
-Missing	1 (.1%)		

Internal consistency

The Cronbach's alphas for the SDQ subscales in Indonesian data ranged from .47-.84 in teacher reports, .31-.75 in the student reports, and .38-.72 in the parent reports (see Table 2). The lowest Cronbach's alphas were found in the conduct problems (teacher $\alpha = .47$, student $\alpha = .31$, and parent $\alpha = .48$) and peer problems (teacher $\alpha = .50$, student $\alpha = .42$, and parent $\alpha = .38$). In the UK data, the SDQ internal consistency was higher, ranging from .70-.88 for teacher reports, .44-.76 for student reports, and .58-.81 for parent reports. The UK Cronbach's alphas were low in peer problems (student $\alpha = .44$ and parent $\alpha = .58$).

Table 4.2 shows that range of Cronbach alphas for SDQ internalizing and externalizing problems was .60-.81 in the Indonesian data and .67-.88 in the UK data, which are considered satisfactory. Based on the results, analyses changed compared to what we wrote in the OSF pre-registration, in which we planned to analyse five SDQ sub-scales. Nevertheless, the internalizing and externalizing problems could represent difficulties in sub-scales of the SDQ

(emotional problems, conduct problems, hyperactivity, and peer problems). Therefore, in subsequent analyses, we focused on scales with satisfactory internal consistency (prosocial behaviour, internalizing and externalizing problems).

Table 4.2

Strength and Difficulties Questionnaire Scales Internal Consistency Based on Cronbach's Alpha (Indonesia and UK Data)

Scales	n of items	Teacher		Student		Parent	
		ID	UK	ID	UK	ID	UK
1. Emotion problems	5	.84	.79	.75	.65	.72	.70
2. Conduct problems	5	.47	.77	.31	.60	.48	.68
3. Hyperactivity	5	.69	.87	.55	.69	.53	.77
4. Peer problems	5	.50	.70	.42	.44	.38	.58
5. Prosocial behaviour	5	.77	.84	.68	.66	.70	.67
6. Internalizing problems	10	.81	.82	.70	.67	.70	.74
7. Externalizing problems	10	.76	.88	.60	.76	.69	.81

ID = Indonesia; UK = United Kingdom.

Ns (range of the number of samples for each informant): Teacher: ID=962-970, UK=5894-6221; Student:

ID=744-749, UK=7647-7673; and Parent: ID=737-738, UK= 8297-8424.

Comparing SDQ ratings across informants in Indonesia

Mean SDQ internalizing and externalizing problems scores are presented in Table 4.3. Among the three informants (teachers, students, and parents), the teachers' mean scores for internalizing and externalizing problems were below the students' and parents' mean scores. The results indicated that teachers identified fewer mental health problems in their students than reported by students or parents.

Table 4.3

The Mean and Standard Deviation of Internalizing and Externalizing Problems in Teacher, Student, and Parent Reports

Variable	Teacher		Student		Parent	
	Mean	SD	Mean	SD	Mean	SD
1. Internalizing problems	3.7	3.5	7.2	3.6	4.6	3.4
2. Externalizing problems	2.6	2.7	5.6	2.9	3.6	2.9

n =732

Correlation across informants

How well do teacher reports of child psychopathology correlate with the reports of parents and adolescents in Indonesia?

Correlations between raters are presented in Table 4.4. Based on Cohen's (1988) definition of effect size, there was a small positive teacher-student correlation in identifying externalizing problems that was statistically significant and small correlations regarding internalizing problems and prosocial behaviour that were not significant. Regarding teacher-parent correlations, there were small significant positive correlations regarding all SDQ scales. Meanwhile, parents and students had medium strength significant positive correlations regarding prosocial behaviour and externalizing problems and a large positive significant correlation in identifying internalizing problems.

Table 4.4

Correlations Across Informants in Indonesia and the UK

Variable	Teacher-Student (r_{TS})				Teacher-Parent (r_{TP})				Student-Parent (r_{SP})			
	95% CI		95% CI		95% CI		95% CI		95% CI		95% CI	
	ID	UK	ID	UK	ID	UK	ID	UK	ID	UK	ID	UK
1. Prosocial behaviour	.06	-.013, .13	.25**	.22, .28	.11**	.038, .18	.25**	.22, .28	.34**	.27, .4	.31**	.28, .33
2. Internalizing problems	.06	-.013, .13	.30**	.27, .33	.12**	.048, .19	.37**	.35, .39	.50**	.44, .55	.45**	.43, .47
3. Externalizing problems	.12**	.048, .19	.39**	.37, .41	.21**	.14, .28	.51**	.49, .53	.40**	.34, .46	.50**	.48, .52

Significant correlation in bold; * $p < .05$, ** $p < .01$ (2-tailed); Ns: ID=732, UK=4997

Abbreviations: ID = Indonesia; UK = United Kingdom; CI = Confidence Interval

r_{TS} = Teacher-Student correlation; r_{TP} = Teacher-Parent correlation; r_{SP} = Student-Parent correlation

Table 4.5 shows that the teacher-student correlation in externalizing problems was significantly weaker than the teacher-parent correlation. There were no significant differences between teacher-student and teacher-parent correlations on prosocial behaviours and internalizing problems. However, the student-parent correlations were significantly stronger than the teacher-student and teacher-parent correlations.

Table 4.5

Comparison of Correlations Across Informants Within Indonesia, Within the UK, and Between Indonesia and the UK

Variable	Correlations Across Informants within Countries											
	Indonesia						UK					
	r_{TS} and r_{TP}		r_{TS} and r_{SP}		r_{TP} and r_{SP}		r_{TS} and r_{TP}		r_{TS} and r_{SP}		r_{TP} and r_{SP}	
	Z	p	Z	p	Z	p	Z	p	Z	p	Z	p
1. Prosocial behaviour	-0.96	.168	-5.61	<.001	-4.65	<.001	0	.5	-3.26	.001	-3.25	.001
2. Internalizing problems	-1.15	.124	-9.34	<.001	-8.19	<.001	-3.94	<.001	-8.75	<.001	-4.81	<.001
3. Externalizing problems	-1.77	.039	-5.79	<.001	-4.02	<.001	-7.54	<.001	-6.87	<.001	0.67	.251

Variable	Comparison between Indonesia and UK					
	Teacher-Student		Teacher-Parent		Student-Parent	
	Z	p	Z	p	Z	p
1. Prosocial behaviour	-4.93	<.001	-3.66	<.001	0.85	.199
2. Internalizing problems	-6.29	<.001	-6.76	<.001	1.63	.052
3. Externalizing problems	-7.35	<.001	-8.82	<.001	-3.17	.001

Rejection of null hypothesis is in bold = $p < .05$; Ns: ID=732, UK=4997

ID= Indonesia; UK = United Kingdom

r_{TS} = Teacher-Student correlation; r_{TP} = Teacher-Parent correlation; r_{SP} = Student-Parent correlation

Do Indonesian teachers have a stronger correlation with students and parents regarding externalizing rather than internalizing problems?

Table 4.6 compares teacher-student and teacher-parent correlations regarding internalizing and externalizing problems. In the teacher-student correlation, the internalizing problems correlation was not significantly different from the externalizing problems correlation. However, in the teacher-parent correlation, the externalizing problems correlation was significantly stronger than the internalizing problems correlation.

Table 4.6

Comparison of Correlation between Internalizing Problems and Externalizing Problems within Indonesia and within the UK

	Comparison (Fisher's r to z)			
	Indonesia (ID)		UK	
	r_{INT} and r_{EXT}		r_{INT} and r_{EXT}	
	Z	p	Z	p
Teacher-student correlation	-1.16	.124	-5.11	<.001
Teacher-parent correlation	-1.77	.039	-8.71	<.001

Rejection of null hypothesis = $p < .05$, ID (N=732), UK (N=4997)

ID = Indonesia; UK = United Kingdom; r_{INT} = Internalizing problems' correlation; r_{EXT} = Externalizing problems' correlation

How do relationships in Indonesia compare to relationships in the UK?

The comparisons of teacher-student, teacher-parent, and student-parent correlations between Indonesia and the UK are presented in Table 4.5. The Indonesian teacher-student correlations were significantly weaker than the UK correlations in identifying prosocial behaviour and internalizing and externalizing problems. Similar results were found in the teacher-parent correlations. Nevertheless, in Indonesia and the UK, the teacher-parent correlation in identifying externalizing problems was significantly stronger than the teacher-student correlation. The difference was in identifying internalizing problems; in the UK, the teacher-parent correlation was significantly stronger than the teacher-student correlation, whilst, in Indonesia, there was no significant difference between the correlations. Furthermore, Table 4.6 indicates that in the UK, teacher-student and teacher-parent reports were significantly more strongly correlated when identifying externalizing problems than internalizing problems.

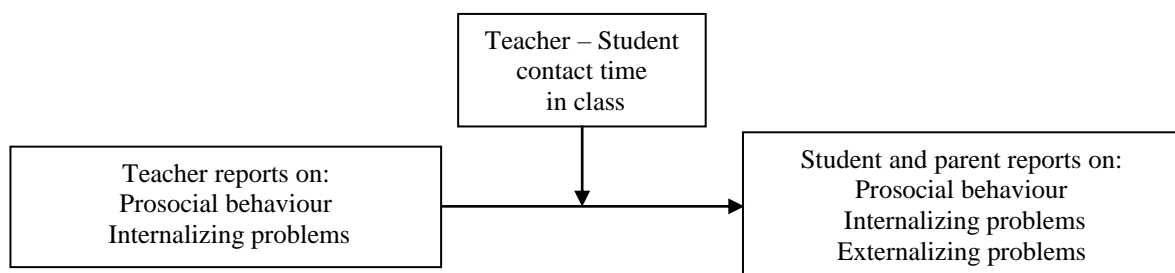
Regarding the student-parent correlations (See Table 4.5), the correlations in Indonesia were not significantly different from the UK in identifying prosocial behaviour and internalizing problems. However, in identifying externalizing problems, the student-parent correlation in the UK was significantly stronger than in Indonesia. Similar to Indonesia, compared to the teacher-student correlations, the student-parent correlations in the UK were significantly stronger in identifying prosocial behaviour, internalizing, and externalizing problems. Furthermore, the student-parent correlations were significantly stronger than teacher-parent correlations in identifying prosocial behaviour and internalizing problems. However, unlike in Indonesia, the teacher-parent correlation in the UK was not significantly different from the student-parent correlation in identifying externalizing problems.

Teacher-student contact time as a moderator

Given the school restriction due to the COVID-19 pandemic, we explored whether teacher-student contact time in class affected teachers' prediction of student and parent reports (see Figure 4.2) in each of the analysed SDQ scales.

Figure 4.2

Path Diagram of The Moderation Model for Teacher-Student Contact Time as A Moderator of Teacher Reports Prediction to Student and Parent Reports



The effect of teacher-student contact time on the prediction of student reports from teacher reports

We investigated whether teacher-student classroom contact time affected teachers' prediction of student reports of each SDQ subscale: prosocial behaviour, internalizing, and externalizing problems. The outcome variables for analysis were student reports of each SDQ subscale: prosocial behaviour, internalizing, and externalizing problems. The predictor variables were teacher reports of prosocial behaviour, internalizing and externalizing problems. The moderator variable was teacher-student contact time.

As shown in Table 4.7, the interaction between teacher reports and contact time was significant ($p < .05$) in predicting student reports of prosocial behaviours. However, teacher reports were more strongly related to student reports at low levels of teacher-student contact time than but not at medium and high levels. Figure 4.3a illustrates the relationship between teacher and student reports of prosocial behaviours. The effect was = .09, 95% C.I. (.0161,

.1651), $p = .02$, at a low level of teacher-student contact (the minimum contact time). At a medium level of teacher-student contact (mean of contact time), the effect = .05, 95% C.I. (-.0035, .1093), $p = .06$. At a high level of teacher-student contact (1 SD above mean contact time), the effect = -.0005, 95% C.I. (-.0673, .0663), $p = .99$

Similarly, table 4.7 shows that there was a significant interaction ($p < .05$) between teacher-student contact time and teacher reports in predicting student reports of externalizing problems. As with prosocial behaviours, the relationship was stronger at the lower levels of teacher-student contact and weaker at higher levels of teacher-student contact. Teacher reports were significantly related to student reports at low and medium levels of teacher-student contact time but not at high levels. The effect of teacher reports on student reports was = .19, 95% C.I. (.0917, .2924), $p = .0002$, at the low level of teacher-student contact (the minimum contact time). At the medium level of teacher-student contact (mean of contact time), the effect = .14, 95% C.I. (.0622, .2191), $p = .0005$. At the high level of teacher-student contact (1 SD above mean of contact time), the effect = -.07, 95% C.I. (-.0302, .1657), $p = .17$. The interaction can be seen in Figure 4.3b. In predicting student reports of internalizing problems, the interaction between teacher reports and contact time was non-significant ($p > .05$), indicating that teacher-student contact time in the classroom did not significantly moderate the prediction, as seen in Figure 4.3c.

Table 4.7

The Moderation Effect of Teacher-Student Contact Time on the Relationship of Teacher Reports with Student and Parent Reports

Interaction	b	p	LLCI	ULCI
Teacher reports prediction of student reports				
a. Prosocial behaviour	-.0024	.0447	-.0047	-.0001
b. Internalizing problems	-.0022	.1803	-.0054	.0010
c. Externalizing problems	-.0033	.0492	-.0065	.0000

Teacher reports prediction of parent reports

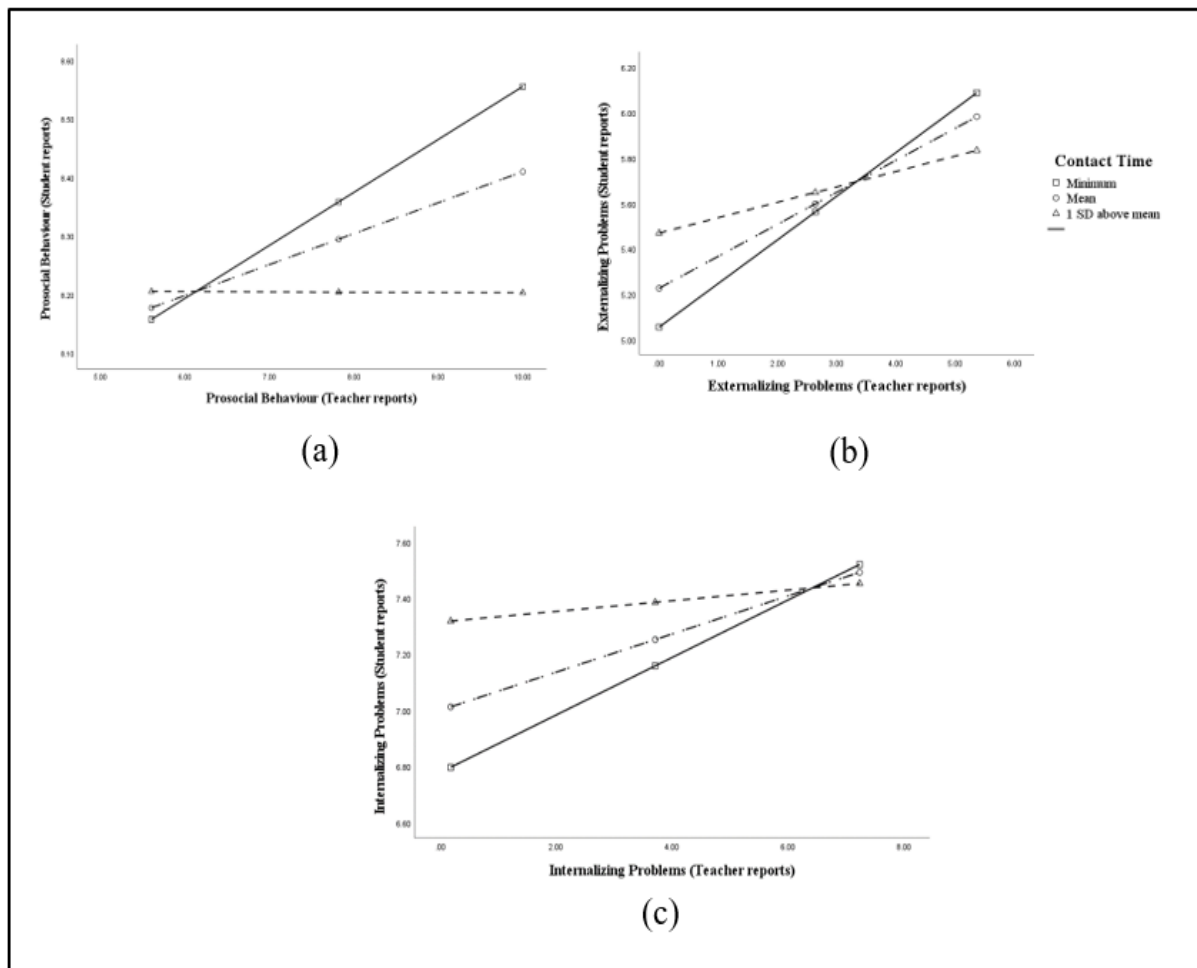
a. Prosocial behaviour	-.0008	.5174	-.0032	.0016
b. Internalizing problems	-.0019	.2177	-.0049	.0011
c. Externalizing problems	-.0005	.7394	-.0037	.0026

Significant interaction in bold; $p < .05$.

Abbreviation: LLCI = Lower Limit Confidence Interval; ULCI = Upper Limit Confidence Interval

Figure 4.3

Line Graph of Teacher-Student Contact Time as A Moderator of The Relationship Between Teacher and Student Reports in Indonesia in (a) Prosocial Behaviour, (b) Externalizing problems, and (c) Internalizing problems

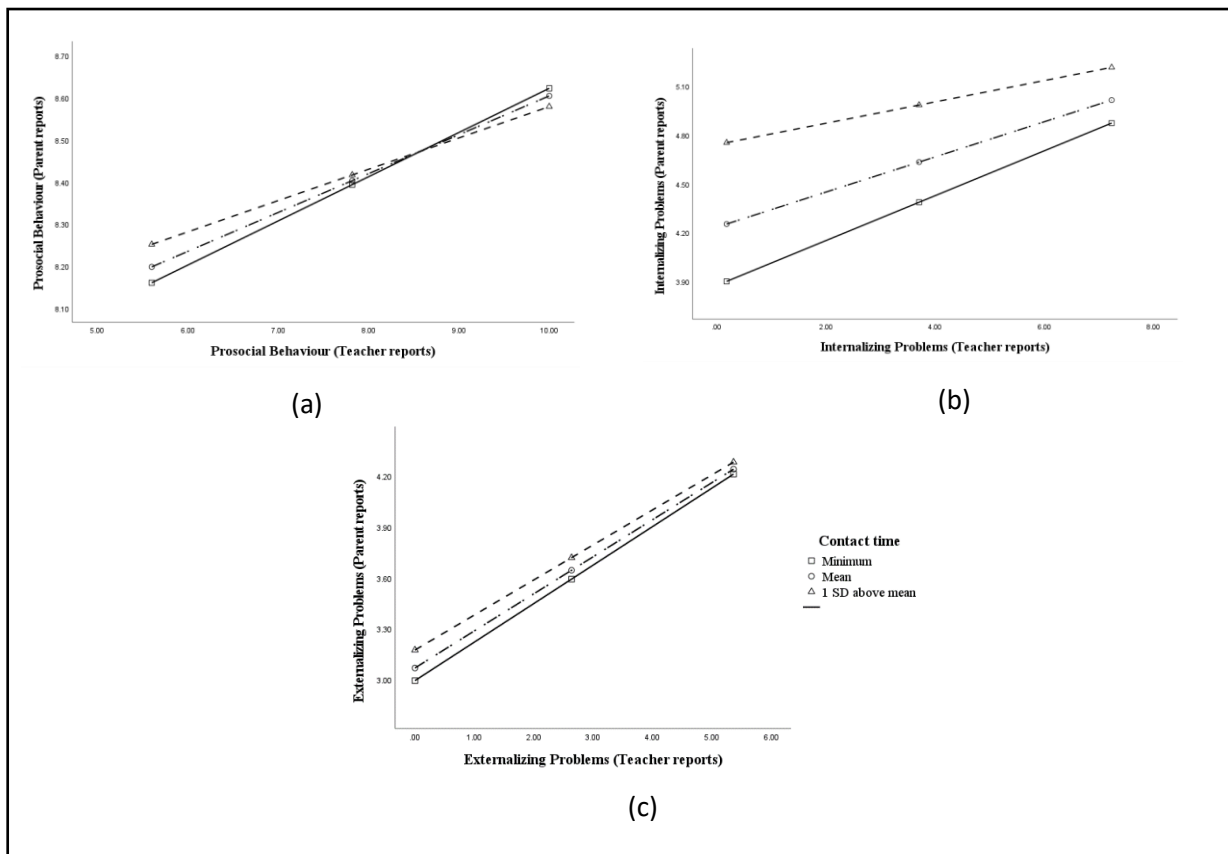


The effect of teacher-student contact time on the prediction of parent reports from teacher reports

As shown in Table 4.7, further exploration of the moderation of teacher-student contact time to the relationship between teacher and parent reports resulting that the interaction between teacher reports of the SDQ subscales and contact time was not significant ($p > .05$). These results showed that teacher-student contact time did not moderate the relationship between teacher and parent reports of prosocial behaviour, internalizing, and externalizing problems as seen on Figure 4.4.

Figure 4.4

Line graph of teacher-student contact time as a moderator of the relationship between teacher and parent reports in Indonesia in (a) Prosocial behaviour, (b) Internalizing problems, and (c) Externalizing problems



4.5 Discussion

The present study investigated Indonesian teachers as informants in school-based mental health screening. We found that teacher reports showed weak correlations with parent and student reports, generally weaker than the correlations between parent and student reports. There was a significant small correlation between teacher and student reports of externalizing problems but not of prosocial behaviour and internalizing problems. The results were similar for teacher-parent correlations. Teacher reports showed small but significant correlations with parent reports regarding prosocial behaviour, internalizing and externalizing problems. Particularly in externalizing problems, teacher reports showed a stronger correlation with parent reports compared to student reports.

These results indicate that much of the psychopathology identified by Indonesian teachers was not reported by parents and the adolescents themselves. Conversely, where parents and adolescents identified problems, teachers often did not identify them. There is a possibility that adolescent function differently in various situations or contexts, resulting in them being perceived differently by each informant (Achenbach et al., 1987). However, our study did not include a gold standard measure for accurately identifying mental health problems. Therefore, it is unclear whether clinical utility varies between informants. What is clear, however, is that parents and adolescents identified substantial levels of psychopathology that were not identified by teachers. At the very least, this implies that screening based only on teachers would miss a lot of emotional and behavioural problems perceived by parents and adolescents.

In order to examine whether the pattern of relationships found between different informants in Indonesia reflected processes specific to this context or more general characteristics, we compared the observed correlations with those found in a large UK dataset. Student-parent correlations were quite similar in UK and Indonesian data. The correlations of

teacher reports with student and parent reports were substantially stronger in the UK than in Indonesia. These findings are consistent with the possibility that teachers in Indonesia are less accurate in assessing psychopathology than teachers in the UK. This may reflect a number of different structural differences between the UK and Indonesian education systems.

Teachers identified fewer problems in their students than those identified by parents and self-reports. These results suggested that teachers might have missed some symptoms. Several studies found that teachers had less understanding of internalizing problems and suggested that they require further training (Taggart & McMullan, 2007; Trudgen & Lawn, 2011). Consistent with the result, students had better agreement with parents than with teachers, especially in identifying internalizing problems. This finding was consistent with Becker et al.'s (2004) study on German adolescents, where self-reports correlated more with parent reports than teacher reports. This indicates that parent reports could substitute self-reports or vice versa, especially in identifying internalizing problems.

One potential explanation for this cross-cultural difference was that COVID-19 pandemic restrictions affected adolescents' interactions with parents and teachers in Indonesia but not in the UK data. Teachers in Indonesia may have been less familiar with their students' everyday functioning as a result of less frequent contact during lockdowns and school disruptions. Conversely, parents may have spent more time with children than usual during home-based learning. However, our results were not consistent with this possibility; we did not find stronger inter-rater agreements when teachers had higher contact with their students. Instead, we found teacher-student agreement in prosocial behaviour and externalizing problems such that the correlation was stronger when contact was lower. Therefore, this analysis provides no support for the hypothesis that COVID-19 disruption might have contributed to lower correlations of teacher reports with parent and child reports in Indonesia.

It remains possible that the pandemic disruption may have impacted student-teacher contact quality and that this may have depressed teacher-reported correlations.

This study's findings raised concern that using teachers as a single informant in Indonesian school-based screening might lead to at-risk students not being identified for appropriate intervention. Studies in HICs, using multi-informants in mental health screening have been demonstrated to provide better detection of child psychopathology than using a single informant (Goodman et al., 2003). Therefore, investigating the efficacy of combining multiple ratings may provide a fruitful avenue for identifying an effective screening approach for Indonesian schools.

4.6 Limitations and future studies

Several limitations in this study might be directions for future studies. First, due to the COVID-19 pandemic, face-to-face data collection was limited. Although some schools were open at the time of data collection, not many schools were available for data collection. Thus, this study collected data from schools that agreed to participate. Furthermore, it should be noted that we used outdated 1999 and 2004 UK data instead of the latest due to budget and time constraints. However, the 20-year time gap between Indonesian and UK data would reflect generational differences or mental health awareness that might affect the data analysis. However, it is worth mentioning that a recent study conducted in the UK using the SDQ found similar correlations between teacher and parent reports as this study (Murray et al., 2021), indicating that the correlations have not substantially changed over time. However, replicating the study with new data would be valuable, considering data collection limitations. Therefore, it is necessary to conduct further investigations with a broader sample from the Indonesian population and the latest UK data, considering the post-COVID-19 situation. Second, we focused on correlations between informants in comparing Indonesian and UK data and less on factors that might contribute to the correlations. According to this study, parents in Indonesian

and UK samples correlated more with their children than teachers. It is possible that this high correlation could be attributed to the fact that parents share the same genes as their children, in addition to being in the same environment as them. Nevertheless, further investigation is needed. In addition to COVID-19 restrictions and limitations of the sample, other factors may influence the differences between Indonesian and UK data, such as school structure, stigma, and the informant's level of mental health literacy. Investigating factors contributing to the correlation between informant reports in future studies is recommended. Third, this study was conducted using data from only two countries. Therefore, any inferences drawn from the study may only apply to these two countries. It is uncertain whether the results can be extended to other populations. Hence, it is recommended that more countries be involved in future studies. Fourth, another limitation was that we did not include a gold-standard assessment for adolescent psychopathology. Hence, there was no information about the accuracy of each informant's psychopathology report. Therefore, we suggest including a gold-standard assessment in future studies on school-based screening.

In this study, we found that teacher-student contact time in the classroom due to COVID-19 disruption did not affect the correlation between teacher reports with student and parent reports. However, considering Indonesia's situation, where frequent disruptions exist (natural disasters such as earthquakes and ethnic-political conflict) in several parts of Indonesia that affect schools, we suggest further studies on the effect of these disruptions on teachers' ability to identify mental health problems.

This study used broad categorization of psychopathology in the SDQ (internalizing and externalizing problems) instead of using specific subscales (emotional problems, conduct problems, peer problems, and hyperactivity) due to low internal consistency found in some subscales (conduct and peer problems) in Indonesia and the UK data. These results were similar to several studies, such as in Muris et al.'s study in Dutch children, Cronbach's alphas were

low in the conduct problems (0.45 in self-report) and peer problems subscale (0.54 in self-report); Rønning et al.'s study of Norwegian children where the conduct problems had the lowest Cronbach's alpha: 0.44 (girls) and 0.54 (boys); and Rothenberger et al.'s study found the lowest reliability (0.53 in girls sample) in the conduct problems subscale (Muris et al., 2003; Rønning et al., 2004; Rothenberger et al., 2008). In this study, Cronbach's alpha range for the SDQ categorization (internalizing problems, externalizing problems, and total difficulties) was 0.60 - 0.81, considered satisfactory. Therefore, statistical analysis of the SDQ focused on variables with satisfactory internal consistency. This is consistent with Goodman et al. (2010) recommendation to use broad categorization (internalizing and externalizing problems) in analysing low-risk children.

4.7 Conclusions

The current study found that Indonesian teachers had low agreements with students and parents in terms of reporting adolescents' mental health problems. Compared to the UK, the agreements were lower. The results suggest that teachers may be missing recognizing symptoms of emotional and behavioural problems identified by parents and adolescents. Screening using teachers as the only informant may likely not identify students who seem to be at risk by other informants. Therefore, this study supported the notion of using multi-informants in school-based screening. Based on the current study findings, it is suggested to involve teachers and students as screening informants in case schools cannot access parents.

Chapter 5: General Discussion

This thesis aimed to investigate Indonesian teachers' effectiveness in identifying the mental health problems of their students. In order to achieve the objective, three studies were conducted to explore: (1) their perceived confidence, needs, and barriers in identifying mental health problems; (2) their accuracy and their approach in identifying mental health problems; and (3) the mental health screening agreement of teacher reports with the reports from parents and students.

This concluding chapter provides a brief overview of the main findings from the three empirical studies and explores the potential implications of these findings for both theory and practice. Additionally, limitations and recommendations for future works are considered.

5.1 Summary of main findings

The first empirical study reported in Chapter 2 aimed to explore teachers' confidence, needs, and barriers in identifying mental health problems, as well as their perception of the feasibility of mental health screening in schools. Using a qualitative methodology, the study found that Indonesian teachers perceived themselves as parents for their students while in school, encouraging them to support their students. Most of them were confident in their ability to identify the mental health problems of their students. The confidence came from their understanding and close relationship with the students and their experiences in dealing with mental health problems. Based on their experiences, most teachers were more confident in identifying mental health problems from students' overt behaviour that they observed in schools than they were in identifying internalizing problems. Despite their confidence, teachers perceived some barriers to identifying mental health problems, including insufficient knowledge of mental health that may lead to misinterpretation and delay in identifying mental health problems, competing demands of their academic tasks, time as well as space constraints

that limited their opportunity to observe students individually and lack of trust from students. Therefore, they expressed a need for support from parents, colleagues, and students in the form of information about students' conditions that may facilitate them in identifying mental health problems. They indicated that they would appreciate some input from colleagues and mental health professionals to help them understand and deal with mental health problems and programmes to enhance their understanding and ability to identify mental health problems. Considering training programmes, teachers preferred continuous education that could provide them with interactive programmes and learn from real cases under supervision from mental health experts. Most teachers thought that mental health screening could feasibly be conducted in Indonesian schools and that parents, teachers, and students would accept screening and appreciate its benefits. Teachers considered screening as the first phase in the process of mental health problem identification, which would require further exploration by teachers.

Studies Two and Three aimed to assess the capability of Indonesian teachers to identify mental health problems. The second study (Chapter 3) focused on investigating teachers' accuracy in identifying children's mental health problems as depicted in the vignettes using a mixed-methods sequential explanatory design. This study found that teachers could accurately identify the presence or absence of mental health problems. Teachers' perceived stress significantly correlated with accuracy, with a small effect size (Cohen, 1988). Teachers identified the presence of mental health problems by comparing the child's situation in the vignettes to their experiences with the students. Teachers could identify mental health problems by observing negative behaviours and emotions in children and through information regarding disruptions in their daily lives, family problems, and adverse childhood experiences. Teachers were more accurate in assessing internalizing than externalizing problems. This study found that female teachers were better at identifying internalizing problems in students compared to male teachers. Teachers were moderately accurate in assessing the severity of mental health

problems. Mean comparison analyses showed that teachers had better accuracy in identifying the severity of internalizing problems in girls and externalizing problems in boys, suggesting gender-specific symptoms influenced teachers' accuracy. In addition, female teachers were more accurate in assessing the severity of mental health problems than male teachers. Teachers explained that they assessed the severity of mental health problems by comparing them to their experiences in handling mental health problems and assessing psychosocial impairment.

The third study reported in Chapter 4 investigated Indonesian teachers as informants in school-based mental health screenings and explored the correlation between teacher reports on students' mental health with parent and student reports. This study compared the correlation of mental health reports from teachers, parents, and students in Indonesia with those in the UK. This study used the SDQ, a valid and widely used mental health screening instrument, as a measurement tool and analysed prosocial behaviours, internalizing and externalizing problems sub-scales, as suggested by Goodman et al. (2010). The results showed that teachers reported fewer mental health problems than reported by students or parents. Correlational analyses found that teacher reports had a small significant correlation with student reports in identifying externalizing problems in Indonesia. In contrast, no significant correlations were found between teacher and student reports in identifying prosocial behaviour and internalizing problems. Teacher reports had stronger correlations with parent reports. Overall, teacher reports had small significant correlations with parent reports in identifying prosocial behaviours, internalizing, and externalizing problems. Compared to teacher reports, student reports had stronger correlations with parent reports, especially in identifying internalizing problems. We found that the correlations of Indonesian teacher reports with student and parent reports were weaker than correlations in the UK as measured using the SDQ in the UK's 1999 and 2004 Mental Health of Children and Young People studies. One possibility is that COVID-19 disruption might have reduced teacher-student interaction times in the Indonesian sample,

meaning that teachers were less aware of mental health problems in students, leading to their ratings correlating less strongly with parent and child reports, compared with the UK study. However, we tested this possibility by examining whether correlations were higher when the quantity of teacher-student interaction was greater. Our results did not find that amount of teacher-student contact moderated the reporter correlations in this way. As mentioned in Chapter 4, another possible explanation is that there are structural differences in the education systems of Indonesia and the UK which provide differential opportunities to teachers to assess students' mental health functioning. This deserves further investigation.

Integration of main findings

The studies in this thesis provide a comprehensive understanding of Indonesian teachers' effectiveness in identifying mental health problems in their students from various approaches. Study Two found that Indonesian teachers were effective at identifying the presence of mental health problems when given adequate information about the child's condition, such as in the vignette. The results may appear to contrast with the findings of Study Three. First, as an informant in mental health screening, teachers reported fewer mental health problems than those identified by parents and students. Second, Indonesian teachers had low agreement with students and parents in identifying mental health problems. The findings from Study Three might indicate that Indonesian teachers were not good at recognizing mental health problems. Although both studies investigated teachers' ability to identify mental health problems, each study had a different focus. Study Two investigated accuracy in identifying mental health problems, while Study Three focused on the agreement between informants. Studies Two and Three combined results comprehensively evaluated teachers' ability to recognize mental health issues. Chapter 4 discusses how adolescents may behave differently in different situations, leading to varying perceptions by observers. Supported by the results of Study Two that Indonesian teachers accurately identified mental health problems, low

correlations between reports from teachers, students, and parents in Study Three may not necessarily indicate that Indonesian teachers could not identify mental health problems. Instead, it may suggest that each informant offers a unique perspective on student behaviour that can be complementary, in part reflecting that child behaviour can differ between contexts. The findings highlight using multi-informant methods to identify mental health problems in school-based screenings.

Indonesian teachers, who see themselves as parental figures at school, were well-suited to identify mental health problems in their students. They were confident in recognizing these problems and expressed a willingness to support students' mental health and improve their ability to identify mental health problems (Study One). Based on Studies One and Two, Indonesian teachers' comprehension of mental health problems was developed through their personal experiences. They appropriately identified mental health problems by focusing on student behaviours, psychosocial functioning disturbances, and risk factors like parental divorce and child adversity. Teachers expressed a need to understand students' mental health problems and preferred a personal approach to exploring students' mental health conditions. Nevertheless, they supported mental health screening, indicating the potential of its implementation in schools in Indonesia. Findings from this thesis can contribute to developing programmes to improve Indonesian teachers' ability to identify mental health problems.

5.2 Theoretical and practical implications

The results of three empirical studies have important implications, both in theory and practice. Numerous studies have been conducted to investigate teachers in school-based mental health problem identification, especially in HICs such as the USA and the UK. Considering the difference in socio-economic, cultural, school structure, and provision of mental health services, the findings from studies conducted in HICs may not generalise to LMICs, such as Indonesia. To my knowledge, this thesis is the first to investigate the teachers' effectiveness in

identifying mental health problems in Indonesia. To gain a thorough understanding of the topic, this thesis combines three empirical studies which offer different perspectives investigating Indonesian teachers in identifying the mental health problems of their students. The findings can provide valuable insight into the understanding of mental health in LMICs, especially the practice of identifying mental health problems in Indonesia. Study One provided a unique perspective of Indonesian teachers on their experience in identifying mental health problems. A noteworthy finding is that teachers in Indonesia perceive themselves as parental figures at school that encourage them to support their students. Study Two supported previous findings that teachers could recognize the presence of mental health problems and the mixed results on teachers' ability to assess the severity of mental health problems. This study added value by incorporating the qualitative method to explore how teachers identified mental health problems. In addition, Study Two found that, in contrast to previous findings, teachers were better at recognizing internalizing than externalizing problems. Further investigation of this finding is suggested. The findings from Studies Two and Three support using multi-informants in school-based mental health screening.

Practically, the results can be applied to develop school-based mental health programmes in Indonesia that enhance teachers' ability to support students' mental health. In Study One, teachers stated the need for mental health training programmes and collaboration with colleagues, parents, and mental health experts. The results of Studies One and Two highlight the potential benefits of developing training programmes that include mental health literacy, referral systems, effective communication skills, and mental health screening. Some established teacher mental health training packages are available online, such as The Mental Health in Schools Training Package for Educators (World Health Organization. Regional Office for the Eastern Mediterranean, 2021), Promoting Mental and Emotional Health in The European Network of Health Promoting Schools: A Training Manual for Teachers and Others

Working with Young People (Weare & Gray, 1995), and The Mental Health and High School Curriculum Guide (The Guide), an evidence based mental health literacy programme for teachers (available from <https://services.actionforchildren.org.uk/the-guide/the-guide/>). These training programmes were found effective in some HICs and LMICs. For example, a prospective cohort study of 60 preservice teachers in Canada found that using The Guide in training significantly improved teachers' mental health knowledge and decreased mental health stigma (Carr et al., 2018). Similar findings in using The Guide were found in a study of secondary school teachers in Tanzania (Kutcher et al., 2016). In a randomized controlled trial conducted in Pakistan, the Mental Health Manual programme developed by WHO's Eastern Mediterranean Regional Office improved teachers' mental health knowledge and self-efficacy in managing classrooms and interacting with students (Imran et al., 2022). The findings suggest that these programmes have the potential to be adapted in Indonesia after further adjustment and evaluation, for example, by conducting a randomized controlled trial. Furthermore, as mentioned in Chapter 1, schools in Indonesia provide guidance and counsellor teachers to support students' mental health and a school health unit, namely UKS. With the current emphasis on promoting physical health, UKS can be optimized to support school mental health by broadening its services to provide mental health experts or conducting mental health screening.

In Studies One and Two, teachers reported a need to be close to the students to explore student mental health problems. However, considering teachers' barriers (time, space, and academic tasks), schools may consider using a multiple-gating approach as an alternative to teacher ad hoc nomination to identify students' mental health problems. Multiple-gating approach is a screening process whereby students who require further follow-up undergo more intensive assessments (Dowdy et al., 2016). Using this approach, initial screening might involve a universal mental health screening measure to monitor students' mental health with

the student or parent as an informant. According to a meta-analysis of 38 studies in the USA, school-based mental health screening mostly used students as informants, and their participation rate was higher when using passive consent rather than active consent (Villarreal et al., 2023). Students identified as at risk of mental health problems would then proceed to the second assessment run by the teachers. Then, teachers determine whether to make a referral to further interventions. Further study is required to investigate the effectiveness of this approach.

5.3 Limitations and future works

There are some limitations to the studies included in this thesis. The first study used a qualitative methodology that focussed on Indonesian teachers' unique perspectives in identifying mental health problems. Therefore, it may not represent the situation in other countries. Countries may have differences in norms, culture, government regulations, mental health provisions, or educational structure that may render interventions ineffective for implementation in other countries. However, it is essential to understand the perspective of Indonesian teachers so that any intervention programmes are aligned with their needs and ensure programme uptake. The second study used vignettes to assess teachers' ability to identify mental health problems. These may not fully representative of real-life situations. In future vignette studies, utilising other formats that showcase real-life scenarios, such as video vignettes, may be beneficial. Furthermore, using a sequential explanatory design caused a significant delay between the quantitative and qualitative phases, as statistical analysis took time to complete. This could potentially impact the accuracy of teachers' recollection of their earlier responses. Chapter 4 mentions that the third study did not use a gold-standard method to assess adolescent psychopathology. As a result, there is no information about the accuracy of the mental health reports from each informant. Including a gold-standard assessment in future studies is recommended to gain more insight into teachers' accuracy compared to other

informants. Another possibility is to conduct a longitudinal study to evaluate the extent to which different reporters predict future psychopathology.

Throughout this thesis, three studies were conducted amidst the COVID-19 pandemic. Unfortunately, face-to-face data collection and respondents' participation were limited due to the pandemic. For future studies, it is recommended to use a broader sampling method that can cover the entire Indonesian population. Nevertheless, due to Indonesia's situation, where disruptions to schooling can result from natural disasters like earthquakes and ethnic-political conflicts, collection of data during abnormal times may be particularly relevant. It is suggested that further studies should be conducted to determine the effects of these disruptions on teachers' ability to identify mental health problems.

This thesis focuses exclusively on the perspectives and capabilities of Indonesian teachers in identifying students' mental health problems. It is crucial to comprehend teachers' perspectives, including their needs and barriers, to improve school programmes for identifying students' mental health problems. However, it is worth noting that students and parents may have different views and needs. As adolescents, students may hesitate to confide in adults, such as teachers, about their problems. As a result, they may not be sincere when completing mental health screenings. Furthermore, implementing school-based mental health screening could lead to privacy concerns from parents regarding their family's confidentiality (Weist et al., 2007). Although supported by teachers, implementing school-based mental health screening involves other stakeholders, such as students, parents and headteachers. Future studies should investigate the perspectives of school stakeholders (e.g., students, parents, headteachers) on identifying mental health problems among students.

5.4 Conclusion

The main objective of this thesis was to investigate teachers' effectiveness in identifying mental health problems in Indonesia. This thesis is the first to explore the topic in the Indonesian context by providing a comprehensive understanding through various approaches reflected in three studies. The results of three empirical studies demonstrated that Indonesian teachers were confident in their ability to identify mental health problems in their students. Nevertheless, they reported a lack of mental health knowledge, time and space restrictions, and students' lack of trust as barriers to effective identification. Therefore, they needed support and mental health programmes to overcome the barriers (Study One). Considering teachers' ability to identify mental health problems, teachers could accurately identify the presence or absence of mental health problems but were less able to determine the severity of the problems (Study Two). As informants in school-based mental health screening, teachers reported fewer mental health problems than reported by students and parents. Teacher reports had low agreements with student and parent reports (Study Three).

The results suggested that Indonesian teachers may be considered effective in identifying the presence of mental health problems despite the barriers. Considering the low agreement between teacher reports with parent and student reports, teachers might give different perspectives on assessing students' mental health than parents and students, suggesting using multi-informant approaches in school-based mental health screenings. These findings can be used to develop school-based mental health programmes in Indonesia.

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Appendices

Appendix A. Participants' demographics

Pseudonym	Sex	Age (In years)	School	Length of teaching (In years)	Province
1 Ami	Female	40	Senior high school	12	East Kalimantan
2 Brigitta	Female	32	Junior high school	16	Riau
3 Ardi	Male	23	Junior high school	5	West Java
4 Cici	Female	27	Junior high school	2	West Java
5 Bagus	Male	42	Junior high school	16	West Java
6 Candi	Male	28	Junior high school	4	West Java
7 Dion	Male	38	Senior high school	13	West Java
8 Edi	Male	32	Junior high school	4	West Java
9 Gani	Male	29	Senior high school	7	West Java
10 Dian	Female	32	Senior high school	11	West Java
11 Ema	Female	36	Senior high school	10	West Java
12 Heru	Male	35	Senior high school	10	West Java
13 Ian	Male	27	Senior high school	5	West Java
14 Femmy	Female	31	Senior high school	10	West Java
15 Gendis	Female	23	Junior high school	1.5	West Java
16 Hani	Female	42	Junior high school	17	West Java
17 Ima	Female	30	Senior high school	9	West Java
18 Jelita	Female	27	Junior high school	2	West Java
19 Juna	Male	27	Senior high school	5	West Java
20 Karin	Female	41	Junior high school	16	West Java
21 Kiki	Male	39	Junior high school	12	West Java
22 Lulu	Female	31	Junior high school	8	West Java
23 Mia	Female	31	Junior high school	10	West Java
24 Lukman	Male	32	Junior high school	7	West Java
25 Mulya	Male	30	Senior high school	6	West Java
26 Nana	Female	31	Senior high school	10	West Java
27 Nuh	Male	56	Senior high school	33	West Java
28 Ovi	Female	44	Junior high school	16	Riau
29 Putri	Female	32	Junior high school	9	West Java
30 Opik	Male	29	Senior high school	6	West Java
31 Qirana	Female	40	Senior high school	12	West Java
32 Rully	Female	48	Senior high school	20	West Java
33 Santika	Female	28	Senior high school	6	Banten

Appendix B. Interview schedule

Questions and probing

1. *What do you think about the teacher's role in preventing mental health problems in students? Who do you think should be responsible for preventing mental health problems in students?*
 2. *Based on your experience, how do you usually recognize a problematic student? <Follow-up probes on the method used> How confident did you feel about your ability to recognize a student with mental health problems? <Follow-up probes on factors influencing their confidence>*
 3. *After completing the SDQ:*
 - a. *How confident do you feel that you could complete the Strengths and Difficulties Questionnaire for the children in your class? <Follow-up probes on which statements in SDQ they feel more confident to assess than others and what factors contribute to that confidence>*
 - b. *Do you think some sections of the SDQ would be easier to assess than others? <Follow-up probes on which items would be easier/more difficult within identified areas of the sections highlighted>*
 - c. *Overall, do you think the SDQ addresses the key indicators of mental health problems you commonly see in your class? Do you think anything is irrelevant? Do you think anything is missing?*
 4. *Based on your experience, what difficulties have you encountered when identifying mental health problems in your students? What do you need to overcome these difficulties?*
 5. *What do you think about the feasibility and acceptance of conducting formal mental health screening (using questionnaires)? < Follow-up probes on how parents, students, respondents, and teachers generally would feel about it?>*
 6. *If there was a program to increase teachers' ability to identify students' mental health problems, what would be the best way to deliver this program to teachers (mode of delivery, time, and length)?*
-

Appendix C. Interview Schedule

Questions and probing

1. *How did you identify children who have mental health problems? <follow-up probes on what information in the vignette support their identification. What factors influence their judgement?>*
 2. *How did you assess the severity of children's mental health problems? <follow-up probes on what information in the vignette support their assessments. What factors influence their judgement?>*
 3. *Which children will you refer to a mental health specialist for further treatment? <follow-up probes on the reason for referral>*
-

Appendix D. Participants' Descriptions

Pseudonym	Sex	Age (In years)	Length of teaching (In years)	School level	Vignette version	Accuracy level
Anna	Female	54	30	Junior high school	BinGex	Low
Bestari	Female	43	20	Senior high school	BinGex	High
Celine	Female	25	3	Senior high school	GinBex	High
Damar	Male	47	17	Junior high school	GinBex	Low
Eka	Female	53	22	Junior high school	BinGex	Medium
Gading	Male	35	9	Junior high school	GinBex	Medium
Halimah	Female	49	18	Senior high school	BinGex	Low
Ina	Female	39	15	Junior high school	GinBex	Low
Jeni	Female	23	1	Junior high school	GinBex	Low
Kintan	Female	51	20	Senior high school	BinGex	Medium
Omar	Male	34	10	Senior high school	GinBex	High
Rina	Female	39	11	Senior high school	BinGex	Medium

Appendix E. Changes from The OSF Preregistration

As documented in the OSF preregistration, we planned to analyse the correlation between SDQ scores and students' mental well-being scores, and then compare it with the UK data. However, the UK 1999 and 2004 data did not contain a well-being survey. Meanwhile, we did not have access to the 2017 UK data with a well-being survey. Therefore, we decided not to include students' well-being in the main analyses. Instead, we put the calculation in Table E1 below.

Furthermore, we planned to analyse each of the five SDQ subscales as well as the total score of psychopathology, internalizing, and externalizing problems. However, in our sample, conduct problems, hyperactivity, and peer problems of the SDQ subscales did not have satisfactory internal reliability (as detailed in the Results section). The internalizing and externalizing problems had satisfactory internal consistency. Therefore, we decided to analyse only the prosocial behaviour, internalizing, and externalizing problems in the analyses.

We planned to describe the results of the SDQ based on the SDQ cut-off determined by the teacher reports. However, the normative data for the Indonesian SDQ was unavailable. Therefore, we used mean scores to describe the results of the Indonesian SDQ data.

In the exploratory analysis, we planned to test factors (length of teaching, training experience, the teacher-student contact time in the classroom) affecting the relationships of teacher reports with students and parent reports. However, we no longer expected the effect of the length of teaching on the relationship of teacher reports with student and parent reports, because we discovered a study from Trudgen and Lawn (2011), which found that teaching experience did not associate with teachers' mental health knowledge. However, we still tested whether the length of teaching affected the relationships between teacher reports with student and parent reports (See Table E2; Figures E1 and E2). Regarding teachers' training experience, we found that only a few teachers had mental health training experience ($n = 6$, 18.2%)

compared to teachers without mental health training experience ($n = 27, 81.8\%$). Hence the quantity was too small to analyse (the number gap was too large). Second, we improved the statistical analyses plan to test the moderation of the relationship of the teacher's SDQ report with parent and child SDQ report by the length of teaching and teacher-student contact time. We had planned to use correlation and Fisher's r to Z transformation, but instead, we used moderation analysis PROCESS Procedure Version 4.1 for SPSS.

Table E1

Comparison of Correlation of Teacher Reports on Child Psychopathology and Child Well-being in Indonesia

Variable	Correlation		Comparison between correlations	
	Teacher reports - Students' well-being correlation (r)	Parent reports – Students' well-being correlation (r)	Z value	p
1. Internalizing problems	-.05	-.29**	4.75	.001
2. Externalizing problems	-.02	-.18**	3.09	.001

*Significant correlation in bold; * $p < .05$, ** $p < .01$ (2-tailed); $n=732$.*

Table E2

The Moderation Effect of Length of Teaching on the Relationship of Teacher Reports with Student and Parent Reports

Interaction	b	p	LLCI	ULCI
Teacher reports of student reports				
a. Prosocial behaviour	-.0037	.2511	-.0100	.0026
b. Internalizing problems	.0010	.8083	-.0070	.0089
c. Externalizing problems	.0040	.3212	-.0039	.0118
Teacher reports of parent reports				
a. Prosocial behaviour	.0009	.7798	-.0056	.0075
b. Internalizing problems	-.0053	.1657	-.0128	.0022
c. Externalizing problems	-.0037	.3327	-.0113	.0038

$p < .05$

Figure E1

Line graph of length of teaching as a moderator of the relationship between teacher and student reports in Indonesia in (a) Prosocial behaviour, (b) Internalizing problems, and (c) Externalizing problems

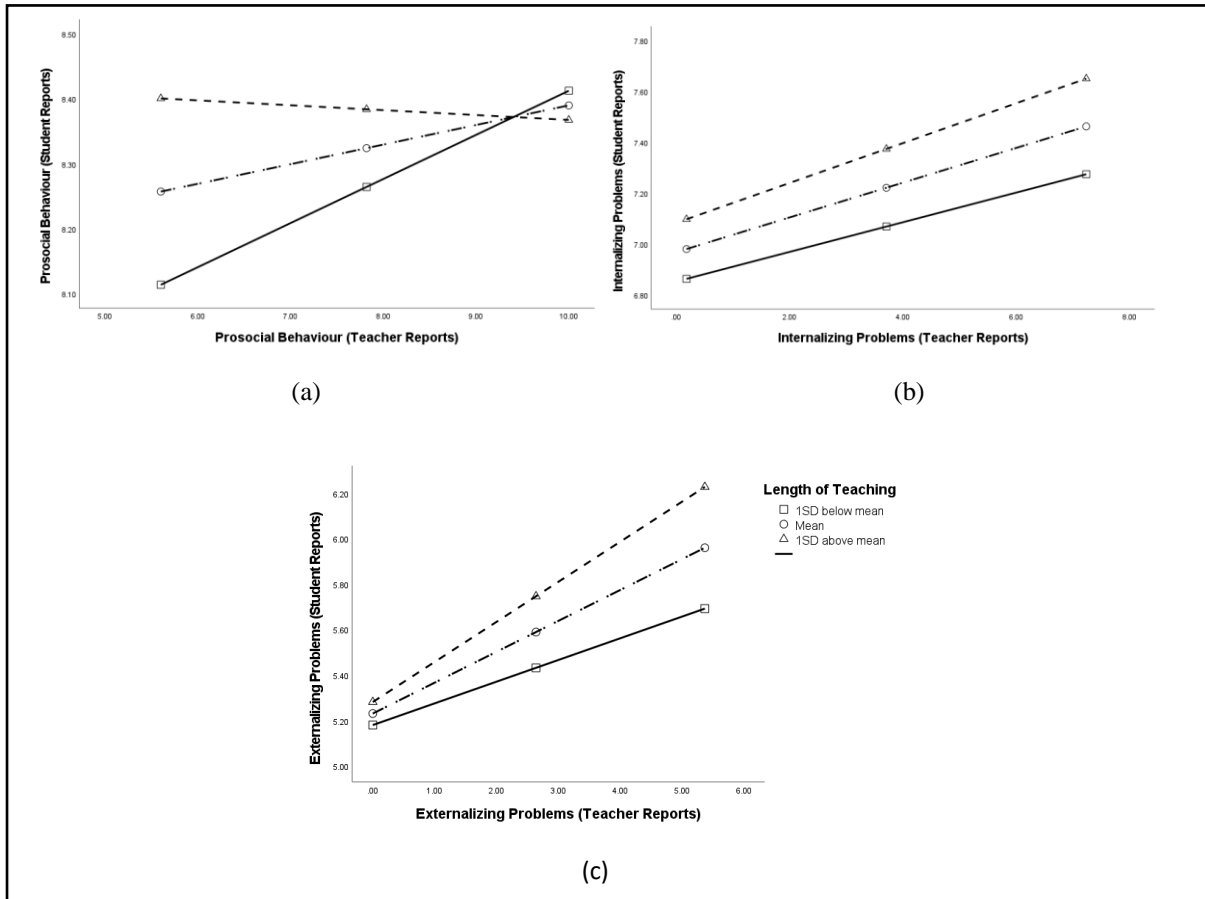
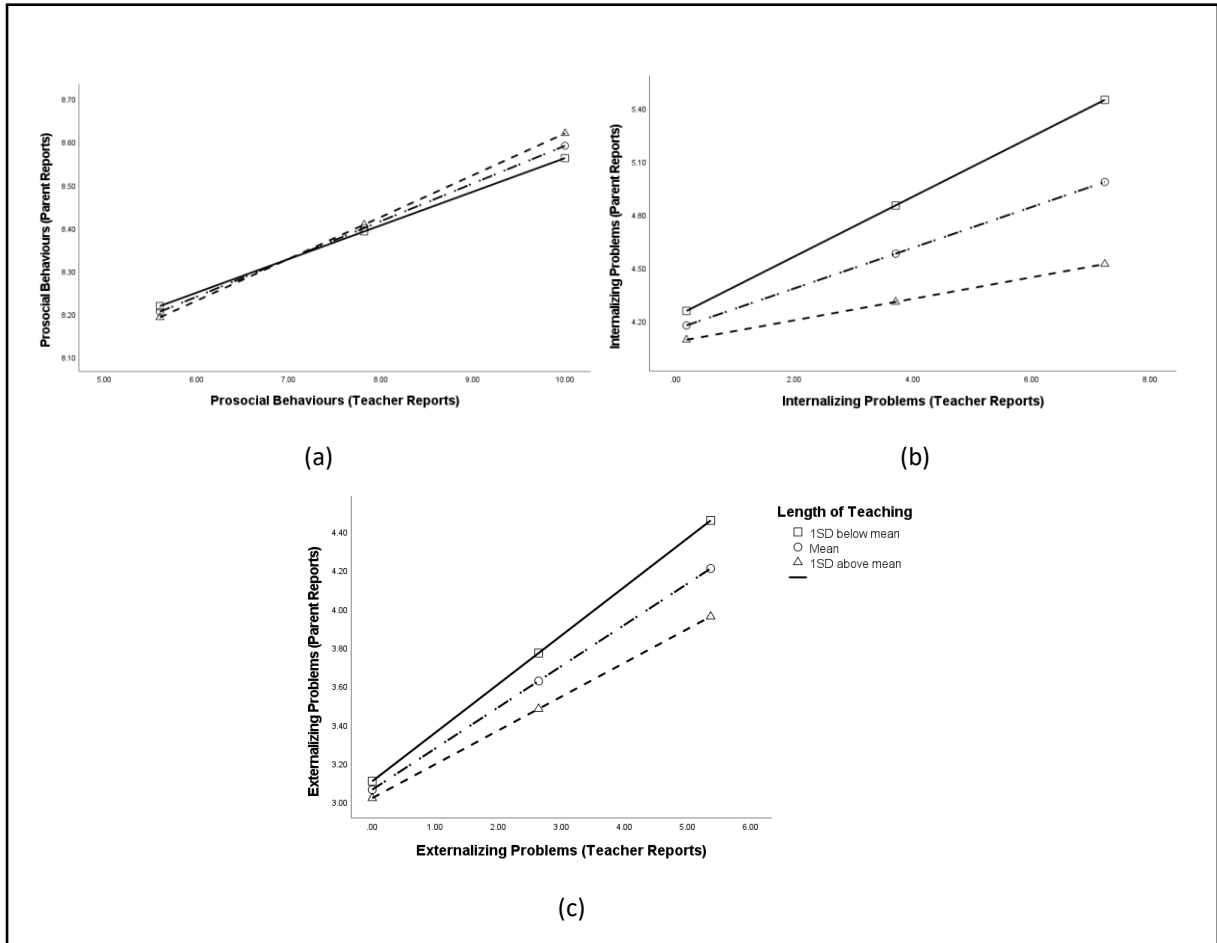


Figure E2

Line graph of length of teaching as a moderator of the relationship between teacher and parent reports in Indonesia in (a) Prosocial behaviour, (b) Internalizing problems, and (c) Externalizing problems



Appendix F. Vignette

Table F1

GinBex vignette

<p>Vignette 1. No symptom</p> <p>Linda is a girl in your class whose parents have recently separated. Since she joined your class at the beginning of the term, she has never expressed undue concerns. She happily attends school, and has not been visibly distressed when her mother drops her off at school, although she was once upset when her father dropped her off. During the school day, she has only once complained of feeling unwell. Linda rarely requests permission to call either of her parents from school. She is sociable, and seems to make friends relatively easily, and was recently happy to go on a school trip involving spending a night away from home.</p>	<p>Vignette 2. Externalizing problems (Moderate)</p> <p>Joni (a boy) lives with his stepmother, his father and two step-sisters. His father remarried a month ago. You noticed recently Joni is disobedient at school. Sometimes he can be irritable, stubborn and ill-mannered. He was once caught stealing other people’s things at school and didn’t appear to feel guilty. He got into fights and is getting friendly with a group of older boys who are trouble-makers. Joni once physically attacked another pupil after school. You have noticed that he can be argumentative at times. You are aware that he doesn’t get along with his stepmother and has been rude to her in front of you. His stepmother said that last week Joni had tantrums and broke articles of furniture in the home.</p>
<p>Vignette 3. Internalizing problems (Moderate)</p> <p>Rani (a girl) is a student in your class. She is always kind with other people and follows instructions during class. In the last few months, Rani has been increasingly moody, and you have noticed that she often puts her head down on her desk. She also seems to have lost interest in many of her friends and classwork, including participating in class activities that she used to enjoy. Every day, Rani says that she feels very tired, but when you ask, she also says she is sleeping more than normal at night. In addition, the last few months, Rani seems to have trouble concentrating in class.</p>	<p>Vignette 4. Internalizing problems (Severe)</p> <p>Maya (a girl) is a student in your class. She is an only child and lives with her mother and father. Since the beginning of the term, she has repeatedly expressed concerns that her mother will be killed in a car crash, or that someone will break into her house whilst she is at school, and she would not be able to protect her mother. Maya attends school, albeit reluctantly, and is often visible distressed and upset when her mother drops her off at school. During the school day, she frequently complains of stomach aches. Maya also often requests permission to call her mother, sometimes several times a day. She is shy about making friends, and does not attend sleep-overs at other children’s houses.</p>
<p>Vignette 5. No symptom</p> <p>Andi is a boy in your class. In class, he is very timid and quiet. He never gets into fights or hangs out with kids who get into trouble, but you are aware that children have bullied and physically attacked him in the past. He never argues with anyone, is not mean, and goes out of his way to get along with everyone. He is kind and patient, and does not tend to misbehave. He lives at home with his mother and his brother, and as far as you know, he is generally well-behaved at home too, and seems to get along well with his brother. When he has done something wrong, he seems to feel guilty and will apologise appropriately.</p>	<p>Vignette 6. Internalizing problems (Severe)</p> <p>Agus is a boy in your class. His school grade is below class average and he always skips school. You notice that he doesn’t want to get along with his friends in school. His parents told you that Agus often plays online games. He spends a lot of time in front of his computer or using gadgets. He rarely goes out from his room. He even steals money from his parents and uses his tuition fee to top up his online game. His parents are very busy at the office.</p>

Table F2

BinGex vignette

<p>Vignette 1. No symptom</p> <p>Raka is a boy in your class whose parents have recently separated. Since he joined your class at the beginning of the term, he has never expressed undue concerns. He happily attends school, and has not been visibly distressed when his mother drops him off at school, although he was once upset when his father dropped him off. During the school day, he has only once complained of feeling unwell. Raka rarely requests permission to call either of his parents from school. He is sociable, and seems to make friends relatively easily, and was recently happy to go on a school trip involving spending a night away from home.</p>	<p>Vignette 2. Externalizing problems (Moderate)</p> <p>Yani (a girl) lives with her stepmother, her father and two step-sisters. Her father remarried a month ago. You noticed recently Yani is disobedient at school. Sometimes she can be irritable, stubborn and ill-mannered. She was once caught stealing other people's things at school and didn't appear to feel guilty. She got into fights and is getting friendly with a group of older boys who are trouble-makers. Yani once physically attacked another pupil after school. You have noticed that she can be argumentative at times. You are aware that she doesn't get along with her stepmother and has been rude to her in front of you. Her stepmother said that last week Yani had tantrums and broke articles of furniture in the home.</p>
<p>Vignette 3. Internalizing problems (Moderate)</p> <p>Arif (a boy) is a student in your class. He is always kind with other people and follows instructions during class. In the last few months, Arif has been increasingly moody, and you have noticed that he often puts his head down on his desk. He also seems to have lost interest in many of his friends and classwork, including participating in class activities that he used to enjoy. Every day, Arif says that he feels very tired, but when you ask, he also says she is sleeping more than normal at night. In addition, the last few months, Arif seems to have trouble concentrating in class.</p>	<p>Vignette 4. Internalizing problems (Severe)</p> <p>Joko (a boy) is a student in your class. He is an only child and lives with his mother and father. Since the beginning of the term, he has repeatedly expressed concerns that his mother will be killed in a car crash, or that someone will break into his house whilst he is at school, and he would not be able to protect his mother. Joko attends school, albeit reluctantly, and is often visible distressed and upset when his mother drops him off at school. During the school day, he frequently complains of stomach aches. Joko also often requests permission to call his mother, sometimes several times a day. He is shy about making friends, and does not attend sleep-overs at other children's houses.</p>
<p>Vignette 5. No symptom</p> <p>Anna is a girl in your class. In class, she is very timid and quiet. She never gets into fights or hangs out with kids who get into trouble, but you are aware that children have bullied and physically attacked her in the past. She never argues with anyone, is not mean, and goes out of her way to get along with everyone. She is kind and patient, and does not tend to misbehave. She lives at home with her mother and her brother, and as far as you know, she is generally well-behaved at home too, and seems to get along well with her brother. When she has done something wrong, she seems to feel guilty and will apologise appropriately.</p>	<p>Vignette 6. Internalizing problems (Severe)</p> <p>Karin is a girl in your class. Her school grade is below class average and she always skips school. You notice that she doesn't want to get along with her friends in school. Her parents told you that Karin always plays online game. She always sits in front of her computer or gadget in a very long time. She rarely goes out from her room. She even steals money from her parents and use her school tuition to top up her online game. Her parents are very busy at the office.</p>