ODI Report

The co-creation and implementation of an adolescent school-based mental health intervention in Viet Nam

Key findings

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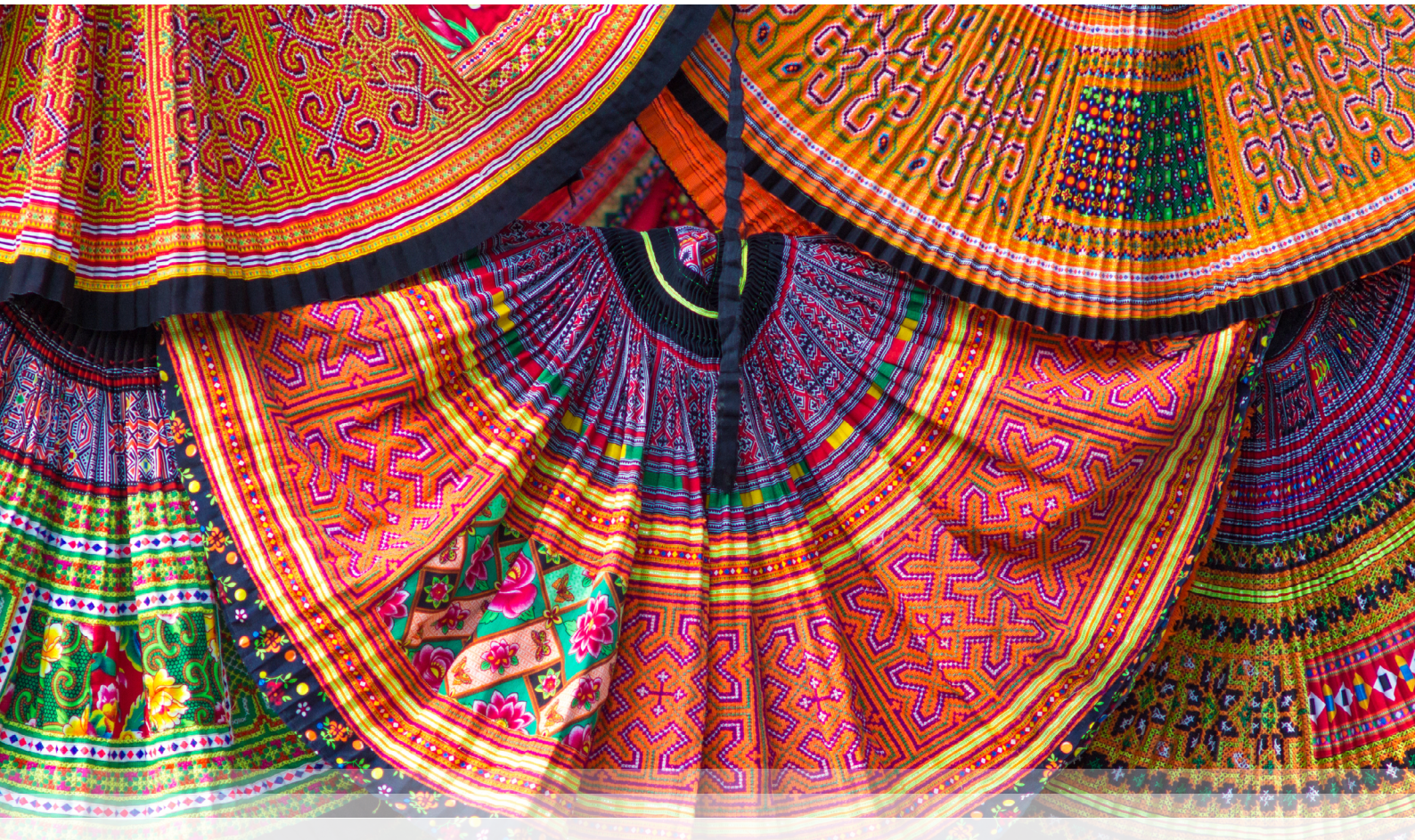

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Contents

Display items

Boxes

Tables

Figures

Acronyms/Glossary

ANCOVA	Analysis of covariance
CBO	Community-based organisation
CMD	Common mental disorder
CSO	Civil society organisation
DoET	Department of Education and Training
FCS	Family case study
FGD	Focus group discussion
GRDP	Gross regional domestic product
IDI	In-depth interview
IGT	Intergenerational trio
KII	Key informant interview
LMIC	Low- or middle-income country
MEL	Monitoring, evaluation and learning
MoH	Ministry of Health
MoLISA	Ministry of Labour, Invalids and Social Affairs
NGO	Non-governmental organisation
SDQ	Strengths and Difficulties Questionnaire
SES	Socioeconomic status
THCS	Trung Học ơ Sở (secondary school)
THPT	Trung Học Phổ Thông (high school)
WHO	World Health Organization
WHO-5	World Health Organization Five Well-Being Index

Executive summary

> **'Right now students don't have any places to go to when they want to talk. There is a distance between teachers and students, not all parents can be understanding, not all friends are good friends and not everything on the internet is useful. We need a place where students are guided and helped. We hope that the club could help many students if they have problems.'**
> Headteacher, Hà Huy Tập school, Nha Trang

Introduction

This endline report explores the effects of an adolescent school-based mental health intervention in Viet Nam, based on the co-creation and implementation of 'psychology clubs'. The intervention, funded by Fondation Botnar, aimed to enhance mental health awareness and literacy among adolescent school students in eight schools across two provinces: Khanh Hoa and Nghe A.

Its design and implementation were based on a process of co-creation with adolescents, teachers, school board members, a psychologist, parents and local authorities. Together, they developed the schools-based psychology clubs, where adolescents could take part in activities designed to support their mental health.

The clubs offered a mix of indoor and outdoor sessions, as well as in-person and online interactions. They also used digital technology, including social media platforms such as Facebook groups, and the MoodTracker+ app. Developed specifically for the intervention, the app enabled adolescents to keep track of and document their own feelings.

This report draws on a mixed-method research and evaluation study, also funded by Fondation Botnar, to explore the effects of the intervention, outline key recommendations and set out potential next steps. The study included baseline and endline quantitative and qualitative data collection.

The situation: adolescent mental health in Viet Nam

The intervention took place in a context of considerable unmet need for adolescent mental health services and support in Viet Nam. Recent data suggests that more than 1 in every 5 Vietnamese adolescents (21.7%) has experienced a mental health problem in the previous 12 months, and that 1 in every 30 (3.3%) meet the criteria for a mental disorder (Institute of Sociology et al., 2022). Another recent study notes that 15% to 30% of adolescents in Viet Nam face some form of mental disorder (UNICEF, 2022).

The mental health system remains heavily focused on the treatment of severe mental disorders (particularly epilepsy and schizophrenia) in hospitals in urban areas, and tends to ignore more common mental health problems, such as anxiety and depression (Niemi et al., 2010; Vuong et al., 2011; Lee et al., 2015). Service coverage is limited, at best, in rural areas (Lee et al., 2015; Ministry of Health (MoH) and Health Partnership Group, 2015), and there is a chronic shortage of trained staff, with just 900 psychiatrists for a country of more than 100 million people (Cuong, 2017).

Where services do exist, their use is low, particularly among adolescents and children. Either they do not know about them, there is no

service tailored to their needs, or they fear the stigma that continues to surround mental ill health (see e.g. Giang, 2006; MoH and Health Partnership Group, 2015).

Aims of the study

The study combined qualitative and quantitative research to identify any changes on key areas since the start of the intervention, comparing the findings against a baseline study (published in Samuels, 2022). It aimed to gauge the effects of the intervention following a quasi-experimental design and focusing on the following areas:

- mental health literacy: knowledge, awareness and attitudes;
- mental health, its drivers and protective factors;
- access to and use of formal mental health services;
- coping strategies;
- the use of technology to support mental health.

In addition to a quantitative survey, the endline data collection featured: in-depth interviews (IDIs) with a sample of adolescents; focus group discussion (FGDs) with adolescents and parents; and intergenerational trio (IGT) conversations with parents and their adolescent children.

Key findings

Overall and across all five areas, the study found that the intervention had a greater and more positive effect on boys and on students from low-income households. These adolescents started from a lower baseline than other participants, and saw major improvements in their understanding of and response to mental health as a result.

Mental health literacy: knowledge, awareness and attitudes

> 'I have more knowledge on mental health. I understand more about the mentality of people, the way to communicate with people. (14-year-old girl, Vinh)

The quantitative survey found that the intervention had a significant and positive effect on **mental health literacy** in both Nha Trang and Vinh provinces, with this effect being particularly marked among boys, younger adolescents (aged 12–15), and those with a low socioeconomic status (SES), although statistically significant improvements in mental health literacy were observed in all SES groups. The findings of the qualitative study were slightly different: nearly half of the adolescents said that their knowledge of mental health had improved as a result of the intervention (a finding confirmed by their teachers and their parents), with more girls reporting an improvement than boys.

The qualitative study also found that almost half of the adolescents were aware of **mental health support programmes or services**, with psychiatric hospitals the service mentioned most frequently. While there was no general shift in the level of knowledge of mental health services during the intervention, findings from the quantitative study show an increase in the share of students with a low SES who knew where to seek information on mental health.

Similarly, the quantitative survey found little or no change in **attitudes towards mental health services among study participants,** except for – once again – a large and statistically significant improvement among students with a low SES.

Nearly half of the adolescents in the qualitative study felt that their own awareness of and **attitudes towards people with mental health problems** had improved, despite the persistent stigmatisation of mental health issues in the study sites.

Despite the improvements in mental health literacy among intervention participants, the intervention did not register statistically significant improvements in the **mental health of the participants themselves** or in the incidence of **emotional problems**. However, a control group of adolescents who did not take part in the intervention did show an increase in emotional problems, which suggests that the intervention may have shielded its participants from a similar increase. The intervention did not have a statistically significant effect on **behavioural problems**, with – once again – the exception of boys and, in this case, those with a medium SES. No statistically significant improvement in well-being was observed as measured by the **WHO-5 scale**, with the same exception of boys and those with low SES. It may be that with more time, participants may further convert gains from mental health literacy into improvements in well-being and mental health.

Mental health, its drivers and protective factors

> **'The saddest thing is when I feel like my parents are disappointed in me, not just in my grades, but in daily life situations. When my parents are disappointed, I feel being pressured and sad at the same time ... but I don't know how to make my parents happy.'**
> (14-year-old girl, Vinh)

The research (from the qualitative study) found no change in the **drivers of mental ill health** or in **protective factors.** The drivers included negative self-image, conflicts with family members and friends, bullying and academic stress. The factors that protect against mental health problems were mirror images of the drivers, including having good relationships with family and friends, and doing well at school.

The change reported most frequently was in **adolescents' negative views of themselves**, with some participants in the qualitative study saying that they had changed, and some reporting better relationships with their parents and friends. When asked about changes in other areas, such as academic pressure, most students reported that the pressure was still there, but their ability to cope had changed as a result of the intervention.

Access to and use of formal mental health services

> **'Most treatments are medications. However, not all mental illness can be treated by medication. People don't need much medication. They need one person to help them. That is very important.'**
> (Key informant, local authority – Youth Union, Nha Trang)

Almost none of the adolescent participants in the qualitative study had ever accessed any mental health or psychosocial support service, making it difficult to draw any conclusions in terms of changes over time. However, some changes had been observed by a number of key informants and parents. A headteacher in Vinh, for example, noted that before the intervention, any students who had significant mental health concerns at

school were referred to specialist clinics. After the intervention, however, adolescents advocated more proactively for the use of formal mental health services, rather than just waiting for referrals.

Coping strategies

> **'... the first thing I did being upset was lash out at people around me. I would also lose my motivation for studying. But now that I've learned a few things about psychology, whenever I do a terrible job in my test or I'm struggling, I'll find a solution and keep working hard.'**
> (14-year-old boy, Vinh)

The research looked at three kinds of coping strategies: active (including problem-solving); avoidance (including distraction); and emotional (which can include withdrawal and anger). While there was no shift in the use of active coping strategies, the quantitative study found that the intervention had some positive effect on both **avoidance and emotional coping strategies**. In particular, the intervention seems to have helped to prevent an increase in emotional responses to stress, such as yelling or blaming someone else.

The study also found that the intervention had some effect on reducing risky behaviour. According to findings in the qualitative study, some adolescents who had previously self-harmed had turned to more positive coping strategies, such as talking to someone. Some adolescents reported that they felt better able to regulate their emotions and manage their stress and were more empathetic and patient. Finally, some mentioned that taking part in the intervention had made them more willing to seek help if they needed it.

The use of technology to support mental health

> **'... here on the app [MoodTracker+], only I know my own world, so I can relax, enjoy, express my heart, and record the stories of my day. That's why I find the application quite interesting.'**
> (Participant in FGD with girls, Vinh)

The vast majority of participants in the study (both adolescents and adults) had phones – most of them smartphones, and many had access to computers and tablets. More than 70% of adolescents (in the quantitative survey) had searched online for mental health information. When asked (during the qualitative study) about the benefits of technology for mental health care, the responses emphasised its speed and the ability to access a wide range of information. Concerns included the fact that not all young people have digital skills or access to smart devices and internet connections; doubts about the reliability of information taken from the internet; and the risks of exposure to inappropriate content.

Although there was no notable change in participants' perceptions about the use of technology to support mental health care, one suggestion was the need for a blended approach that combines in-person and digital solutions to address mental health. While participants recognised the benefits of online interactions (particularly during the Covid-19 pandemic), these were not seen as a long-term substitute for face-to-face conversations.

Recommendations and next steps

> **'I assure you, as one of the leaders of the school, the school will support programmes that help students to develop or help students to form their personality in a good way. We are willing to support it. We can even support it financially, if it's not too much'.** (Key informant, headteacher – Hà Huy Tập school, Nha Trang)

A number of recommendations emerged from the study to improve and expand this co-created approach, and to promote mental health support more widely. There were calls for: more **awareness-raising about the intervention** within schools, among parents and carers and across communities, with school-wide campaigns to attract more participants; networking and exchanges with other schools; and the showcasing of the intervention through films and photos.

Recommendations **to improve the intervention** included: the greater involvement of parents and carers; an enhanced digital component; more outdoor activities such as games; and the targeting of areas and students with particular needs, including those with a low academic performance.

At a broader level, there were **recommendations to raise awareness and provide more information on mental health**. These included: the increased provision of written and visual information; presentations in school assemblies and other school-related events; activities at local and commune level for students; and training in parenting skills. One key recommendation was the provision of mental health lessons by the Ministry of Education and their eventual inclusion in the curriculum.

There were calls for the **greater availability of free mental health services**, particularly for adolescents in rural areas. A number of recommendations focused on **online and digital approaches**, including: more online services (some of which could be managed by adolescents themselves, drawing on expert knowledge); online shows on mental health; and the greater use of the MoodTracker+ app.

In-person and place-based approaches were also suggested, including: having a 'go-to person' who could provide mental health advice (a mental health professional or a trained teacher); having a place at school where students could share their thoughts confidentially; and having more fun activities to support mental health, such as volunteering and hobby groups. One recommendation was to have blended approaches that combine both digital and in-person activities – with each approach supporting and building on the other.

Finally, there were recommendations on **supply-side inputs to provide the necessary services and support**. Suggestions included: more mental health service providers; more training for existing providers on the mental health needs of adolescents; the regulation of the provision of mental health support, including through schools; and measures to embed psychology clubs within the school curriculum.

A number of respondents (including teachers and headteachers) wanted the intervention to continue and would welcome its expansion to more schools. There were also suggestions that the intervention could take place in other settings, such as women's and farmers' unions, so that parents could also take part in activities while their children were participating at school.

At a broader level, it was proposed that the awareness of mental health services and their provision, particularly for adolescents, needs to go beyond hospital environments and out into the community through schools and district health facilities. This will also allow for the wider promotion and sharing of knowledge and information about mental health.

1 Introduction

1.1 Motivation

In 2016 around 1 in every 6 people worldwide (15–20%) had one or more mental or substance use disorder.[1] Mental ill health and psychosocial problems often start during adolescence, with common mental disorders (CMDs) – anxiety and depression – being the most prevalent psychiatric illnesses among adolescents and young people worldwide (WHO, 2021a).

Studies show that suicide rates among young people are increasing (Patel et al., 2007; WHO, 2016; ODI and UNICEF Viet Nam, 2018), often a result of undiagnosed and untreated mental ill health and psychosocial distress. Indeed, suicide is the fourth leading cause of death in 15–19-year-olds (WHO, 2021a).

An overwhelming body of evidence highlights the toll of the Covid-19 pandemic and its associated lockdowns on the prevalence and severity of mental health problems. The World Health Organization (WHO) estimated an increase of more than 25% in already common conditions such as anxiety and depression in the pandemic's first year (WHO, 2022). All the evidence suggests that the pandemic has had a disproportionate impact on adolescents, females, and those with previous or current mental health difficulties.[2]

Panchal et al. (2023), for example, report that 57% of the studies they reviewed found symptoms of anxiety exacerbation among young people; that the prevalence of youth experiencing severe depression rose from 10% to 27%; and that self-harm, suicidal ideation, planning and attempts all increased. Meanwhile, studies by Young Lives in Ethiopia, India, Peru and Viet Nam found sharp rises in reported anxiety and depression and a significant decline in subjective well-being. This was particularly true for young women whose education had been disrupted and whose domestic chores had increased, and for young people who lost their jobs as a result of the pandemic (Young Lives, 2022).

There has been some progress in terms of greater attention for mental health at a global level. Sustainable Development Goal (SDG) 3, for example, now includes targets related to mental health,[3] and discussions around mental health were at the forefront of the 74th World Health Assembly in 2021, spurred by the Covid-19 pandemic. The WHO-led Mental Health Gap Action Programme (mhGAP)[4] has played a key role in supporting the scale-up of national services for mental, neurological and substance use disorders, particularly in low- and middle-income countries (LMICs). In addition, many non-governmental and civil society organisations (NGOs and CSOs), such as those led by youth and those that use digital approaches,[5] are now working on mental health issues including in LMICs.

1 https://ourworldindata.org/mental-health
2 See systematic reviews by Salari et al. (2020); Meherali et al. (2021); Panchal et al. (2023). See also Ettman et al. (2022) on the United States.
3 https://medium.com/sdgs-resources/sdg-3-indicators-43806cbf63e9
4 www.emro.who.int/mnh/mental-health-gap-action-programme/index.html
5 Summaries of some of these approaches can be found in Rost et al. (2020) and Ananthakrishnan et al. (2020a, 2020b).

Despite this progress, mental health remains neglected at global and national levels – and even more so in LMICs. While the experiences of Covid-19 may have started to shift this pattern, mental health remains a low priority in many contexts. Less than 2% of national health budgets globally are spent on mental health, and this drops to less than 1% for LMICs, with WHO recommending a minimum allocation of 5% (WHO, 2022).

This shortfall in mental health spending results in shortages of trained personnel, the concentration of services in a few (often urban) areas, and funding that favours mental health hospitals at the expense of community-based or other preventive structures and activities. Similarly, most funding is directed towards severe mental disorders such as schizophrenia and bi-polar disorders that are easier to observe and measure, rather than CMDs and less severe forms of mental ill health. The latter are far more common, but often go unreported and untreated because they are more difficult to diagnose and less visible, and because people are unwilling to come forward for fear of the associated stigma (Weiss et al., 2012; van Ginneken et al., 2013; Kutcher et al., 2016).

Where mental health services do exist in LMICs, they are often inaccessible to those in the greatest need as a result of resource constraints and cultural norms (Patel et al., 2007; Patel et al., 2011; Kutcher et al., 2017; Rathod et al., 2017; Alloh et al., 2018). People living in LMICs are far more likely to experience poverty, gender inequality, the impacts of climate change, and inadequate access to good physical health, literacy and housing – all of which can exacerbate mental health difficulties (Weiss et al., 2012; Kutcher et al., 2016; Mathias et al., 2018).

There are further disparities within LMICs, with the quality of care for adolescents who have mental health conditions lagging behind that of other age groups, despite a growing focus on adolescent mental health in recent years. This is because adolescents often have less experience of using mental health services, and often lack adequate mental health literacy, including literacy about their quality of care (Quinlan-Davidson et al., 2021). In addition, the services and programmes that are available are often both age and gender blind – they do not tailor services to the needs of adolescents or do not consider the ways in which gender norms are replicated by the health systems (Percival et al., 2018).

1.2 Child and adolescent mental health in Viet Nam

In 2014, Viet Nam's most recent and first nationally representative epidemiological survey on the prevalence of mental health problems in children between the ages of 12 and 16 found an overall level of child mental health problems of around 12%, suggesting that approximately 3 million children were in need of mental health services. The study also found that overall rates of child mental health problems varied significantly across the 10 provinces surveyed (Weiss et al., 2014, in Plank et al., 2021).

Earlier studies with adolescents found that approximately 9% had mental health difficulties (Amstadter et al., 2011), 16% were experiencing significant affective problems, 24% had behaviour problems (Anh et al., 2006) and that up to 41.1% and 22.8% had significant symptoms of depression and anxiety respectively (Nguyen et al., 2013). Recent data suggests that more than 1 in 5 Vietnamese adolescents (21.7%) had experienced a mental health problem in the previous 12 months, and that 1 in every 30 met criteria for

a mental disorder (3.3%). Anxiety was the most prevalent mental health problem (18.6%), followed by depression (4.3%)(Institute of Sociology et al., 2022). Another recent study notes that 15–30% of adolescents in Viet Nam face some form of mental disorder (UNICEF, 2022).

As described in the baseline report for this study (Samuels et al., 2022), Viet Nam does not have a mental health law. However, there is a draft National Mental Health Strategy covering the period 2015–2020, with a vision to 2030. This considers service provision across all life stages (from infancy to old age). The main government ministries responsible for mental health services are the Ministry of Health (MoH) and the Ministry of Labour, Invalids and Social Affairs (MoLISA). There are also several pieces of legislation that protect the rights of mentally ill persons, including MoLISA's Scheme 1215 (2011–2020), which provides community-based social assistance and functional rehabilitation for people with mental illness or mental disorders (for further details of policies and legislation see Annex 8, Table A7 in Samuels et al., 2022[6]).

To situate mental health within the broader health system, Viet Nam's health care system is based on four tiers (central, province, district and commune). Mental health services are provided through six types of institution:

- two national psychiatric hospitals (in Hanoi and Bien Hoa);
- provincial-level psychiatric hospitals;
- outpatient facilities;
- commune health stations;
- day treatment facilities;
- community-based psychiatric inpatient units (Samuels et al., 2022).

Figure 1 provides an overview of the country's mental health and health system as described by Nguyen et al. (2019).

While the types and levels of institutions may vary, the mental health system in Viet Nam is heavily focused on the treatment of severe mental disorders (particularly epilepsy and schizophrenia) in hospitals that are located in urban areas, and tends to ignore the more common mental health problems (Lee et al., 2015; Niemi et al., 2010; Vuong et al., 2011). In addition, service coverage is low outside the country's urban areas and provincial capitals (MoH and Health Partnership Group, 2015; Lee et al., 2015), as the primary health care system is not equipped to deal with mental ill health. There is also a shortage of trained staff, with only 900 psychiatrists, for example, to cover a population of more than 100 million people (Cuong, 2017).

Where services do exist, uptake is low, especially among adolescents and children. The reasons include a lack of knowledge about the existence of services, the stigma surrounding mental ill health, and a lack of age- and gender-appropriate services (see e.g. Giang, 2006; MoH and Health Partnership Group, 2015). A recent study, for example, found that only 8.5% of adolescents with a mental health problem had accessed services that provide support or counselling for emotional and behavioural problems in the previous 12 months (Institute of Sociology et al., 2022).

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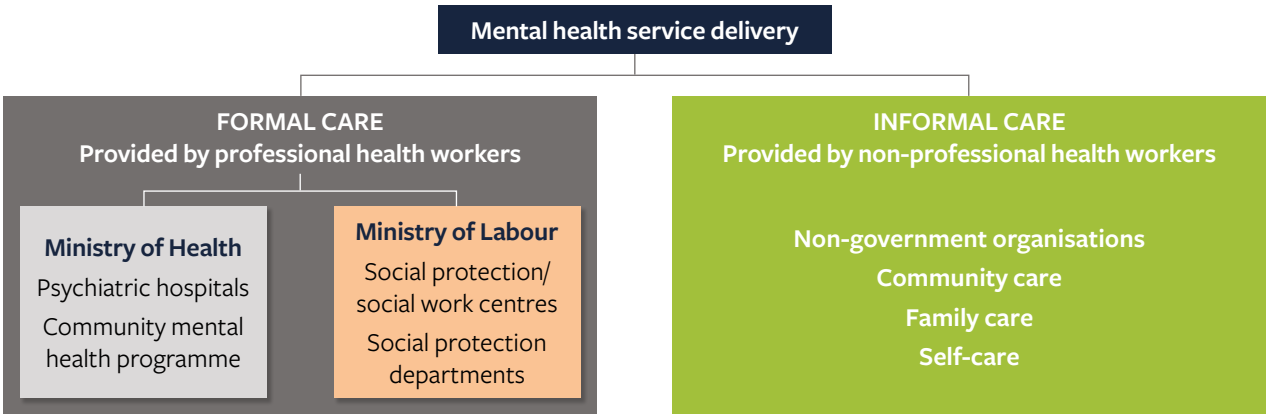
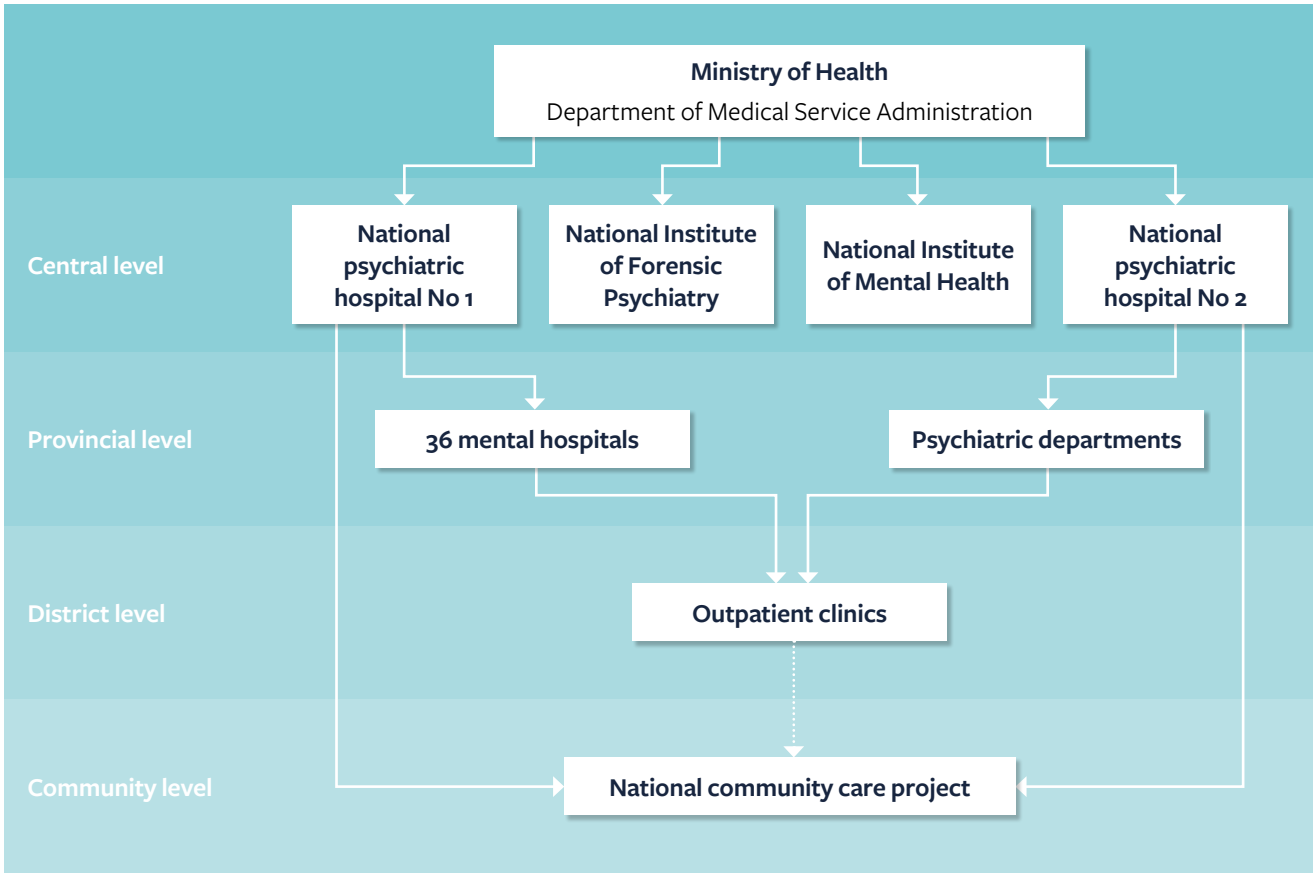
6 The only new law that has come into operation since the baseline study that is of relevance is that on Medical Examination and Treatment (15/2023/QH15, released on 9 January 2023), whereby clinical psychologists now require a licence to practice.

Figure 1 Mental health service provided by health sector





Source: Nguyen et al., 2019.

1.2.1 Background to this study

This endline report assesses the effects of a school-based intervention to enhance mental health awareness and literacy among adolescent school students in two provinces of Viet Nam: Nha Trang and Vinh. The intervention, funded by Fondation Botnar, was carried out in eight schools in 2020/21. It was based on a consultative process of co-creation with adolescents, teachers, school board members, a psychologist, parents and the local authorities of the provinces.

Together, they co-created and developed school clubs, often called 'psychology clubs', where adolescents could take part in activities designed to support their mental health.

The intervention was comprised of a mix of indoor and outdoor activities, as well as in-person and online interactions. It also made use of digital technology, such as the MoodTracker+ app, which enabled adolescents to track their own mood, and social media platforms, including Facebook groups.

This report draws on baseline and endline research studies, also funded by Fondation Botnar, to explore the effects of this intervention, outline key recommendations, and set out potential next steps.

For more on the specific activities of the intervention, see Section 3.1.

1.3 Study objectives and fit with evidence gaps

Anxiety and depression often start during adolescence (Kessler et al., 2007; Patton et al., 2016; WHO, 2021a, 2021b). This means that targeting interventions to youth helps to mitigate long-term personal and economic costs while taking advantage of a developmental window of opportunity (Crone and Dahl, 2012). Within this context, the overall aim of this study, funded by Fondation Botnar, is to address the mental health and support the broader well-being of adolescents in urban settings in Tanzania and Viet Nam – two countries selected because they represent different LMIC contexts.

Although the purpose is not necessarily to compare the mental health environment of these two countries (in terms of the drivers of mental ill health, mental health provision, etc.), they are interesting cases to study because of the differences in their levels of economic and technological development, their health systems and the status of their mental health provision. In addition, the study reveals differences in their underlying structures, including their cultural contexts and the social and gender norms that influence behaviour, their poverty and livelihood dynamics as well as their political systems – all of which have diverse and context-specific effects on the mental health and broader well-being of adolescents.

The specific objectives of the overall study are as follows.

1. The identification of drivers of mental ill health among mid (11–15) and older (16–19) adolescents in two cities in Tanzania (Morogoro and Mwanza City) and Viet Nam (Vinh City and Nha Trang), taking into account the underlying social norms that may be driving mental distress.
2. The co-creation, design and testing of digital and non-digital solutions with adolescents, teachers and local authorities, for use in the classroom, the community and in relevant local government units to support and enhance the mental health and overall well-being of adolescents.

3. The review and adaptation of these solutions through learning acquired through a monitoring, evaluation and learning (MEL) system, a mixed-methods baseline and endline study, and ongoing feedback loops.
4. The documentation of the effectiveness of in-person and digital solutions for mental health problems as tested by the project.

The project consisted of six phases:

- inception;
- mixed-method baseline data collection;
- co-creation and design of solutions;
- implementation of solutions;
- mixed-method endline data collection;
- sharing, dissemination and research uptake.

The project began in March 2020 and was designed to run for a total of 36 months. However, Covid-19 delays added 7 months to the project, which ended in October 2023.

Literature reviews were conducted as part of the inception phase to help situate and hone the overall design of the project, providing guidance to both the mixed-method baseline and the endline primary data collection, as well as the design of the digital and non-digital solutions to be co-created with adolescents and others. These literature reviews also identified knowledge gaps that this study aims to fill.[7] Key findings from these literature reviews include the following.

- There are tools and programmes that focus on mental health in LMICs; but there are fewer approaches that target adolescents and children (Ananthakrishnan et al., 2020).
- Although digital interventions to address mental ill health are becoming more popular, care is needed to avoid digital divides, with in-person and face-to-face interventions remaining crucial, and a blend of digital and non-digital approaches being the ideal (Rost et al., 2020).
- While some tools and scales have been adapted for the measurement of mental health, these have not yet been adapted and validated fully for the contexts of Tanzania and Viet Nam and it remains critical to consider context specificities, including prevailing norms (Ananthakrishnan et al., 2020).
- There appears to be relatively little (if any) literature on the co-creation of mental health approaches with children and adolescents in schools in general, let alone in LMIC contexts and the two study countries (a few examples are included in Kutcher et al., 2019).

This report presents findings from the mixed-methods endline study in Viet Nam. It does so by comparing primary data from the baseline study with the results of data collected after the co-creation and implementation phases.

1.4 Snapshot of findings from the baseline study

Our mixed-methods baseline study in Viet Nam (Samuels et al., 2022) found that 33% of respondents in the survey were at risk of depression when assessed against the WHO-5 Well-Being Index[8], with girls, in both the qualitative study and survey being more likely to experience mental health distress than boys. Respondents in the qualitative study mentioned experiencing stress, depression/sadness, anxiety, and anger; they also talked about suicide ideation. The baseline findings also suggested that mental health

7 The outputs of the literature review can be found on the project webpage.
8 Where '0' represents the lowest psychological well-being and '100' the highest possible psychological well-being.

stressors increase with age and that, from the qualitative research, adolescents from minority backgrounds (defined here as those not from the Viet or Khin ethnic group, the largest ethnic groups in Viet Nam) were more likely to face discrimination and bullying, with consequences for their mental health.

Respondents in the qualitative study identified a range of factors that were protective of mental health, including having a positive perception of oneself, positive family dynamics and good relationships with parents, and having close friends. In contrast, some of the drivers of mental distress (as found in the qualitative study and supported by the survey) were the direct opposite: negative self-perceptions and unhappy family dynamics, as well as poverty, financial difficulties and 'addiction' to mobile phones and social media.

Although at baseline, among survey respondents, knowledge of what constitutes good mental health was high (74%) as was knowledge of sources of information about mental illness, only 35% were confident that they knew where to seek information.[9] In terms of accessing mental health services, more than three-quarters of survey respondents (79%) said they would find psychotherapy useful if they experienced a serious emotional crisis. Most respondents to the qualitative study had not used formal mental health services and most felt they had never needed professional support. Even if they may have felt they *did* need it, they claimed they would probably not have sought it, in contrast to the findings of the survey.

Respondents reported a range of coping strategies, both positive and negative. According to respondents in the qualitative study, positive coping strategies were akin to mental health protective factors and included, for example, spending time with family and friends and playing sport. Negative coping strategies included isolating themselves, behaving in a violent way, and suicide ideation; indeed, the survey found that up to 28% of respondents had engaged in self-harm on occasion, while 2% did so frequently.

The quantitative analysis (using the Kidcope scale) identified three main groups of coping mechanism: active coping; avoidance coping; and expressive or emotional coping.[10] Overall, problem-solving or active coping mechanisms were more common among survey respondents. Their use of coping mechanisms was a good predictor of the respondent's mental ill health. Emotional coping mechanisms were by far the highest predictor, increasing by 18 times the likelihood of being in the high-risk category (after controlling for other factors) according to the Strengths and Difficulties Questionnaire (SDQ).

Technology usage was also explored in the baseline study. Most adolescent respondents had a smartphone, while fewer adolescents had access to a computer, and even fewer reported owning one. They saw the positive aspects of technology use as: relieving stress and loneliness; allowing people to 'connect'; and finding information and services online. The negative aspects included: distracting students from their schoolwork; the risk of addiction; and concerns about the effectiveness of the internet for addressing mental ill health. On the latter, it was observed that information on websites: is often not checked,

9 See Section 2.2 for definitions on each scale.

10 The label of each coping mechanisms was refined as part of the endline study. See Section 2.2 for definitions of each scale.

verified, and may even be dangerous; is often too generic to be useful; and may lack a personal/emotional connection (one of the benefits of in-person services). There is also a risk of children and adolescents seeing distressing or age-inappropriate images.

1.5 Structure of the report

Following this introduction, Section 2 describes our methodology and study sites. Section 3 discusses the intervention stages – including the various phases (co-creation, implementation, adaptation), and participant feedback.

Sections 4 to 7 analyse our data on the effects of the intervention, drawing on quantitative and qualitative data collection at baseline and endline. Section 4 focuses on how the intervention affected knowledge and awareness of mental health issues, while Section 5 focuses on its effects on its effects on mental health, drivers and protective factors. Section 6 explores any changes in access to and the use of formal mental health services in the study sites, and the extent to which these can be attributed directly to the intervention. Section 7 examines how the intervention affected both positive and negative coping mechanisms among study participants. Section 8 investigates how technology was used in the intervention and the extent to which it shaped outcomes, covering both its advantages and disadvantages. It underscores the value of blended (in-person and digital) approaches in the design of mental health interventions. Finally, Section 9 summarises key findings and provides some recommendations for future policy and programming.

2 Description of study sites and methodology

This section provides an overview of the study sites, our methodology, the approach used for the accompanying MEL component, and the ethics protocol and study limitations. Our discussion of methodology describes the baseline and endline of the project and the design of the evaluation, which involved both quantitative and qualitative data collection.

2.1 Study sites

Data collection for both our baseline and endline took place in eight public schools in urban and rural areas of Khanh Hoa and Nghe An provinces. The Department of Education and Training in each province operates public schools; however, they have limited autonomy and limited funding for extra-curricular activities, including school counselling or other well-being support programmes.

Khanh Hoa, on Viet Nam's south-central coast, had a population of 1.2 million in 2018. Around 45% of the province's residents live in urban areas, and 55% in rural areas. Khanh Hoa is sub-divided into two provincial cities (Nha Trang, its capital, and Cam Ranh), one district-level town and six districts. With a gross regional domestic product (GRDP) per capita of $2,698 and an annual growth rate of 7.4%, it is Viet Nam's second most developed province. Tourism and construction are the mainstays of the economy (each accounting for more than 40%), while agriculture contributes around 10% (General Statistics Office (GSO), 2020).

Nghe An, on the country's north-central coast, had a population of 3.3 million in 2018, with the vast majority (85%) living in rural areas. It is sub-divided into one provincial city (Vinh City, its capital), three district-level towns and 17 districts. With a GRDP per capita of $1,853 and annual growth of 8.8%, its economic performance places it in the top third of Viet Nam's provinces. As with Khanh Hoa, services (tourism and the construction industry) are the major economic sectors, each accounting for approximately 40% of the province's economy, while agriculture/forestry/fishing accounts for around 18% (GSO, 2020). For further details of the educational contexts and other infrastructure, see Annex 1 in the baseline report (Samuels et al., 2022).

2.2 Methodology

During the project's inception phase, in order to contextualise the study within broader debates around adolescence, mental health and psychosocial support services, and digital technologies, the research team commissioned five literature reviews to explore: (1) the effects of Covid-19 on adolescents' mental health in Tanzania and Viet Nam (Chakraborty and Samuels, 2021); (2) frameworks and tools to measure and evaluate mental health and psychosocial well-being (Ananthakrishnan et al., 2020); (3) non-digital interventions for adolescent mental health and psychosocial well-being (ibid.); (4) digital approaches to adolescent mental health (Rost et al., 2020); and (5) drivers of and protective factors for mental health and psychosocial well-being among adolescents in both countries (Plank et al., 2021). Drawing on global literature as well as the literature on Tanzania, these reviews helped to identify existing gaps in the evidence base as well as how to frame the current study.

The data collection followed a quasi-experimental design using quantitative and qualitative research methods. One purpose of the qualitative work was to validate and deepen our understanding of the quantitative findings; for this reason, we identified several students who participated in the quantitative survey for in-depth interviews, as described below. The methods align with the MEL component, which describes the changes the project aims to contribute to, following a theory of change and a results framework (see annexes 1a and 1b). The MEL component also sought to document knowledge outputs, web statistics, events and project uptake, as evidenced through important moments recorded during the project implementation (Annex 1c).

2.2.1 Quantitative methodology

At baseline, the quantitative survey aimed to construct a profile to better understand mental health status, literacy and service access, and to inform evaluation of the effects of the digital and non-digital interventions on these constructs. At endline, the aim was to understand the effect of the intervention on students who had participated (the treatment group) compared to a control group, following a quasi-experimental design.

Data collection was undertaken at baseline and then again at endline, after the intervention. Given the constraints imposed by the Covid-19 pandemic, the implementation took longer to start than anticipated, which meant that data had to be collected again to update the baseline. However, as we explain later in this section, this was only possible for the treatment group. For details on the sample size and composition see tables 1 and 2, as well as further disaggregation in Annex 2 (Excel file).

2.2.1.1 Sampling at baseline and endline

The initial baseline survey (baseline 1) was conducted in December 2020. The study employed a two-stage stratified cluster sampling. The regions and schools were taken as sample strata, while classrooms were treated as heterogeneous clusters within each school. The first stage involved the selection of four schools in the capital cities of each province (Nha Trang and Vinh), following a purposive sampling designed to ensure sufficient diversity in terms of school level and urban/suburban location. Within each province, the Department of Education and Training selected one high school (generally for students aged 16–18) and one middle school (generally for those aged 11–15) in the suburban and urban parts of the city respectively. The sample was recruited through public schools, which are attended by the vast majority of Vietnamese children (GSO, 2019). The second stage involved the random selection of 20 classrooms in which all students were interviewed. The number of classrooms was determined by the need to ensure a sample size with sufficient statistical power (with confidence intervals of 95% and a 5% standard error).

The baseline survey sample consisted of students in the 7th and 8th grades (middle school) and those in the 10th and 11th grades (high school).[11] In each province, two classes were randomly selected in two schools, and three classes were randomly selected in two other schools (a total

11 In Viet Nam, 9th grade and 12th grade students are preparing for high school or university exams, while 6th grade students have just entered secondary school. Given these diverse stressors (and because the 12th grade class would have already graduated at endline), these grades were excluded.

of 10 classes per province, and 20 classes across both provinces). All of the students in the selected classrooms (421 in Nha Trang and 423 in Vinh) were invited to participate in the study. Nearly all (842 of 844) consented and received parental consent to take part in the survey (a participation rate of 99.7%).

The intervention was school-wide; participation was not confined to students who had taken part in the original baseline. In addition, given the constraints imposed by the Covid-19 pandemic, the intervention took longer to start than anticipated. In the process, some students who had participated in the baseline had already graduated (students in the last grades of primary and secondary schools), while a number of students may have moved elsewhere. For these reasons, we administered a second baseline for every student in the treatment group. As a result of limited resources, we were not able to conduct a second baseline for the control group. As a result, our sample consists of two baselines for the treatment group and one baseline for the control group. The second baseline was conducted from February 2022 to March 2022.

The endline survey was then conducted from December 2022 to February 2023 once the intervention had ended. The sample consisted of 894 students (see Tables 1 and 2), as follows.

1. 187 students from the treatment group, corresponding to those who remained in the school – who had not graduated or dropped out from the psychology clubs that formed a key part of the intervention – by the time of data collection. Of these students, 106 had data from the first baseline study (baseline 1), while 81 were joining the study for the first time. All had data for baseline 2 and endline.
2. 707 students from the control group. Of these, 249 had participated in the baseline 1 data collection and had not graduated since that time. The additional 458 were new students, included to complete a representative sample across the schools. New students were selected to fill the gap and ensure an age and gender representativeness similar to the control group in baseline 1. The selection process followed the same criteria.

The survey was self-administered through a paper-based questionnaire, which reduced the cost and time needed for data collection, as it made it possible to survey many students in a relatively short time. Cognitive testing undertaken during the piloting stage revealed that the participants understood the questionnaire well and preferred to answer by themselves.[12] The approach may also have reduced interviewer bias in responses to sensitive questions. A team member provided a brief introduction in each classroom before asking students to complete the questionnaire.

12 Cognitive testing is a qualitative technique used during questionnaire design that involves the administration of the survey to a very small number of respondents. They are asked either to 'think aloud' as they answer a question or asked as they answer a question or asked retrospectively why they answered a given question in the way they did. The aim is to ensure that respondents have understood the questions in the way that researchers intended.

Table 1 Control and treatment sample by school in baseline 1, baseline 2 and endline

		School ID								Total
		THCS Lam Sơn	THCS Nguyễn Huệ	THPT Hà Huy Tập	THPT Nguyễn Thái Học	THCS Hưng Bình	THCS Nghi Lâm	THPT Lê Viết Thuật	THPT Nghi Lộc 5	
Baseline 1	Control	76	116	112	80	98	52	92	120	746
	Treatment	11	3	19	4	29	29	0	3	98
Baseline 2	Control	Number of students included in baseline 2 data collection								
	Treatment	38	32	37	39	36	36	34	38	290
Endline	Control	65	112	104	78	89	52	68	138	706
	Treatment	18	13	20	15	30	29	27	35	187

Table 2 Panel data sample composition by school

	THCS Lam Sơn	THCS Nguyễn Huệ	THPT Hà Huy Tập	THPT Nguyễn Thái Học	THCS Hưng Bình	THCS Nghi Lâm	THPT Lê Viết Thuật	THPT Nghi Lộc 5	Total
Baseline 1	87	119	131	84	127	81	92	123	844
Of which, treatment	11	3	19	4	29	29	0	3	98
Baseline 2	38	32	37	39	36	36	34	38	290
Of which, treatment	38	32	37	39	36	36	34	38	290
Endline	83	125	124	93	119	81	95	173	893
Panel baseline 1 and endline (control)	20	57	26	31	32	12	16	55	249
Panel baseline 2 and endline (treatment)	8	11	8	12	4	4	27	32	106
Only endline (new student in control groups)	45	55	78	47	57	40	52	83	457
Panel baseline 1 and 2 and endline (treatment)	10	2	12	3	26	25	0	3	81

Our aim was to fit the evaluation to the broader intervention rather than the intervention to the evaluation. For ethical reasons, we wanted to open the intervention to any interested student rather than confining it to students who had participated in the intervention (which proved fortuitous, given delays in starting the intervention). We were aware of the possibility of contagion effects between intervention participants and their classmates but decided not to take any steps to minimise this; instead, we opted to make this part of the evaluation design and probe for any 'spill-over'

effects between the treatment and control groups during the qualitative work. This proved to be less of a concern, given that we had to resample our endline group, replacing 457 new students in the control group.

A key challenge was the possibility of selection bias among intervention participants. We computed sample weights to address this bias; the weight readjusts the demographic composition of the baseline-treatment, endline-control and endline-treatment populations so that they conform to the demographic composition of the baseline 1 (control and treatment), which is the closest representation of the demographic composition of the school (Box 1). All computations presented in this report use sampling weights.

Box 1 Selection bias and weighting according to survey characteristics

Our analysis of the raw data on student characteristics pointed to statistically significant differences in gender and socioeconomic status (SES) between the treatment and control groups. On average, participants in the intervention were more often female and better off (concentrated in the top SES tercile) than those in the baseline sample. The sample weight adjusts for demographic differences in gender and SES composition at baseline and endline for each school.

A second challenge had to do with the delay between baseline 1 and baseline 2/the intervention, particularly given changes in the external landscape that were likely to have affected the mental health of the students (including the Covid-19 pandemic). While data from the treatment group in baseline 2 accounts for any changes taking place between both baselines, the data from control in baseline 1 does not account for this potential change. Control group data from baseline 1 was adjusted to test for robustness (Box 2). The analysis in the report is based on figures without this adjustment, but the robustness test was then used to ascertain if the conclusions hold (even after these adjustments). The adjusted figures are presented in Annex 2g.

Box 2 Adjustment control group data baseline 1

The adjustment consists of calculating the rate of change between baseline 1 and 2 among the treatment group for which data is available from both baselines. Assuming this represents the overall trend, adjustments were made to baseline 1 in the control group using the same rate of change. This new adjusted figure was used to compute the robustness test.

2.2.1.2 The questionnaire

The questionnaire was designed by consulting existing surveys on mental health.[13] Our review aimed to identify robust indicators of adolescent mental health and psychosocial well-being (Table 3); the constructs aligned with the key study hypotheses (Table 4); and other indicators that previous research suggested were likely to influence mental health service access and outcomes (Table 5).

13 Survey modules from various geographical contexts were consulted, including some specific to Viet Nam.

To measure key constructs, we sought to identify scales with well-established psychometric properties and, where possible, to include those that had already been validated in Viet Nam. The survey was translated into Vietnamese with some minor modifications made for the context (e.g. to describe educational performance). Having already analysed the baseline data, we had a better sense of which data was vital to collect and which had proved less useful. We also aimed to keep the survey as short as possible to minimise the time needed to collect the data and to avoid respondent fatigue. Annex 3 provides additional details of questionnaire design, while Annex 4 contains the full questionnaire.

Table 3 Indicators of adolescent health and psychosocial well-being

Scale	Construct	Resulting indicators
Strengths and Difficulties Questionnaire (SDQ)	Effective in screening for a range of child psychiatric disorders, including oppositional disorders, hyperactivity disorders, depression, pervasive developmental disorders and some panic disorders (Goodman, 2000).	1. Raw score 2. Based on Factor Analysis, we identified 3 subscales (emotional, behavioural, prosocial).
WHO-5 Well-Being Index	Measure of psychosocial well-being and screening instrument for depression (Topp et al., 2015).	1. Raw score

Note: A linear rescaling was followed to convert all scales on a 0–100 range to ease interpretability.

Table 4 Key constructs, hypotheses and corresponding survey[14]

Construct	Hypothesis (by endline)	Indicators
Mental health awareness	20% increase in adolescents' mental health literacy	Emotional literacy scale (O'Connor and Casey, 2015) Knowledge of what is important for good mental health scale (Bjørnsen et al., 2017) Knowledge of where to seek information subscale of the Mental Health Literacy Scale (MHLS) (O'Connor and Casey, 2015)
Agency in coping with mental health challenges	20% increase in the reported confidence of adolescents in their ability to address mental health problems	Ways of coping with mental health challenges scale (Kidcope children's version) (Spirito et al., 1988), with our additions (see Annex 3)
Help-seeking behaviour	20% increase in the number of adolescents who use tech and non-tech solutions to address mental health issues, conditional on average levels of mental health	Attitudes toward Seeking Professional Psychological Help scale (Fischer and Farina, 1995; Picco et al., 2016) Use of technology to seek health/mental health information indicators

14 See also project results framework in Annex 2 from the baseline report.

Table 5 Other determinants of mental health included in survey questionnaire

Topic	Details
Socio-demographic	Characteristics of respondents and households
Education and health	Subjective reports of education performance and physical health
Socioeconomic	Socioeconomic scale based on principal component analysis (PCA) using the following variables: education, having gone hungry in the last 12 months, assets ownerships (PC, fixed phone, refrigerator, computers)[15]
Social support	Family, friends, role models
Technology	Usage overall and in seeking health information
Violence and responses to violence	Violence by peers, parents, teachers
Engagement in risky or harmful behaviours	Alcohol, smoking, drugs, self-harm, violence
Sexual activity	Engagement in sexual activity, number of partners, engagement in unwanted sex and in sex while drunk

At baseline, the questionnaire and psychometric scales were tested and refined after the piloting of the survey. The validation process was then repeated at endline (see annexes 2b and 2c). In comparing baseline and endline, we produced a pooled dataset that included both baseline and endline data that was then used to run a psychometric test of the scales. Confirmatory factor analysis was then used to test factor structure in the SDQ and Kidcope scales. Given low goodness of fit, we ran an exploratory factor analysis to design the most appropriate scales for the analysis in these two scales. Exploratory factor analysis was also used to check construct validity in other scales.

In some cases, to maximise construct validity and reliability, we retained only the data for scale items that were loading as expected in the exploratory factor analysis, and excluded those that would increase Cronbach's alpha[16] if the item was deleted. This enabled us to construct measures that were most attuned to the context where the survey was administered, albeit at the expense of comparability with other studies conducted in Viet Nam or elsewhere. The result of the psychometric validation is summarised in Annex Table 2b.

A careful analysis of reliability was produced by computing Cronbach's alpha at baseline, endline and pooled datasets, as well as by disaggregating by subgroup of population (see Annex 2c). The conclusion is that psychometric scales provided valid and reliable measures of the baseline mental health of the adolescent population in these schools. We obtained good reliable scales for emotional literacy, knowledge of what is important for good mental health, knowledge of sources of information-seeking, attitudes toward seeking professional psychological help, strengths and difficulties questionnaire (SDQ), and the well-being questionnaire (WHO-5).

One scale – ways of coping with mental health challenges (Kidcope) – exhibited low reliability at

15 See composition of the socioeconomic status in Annex 2d.
16 A reliability coefficient and a measure of the internal consistency of tests and measures.

baseline level even after piloting and refinement.[17] The endline repeated low reliability for Kidcope, even if the reliability was slightly better than it had been at baseline. The available evidence suggests that the issues we encountered with Kidcope are shared more widely.[18] However, it is possible that some respondents may not have understood the items in these scales or may have responded erratically because of their limited understanding of what constitutes mental health. The Cronbach's alpha for Kidcope is also presented in Annex Table A3.

The team generated two datasets. First, a **panel dataset**, consisting of treatment and control respondents who were interviewed during baseline and endline. The structure of the dataset allowed for analysis over time and the testing of pair samples, as well as ANCOVA testing.[19]

Second, a **cross-sectional dataset (or pooled dataset)** was produced, including all interviews: not only with those students that were part of the panel, but also those students who responded only to the baseline or the endline. In this cross-sectional dataset, each data collection corresponds to an observation, so those who were interviewed at baseline and endline are included twice, and a variable indicates if the record is for baseline 1, baseline 2 or endline. This dataset was used to run a psychometric validity test with the full data, produce comparative variables such as socioeconomic status, and run a t-test with independent samples. The advantage of the panel data is that it makes it possible to work with pair samples, while the cross-sectional dataset provides a sample size with higher statistical power and better representativeness for the control group.

Baseline and endline levels for each key indicator were produced using the panel and cross-sectional dataset for the full and for relevant subgroups – e.g. by school level, region, gender, household socioeconomic status, etc. We analysed the statistical significance of changes between baseline and endline for treatment and control group separately, using both the panel and cross-sectional data. A t-test for pair samples, and a t-test for independent samples were produced with the panel and cross-sectional data respectively.

To facilitate interpretation and help the reader, only the more representative and statistically significant figures from the cross-sectional dataset are included in the body of this report, while the panel data calculations as well as ANCOVA testing assessing the treatment effect between control and treatment are presented in Annex 2g. As well as discussing the results that are statistically significant, we also report non-significant results where relevant. Given our small sample size, we flag all results of at least 10% significance or lower in the tables, but the figures and text of the

17 The factor structure of Kidcope for our baseline still produced a coherent structure that grouped indicators in three factors: active coping, avoidance coping, and expressive or emotional coping.

18 As Antoniou and Drosos explain (2017: 62): 'As there are few available instruments that assess children's coping strategies, Kidcope is widely utilised, although there are varying results regarding its psychometric properties and factor structure. Several different factor structures have been proposed … It should be noted that even the studies with the same number of factors did not find the same factor structure. … [It follows that] Kidcope's factor structure is not stable and may vary across diverse samples.'

19 Analysis of covariance (ANCOVA) controls by socioeconomic status as well as gender. See results in Annex 2g.

report discuss only results with 5% significance or lower.[20] Data processing was conducted using the Statistical Package for the Social Sciences (SPSS).

2.2.2 Qualitative methodology

Primary qualitative data collection was carried out at baseline in December 2020 and January 2021 and in January and February 2023 for endline by a team comprised of six members, with remote support from the ODI team. Piloting of the data collection tools, which were developed in a participatory way by all members of the study team, was carried out in November 2020 for the baseline and in December 2022 for the endline by local team members, and the tools were then further adapted. Schools that met the pre-determined criteria were selected to participate in the study (see the baseline report, Samuels et al., 2022, for further details on the schools' selection).

The qualitative tools were comprised of in-depth interviews (IDIs), focus group discussions (FGDs), intergenerational trios (IGTs – where different generations of the same family are interviewed), and key informant interviews (KIIs). Two strategies were used to enrol adolescent participants in the study at baseline. First, we used purposive sampling to enrol adolescents disaggregated by age (mid-adolescence [11–15 years] and older adolescence [16–19 years]), gender (male and female), mental health status, academic performance, and playing leadership roles. These participants were recruited through enrolment lists, with their socio-demographic characteristics shared by school teachers. Second, the team selected adolescents who were interviewed for the quantitative component, based on their gender and their scores on the SDQ (those who showed high levels of internalising issues such as depression or anxiety).

At endline, 5 participants were selected for IDIs in each school, all of whom had taken part in the intervention: 2 were taking more of a leadership role in their psychology club (as identified by the local psychologist); 2 showed high levels of mental health issues based on their SDQ scores; and 1 was selected randomly from those who had participated in the baseline qualitative interviews. FGDs with students consisted of participants in the intervention and school student leaders who had not taken part. A total of 92 interactions were conducted across the two sites at baseline and 78 at endline. Annex 5 contains the basic socio-demographic details of the respondents to our qualitative research.

The following areas of enquiry were explored in the qualitative component:

- understanding the drivers of mental ill health and psychosocial distress across different domains of adolescents' lives (in school, at home, in interpersonal relationships, etc.);
- the underlying social and gendered norms that may affect mental well-being;
- demand- and supply-side issues in relation to service access, quality and provision;
- the kinds of technologies available to and used by students (including the challenges and opportunities presented by each).

At endline, and as reflected in this report, the focus was on the effects of the intervention on all of these areas, including its effects on the drivers of

20 It is a more common practice to report only those results that are significant at 5% or lower, but the reduced sample size makes this level too low for our study. Therefore, we report results that are significant at least at the 10% level and provide the p value so that the reader can make their own judgement.

mental ill health, on knowledge about mental health services and on coping mechanisms (see Annex 6 for endline qualitative data collection tools).

All interviews were recorded, with the appropriate consent, and were then transcribed and translated. The study team developed a coding structure, based on what was emerging from the data (i.e. grounded theory) and all interviews were coded and entered into MAXQDA (data analysis software). Data from the coded segments was summarised according to agreed themes and the analysis also explored differences emerging from different variables, including site/location, gender, education, religion, and mental health problems and experiences, as well as household structure. The analysis was then written up in the agreed report format.

While coding the qualitative interviews, researchers aimed to record whether statements, opinions or perceptions shared by respondents were described by a majority, more than half, some, or only a few. In the report, we refer to 'most or the majority' when a statement corresponds to well over 50% of respondents (usually two-thirds of respondents or more). We use 'more than half' when a statement corresponds to over 50% of respondents. We use 'some' when a statement corresponds to fewer than half of participants. We use 'a few' when a statement corresponds to three or four participants. Finally, when a statement was mentioned by only one or two respondents, the report states so explicitly.

2.3 Ethics protocol and study limitations

ODI has its own ethics review committee composed of internal and external members. This committee reviewed all data collection instruments and other protocols, and recommended adjustments as required, covering data collected at both and baseline and endline. In-country clearance was not necessary in Viet Nam as the study protocol had been approved by the ODI ethics review committee. Approvals and permissions were instead sought via the relevant ministries and departments.

The adolescents who responded to the survey provided their written consent, acknowledging that their participation was completely voluntary and that they were free to stop at any point or to leave blank any questions they did not wish to answer (see Annex 4). For respondents under the age of 18, the team sought consent from students' parents after speaking to teachers. The research teams were trained prior to the fieldwork and were regularly reminded to adhere to safeguarding protocols.

There were some limitations. The first was survey representativeness. The sample includes four schools from each city (Nha Trang and Vinh). In order to ensure diversity, the district authority in each city selected two urban schools and two suburban schools. The team then randomly sampled 20 classrooms within these schools. This final sample provides as much diversity as we could guarantee, but given the absence of a complete sampling frame to select the schools, we cannot conclude that the findings are fully regionally representative, and recommend presenting school-level results.

The second limitation concerns questionnaire sensitivity and potential response bias. Although the study team guided students on how to respond to the questionnaire to ensure that the questions were fully understood, the answers received were accepted as final. There was no room to probe or to clarify ambiguities, or to overcome missing

responses, particularly for sensitive questions. The possibility of response bias arises because respondents had access to the full survey before responding to any single question, which might result in changing some of their responses to skip the follow-up questions. We found that including 'I prefer not to say' as a response to potentially sensitive questions increased the quality of the survey data, as significant numbers of students selected this option.

The Covid-19 pandemic did not affect conduct of the baseline survey because no lockdown measures were in place at the time of data collection (January 2021). Although qualitative data collection activities were not altered by the pandemic, the content of the interviews at baseline was reduced slightly to account for the time that participants had to respond to the tool. The number of FGD participants was limited to 5–8 and they were kept apart to control disease transmission. Although the interviews were conducted in private rooms, various noises affected the quality of audio-recordings, meaning that some valuable quotes may have been lost during transcription and translation. We cannot quantify how Covid-19 affected participant responses, although some studies conducted as part of this project suggest significant mental health effects (see Chakraborty and Samuels, 2021; León-Himmelstine, et al., 2021; Samuels et al., 2021).

Finally, it is possible that some students who agreed to participate in the survey at both baseline and endline might have responded without paying due attention, owing to exam fatigue and time constraints (at both baseline and endline, the survey took place after the exam period).

3 The intervention and its processes

This section describes the intervention that was implemented at the eight sites in Viet Nam, as well as student responses to the intervention: what they felt was positive, what they saw as challenging, and their suggestions for future programming.

> **'I think the creation process was quite comprehensive and interesting … There are a few things that I like about it. People were very friendly and cooperative to come up with the best solution which was suitable for the club.'** (17-year-old boy, Vinh, who led intervention activities)

3.1 Co-creation processes

To design the co-creation process, the full team (researchers, technology developers, and experts in co-creation and MEL met weekly over a two-month period to agree on the number, duration, facilitation and content of the intervention sessions. The team prepared a shortlist of solutions to be discussed with the adolescents, the activities, games, and energisers to be used, and the materials that would be made available to them.

Originally, the co-creation workshops were planned to be held in-person and to last for four days. However, as a result of the Covid-19 pandemic, the co-creation workshops had to move to a hybrid form, with some tweaks to the original plans (e.g. the workshops were shortened and activities that were more suitable for online participation were included). A total of 111 people took part in the co-creation workshops across the 8 schools. They included 85 students, 18 teachers and members of the school boards, 1 school psychologist, 5 parents and 2 local authorities.[21] As one participant in the co-creation workshops commented:

The solutions co-created by adolescents, supported by the research team, consisted of a blend of in-person and digital activities. The in-person components consisted of indoor and outdoor sessions. During the in-door sessions a set of mental health topics was discussed (including through the use of games, debates and role plays) (see Table 6). In the outdoor sessions, students learnt about mental health through activities such as traditional games (tug of war) or sports.

The psychology clubs, as named by the students, ran once a month over an 11-month period.[22] A total of 20 sessions took place (11 indoor sessions and 9 outdoor sessions), with each session lasting 90 minutes. The indoor sessions were facilitated by local psychologists, the outdoor sessions by students and the local psychologists. The sessions were held outside school hours. Each club had around 30 students, although the numbers who attended did fluctuate by session according to, among other things, their homework.

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21 Participants were divided into eight small groups (corresponding to eight schools) in the first three sessions. In the fourth session, the participants were divided into four groups (two schools/group).

22 The frequency of the sessions was discussed and agreed on during the co-creation workshops with the schools' board, teachers, students and parents. Most thought that once per month was feasible given schools' busy schedules and other activities of the students.

Table 6 In-door session topics

February	Topic 1: Introduction
March	Topic 2: Overview about mental health
April	Topic 3: Stress
May	Topic 4: Anxiety
June	Topic 5: Depression
July	Topic 6: Emotional regulation skills
August	Topic 7: Conflicts and social relationships (1)
September	Topic 8: Conflicts and social relationships (2)
October	Topic 9: Bullying
November	Topic 10: Self-care and promoting well-being
December	Reflection

The digital solutions that were co-created included a mobile application called MoodTracker+, which enabled students to record or rate their feelings (see Figure 2) and keep a daily diary. The app also includes links to mental health resources. A Facebook group was set up that linked to the in-person sessions. This enabled students to post summaries of information from the psychology club sessions and other information related to mental health. They could also post photos from the club's sessions to the group, have additional online discussions and connect with each other. The administrators and monitors of the groups are students from the psychology club and members of the research team. The Facebook group is private and allows students to post anonymously.

Figure 2 Rating feelings in the MoodTracker+ app

3.2 Monitoring, learning and adaptation

Simple registers were developed to track implementation for both in-person and digital activities. For the in-person component, the local psychologist collected data on: attendance; date/time of the session; the theme of the session (knowledge and activities); stakeholder participants; what worked well and less well; further suggestions; student feedback; and photos and videos.

The tracking of the digital component, carried out mostly by the country technology team, consisted of, for the MoodTracker+ app, recording: login time, usage time, mood level (from 1 to 5) and monthly average mood level and any notes from students (why they chose that level, what happened, how they felt, etc.). Students received reminders from the app to make use of it. The tracking of the Facebook group included recording of: time of posts, type of posts (photo, text or video) and number of photos and videos on each post; interactions (how many shares, views, comments) and reactions (how many like/love/laugh/sad/wow/angry). All tracking data for digital solutions was collected and reviewed monthly. The data, both from the in-person and digital session, was presented in the monthly update meetings that were held with the full research team.

In addition to the regular monitoring and tracking of activities, the research team carried out two qualitative check-in meetings in each school during the implementation period (in months 4 and 9). These check-ins consisted of in-depth and group

discussion with students, facilitators, teachers, local authorities and parents, aiming to reflect on and adapt the co-created solutions if necessary.

Some adjustments to the intervention were made as a result of the regular monthly summarising and presenting of the monitoring/tracking data at the update meetings and the two more in-depth check-ins, which were opportunities to find solutions to any challenges. For example, not all students had mobile phones, so the research team asked the schools for permission to use the school computers. A fund for refreshments was started to provide additional incentives for students to take part in the psychology clubs and contribute to team-building. In addition, the research team decided to shorten and condense the intervention in one school because it started later than in the others.[23]

These regular check-ins made it possible to examine early findings on the effects of the intervention. For example, they revealed reports from students that, as a result of the intervention, they had more relationships and were better able to regulate their emotions. Parents and the local psychologists both noted that students had become more confident, with the psychologists also observing that students were now better able to search for mental health information and share that information with others.

3.3 Adolescent perceptions of the intervention

Adolescents were asked for their views on the intervention during the endline qualitative study. Many of their views aligned with the findings of the tracking/monitoring and the check-ins.

The majority of adolescent respondents simply described their **type of participation in the intervention** as being a 'member', with a handful working as group leaders (who volunteered from the beginning of the intervention to, for example, monitor the Facebook groups, inform other students about session schedules and liaise with the psychologist. A few others took on the roles of Facebook administrators and others spoke about presenting 'information about psychology and mental health issues to other students on flag day'.

In terms of **attendance**, a handful of participants (most of whom were female, and more of them from Vinh) reported that they attended every single session. Some spoke about attending nearly all sessions and said that they had only 'skipped 1 or 2 sessions'. Meanwhile, a significant proportion of participants attended only around half of the sessions, with a handful reporting that they only attended a few sessions. The most commonly cited reason for missing a session was the need to study.

> **'I didn't attend all the meetings. I'm in grade 9, so my schedule was packed with studying. I could only attend about five or six meetings.'**
> (14-year-old boy, Vinh)

When asked **about motivations for attending**, the reason cited most often was the desire to expand knowledge about mental health, as well as ways to treat or solve mental health problems, such as being better equipped to deal with their emotions as well as any negativity. Adolescents talked about solving not only their own mental health challenges, but also those of relatives

23 The intervention in that school was delayed by two months as a result of the school's internal organisation. However, once the intervention began, it was run more frequently than in other schools and, unlike the other schools, continued through the summer holidays. All sessions were completed, despite the initial delay.

or strangers. This interest in mental health was expressed across all age groups and both sites, but particularly by female adolescents.

> '(I wanted to participate)... because I found it interesting. I felt it was comfortable and interesting, which was the basis for me to participate in all activity sessions. The second is because it expanded my knowledge. I feel it as useful knowledge that I have to understand and comprehend so that later on if my relatives or even strangers meet such situations, I still have a way to help them solve their problems.'
> (17-year-old girl, Nha Trang, who led and participated in the intervention activities)

Another commonly cited motivation for taking part was to be with their friends, including those who were 'actively participating'. This was cited by both boys and girls in Nha Trang, but only by boys in Vinh. Some also mentioned that the club was an opportunity to meet new people, beyond those who were in their own grade. Several other students wanted to take part in a fun activity, with particular praise given to the psychologists involved.

> 'Well, I found the sessions very enjoyable, and the teachers [local psychologists] were funny, enthusiastic, and friendly to everyone, [I] felt very comfortable when joining the club, and everyone was very open-hearted, interacting with each other, in general it was a lot of fun, so I really enjoyed participating.'
> (17-year-old girl, Vinh, selected by a psychologist to take part in this study)

Participants in the qualitative endline study were also asked **what worked particularly well or what they liked the most about the intervention.** In general, students liked being involved in the design of the psychology clubs and being allowed, for example, to 'speak freely about what I thought'**.** When probed on what they liked about the in-person sessions, many responses echoed their motivation for attending: enabling them to gain new knowledge, to interact with classmates and to take part in interactive activities and play games. Participants also welcomed the fact that each in-person session had a 'different topic' and provided both 'theoretical knowledge and practice'. Several adolescents welcomed the food provided at the sessions, and one participant described how they liked being in a leadership position.

> 'I feel very happy when being in a leadership position. Being able to lead my friends makes me feel more confident.'
> (14-year-old boy, Nha Trang, selected by a psychologist to take part in this study)

When asked about what participants liked about the digital sessions, some adolescents (both male and female, and in both sites) were positive about the use of the app to regulate their mental health, with such comments as 'it records my daily feelings neatly' and 'I can see my emotions increase or decrease each day'.[24] Several adolescents also highlighted the privacy benefits of the app.

Their positive views of the Facebook component included its summaries of their discussions in the in-person sessions. They saw this as a useful reference tool, allowing them to message each other and

24 In terms of how this connected to their ability to regulate their emotions, they could look back to see what made them happy, sad or angry, and that might help them to predict or deal with sadness or anger in the future.

exchange information as well as preserve 'moments and stories of what we've been doing', including for some who could not join the sessions.

The key informants, predominantly teachers, had similarly positive views about the psychology clubs observing that, as a result of participating, the confidence of students increased and that they had 'a new perspective on mental health'. One teacher highlighted the benefits of having a psychologist in the school's club as it enabled students to express themselves more openly.

> **'It was an environment for students where they could express themselves comfortably. Because it was a club where they were a member and [name of the local psychologist] was not a school employee. If teachers had been there, students would have felt restricted. It was a barrier. Without teachers, students could be more open to express themselves. There were some sessions that I just observed from afar without actually joining in. I noticed that students participated enthusiastically. However, when I was in the sessions, like an inspector in class, students controlled themselves and didn't show all their abilities.'** (Key informant, teacher – Nguyễn Thái Học school, Nha Trang)

The majority of adolescents, especially those from Vinh, felt that the **programme would be popular if it ran again.** They felt that mental health issues are gaining more attention and their peers also spoke to them about their worries 'about studying, about relationships with friends, family and society'. However, a handful of adolescents felt that the programme would not be popular because of time pressures and the competing demands of schoolwork. Indeed, this challenge could be seen during the intervention itself, with one school in Nha Trang facing scheduling and administrative issues that caused half of the students to drop out. The school chose to continue with the remaining 15 students because it would be difficult to recruit more students with the upcoming summer break. Some students also observed that some people still do not take mental health issues seriously enough and that the clubs would 'only attract people with psychological problems', according to one adolescent girl.

Key informants responded positively when asked about **whether the programme will continue**. It is likely that this interest was generated as a result of inviting teachers to attend the sessions alongside students – an approach that was particularly common in Vinh. Headteachers and teachers were quite involved, welcoming the check-ins and the feedback mechanism. One headteacher in Nha Trang said that the school might be 'willing to support it', including 'financially' providing 'it's not too much'.[25] Another teacher suggested that the school would 'try to find funds from the Union budget to continue and improve the club in the future'. One psychologist committed to run the programme for 'one year' in any form with 'no funding or anything'.

> **'I assure you, as one of the leaders of the school, the school will support programmes that help students to develop or help students to form their personality in a good way. We are willing to support it. We can even support it financially if it's not too much'.** (Key informant, headteacher – Hà Huy Tập school, Nha Trang)

25 Expenses incurred at the schools related mostly to stationery and the printing of handouts.

Some key informants also expressed concerns, even where the value of the intervention was acknowledged ('this club is truly necessary') and these related largely to resources. There was concern about the need to have appropriate staff with training in mental health who could run the clubs – seen as essential to run them effectively. It was also felt that those who run the clubs should not be teachers, as outsiders enabled students to open up more easily. Some key informants also raised concerns about the difficulties of finding the appropriate schedule and timings for the clubs, particularly in relation to exam schedules, as well as finding the right space and place to run the clubs.

> **'Right now students don't have any places to go to when they want to talk. There is a distance between teachers and students, not all parents can be understanding, not all friends are good friends and not everything on the Internet is useful. We need a place where students are guided and helped. We hope that the club could help many students if they have problems. We are willing to support the club, even financially.'**
> (Key informant, headteacher – Hà Huy Tập school, Nha Trang)

Other support needed to run the club mentioned by key informants included support from departments such as the Labor, Invalids and Social Affairs Ministry of Culture and Sports.

When asked **whether they had spoken about the intervention and, if so, who they had spoken to**, the vast majority of adolescent participants (particularly girls and those from Vinh) confirmed that they had spoken to someone about it before participating. The person they had spoken to most frequently was a parent, another relative or a friend. The majority of participants who told a parent did not specify which parent they told; a few adolescents said that they told their mother (or another female relative) specifically. Meanwhile, a minority of students said that they had not told anyone about their participation. Of the few who explained why they had not told anyone, one suggested that their mother was busy with work and another said that, initially, their parents did not know because they only cared about grades. At the first two check-ins it remained unclear whether parents knew about the project at all.[26] Teachers suggested bringing them into future meetings.

Most of the adolescents who had told someone else about their participation in the intervention reported a positive reception. One mother, for example, perceived that their adolescent child was more confident now; another mother perceived the intervention as providing useful knowledge not only about how to help the adolescent themselves, but also how to help others.

26 The research team and the teachers spent a great deal of time at every stage of the research to raise awareness among parents about the intervention. Parents also had to sign informed consent forms for their child to participate in the research study. Even so, it seems that this awareness-raising may not have been sufficient as many students still said their parents were unaware of it (with some adolescent respondents saying that their parents 'did not care').

> 'My mum definitely supports me joining these kinds of clubs. Since I joined the club, my mum's found me more confident, more talkative. I've talked more than I used to. I used to be quiet and reserved but when I join many clubs, including the psychology club, my mum notices I've changed a lot in terms of personality and thoughts.'
> (17-year-old boy, Vinh, who led and participated in the intervention activities)

> 'No, my parents are happy, because I can go out, and learn more from other people, joining this club I can know more and I'm less dependent on my mobile phone.'
> (17-year-old girl, Vinh, selected by a psychologist to take part in this study)

In terms of what worked less well or the challenges faced, several adolescents described an initial scepticism among parents about the initiative, such as a belief that those who join are mentally ill or that it would distract their children from their studies. However, these adolescents explained that their parents eventually became convinced of the benefits of their child attending; one adolescent outlined how they shared recorded videos or audio sessions in the club with their parents to change their views about the intervention.

> 'So my mother... there was a time she told me to withdraw from the programme to focus on my studies. But after... after hearing what I said... I told her that when I joined, I was taught what goes on in the family. Therefore, my mom thought positively and changed her mind and let me participate.'
> (15-year-old girl, Nha Trang)

A handful of adolescents reported a continued lack of support from their parents for their participation in the intervention, mainly because the parents wanted their children to focus on studying. A significant minority of adolescents said that their parents (and other people they had told about their participation) were indifferent. Most did not provide a reason, although one mentioned that their parents did not know much about mental health.

When asked what **worked less well or what did students not like about the intervention**, a number of responses emerged. These also mirrored the findings from both the regular monitoring data and the qualitative check-ins. In terms of the in-person sessions, the most frequently cited aspect that students (both boys and girls, and in both sites) did not like was the limited engagement of some participants, with a number observing that some were passive and did not contribute to the discussions. They said that often only one or two people would speak, and often the same people each time.

> 'However, in that session, very few people spoke, and the opinions expressed were few. I didn't know if it was then... At that time, they divided us into two groups. I didn't know what about the other group, but my group was mostly just me talking, with a few other friends adding their opinions.'
> (15-year-old girl, Nha Trang, selected by a psychologist to take part in this study)

Other aspects that adolescent respondents disliked about the clubs included the low numbers of people attending, with numbers dwindling over the course of the intervention. As noted by a 15-year-old girl from Nha Trang: 'gradually

there were only about 10 people left (in club)'. One adolescent had doubts about a 'lottery' system that was used in one school in Nha Trang where many students signed up and there were insufficient places. In addition, several adolescents mentioned that some participants were often late, which meant that the club started late. One 14-year-old girl also observed that sometimes she found it hard to understand what the psychologist said.

In terms of things participants disliked about the digital sessions, a handful of adolescents criticised the user-friendliness of the app, noting that the interface was not attractive or creative, that it was more appropriate for younger children, and that people their age would 'get bored quickly'. Some respondents also disliked the fact that users were required to log in every time. A few participants in both study sites reported difficulties in logging into the app. There were some mixed views about the frequency of notifications, with one adolescent suggesting that the app needed more features to remind them to make more use of it, while another felt that there were too many notifications. Although one adolescent reported liking the app at first, they stopped using it as they felt it made them dwell too much on their thoughts and feelings.

> **'I did put it to use [the app] for a few weeks before I stopped, I wanted to express my feelings at first, but I didn't want to do that anymore after a while, I didn't want to speak my mind anymore. I figured that leave my thoughts alone and they would settle as time went by, so I didn't want to write it down since it was time-consuming to think about how I was feeling throughout the whole day.'**
> (18-year-old young woman, Nha Trang, selected by a psychologist to take part in this study)

Regarding the Facebook group, a few participants commented that it was not active and some of the posts that recapped each session were too long. A few adolescents simply preferred in-person interactions to technological interventions, as they felt it was 'easier' to talk to other people in person about their issues.

Participants in the intervention reported a wide range of **barriers to attending the sessions**. By far the most frequently cited related to lacking time because of schoolwork, clashing schedules, having to take extra classes at school, needing to study at home and preparing for exams.

> **'One hardship for me was the schedule of the club's activities. Sometimes it overlapped with my studying schedule, so I couldn't make time to attend even if I wanted to. Studying is of utmost importance to take the high school entrance exams for us ninth-graders, so I don't have time to spare.'**
> (14-year-old boy, Vinh)

Other barriers to attendance – or dwindling attendance – reported by a very few adolescents included clashing schedules as a result of 'church' commitments, not having any 'friends to talk to' during sessions and/or feeling 'shy', and being 'busy with housework'. One 18-year-old male respondent had a job as a waiter and reported that his shifts clashed with the club schedule, so he was unable to attend. In contrast, some adolescents reported no barriers at all to attending.

'No, I haven't [faced any difficulties in the club]. I feel very comfortable and happy because the older members in the club are very sociable and see me as the youngest in their family, so it's very easy to talk to them.'
(17-year-old girl, Nha Trang, who led and participated in intervention activities)

The key informants were also asked what they disliked about the intervention or barriers to attendance. Some reiterated the comments made by the adolescent participants, such as 'students are too shy and timid' to contribute to discussions. They also observed that it was difficult to attract students to the clubs and that there were schedule clashes, related both to students' other classes and studies, as well as jobs outside school. Several negative comments were made about the digital sessions, with some observing that students sometimes used phones (that were borrowed from their parents for the clubs) to surf the net or play games rather than for club-related activities.

'They are not confident enough to express themselves. Only some students who have a strong personality could be confident enough to join. Secondly, it's a matter of schedule. Some students wanted to join but they had to go to extra classes or they had a part-time job, etc... They joined one or two sessions and they stopped coming. The number of students signing up for the club was relatively [high] but there were not many students left after a while.'
(Teacher – Nguyễn Thái Học school, Nha Trang)

Other negative comments made by key informants about the programme related to difficulties in convincing the students that they would benefit from participating in the clubs. One key informant implied that perhaps participation would have been better if there had been more buy-in and support from other teachers and/or the headteachers, and if the sessions had been made mandatory. Another noted challenges linked to travelling some distance for the in-person activities.

'There were a lot of hardships. The first one is the limited time when they can approach students, as students are always busy. If it's an extensive programme, we can spend every afternoon on it, for example. The second hardship is the distance, the distance also makes things difficult for teachers. The third is the cooperation of teachers and students. They aren't very cooperative, as we have yet to see their excitement. As much as we know it's beneficial, we also need to see the excitement.'
(Key informant, headteacher – Nghi Lộc 5 school, Vinh)

Finally, one teacher noted that the small-group nature of the programme was challenging, suggesting that more students needed to be involved in school activities, given that their school has 1,000 students.

'... so the number of students who grasp the knowledge, who grasp these life skills is too small compared to the total number of students... The more students participate in this club, the better.'
(Key informant, teacher – Nguyễn Huệ school, Nha Trang)

4 Effects of the intervention on mental health literacy: knowledge, awareness and attitudes

This section focuses on the effects of the intervention on mental health literacy, including knowledge and awareness, as well as attitudes. We first explore general knowledge of mental health, followed by knowledge of the drivers of mental ill health. We then turn to knowledge of and attitudes towards mental health services and mental health-seeking behaviours, moving on to explore people's attitudes towards mental health itself. The final subsection discusses perceptions of change over time.

In a nutshell, we found that the intervention had a high and statistically significant effect in improving knowledge of mental health. This is particularly the case for mental health literacy, but also for knowledge of what is good for mental health. To a lesser degree, the intervention also improved the knowledge of where to seek information and attitudes towards mental health services, especially among students with low socioeconomic status, who presented a greater gap of knowledge to start with.

4.1 Knowledge of mental health

We start by presenting the results from the quantitative survey to assess whether the intervention had a positive effect on participants' knowledge of mental health. We do so by comparing changes taking place among the intervention participants against changes taking place in members of the control group (who did not have any direct contact with the intervention).

Four key MEL indicators are assessed in this section:

- mental health literacy
- knowledge of what is good for mental health
- knowledge of where to seek information
- attitudes towards mental health services.

4.1.1 Mental health literacy

In our quantitative study, mental health literacy was measured using a five-point Likert scale composed of 7 items with answers ranging from 1=strongly disagree to 5=strongly agree (see Section 2.2 for the methodology).[27] The final scale was rescaled to range from 0 to 100, where higher values represent higher mental health literacy. Figure 3 and Table 7 present the results for the control and treatment groups broken down by key demographic factors. Results for the panel data are presented in Annex 2g as well as a series of robustness tests with the adjusted figures.

27 Initially this scale had 13 items, but after scale validation these were reduced to only 7 items to increase reliability: q29_1, q29_2, q29_3, q29_4, q29_5, q29_9, q31_1. Item q31 was converted into a 4-point scale to aggregate with q29 items.

Evidence indicates that the intervention had a statistically significant positive effect on mental health literacy in both Nha Trang and Vinh, with relative increases of 8% and 5% respectively. The effect is particularly significant among boys (8%), younger students aged 12–15 (11%) and those with low socioeconomic status (SES) (17%). These groups had a greater knowledge gap at the start, giving greater space for improvement. The panel data also recorded a statistically significant improvement among girls in the treatment group (4.6%) while the ANCOVA test found a statistically significant treatment effect when controlling by gender (with a confidence interval increase between 1.1% and 8.6% compared to the control group). Among older students (16–19) and those with a higher SES, the intervention may have had a preventive effect: avoiding a deterioration of mental health literacy as recorded by the control group.

Figure 3 Changes in mental health literacy scores by treatment and control group

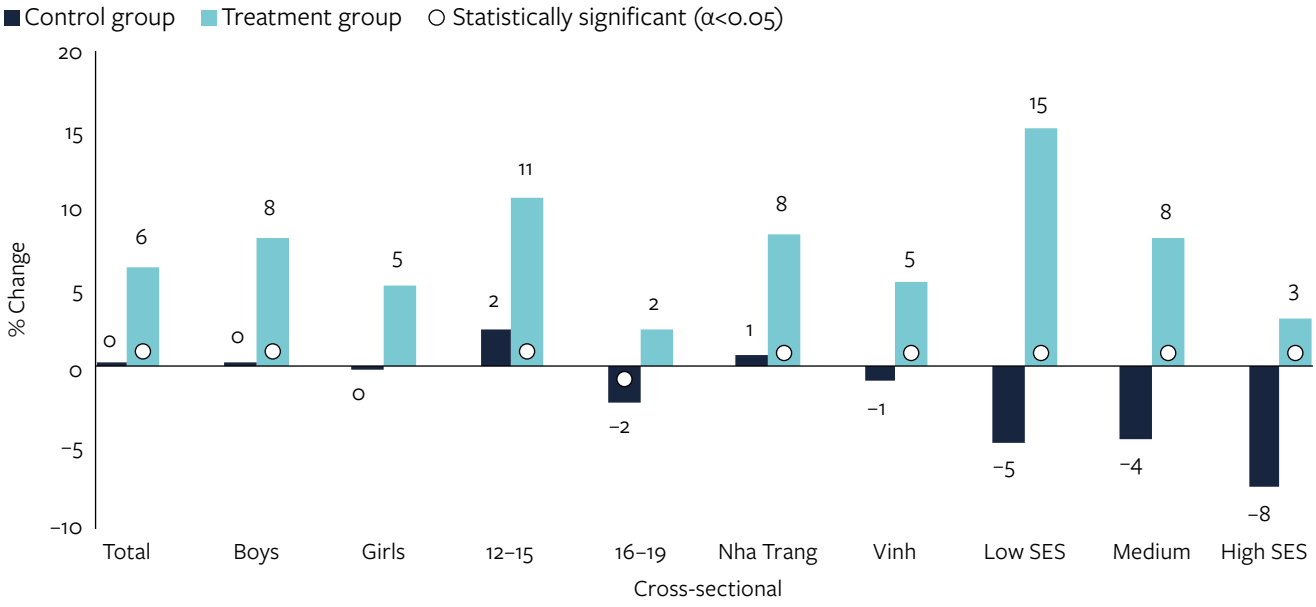


Table 7 Changes in mental health literacy scores by treatment and control group

	Baseline	Endline	% Change	Significance
Cross-sectional				
Control	68.5	68.6	0%	no sig
Treatment	68.7	73.1	6%	0.002
Boys				
Control	68.3	68.4	0%	no sig
Treatment	67.9	73.5	8%	0.007
Girls				
Control	69.0	68.9	0%	no sig
Treatment	69.2	72.8	5%	0.069
12–15				
Control	66.5	68.1	2%	0.072
Treatment	65.6	72.6	11%	0.003
16–19				
Control	70.5	68.9	-2%	0.050
Treatment	71.6	73.2	2%	no sig
Nha Trang				
Control	67.4	67.9	1%	no sig
Treatment	68.0	73.7	8%	0.022
Vinh				
Control	69.7	69.2	-1%	no sig
Treatment	69.1	72.8	5%	0.029
Low SES				
Control	69.4	69.4	0%	no sig
Treatment	63.0	73.9	17%	0.001
Medium SES				
Control	68.8	68.7	0%	no sig
Treatment	70.3	74.7	6%	0.027
High SES				
Control	71.9	67.9	-6%	0.002
Treatment	71.4	72.5	2%	no sig

4.1.2 Knowledge of what is important for good mental health

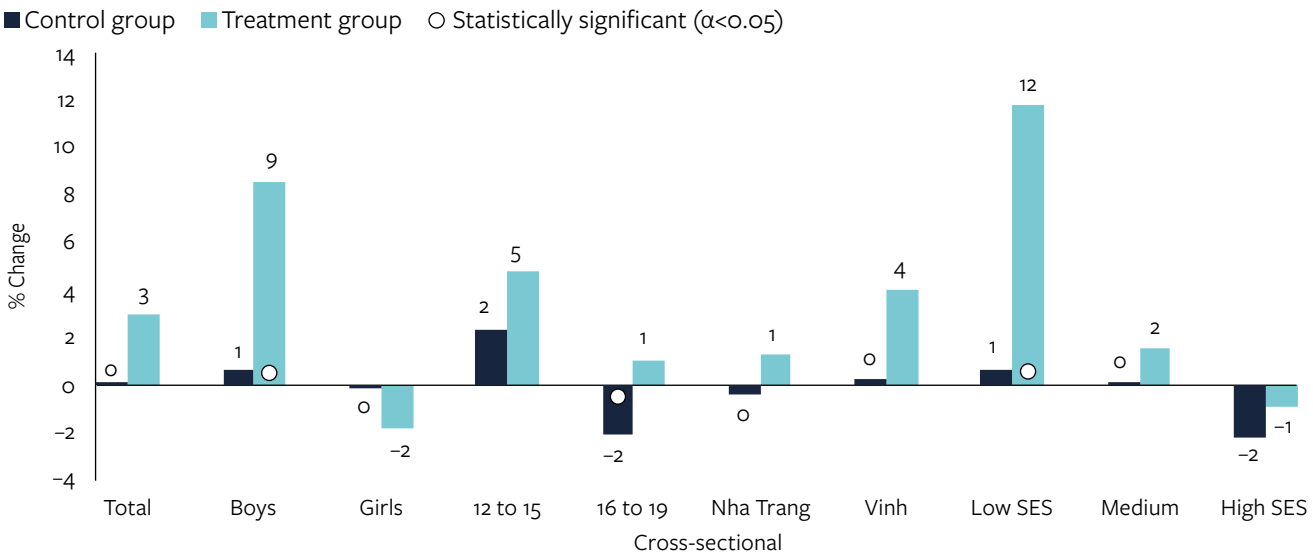
The quantitative study also explored knowledge of what is important for mental health. This was measured with a 4-point Likert scale composed of 10 items with answers ranging from 1=strongly disagree to 4=strongly agree (see Section 2.2 for methodology). The final scale was rescaled to range from 0 to 100, where higher values represent better knowledge of what is important for good mental health. Figure 4 and Table 8 present the results for the control and treatment group broken down by key demographic factors. Results for the panel data are presented in Annex 2g, as well as a series of robustness tests with the adjusted figures.

The intervention had a statistically significant and positive effect on knowledge of what is good for mental health only among male students (a 9% relative increase); there was no statistically significant change among female students.

Similarly, the effect of the intervention was statistically significant only for students with a low SES (a 12% relative increase), while no statistical differences were observed among students with a medium or high SES. The ANCOVA test using the panel data shows additional evidence that treatment groups experienced an improvement compared to the control group (with a confidence interval relative increase of 1.1% to 5.6%), but the results are not statistically significant.[28]

It appears, therefore, that the intervention had a positive effect on knowledge of what is important for good mental health, particularly among male students and students with a low SES, but little or no effect among most other students. This is probably because of the gap in knowledge that boys and children with a low SES had at the start of the intervention. They had more to gain in terms of knowledge than their female counterparts or students who were better off.

Figure 4 Changes in knowledge of what is important for good mental health scores by treatment and control group



28 There was no statistical significance even after controlling by socioeconomic status and gender. See results in Annex 2g.

Table 8 Changes in knowledge of what is important for good mental health scores by treatment and control group

	Baseline	Endline	% Change	Significance
Cross-sectional				
Control	75.3	75.3	0%	no sig
Treatment	75.6	77.9	3%	0.088
Boys				
Control	75.0	75.6	1%	no sig
Treatment	73.1	79.4	9%	0.004
Girls				
Control	75.7	75.7	0%	no sig
Treatment	78.0	76.6	-2%	no sig
12–15				
Control	72.9	74.7	2%	0.063
Treatment	74.2	77.8	5%	no sig
16–19				
Control	77.4	75.9	-2%	0.042
Treatment	76.8	77.7	1%	no sig
Nha Trang				
Control	74.5	74.2	0%	no sig
Treatment	75.1	76.0	1%	no sig
Vinh				
Control	76.1	76.4	0%	no sig
Treatment	75.8	78.9	4%	0.057
Low SES				
Control	75.6	76.1	1%	no sig
Treatment	70.1	78.4	12%	0.014
Medium SES				
Control	75.3	75.4	0%	no sig
Treatment	77.8	79.0	2%	no sig
High SES				
Control	77.9	76.2	-2%	no sig
Treatment	77.4	76.7	-1%	no sig

4.1.3 General knowledge of mental health, mental health conditions and the effects of the intervention

Turning to findings from the qualitative study, we asked adolescents to describe what they thought or what they understood by the term 'mental health'. Before the intervention, adolescents had vague ideas about this, often linking the term to mental health problems, and noticing only the negative aspects of mental health. Some of them even reported that they never heard of the term. Some misunderstandings and misconceptions about mental health conditions were also mentioned.

After the intervention, nearly half of the adolescent respondents said their general awareness of mental health had improved. In particular, adolescents in Vinh, and the majority of them female, were more likely to report this change than their male peers. One girl stated that through the intervention, she had 'gained a better understanding of her mental health and external factors in her surroundings that influence it'. Another girl noted the following:

> **'I have more knowledge on mental health. I um... understand more about the mentality of people, the way to communicate with people.**
> (14-year-old girl, Vinh)

Some adolescents reported that they learnt more about specific mental health conditions, including their description, types, signs, symptoms and how to identify them:

> **'What I remember most is that we were given some types of mental disorders, their definitions, then their signs, then we could check if it's a disease or not and see if we were right or wrong.**
> (17-year-old girl, Nha Trang)

This aligned with the topics covered in the club sessions, which included general information on several mental health problems, such as stress, anxiety and depression. This knowledge was also personally useful to some adolescents who had experienced those conditions.

> **'There was a lesson about anxiety disorder. I was a person with severe anxiety disorder... However, when I learnt more about this disorder, I gradually realised and changed to a more positive mindset.'**
> (14-year-old girl, Vinh)

Among other things, adolescents claimed that the project taught them how to assess their own mental health and 'control their emotions', as well as how to make new friends and 'become more comfortable with social contact'. It also, according to them, enhanced their parents' awareness of mental health.

> **'My mum is an example... When I was in the club, after every session, I shared with my mum about everything I learnt in the session. My mum and friends around me also had another view about mental health and people who might have mental health issues.'**
> (18-year-old young woman, Nha Trang)

Changes in mental health awareness were reported not only by adolescent participants, but also by teachers and parents which, according to them, helped to 'improve parent-child, teacher-student, and friendship connections'. A teacher in Nha Trang who joined several sessions was amazed by how advanced the knowledge of the students had become.

> **'They have basic knowledge of mental health issues. They can stand in front of a crowd and give presentations about mental health. I heard them present before and I think it was OK. Better than I expected. I just had vague ideas about it. There were things that students knew better than I did.'**
> (Teacher – Nguyễn Thái Học school, Nha Trang)

A number of adult participants in both provinces mentioned that the project had broadened their knowledge on mental health. They were mostly school staff who had been closely involved in club activities. One teacher in Nha Trang who was in charge of supervising the club, for example, said that it broadened his 'knowledge about mental health issues of students [and I] use it in my work and with tasks that are assigned to me by the school'. The knowledge these adults gained from the initiative was not only useful in their jobs, but also in their daily lives as well, such as understanding more about their own mental health and that of their children.

> **'Yes. The programme made me redefine the role of mental health for students. It also changed my... way of evaluating my own mental health, as well as that of students, and especially my children at home.'**
> (Key informant, teacher – Lê Viết Thuật school, Vinh)

4.1.4 Knowledge of drivers of mental ill health and the effects of the intervention

In terms of participants' understanding of the drivers of mental ill health (a topic that is also explored in Section 5.3), a similar pattern emerged from both the baseline and endline qualitative studies. Academic pressure and family issues were often perceived by adolescents both before and after the intervention as causes of mental health problems. Adolescent participants, particularly those aged 14–18, were also aware of other drivers of mental ill health, including their living environment, puberty changes, strained parent-child relationships, societal pressure, cyber-bullying, substance abuse, a 'lack of emotional control', school violence, 'verbal abuse' and 'body shaming and low self-confidence'. Even though some adolescents stated that they learnt more about drivers of mental illness through the intervention, there was no clear evidence of significant changes related to the matter.

> **'I picked up a few more causes, such as family reasons, and others that I had never thought of, that I only knew about after learning.'**
> (17-year-old boy, Nha Trang)

4.2 Knowledge of, and attitudes towards, mental health services and help-seeking behaviours

4.2.1 Knowledge of mental health services

During the endline qualitative study, almost half of the adolescents, over 80% of whom lived in Vinh, and some adults reported being aware of mental health support programmes or services. The most common service mentioned by both adolescent and adult participants was psychiatric hospitals. This type of mental health service was also the one mentioned most often during the baseline interviews. This was because, according to one key informant, they are 'frontline' facilities for mental health treatment and there is a notable lack of other qualified practices or services in the area. In addition, there are two well-established psychiatric hospitals in the two provinces, and one of them is in the neighbourhood of two schools participating in the project. One local psychologist who facilitated the psychology clubs has been working in that hospital.

> **'... the mental hospital is also the front line of the province so they have no other choice and what's important is that it is very rare for private clinics to be able to handle mental health problems.'**
> (Key informant, local psychologist, Nha Trang)

A few respondents referred to several local facilities for general health care, such as 'local health stations, public health offices' and 'sexual and other health organisations', but did not point out how they supported adolescents in terms of mental health. Some respondents seemed to be confused about the functions of support facilities.

Some adult participants considered skills training workshops and programmes for young people to be support resources for mental health. However, the workshops referred to were mostly irrelevant or were not focused directly on providing mental health care, e.g. sport programmes or life-skills clubs. One local authority mentioned 'many programmes or social work groups managed by the Youth Union or established under Ministry of Education Circulars 33 and 30'.

Regarding mental health services in school, over half of our key informants and some adolescent participants talked about various kinds of psychological support. According to adult respondents, these included student counselling, specialist seminars for students, clubs like a 'biology-technology team' raising awareness on psychophysiology, puberty, and 'social relationships between teachers and students'. Respondents also emphasised the 'availability of school medical services and professionals who cater to students and offer life care services for teachers'. The responses came from both cities, with the number of respondents in Vinh slightly higherthan in Nha Trang (11 to 9 respectively).

A handful of adolescents mentioned online support for mental health. While some said that they did not know of any services or programmes at that moment, they knew that they could look up information about mental health services from internet sources (websites, social media channels), and television if they needed support.

Several participants, both adolescents and adults, reported that they did not know much about mental health services or programmes because they were 'quite rare'. The lack of facilities to support adolescents' mental health in the local area was mentioned many times in participants' responses.

> 'Maybe those kinds of services aren't popular here. I don't really know about it. I only know about psychiatric hospitals. Maybe psychology isn't popular in Viet Nam yet. These kinds of services in Nha Trang aren't popular yet, I don't know about them.'
> (18-year-old young woman, Nha Trang)

> 'I don't know any in the local area but I once went to Hanoi for a psychological assessment. [That's how] I knew there was one out there. I've never gone to any kind of assessment service like that in the area.'
> (17-year-old girl, Vinh)

In general, participants know about some forms of mental health support for adolescents. However, there was no evidence from the qualitative endline study of any change in knowledge about mental health services among endline study participants. This may also be because sources of information on mental health services were not covered in the intervention.

4.2.2 Knowledge of where to seek information

The quantitative study investigated whether the intervention had an effect on increasing knowledge about where to seek information on mental health. This topic was measured using a 4-point Likert scale composed of 4 items, with answers ranging from 1=strongly disagree to 4=strongly agree. The final scale was rescaled to range from 0 to 100, where higher values represent better knowledge.

Results showed that the baseline level for the treatment group was 71.4 or 69.9, and 74.8 or 61.9 for the control group, using the panel and cross-sectional data respectively. Differences between the levels in the treatment and control groups in the baseline were statistically significant ($p<0.001$ [cross-sectional data] and $p<0.05$ [panel data]). A subgroup breakdown was generated using demographic variables, including the adolescent's sex, age group and SES. Figure 5 and Table 9 present the results for the control and treatment group broken down by key demographic factors. Results for the panel data are presented in Annex 2g, as well as a series of robustness tests with the adjusted figures.

Little or no effect was observed in improving knowledge of where to seek information, with the exception of a statistically significant increase among students with a low SES. These students started at the low level of 65.6% at the beginning of the initiative and finished with an average scale score of 72.5%, a relative increase of 12%. A comparison between the treatment and control groups indicates that the intervention may have prevented a decrease in knowledge of sources among children aged 16–19 and those in the province of Vinh, as per the trend reported by the control group (a statistically significant reduction). The ANCOVA test using the panel data shows a marginal statistically significant treatment effect ($p=0.051$) with the treatment group showing a higher increase in knowledge of where to seek information than the control group (upper bound relative increase: 9.3%).[29]

29 The ANCOVA test controls by SES as well as gender. See results in Annex 2g.

In short, there was a statistically significant improvement in knowledge about information seeking only for the students with a low SES in the treatment group. A possible explanation of low significant effect is that the intervention did not include much support or information regarding places to get support for mental health.

The findings were consistent with those found in the endline qualitative data: many students still did not know about any mental health services. Most of them have never accessed mental health care services or sources of mental health information, mostly as a result of the lack of facilities in the local area and of being unable to come to any facilities that did exist by themselves. However, it is important to note that students with a low SES showed a statistically significant improvement.

Figure 5 Changes in knowledge of where to seek information among subgroups

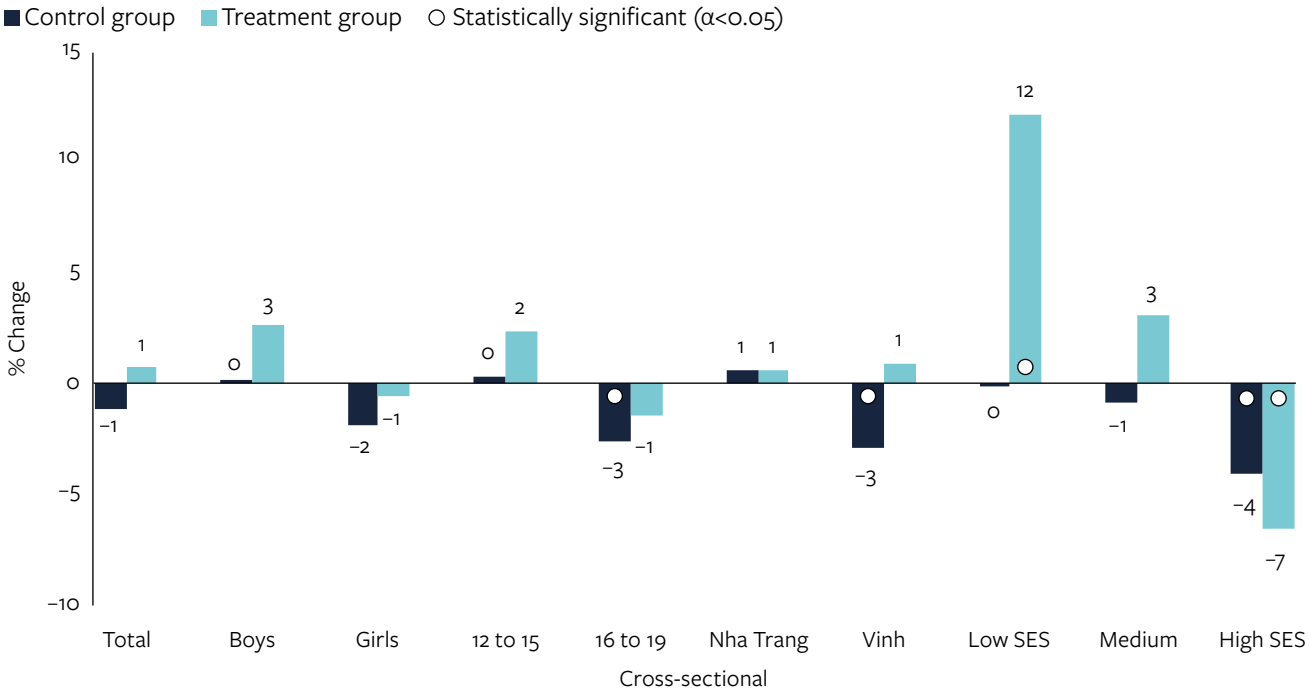


Table 9 Changes in knowledge of where to seek information scores by treatment and control group

	Baseline	Endline	% Change	Significance
Cross-sectional				
Control	70.9	70.1	-1%	no sig
Treatment	70.5	71.1	1%	no sig
Boys				
Control	71.4	71.5	0%	no sig
Treatment	69.2	71.0	3%	no sig
Girls				
Control	70.5	69.1	-2%	no sig
Treatment	71.5	71.1	-1%	no sig
12–15				
Control	69.6	69.9	0%	no sig
Treatment	69.1	70.8	2%	no sig
16–19				
Control	72.1	70.2	-3%	0.039
Treatment	71.8	70.8	-1%	no sig
Nha Trang				
Control	70.4	70.8	1%	no sig
Treatment	69.5	69.9	1%	no sig
Vinh				
Control	71.4	69.3	-3%	0.044
Treatment	71.0	71.7	1%	no sig
Low SES				
Control	71.7	71.6	0%	no sig
Treatment	65.6	73.5	12%	0.011
Medium SES				
Control	71.1	70.5	-1%	no sig
Treatment	71.6	73.8	3%	no sig
High SES				
Control	73.3	70.3	-4%	0.047
Treatment	72.4	67.7	-7%	0.085

4.2.3 Attitudes toward mental health services and help-seeking behaviours

The attitudes of students towards seeking professional help were assessed in the quantitative study using a 4-point Likert scale of 7 items, with answers ranging from 1=strongly disagree to 4=strongly agree. The final scale was rescaled to range from 0 to 100, where higher values represent a more positive attitude towards seeking professional help. A subgroup breakdown was generated using demographic variables including the adolescent's sex, age group and SES. Figure 6 and Table 10 present the results for the control and treatment group broken down by key demographic factors. Results for the panel data are presented in Annex 2g, as well as a series of robustness tests with the adjusted figures.

Evidence from the quantitative study shows that the intervention had little or no effect in improving attitudes towards mental health services, except for a statistically significant improvement among students with a low SES, who started the initiative with a level of just 64.7% and finished with an average scale score of 75.8%, a relative increase of 17%. A comparison between the treatment and control groups suggests that the intervention may have prevented a decrease in positive attitudes towards mental health services among children aged 16–19, among those with a high SES and those in the province of Vinh, as per the trend reported by the control group (which showed a statistically significant decrease). The ANCOVA test using the panel data confirms these findings, by showing a statistically significant treatment effect controlled by socioeconomic status (confidence interval of the relative increase: 3.6% to 5.9%).[30]

The high effect among participants with a low SES may be because these students tended to have less access to knowledge about mental health and might, therefore, face more stigma and negative attitudes towards professional help for mental health issues. Through the intervention, these students may have gained new knowledge about the importance of seeking such help. Another explanation may be that parents of families that have a low SES tend to have lower levels of education. As a result, they may know less about (and exhibit more stigma towards) mental health issues and the idea of seeking professional help for these problems. Children may have been influenced by the attitudes of their parents, and the intervention may have helped them to change their own attitudes.

30 The ANCOVA test controls by SES as well as gender. See results in Annex 2g.

Figure 6 Changes in attitudes toward mental health services and help-seeking behaviours by treatment and control group

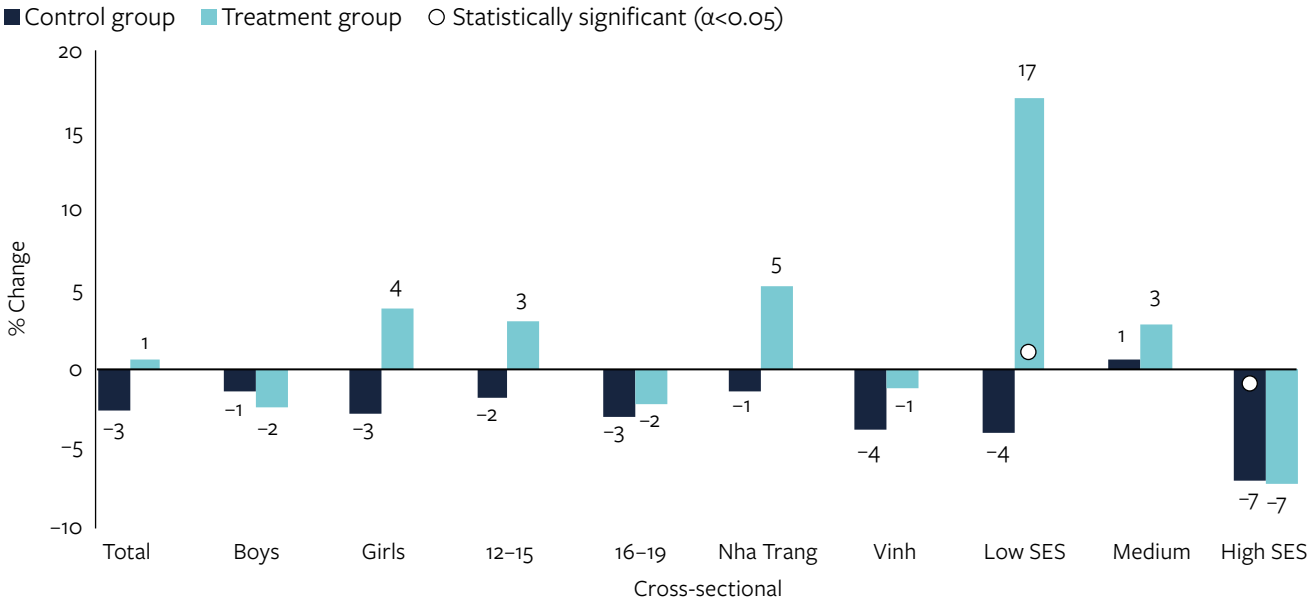


Table 10 Changes in attitude toward mental health services and help-seeking behaviours by treatment and control group

	Baseline	Endline	% Change	Significance
Cross-sectional				
Control	70.1	68.3	-3%	0.021
Treatment	72.1	72.6	1%	no sig
Boys				
Control	69.2	68.2	-1%	no sig
Treatment	71.3	69.6	-2%	no sig
Girls				
Control	71.1	69.1	-3%	0.072
Treatment	72.5	75.4	4%	no sig
12–15				
Control	68.9	67.7	-2%	no sig
Treatment	69.3	71.4	3%	no sig
16–19				
Control	71.0	68.8	-3%	0.027
Treatment	74.7	73.1	-2%	no sig

Table 10 Changes in attitude toward mental health services and help-seeking behaviours by treatment and control group continued

	Baseline	Endline	% Change	Significance
Nha Trang				
Control	69.4	68.4	-1%	no sig
Treatment	67.8	71.4	5%	no sig
Vinh				
Control	70.7	68.1	-4%	0.018
Treatment	74.1	73.2	-1%	no sig
Low SES				
Control	71.2	68.4	-4%	no sig
Treatment	64.7	75.8	17%	0.001
Medium SES				
Control	69.0	69.5	1%	no sig
Treatment	73.3	75.3	3%	no sig
High SES				
Control	72.4	67.2	-7%	0.002
Treatment	76.2	70.8	-7%	0.054

Some adolescent participants in the endline qualitative study reported that they had a negative perception of mental health services before the intervention, as a result of a general lack of knowledge and awareness, apprehension and a fear of stigma. Slightly more than half of the adolescent participants observed that they had a more positive perception of mental health services after participating in the intervention. They ascribed this to a greater understanding and awareness of mental health issues, as well as understanding the potentially positive benefits of mental health services. It is worth noting that this group included twice as many adolescents living in Vinh as in Nha Trang and was predominantly female. This attitude was seen during a group discussion with male students who noted that services or programmes to support mental health are essential to young people, given that adolescence is a stage of life characterised by emotional instability.

> **'In my opinion, this is a very good place [which provides mental health services] for those who have unstable mental health. Juveniles like us may have uncertain, vague passions, emotions, feelings. So this is a place for guidance, helping young people to socialise. Because not everyone has many friends to share... Some others do not know how to share or find someone to share with, so this is a place to save their souls.'**
> (Participant in FGD with male students, Nha Trang)

The majority of parents also agreed on the importance of professional mental health services, realising the limits to the support that they themselves could provide.

> 'We also want more of that. There are things we cannot... like, we are not professionally trained to explain to our kids... It's like, when our kids experience any physical or mental challenges, we can only explain based on our experience and personal knowledge. However, the information we give our children may not always be true.'
> (Participant in FGD with parents, Nha Trang)

Some parents, however, expressed their concern about taking adolescents to mental health care facilities, noting that 'only crazy people would go to a psychiatric hospital' and believing that mental health care issues should be 'private'. It seems, therefore, that while attitudes are changing, stigma still exists.

> 'I'm not comfortable going to that hospital [psychiatric hospital]. I worry that if I take my child there, his/her friends will make fun of him/her, saying that he/she is crazy. I wish there will be a private service. People will think we're crazy if they see us go to a psychiatric hospital. People have a problem with psychiatric hospitals and their titles...'
> (Participant in FGD with parents, Nha Trang)

This reluctance to use mental health services for fear of stigmatisation was also shared by some adolescents.

> 'Some people are concerned about privacy, and don't want others to know that they are seeing a doctor and having some sorts of disorders. It may be just a small problem but because of the negativity from other people, they may think that you are insane, or somewhat crazy. They will judge you.'
> (Participant in FGD with male students, Nha Trang)

4.3 Attitudes towards people with mental health problems and the effect of the intervention

The qualitative study explored attitudes towards people with mental health problems. Some adolescent participants from the endline study, two-thirds of whom were female, confirmed the existence of a culture of stigmatisation and discrimination against people struggling with mental health conditions in their schools or communities. This was also the case for a few adult participants. Around three-quarters of these respondents lived in Vinh. It may be that stigmatisation seems to be more prevalent in Vinh than in Nha Trang because it is a peri-urban area where people have less access to information on mental health – a factor that enables these kinds of attitudes to persist. Most of these negative sentiments came from teachers, community members and adolescents' peers and friends. The most commonly cited reasons included a lack of awareness or understanding of mental health/ill health, or a lack of empathy.

Some adolescents noted that people considered those with mental health conditions to be weak, oversensitive, crazy or having an illness that cannot be treated.

> **'They still think people with depression or those having negative thoughts are weak and are cry-babies.'**
> (14-year-old girl, Vinh)

> **'They just, kind of, consider people's mental disorders as something insignificant, so that, it's not worth the treatment.'**
> (Participant in FGD with female students, Nha Trang)

A gendered perspective was evident, with both male and female adolescents associating mental health issues with stereotyped ideas around 'feminine' attributes. Quite a few respondents stated that girls are most susceptible to mental health illness because 'girls are born as the weaker gender' and are 'more sensitive than boys'.

Discriminatory attitudes were often demonstrated by people 'isolating', 'not wanting to communicate or get close to' or 'avoiding talking to' people with mental health problems. This reaction was noticed by adolescents and adults, in both cities, and with no difference in reaction between male and female respondents. A handful of female adolescents and one key informant reported that some people simply choose to ignore people with mental health conditions, will not 'associate nor interact with' them, and will not offer any kind of support or assistance.

> **'I think, in general, people usually stay away from those with mental health disorders. For instance, people teased those with mental health issues, like having a disease, and told others not to play with them... or something... I notice people belittle and shun them away more.'**
> (Participant in FGD with female students, Nha Trang)

Discrimination in the community, according to one key informant, was even more serious when some families even 'built cages and chained family members with mental health conditions'. Despite this continued discrimination, there were some signs of sympathy and support for people experiencing mental ill health. As the local psychologist in Vinh witnessed, some people show worry and concern about them.

> **'People are worried, also very caring and some do judge and discriminate, but basically I think they are also very concerned and worried about that person.'**
> (Key informant, local psychologist, Vinh)

Some adults and adolescents reported that some people provide various kinds of emotional support or financial assistance to people struggling with mental health issues. According to one psychologist interviewed, the level of help people provide is 'dependent on their relationship with the victim. For example, parents are more inclined to assist than teachers'. Over half of these responses came from respondents in Nha Trang. This site pattern is in keeping with the findings described above, where stigma is greater in Vinh than in Nha Trang, the latter being the more urban site, where more information about mental health is available.

> **'I don't see people discriminating against other people… they also help people with mental illness, depending on the state of mental health of those people, since there are so many types of mental illness. Before, there was a guy with mental illness; he had delusions. However, he was very close to the governmental staff, and he was very hard-working. He took care of the motorbikes. People really loved him and often gave him money to buy coffee or drinks. They didn't chase him away or something. Here people felt pity and care for him. No discrimination.'**
> (Key informant, local authority – Youth Union, Nha Trang)

Some adolescents reported another kind of reaction, typically from adults. They observed that some adults fail to take mental health issues seriously or tend to normalise them, while believing that adolescents should not face mental health issues because they do not have to worry about financial problems.

> **'Actually, I see that almost everyone has their own problems so they [adolescents] would be more understanding. For adults, they usually think that they already provide their children with financial support so there is nothing for the children to overthink, to be pressured or depressed.'**
> (17-year-old girl, Vinh, who led and participated in the intervention activities)

> **'At home, whenever I talk about being tired, mentally tired, my parents would tell me to eat more, saying that eating would help.'**
> (Participant in FGD with adolescent boys aged 15–17, Vinh)

There were mixed responses from the participants when asked about changes in reactions to those experiencing mental health issues over time. A number of adolescents in the older group (aged 14–18) in both provinces (and some parents in Nha Trang) thought that the stigma against people with mental health problems had worsened. Meanwhile, a handful of adult respondents reported having seen a decrease in stigma over time, feeling that people were more understanding and sympathetic to those experiencing mental illness. However, they were unable to provide a cogent reason for either kind of response.

> **'In the past, people would do that, but now they understand. There is no one who discriminates. No one wants that… Now, people watch their phones and watch TV a lot, so they also see the situation, and then they sympathise with each other, understand each other.'**
> (IGT with 42-year-old mother of 18-year-old young woman, Nha Trang)

Nearly half of the in-depth interview respondents respondents (more than 80% of them female, plus one adult) agreed that the intervention had improved their awareness of and attitudes towards people struggling with mental health challenges. It has also taught participants how to relate to and support people who are experiencing mental health issues. A greater proportion of these respondents lived in Vinh.

> 'Well, for example, at this time last year, I was struggling with anxiety disorder, and I frequently talked to my best friend about it. However, at that time, my friend was indifferent and unwilling to listen to my stories. However, after they joined the programme, they changed completely. Every time I feel sad, my friend asks me why I feel that way and gives me advice.'
> (14-year-old girl, Vinh)

A few adolescent participants learnt about stigma and discrimination, as well as its harmful effects on the mental health of victims. According to one 17-year-old boy, the intervention helped him become more tolerant and sensitive around people dealing with all types of mental health issues.

> 'I learnt that psychological disorders shouldn't be stigmatised. It's an illness that is curable, so we shouldn't avoid people with mental problems.'
> (17-year-old girl, Nha Trang)

In contrast, some adolescents (9 girls and one 17-year-old boy) believed that the intervention had little-to-no effect on their attitudes (and there was no significant difference by site). They cited its limited reach and a lack of adequate information on the harmful effects of stigmatisation. One 14-year-old female participant stated that the people who should have received stigma education classes were not present during the conversations. One 18-year-old female participant seemed slightly unsure as to whether or not the intervention had encouraged a change in attitudes.

> 'Our school's club was only known in a few sections in a few classes instead of widely known throughout the school, so people might know about it or not. If people know, they can make better progress, become more positive... It [the club's influence] hasn't spread throughout the whole school, only partly.'
> (18-year-old young woman in Nha Trang, grade 12, selected by a psychologist to take part in this study)

4.4 Perception of trends in prevalence of mental health issues over time

Some adult respondents, as well as adolescents from the qualitative endline study, had noticed an increase in mental health issues over time, 'particularly among young people'. They attributed this shift to a variety of factors, the most common being technological advancement, which, according to them, has hampered open communication between families, 'encouraged video game addiction', and exposed adolescents to 'inappropriate or false content published on various social media channels'. This finding is consistent with our findings in the baseline study, where key informants linked an increase in mental health difficulties with the development and use of technology, including social media and digital devices.

> 'I think they are increasing in general, in any particular area. Children nowadays have early access to smartphones, computers, Macbook, laptop, tablets and get addicted to them. Then they will spend less time on social activities and suffer from social diseases and mental illness, which is problematic. This

> is not only what we think, but it's the truth. The number of young people with mental problems are increasing.'
> (Key informant, local authority – Youth Union, Vinh)

> 'Adults start to... they become neglectful. They leave their children with their phones and let them do whatever. In turn, the children may be emotionally deprived or mentally affected by social media.'
> (Participant in FGD with female students, Nha Trang)

Respondents also cited a range of other possible causes of mental ill health:

- financial burdens
- increasing academic pressure
- stigma
- substance abuse
- less family interaction and strained familial relationships
- lack of social interaction between adolescents
- early sexual relationships leading to reproductive and health consequences
- puberty
- living environment/societal pressure.

> 'In reality, I see an increase in suicide and self-harm, among young people, so I think it's increasing rather than decreasing, and...

> pressure from society is increasing... I think now the pressure of academic performance is becoming greater... so many students will face more pressure.'
> (Participant in FGD with adolescent girls aged 17–18 in grade 12, in Nha Trang)

At the same time, a roughly equal proportion of adult and adolescent respondents reported a decrease in mental health issues over time. They linked this shift to 'adolescents' improved maturity, lower academic pressure', and a 'better grasp of the negative consequences of societal "evils" such as drug or tobacco use'. One psychologist attributed the change to an increasing focus on children and adolescents as part of improved access to information, teaching, and treatment approaches for mental health illnesses. Others ascribed a decrease in mental health issues to improved adolescent confidence and social contact, as well as increased governmental and private sector involvement in mental health awareness.

A few school administrators and teachers justified their responses by citing 'a lack of new reported mental health cases, particularly among older pupils due to their knowledge of positive coping strategies'. Although this change was not directly linked to the intervention (and because the question at that stage of the interview was not phrased as such), one could hypothesise that the intervention has played some role in this decrease in mental health issues.

5 Effects of the intervention on mental health, its drivers and protective factors

We now explore the effects of the intervention on the drivers of mental health as well as protective factors, comparing baseline and endline data. To frame the discussion, and drawing on our qualitative study, we first explore how the Covid-19 pandemic affected mental health in our study sites, including the effect of the intervention on helping adolescents to cope with Covid-19 (Section 5.1). We then report the effects of the intervention on key markers of mental health and psychosocial well-being, drawing on quantitative evidence and comparing participants and non-participants. Then, from a qualitative perspective, we explore other indicators of positive and negative mental health and psychosocial well-being, and any changes that can be attributed to the intervention.

5.1 The effects of the Covid-19 pandemic on mental health and the effects of the intervention

This section discusses the effects of the pandemic on mental health, drawing on findings from the qualitative study. Taking a socio-ecological approach, we explore three levels: the individual level; the household level; and beyond the household level. We then explore the effect the intervention had on people's experiences of coping with Covid-19 and conclude with a discussion on how study participants see life after the pandemic.

5.1.1 Effects of the Covid-19 pandemic at the individual level

The majority of respondents reported that the pandemic took a toll on both their physical and mental health. In terms of physical health, several respondents reported having post-Covid symptoms such as 'sore throat' and 'tiredness'. Many respondents also observed that people who contracted Covid-19 seemed to be more forgetful than people who had not contracted Covid-19. In addition to post-Covid-19 symptoms, several adolescents also reported declining eyesight as a result of online studying and excessive use of 'computer, mobile phone'.

> 'It has a huge impact, and I am in shock. It is leading to a condition called post-Covid that people talk about quite a lot, which is characterised by forgetfulness. I used to be very confident in my memory, really, not as super-memories, but since I was little, I've had a very good memory and I remember [things] since I was less than three years old. I still remember now, but after Covid, I can't remember anything. It's like the side effects of the vaccine and Covid.'
> (14-year-old girl, Vinh)

> 'The Covid epidemic affects how I use my computer. Because I study online, I use computers a lot. But before I got Covid... Well, before I studied online, my eyesight was very normal. I still saw the blackboard clearly. Since studying online, my eyes have increased myopia by about 1 degree – 1.5 degrees.'
> (14-year-old girl, Vinh. who participated in both the baseline and the intervention activities)

There were also concerns about mental health. Participants reported that the pandemic caused fear and anxiety related to getting Covid-19 and being discriminated 'against' for having the virus. In addition, some respondents expressed their worries about the vaccination and its possible side effects, particularly the vaccine from China. The illness and deaths of loved ones also had a major effect on mental health. One adolescent mentioned having 'thought[s] of committing suicide' after their father was hospitalised and they could not visit him. In addition, many key informants, particularly teachers, were worried about the possibility of adolescents becoming addicted to technology as a result of the pandemic, which could affect their 'communication' and their ability to 'concentrate' in class.

> 'I think that [the Covid-19 pandemic] led to changes in students' mental states. For example, when students are too addicted to playing, they tend to neglect studying, which then results in more worries In terms of playing games on smartphones, they often do that secretly, I feel like they become really, really addicted. Which means if they are unable to use the phones, they can't take it and they become restless... The lessons are compromised. They don't concentrate.'
> (Key informant, teacher – Hà Huy Tập school, Nha Trang)

5.1.2 Effects of the Covid-19 pandemic at the household level

Different kinds of respondents at the household level, including adolescents, parents, teachers and some other key informants, reported the significant negative effects of the Covid-19 pandemic on the financial situation of households. This was particularly evident in Nha Trang, a tourist city. Many reported that they or the people around them became unemployed, which led to falling household income and rising poverty. Meanwhile, 'prices kept increasing' and families 'still had to pay the tuition fees and the internet bills every month'. Many respondents reported experiencing a 'lack of food', and some families had to ask their relatives for help. Not all families, however, were impacted significantly by the pandemic in terms of finance. Some adolescent respondents, for example, mentioned that their families were not affected financially because their parents were teachers and continued to receive a state salary.

> 'Normally, only my father works while my mom stays home and does housework. Dad is in charge of working, so his unemployment affected us a lot. [The lockdown during] Covid lasted for three months, and three months without work cost us a lot of things. The prices kept increasing while we couldn't work so we were affected. My family used to give frequent allowance to my grandmother, but that had lessened, partly due to health reasons, we had to take care of my grandmother first and foremost, we cut down on giving money away.'
> (18-year-old young woman, Nha Trang, selected by a psychologist to take part in this study)

The pandemic was also reported to have affected relationships within the family, with mixed effects. Some adolescents reported increased tension between them and their parents as they 'argued with their parents more often'. Other adolescents also reported the deterioration of relationships among other family members, with one describing how their family got into more arguments when staying at home together.

> 'My mom, my elder sister and my dad were laid off and stayed at home (as a result of Covid). We were good when we didn't see each other that often. When we had to see each other a lot, we criticised and we yelled at each other. It broke our bond.'
> (17-year-old girl, Vinh, who led and participated in the intervention activities)

In contrast, some adolescents, particularly those who were older, reported improved family relationships because they could stay home and spend more time with each other. The family, therefore, started to 'understand each other more'. One student also reported that they 'shared with their parents about things more'. For some families, not being able to see each other regularly because of the travel lockdowns (with some family members working away from home) also helped to improve once-strained relationships. One adolescent said that there were less quarrels in the house because their father was away from home as a result of the travel lockdown.

> 'And as we can see, during Covid, some families had more time together because instead of the father going to work and mother working at the night market... we could stay close to each other. We can see that sometimes Covid helped us to understand each other more like how much pressure the father felt to provide for the family, usually the mother has to do everything from our studying, household chores, cooking, as well as keeping the harmony between her husband and her children. So we can understand each other, sit down together.'
> (Participant in FGD with adolescent boys aged 17–18 in grade 12, Nha Trang)

5.1.3 Effects of the Covid-19 pandemic beyond the household level

Given that the school and factors associated with it are beyond the household, we explore academic performance at this level. We then explore relationships with friends and service provision during the Covid-19 pandemic.

One of the most frequently reported consequences of the pandemic was its effect on academic results. Many adolescent respondents said that their academic results deteriorated as a result of online learning, and that it was easier for them to become distracted during the lessons. For example, students could use phones during lessons and deal with 'personal stuff'. Some students even reported that they had turned off the camera and gone back to sleep after the teacher finished the attendance register. Similarly, there was a lack of interaction during class because some students turned off their microphones and cameras and did not respond.

In addition, the internet was sometimes slow, or the teachers had not adjusted to the use of technology to teach, which hindered learning quite significantly. One student even reported that it was easier to cheat during exams, removing the need to study for them.

> 'Yes, it also affected my study. For example, teachers in schools were not proficient in using electronic devices, so it greatly affected learning, especially testing. If we do the tests on Azota [an exam and homework platform], it is very easy to cheat. When it comes to cheating, we only need a phone to sit and type the answer. The tests consist of multiple choice questions, so it only takes a phone to type the answer. We can also text or Google them [answers].'
> (15-year-old girl, Nha Trang, selected by a psychologist to take part in this study)

One parent in the rural area of Nha Trang also outlined the multiple challenges of online studying in Viet Nam as not all families could afford technological devices and the internet for their children. This issue, coupled with the reduction in income as a result of social distancing and lockdown, made it even more difficult for children to have access to online education.

> **'They had to study online at that time. Everyone needs technological devices but not everyone has enough money to buy them. School just told us to buy mobile phones [inaudible] My son's class was a specialised one, most of the students coming from rich families. But there was another student who didn't have a rich family, he was there because his studying was excellent... But that's what the school said, who didn't have a mobile phone, they had to accept that they couldn't study... We [the respondent's family] had mobile phones but we didn't have Wi-Fi, so we had to buy data. But during Covid-19, what could we do to make money?'**
> (IGT with 45-year-old father of adolescent boy in grade 8, Nha Trang)

Some students, however, did benefit from online learning. A number of adolescent respondents mentioned that they were able to discover 'interesting online courses' and 'actively learn' rather than relying on the teachers. Some parents also agreed with this view as they also reported that their children were still 'studying seriously while I was doing my work'. In addition, some parents also noticed that their children got to 'sleep longer', which is also another benefit of learning online.

In terms of relationships with friends, adolescents also reported less interaction and conversation with their friends as a result of social distancing. A few adolescents reported a negative effect on their friendships, with one saying that the pandemic 'made us strangers'. However, the majority of adolescents felt that the negative effect was mitigated by technology, because adolescents 'still texted each other as usual'. Many adolescents noted, therefore, that the pandemic had little-to-no effect on their relationships with friends. One adolescent reported that their relationships with their close friends remained the same, while their relationships with other friends got worse.

Some key informants also observed an increase in 'technology-mediated relationships', and saw this as negative. One psychologist said that communication through media 'is never as good as direct communication', while one teacher expressed concerns about students being 'addicted to the online world... they also don't like talking to each other much, but just prefer chatting through networks'.

As mentioned in the subsection about the effect of the pandemic at the individual level, it was noted that there was a great need for mental health support. However, some key informants in both provinces raised the lack of mental health resources, to the point where 'there are almost no mental health support services', and people often had to travel to big cities for mental health care. When asked about the types of services provided during the pandemic, most respondents referred to 'online therapy', but none had made personal use of such services or elaborated on their answers.

5.1.4 Effects of the intervention on coping with the Covid-19 pandemic

A small number of adolescents, mainly girls, noticed the positive effects of the intervention on their ways of coping with the pandemic. One adolescent, for example, indicated that the intervention had shown her 'methods to reduce the levels of stress and anxiety when I have to stay at home' and that she became more able to 'stay calm and comfort everyone'. Several respondents pointed out that they were able to have 'more positive thoughts', 'avoid negative thoughts' and have a 'happier, more positive outlook on life'. However, the majority of participants in the intervention reported no effect on their coping strategies. Although most adolescents did not elaborate their answers, one adolescent suggested that they already had a 'carefree personality'.

> **'During the pandemic, people didn't go out much and it led to many disorders in people getting worse when they had to stay at home. After joining the club, I know more about methods to reduce the levels of stress and anxiety when I have to stay at home. It's a change.'**
> (18-year-old young woman, Nha Trang, who led and participated in the intervention activities)

5.1.5 Life after Covid-19?

When asked whether life had returned to normal after the pandemic, respondents generally agreed that many aspects of adolescents' lives are now the same as they were before. Adolescents, for example, reported that they were able to go back to school and study in-person. In addition, some mentioned that their family relationships have gone back to normal. One teacher, however, observed that some students still wore masks and still felt 'worried'.

In terms of relationships with friends, there were mixed reports from the adolescents and the key informants. One adolescent said that they have felt more 'friendly with people' since the pandemic, and that they 'want to get along with people and talk more'. This may be because some students realised the importance of social interaction after months of social distancing and are now more motivated to communicate with people. One key informant also observed that students 'became closer'. However, one adolescent felt that their friendships were 'not as close as before', while one key informant observed that students no longer 'play with their close friends as much as they used to'.

> **'When they saw each other again [after Covid-19], they became closer. Like close friends seeing each other after a long time, they were excited. Before that, they hadn't seen each other very often and there was a distance between them. We could notice the excitement in their eyes, even though they were wearing masks'.**
> (Key informant, teacher – Nguyễn Thái Học school, Nha Trang)

There was limited information regarding whether the economy had returned to normal. One adolescent reported that their family's financial situation had not recovered and that 'financial problems are still a concern'. A key informant also observed that even though the economy in Nha Trang may have recovered a little, 'a lot of hotels and restaurants are still closed. Therefore, a lot of people are still unemployed or have unstable incomes'.

5.2 Effects of the intervention on mental health (SDQ) and psychosocial well-being (WHO-5)

We now turn to the effects of the intervention as measured in the endline studies. We start by assessing the degree to which the intervention had a positive effect on the mental health and psychosocial well-being of the adolescents participating in the project. We start by looking at mental health outcomes as measured by the Strengths and Difficulties Questionnaire (SDQ) and then evaluate the impact on psychological well-being as measured by the WHO-5 scale.

As shown in the following sections, there is no evidence from our quantitative study to support the hypothesis that changes in mental health and psychosocial well-being took place as a result of the intervention, with some notable exceptions. It is possible that the knowledge and practices learnt as part of the intervention – as outlined in other sections – may have an instrumental effect on longer-term mental health and well-being, but for the time being, little or no change was recorded for most of the participants.

5.2.1 Effect of the intervention on mental health: Strengths and Difficulties Questionnaire (SDQ)

As explained in Section 2, mental health was measured using the SDQ. During our baseline study we identified three dimensions based on an exploratory factor analysis (see Section 2 for more details on scale construction):

- subscale emotional problems
- subscale behavioural problems
- subscale prosocial[31] problems.

The final scales are coded from 0 to 100, where higher values represent better mental health status in the particular subscale. Figure 7 and Annex 2e present the results for the control and treatment group broken down by key demographic factors. Results for the panel data are presented in Annex 2g, as well as a series of robustness tests with the adjusted figures.

1. In terms of incidence of **emotional problems**, the intervention did not show any statistically significant effects. Little or no change was observed in the treatment group. However, the control group showed a statistically significant increase in emotional problems (3%) during the period of the intervention, particularly among boys (3%) and in Vinh province (4%). Based on these findings, it is possible to speculate whether the intervention may have had a 'preventive' or 'protective' effect on the mental health of the participants in relation to emotional problems, given the increase in the control group. The ANCOVA test using the panel data rejects this hypothesis, finding non-statistically significant change in emotional problems between the control and treatment groups after controlling for initial level and other demographics (see results in Annex 2g).[32]
2. In terms of **behavioural problems**, the intervention did not have a statistically significant effect. Little or no change was observed in the treatment group with some exceptions: a reduction among boys (2%)

31 Relating to or denoting behaviour that is positive, helpful and intended to promote social acceptance and friendship.
32 The ANCOVA test for SDQ emotional problems controls by gender. See results in Annex 2g.

and those with a medium SES (2%), and an increase among girls (2%) and those with a low SES (4%) or high SES (5%). In every case, the change was not statistically significant. The only borderline case is the reduction in behavioural problems among students with a high SES (a relative reduction of 5%), which falls just short of being statistically significant (p=0.055). A slightly larger treatment sample may have found the change to be statistically significant. The ANCOVA test using the panel data confirms the overall picture: there was no statistically significant effect on the incidence of behavioural problems across the whole treatment group (see results in Annex 2g).[33]

3. In terms of **prosocial problems**, the intervention also appears to have produced little or no effect, other than small improvements among students aged 16–19, with a reduction of 3% in relative terms. The data also shows a reduction in prosocial problems among students with a low SES (4%), but the difference is not significant (p=0.062). In addition, the ANCOVA test using the panel data did not find any statistically significant effect on the incidence of behavioural problems (see results in Annex 2g).[34]

These results are puzzling, and there may be different explanations. One possible explanation is that the intervention focused in particular on improving mental health literacy, rather than addressing mental health problems.

One expects mental health literacy to be instrumental in improving mental health in the longer term. Indeed, multiple studies showed that adolescents with a high level of mental health literacy are less likely to experience psychological distress (Lam, 2014; Sampaio et al., 2022). Perhaps the time between baseline and endline was too short, and the effect on mental health will be observed over a much longer timeframe.

Another explanation is that by improving mental health literacy, in the short term, children become more aware of their feelings, and are, therefore, reporting more mental health problems (see Foulkes and Andrews, 2023). If this is the case, it could be that the intervention had a modest positive short-term effect, but the better reporting makes it more difficult to register a statistical significance.

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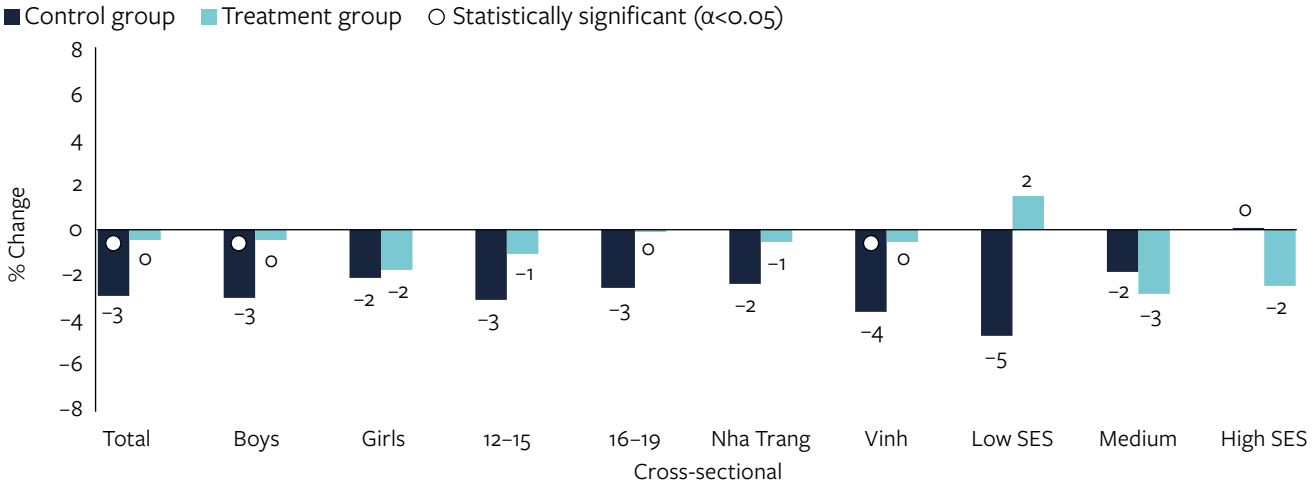
33 The ANCOVA test for SDQ behavioural problems controls by age cohort as well as gender. See results in Annex 2g.

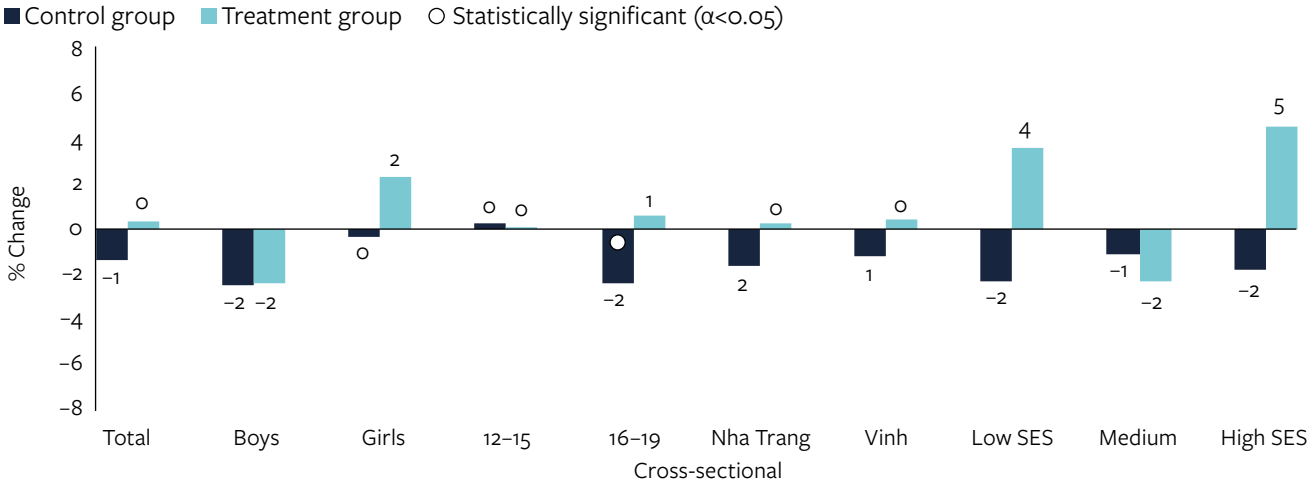
34 The ANCOVA test for SDQ prosocial problems controls by SES as well as age cohort. See results in Annex 2g.

Figure 7 Changes in mental health (SDQ) by treatment and control group

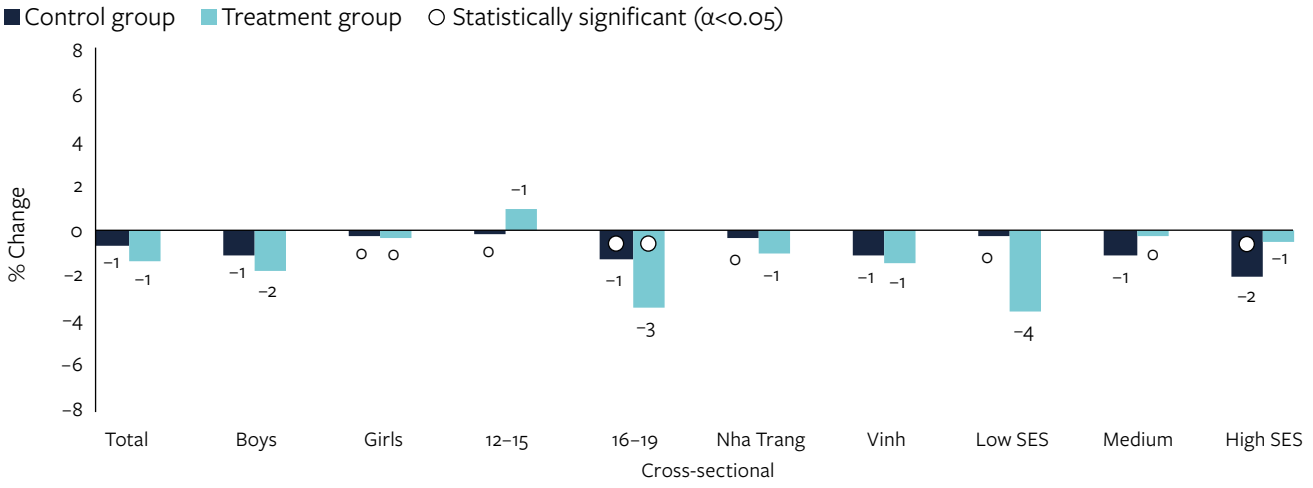
a: Emotional problems



b: Behavioural problems



c: Prosocial problems



5.2.2 Effect of the intervention on psychosocial well-being (WHO-5)

We now assess the intervention effect on psychosocial well-being, as a complement to mental health measures. In the quantitative study, psychosocial well-being was measured using a 6-point Likert scale composed of 5 items, with answers ranging from 1=never to 6=always (the WHO-5 Well-Being Index). The final scale was rescaled to range from 0 to 100, where higher values represent better well-being. A subgroup breakdown was generated using demographic variables including adolescent's sex, age group and SES. The results are presented in Figure 8 and Table 11. Results for the panel data, including ANCOVA tests, are also presented in Annex 2g.

The intervention appears to have little or no effect on the well-being of the participants as measured by the WHO-5 scale (a relative increase of 3%, but not statistically significant). In some exceptions the intervention does appear to be associated with an increase in well-being. First, boys in the treatment group show a statistically significant increase from 64.7% to 70.6% (a relative increase of 9%). Second, students in the treatment group with a low SES showed a statistically significant increase from 53.4% to 65.7% (a relative increase of 23%). However, the ANCOVA test with the panel data shows no statistically significant effect when either controlling by gender, age cohort or SES. The results, therefore, are not conclusive.

In conclusion, the intervention appears to have had a positive effect, though not extensive, on the level of well-being among boys and those with a low SES. The explanation of such small treatment effect may, once again, be related to the intervention's greater focus on mental health literacy, and the need for more time to see the instrumental effect of mental health literacy on psychosocial well-being.

Figure 8 Changes in well-being level among subgroups

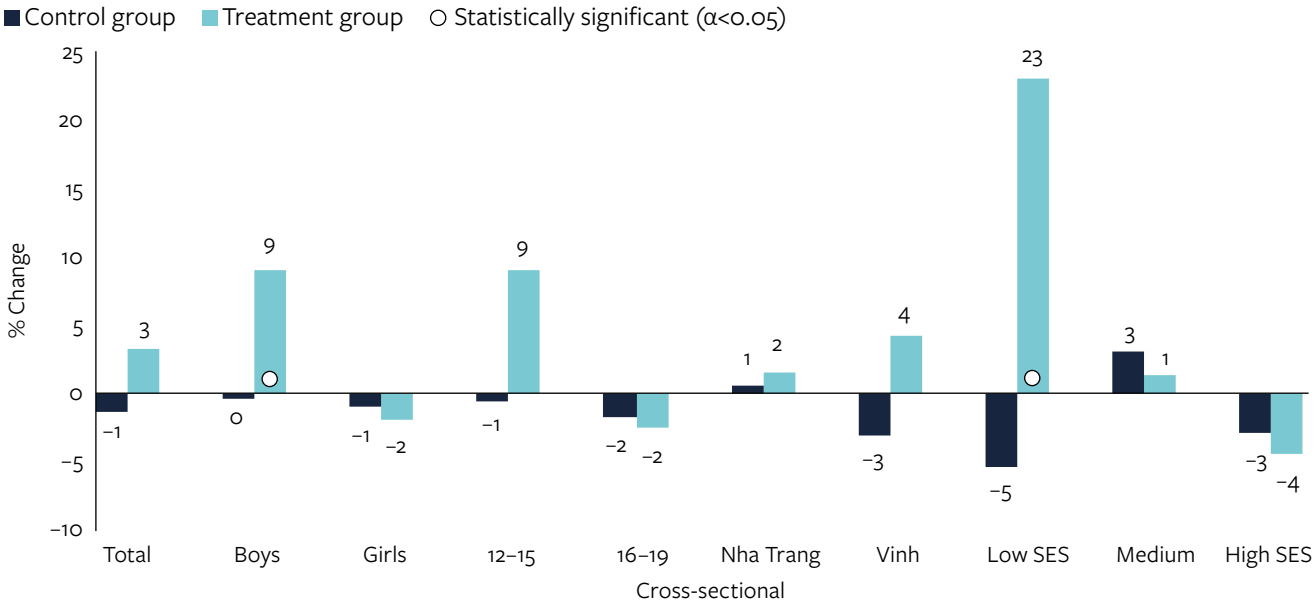


Table 11 Changes in well-being level by treatment and control group

	Baseline	Endline	% Change	Significance
Cross-sectional				
Control	61.6	60.8	-1%	no sig
Treatment	62.1	64.1	3%	no sig
Boys				
Control	62.8	62.6	0%	no sig
Treatment	64.7	70.6	9%	0.042
Girls				
Control	60.3	59.7	-1%	no sig
Treatment	59.0	57.9	-2%	no sig
12–15				
Control	61.5	61.2	-1%	no sig
Treatment	59.3	64.6	9%	no sig
16–19				
Control	61.6	60.5	-2%	no sig
Treatment	64.5	63.0	-2%	no sig
Nha Trang				
Control	61.0	61.3	1%	no sig
Treatment	61.4	62.4	2%	no sig
Vinh				
Control	62.3	60.3	-3%	no sig
Treatment	62.4	65.0	4%	no sig
Low SES				
Control	63.7	60.3	-5%	no sig
Treatment	53.4	65.7	23%	0.005
Medium SES				
Control	60.8	62.7	3%	no sig
Treatment	65.5	66.4	1%	no sig
High SES				
Control	64.3	62.5	-3%	no sig
Treatment	66.0	63.2	-4%	no sig

5.3 Effects of the intervention on risk factors for, and drivers of, mental ill health

This section draws largely on the qualitative study to explore the drivers of mental ill health and the effects of the intervention on these. We used the socio-ecological framework to examine the drivers at three levels: individual, household, and beyond the household.

5.3.1 Individual level

At the individual level, the factor reported most often as causing distress in adolescents is **negative self-perception.** As found in the baseline results, a handful of adolescents said that they disliked their own personal characteristics, such as 'laziness' and being 'hot-tempered'. Some adolescents also reported disliking their 'negative thoughts' or a tendency to 'overthink'.

Physical appearance was also cited by some female adolescents. Several mentioned disliking their weight, as 'being overweight' undermined their confidence. Again, this finding aligns with the baseline study, which found that body image is a major cause of distress and shame among adolescents. However, in contrast to the baseline finding, in which body image issues were found among both girls and boys, at endline this issue was found mainly among girls. Only one boy raised this issue when asked about his knowledge regarding causes of mental ill health, but he did not indicate that he had experienced distress as a result of any body image issue. This may be because we could not interview all the participants in the baseline again, and that this is not an issue among the adolescent boys in this specific sample. When asked if there was anything she did not like about herself, one girl said:

> 'Probably [laugh]... my body. I might be too overweight so to a certain extent, I'm unconfident. I can't lose weight since I have issues related to my stomach so I can't eat less and my weight can't be changed.'
> (18-year-old young worman, Nha Trang, who participated in the baseline and led intervention activities)

Some adolescents also viewed themselves negatively because they were not doing well academically and most of these respondents experienced stress when comparing themselves to other students. One 16-year-old female student from Vinh even said that she created the pressure for herself because all of her friends 'are good at studying', so she felt 'anxious' and wanted to 'do something to be equal to them'. This finding also fits well with the results of the baseline, which found that being bad at studying was a common trait mentioned by adolescents.

> [respondent feels anxious] about studying... Like... It's not the kind of worry caused by pressure from parents. Instead, it's coming from myself. Like, my friends are good at studying, so I have to... I have to do something to be equal to them. It makes me anxious.'
> (16-year-old girl from Vinh, who led intervention activities)

Lack of coping skills was also mentioned as a driver of mental ill health, particularly among female students in a focus group discussion. The students indicated that there were no sessions about mental health at school to teach students ways to overcome the issues they face. In addition, the students were also inexperienced in dealing with psychological issues. When asked about the causes of mental ill health, one focus group participant said:

> **'Well, to me I think... there is a pretty big reason... and quite a bit... the fact that in school there are very few sessions to teach about psychological issues and to... the... methods for you to overcome. They're still... well... young and lacking experience to deal with the problem...'**
> (Participant in FGD with adolescent females aged 15–17, Vinh)

This point was reiterated in the interviews, when adolescents were asked about which group of people were most susceptible to mental ill health.

5.3.2 Household level

At the household level, family conflicts were reported as major drivers of mental ill health, in line with the findings from the baseline. Many adolescents reported feeling sad whenever there are conflicts in their family. Some adolescents also described how they kept thinking 'over and over again', feeling 'sad' and crying over their 'family's sayings', or things their family members say to them.

Some key informants also agreed that unstable family could be a risk factor for adolescents' mental health. In addition, key informants also noted other situations that could be harmful to adolescents' mental health, such as addiction, parents 'being remarried', parental affairs, and adolescents 'being geographically distant from parents'.

In addition, some students also indicated that they did not have close relationships with their parents. In a focus group discussion with male students aged 15–17 in Vinh, a student said that he 'rarely talks' to his father, because parents 'don't understand what we are going through'. This finding is similar to a baseline finding, where adolescents also reported that their parents did not understand their emotions.

Verbal abuse and corporal punishment were also raised by a few adolescent respondents. A 15-year-old in Nha Trang reported that she was 'abusively scolded' and 'even hit' by her grandfather, and that this made her 'sad and angry'. This finding supports the findings from baseline, when adolescents also mentioned scolding and punishment as a common source of distress for them.

> **'...What easily made me sad was my family. I care about my family most so it's also where negative thoughts come from. I didn't get along with my grandfather because he usually said negative things to me. I didn't want to hear those things. I even had to suffer from being abusively scolded. Sometimes I was even hit. This issue used to make me really sad and angry until I grew up, I thought I needed to have a solution for it.'**
> (15-year-old girl, Nha Trang, who participated in the baseline and led intervention activities)

One student also said that her parents' expectations were stressful and indicated that whenever her parents expressed disappointment towards her, she felt 'pressure and sad at the same time', and that she 'doesn't know how to make her parents happy'.

> **'The saddest thing is when I feel like my parents are disappointed in me, not just in my grades, but in daily life situations. When my parents are disappointed, I feel being pressured and sad at the same time, like extremely sad, even though I know that, but I don't know how to make my parents happy.'**
> (14-year-old girl, Vinh)

5.3.3 Beyond the household level

The school environment was seen as an important driver that affects adolescent mental health beyond the household. Indeed, the most common driver mentioned by adolescents in both the baseline and the endline is **academic stress.** Most adolescents reported that they felt stressed when they received 'bad grades'; they also reported experiencing stress around 'semester exam' or when they 'didn't get the expected score'.

This academic pressure comes from various sources, the first being their peers. As well as the negative self-perception created by adolescents when they compare themselves to their peers (as mentioned in Section 5.3.1), this stress also stems from the isolation of some students linked to their academic results. Some even said that their peers refused to hang out with them because they 'are bad at studying'. Several adolescents also reported that they put pressure on themselves to achieve good academic results.

> **'I used to be sad and gloomy all the time because back when I was in 7th or 8th grade, all of my friends ditched me. They told me I was bad at studying and stopped hanging out with me. Since that day, I've been studying hard to show them I'm not a terrible learner.'**
> (14-year-old boy, Vinh)

Parents were the second source of pressure, according to the adolescents. Several students said that there are 'certain expectations' from the parents regarding academic results. This view was supported by some parents, as they seemed to regard doing well at school as the main priority for their children, with good results providing greater opportunities and better career prospects. Several parents reported encouraging their children to 'study as long as [they] can', so that they 'go to university and get a job'.

> **'Yes, there are many expectations from my family and my friends. My mum has high expectations for my English score. I can get high or low scores in other subjects, it doesn't matter, except English. I spend many hours studying English every week so she expects my English score would be higher... I study this subject a lot but I still get unwanted scores.'**
> (15-year-old girl, Nha Trang, who participated in the baseline and led intervention activities)

Not all parents, however, put pressure on children in terms of studying. Indeed, some parents expressed concern about excessive studying and its negative consequences for their children. Some were concerned that focusing too much on studying could affect adolescents' soft skills such as communication skills. One parent, for example, said that her daughter was 'starved of interaction' and 'only cares about studying... I think that is not always a good thing, because she does not get enough interaction to mature'.

Teachers were reported to be the third source of pressure. Several adolescents mentioned that teachers have high expectations for them in terms of academic achievement. However, none of the teachers mentioned this when probed about the risk factors for adolescents' mental ill health.

> **'There is also additional pressure from teachers. There are many types of teachers. There are teachers who care for you but there are also teachers who have high expectations of you. Sometimes when**

> you make a mistake and can't meet those expectations you feel the pressure that the teacher will be sad. Or there are teachers, not many, but some who don't have positive attitudes towards you will cause difficulties for you.'
> (Participant in FGD with adolescent boys aged 17–18 in grade 12, Nha Trang)

Another source of mental distress from the adolescents is **conflicts with peers**. Some adolescents mentioned that they experienced distress when they had quarrels and broke off relationships with their friends.

> 'Um... When I was in secondary school, like... I got into a quarrel with my friend and we broke off after that. Not having them around got me sad for a while. At that time, I kept everything to myself and told no one.'
> (16-year-old girl from Vinh, who led intervention activities)

Peer victimisation and bullying is another aspect of relationships that caused distress for some adolescents. Some students and teachers observed that the bullying was physical, but it could also be in the form of gossiping, spreading rumours about other students and isolating them, as well as cyber-bullying.

Although most teachers said that they would support the bullied students, some of the responses of teachers reflected a certain degree of victim-blaming or an inability to help the bullied students. For example, when one teacher in Nha Trang observed that some students were isolated by their peers, she told those students to be 'more friendly' to not be isolated anymore. In another case, a teacher in Nha Trang mentioned that he received a report from a student about being cyber-bullied. However, he could not do anything about the issue, since the students who were the alleged bullies did not 'mention that student directly', so there was no clear evidence of bullying. This shows that teachers may contribute indirectly to the issue of bullying by either solving the issue in an inappropriate way or by being unable to help the bullied students.

> 'I don't talk much about the physical violence, but the students who are bullied mentally, like when the students play in groups and isolate several other individuals, I did see it happen. Isolation here means that they don't play with one student, even though they still interact with other students. When I see a situation like that, I remind the [isolated] student to be more friendly, and if they remain in their seat alone, the situation will still continue. I see that some classes have this situation.'
> (Key informant, teacher – Hà Huy Tập school, Nha Trang)

Some female adolescents mentioned that they witnessed and experienced appearance-related victimisation among the students. For example, one student described how she was asked 'sensitive questions' about her weight and the types of food she ate. This did not only happen to girls but also to boys, as some female adolescents mentioned in a focus group discussion that boys of a short height were often teased as well. These results were particularly aligned with the findings from the baseline survey, where many students reported being bullied for their weight and appearance.

> 'For example, people who are body-shamed, they want friends... well they want other people to care about them more. I used to be body-shamed before. I was also very sad, when they said that they were also hurt and wanted to get rid of it. Sometimes we feel self-conscious about ourselves and don't know what to do.'
> (17-year-old girl, Vinh, selected by a psychologist to take part in this study)

> 'I was frequently asked sensitive questions such as how much I weighed, how much I ate per day that made me look so fat. I think the words they use would not be a problem to other people, but, to someone like me, it was a heavy issue.'
> (14-year-old girl, Vinh)

One key informant in Nha Trang also said that the **lack of guidance on romantic relationships for adolescents** could also be a driver of mental ill health. According to this key informant, students nowadays are often involved in romantic relationships, yet instead of discussing and guiding adolescents through this stage to help them 'avoid regretful consequences', parents often forbid their children to date. This often leads to children rebelling against their parents.

Interestingly, responses from parents and teachers also reflect a tendency to 'forbid' when probed about common psychological challenges in students. For example, one parent in a focus group discussion in Vinh said that she had expressed concern about the possibilities of her daughter getting involved in a romantic relationship. A headteacher in Vinh also felt that dating at this age is a risk factor for mental ill health, even though he admitted that it is natural for adolescents to like someone else. The reasons for this concern are the risks that dating can distract students from studying and lead to teenage pregnancy.

As will be explored further in Section 8, and as found in the baseline study, **technology and social media** were also seen as potential drivers of mental ill health. Parents were particularly concerned that excessive use of technology could affect their children's social skills and distract them from studying. Some parents and teachers were also worried that adolescents could be exposed to unhealthy influences or fake news on social media. Similarly, there were concerns about the risks of video game addiction, online gambling and pornography.

5.3.4 Susceptibility to mental ill health: intersecting factors (gender, age, sexual orientation)

When probed about groups that are more susceptible to mental ill health, adolescents noted that the risk factors **were gendered**. According to both male and female adolescents, boys often face 'more pressure to study' or to be the 'pillar of support' for the family as a result of patriarchal expectations.

> 'Feeling that way is just normal, at the age of those male students, there will be a kind of pressure among male friends, when you have many friends, you must feel pressure about family. For example, in today's life, there are many families who still have customs... patriarchy... that the son must be the successor. For example, they have to become successful or better than the daughters in the family in order to become the pillar of support in this family or that.'
> (Participant in FGD with 18-year-old young men, Nha Trang)

Most responses from male adolescents about risk factors for females' mental health reflected gender stereotypes and stigma about mental health. In a focus group discussion with male students, the students described female adolescents as 'the weaker gender', as 'more sensitive' and having 'more complicated emotions and thoughts than males'. Therefore, they 'get stressed easier'. This may reflect a lack of understanding of mental ill health causes and gender stereotypes among these male adolescents (see also Section 6.3).

> 'I think girls are born as the weaker gender, so sometimes they are more sensitive than boys. Sometimes they feel more easily hurt or have some other issues. For example, my sister had a guy she was dating, but he was busy one day and couldn't reply because his company had no internet. She felt sad that he didn't reply, and she just lay in her room and wondered why he didn't reply, thinking that he wanted to end their relationship. In general, I mean that the psychological difficulties that girls often face are due to being too sensitive, I mean, most of them. There are many girls, for example, like my other sister who is the same age as me, but she is very outspoken. She can easily face relationships and easily overcome them, not feeling sad, so it depends on the person. That's what I feel.'
> (Participant in FGD with 18-year-old young men, Nha Trang)

In terms of **age group,** a number of female adolescents believed that middle-school adolescents are more vulnerable to mental ill health than any other age groups because of several reasons. According to the participants, middle school is the transition period from the elementary school, so middle-school students are still 'new to the environment', and they 'start to interact with new friends'. In addition, this is the time when adolescents start to experience 'puberty' and face some life problems. Yet, they have not been taught how to 'cope with the problem, how to solve the problem' by their parents and family.

> 'I think... the age that is most susceptible is middle-school students [...] Because more or less high school students have passed puberty. Puberty is precarious, many students in puberty have not been taught by the family, kind of... have not been cared much, parents ... also have to accept because parents also have their parents' misery, parents still have to go to work, so they cannot care for their children enough. Students at this age don't have anyone around to teach them how... to cope with the problem, how to solve the problem; If they quarrel with their friends, they don't know what to do. When they are scolded by their teachers in classes, what should they do? That's what... I think.'
> (Participant in FGD with adolescent girls aged 15–17, Vinh)

Some adolescents and parents also cited **discrimination toward certain vulnerable populations** as risk factors for mental ill health. Some felt that adolescents who come from poorer families are more likely to have mental health problems. Although most adolescents did not elaborate on their answers, one parent suggested that children from poorer backgrounds may feel inferior to their peers when their parents could not buy them nice things.

> 'Generally, it depends. For example, when a child from a well-off family says or does something, their parents will satisfy everything they want. Then they can live comfortably and play as much as they want, so they won't suffer. As for those who are not from a wealthy family, if they ask for a phone or a nice bike, for example, but their parents cannot afford it, they will feel less than their friends. They keep saying why their friends have it but they do not. Gradually, bit by bit, they will become depressed.'
> (IGT with 41-year-old mother of adolescent boy, Nha Trang)

The students also listed peoplefrom the lesbian, gay, bisexual, transgender, queer/questioning and intersex plus (LGBTQI+) community as populations that are susceptible to mental ill health. According to one student in a focus group discussion with female adolescents, homosexual relationships are still not accepted widely in Viet Nam. Some adolescents and teachers also observed that students with a disability are more at risk of mental ill health than other groups. A teacher in Nha Trang mentioned that students with developmental problems have more problems in communicating and are, therefore, more likely to be isolated in class.

> 'There are many disabled students in our school. In the last five years, there were five disabled students in grade 5. They were all my students, scattering in three different classes. Those students definitely have developmental problems, as their growth is affected. For example, their motion problems also lead to problems in communication, inducing slight isolation in those classes, stuff like that... I feel compassion for them.'
> (Key informant, teacher – Hà Huy Tập school, Nha Trang)

5.3.5 Effects of the intervention on the drivers of mental ill health

According to the qualitative study, the most commonly reported change resulting from the intervention related to adolescents' negative views of themselves. Some adolescents observed that they had changed and were able to resolve aspects that they disliked in themselves after the intervention or because of the intervention. This was reported by an almost equal share of male and female respondents (7:6), 8 of whom were from Nha Trang and the other 5 from Vinh.

For example, a 17-year-old girl in Vinh mentioned that she had been introverted, and did not like this aspect of herself. However, after joining her school's psychology club, she started to be 'more open... to others'. Similarly, a 14-year-old girl in Vinh with a 'hot temper' learnt to regulate her emotions more effectively after joining the intervention and became less hot-tempered as a result. In addition, a few respondents said that the intervention had improved their friendships.

> 'I think I have a few more relationships, although they may not be close, but I also know some friends. Also, as I mentioned earlier, the stress factor has helped me change my perception of stress.'
> (Participant in FGD with 18-year-old young men, Nha Trang)

In contrast, a handful of adolescents reported that the intervention had not changed the things they disliked about themselves. Most of these students did not elaborate on their answers.

At the household level, some adolescents, almost evenly split between Nha Trang and Vinh cities,

said that their relationships with parents and family members had improved as a result of the intervention. Some students reported that their parents now had a better understanding of their children's emotions. The 15-year-old female student in Nha Trang who had spoken about being often 'abusively scolded' by her grandfather said that she had spoken to him about this since then, and that their relationship had improved. This change in adolescents was also confirmed by some parents who observed that their children were more open with them since joining the intervention.

> **'Before [the intervention], every time I felt sad, my mom would think that I was simply being oversensitive. However, after some discussions, my mom changed. Now, every time I feel sad, instead of saying I was being too negative or oversensitive, my mom will sit down and analyse the situation with me. In other words, she will show me the silver lining to get rid of those negative thoughts.'**
> (14-year-old girl, Vinh)

A number of adolescents and their parents, however, reported no changes in the relationships within their family. One adolescent explained that their 'family was already close from the beginning', while another adolescent commented that their family 'did not care' that they had joined the intervention.

Regarding weight-based bullying, one adolescent mentioned that the verbal attacks related to her weight had decreased since the intervention, because the students who attacked her had also participated. The quantitative survey found a statistically significant reduction in the share of students participating in the intervention who said that other children 'left [them] out of their games or activities, or ignored [them]'.

When asked about other factors, such as academic pressure, most students reported that while the pressure to do well academically was still there (i.e. the driver had not changed), their ability to cope had changed as a result of the intervention. This change is discussed further in Section 7.

5.4 Protective factors for mental health and the effects of the intervention

This section explores the protective factors for mental health, drawing on findings from the qualitative study. Again, we use a socio-ecological framework for their presentation. As was also found during the baseline study, many of these protective factors are mirror images of the drivers of mental ill health.

5.4.1 Individual level

At the individual level, the ability to take part in leisure activities was the protective factor cited most often by adolescents. The most common leisure activities listed by the students included watching TV, eating good food, surfing the internet and using social media. A few parents supported their child's leisure activities, since 'it's not fine to force them to work and study all the time'. However, parents were more likely to support their children's leisure activities if those activities were sport-related. In contrast, parents were less supportive of activities related to technology because of the concerns mentioned earlier, such as distracting them from their studies or the risk of 'addiction' to mobile phone use, etc.

5.4.2 Household level

Many participants agreed that a strong family unit is an important protective factor for mental health. In some focus group discussions with parents in Nha Trang, some parents noted that in order to make adolescents happy, families should be able to support their education. Other parents also noted that it is important to give their children attention and to accompany their children for every activity, whether at school or outside of school. Several adolescents also said that they felt happy when their parents supported their wishes and comforted them when they felt upset.

When probed about the relationship between adolescents and specific family members, most male and female adolescents mentioned their mother as the person they enjoyed spending time with the most. Some adolescents noted that they often confided in their mother and shared the same interests. Some other adolescents also listed their father, siblings and grandparents as their closest family members.

> **'Yeah, I'm closest to my mom, because actually I feel that in my family, there's no distance, I'm very close to both my mom and dad, sometimes if my mom can't solve a problem, I'll ask my dad, because he's knowledgeable about many things, so he can answer a lot of questions about life, and we'll sit and talk and learn together. As for my mom, we share similar interests, we go shopping and going out together, with my mom, I also talk to her about my classmates and friends, overall, I feel very close to everyone in my family, and there's no distance between us.'**
> (14-year-old girl, Vinh)

5.4.3 Beyond the household level

An important protective factor, and the mirror image of drivers of mental ill health, was doing well academically – a factor mentioned by adolescents and their parents. Several adolescents reported feeling happy when they 'get a good grade'; some parents also observed this in their children.

Another common theme is having good relationships with friends. The vast majority of adolescents mentioned that they had close friends or friends to hang out with, and that they felt happy when they were able to hang out with and talk to them. A few adolescents said that while they had friends, they did not have close friends because of a lack of trust.

5.4.4 Effects of the intervention on the protective factors for mental health

Around half of the adolescent respondents, 14 of whom were female and 4 male, reported changes in their leisure activities after joining the intervention. Several mentioned that their activities changed from activities that they often did by themselves to activities that involved more social interaction. Some students, for example, stated that they 'started to hang out with my friends' rather than 'watch TV too much'.

Some adolescents also said that the intervention inspired them to learn 'new things'. One adolescent even 'picked up an interest in researching psychological issues'. A few students also mentioned that they 'made new friends' through the psychology club. One adolescent described how they preferred to stay alone before the intervention, but since joining the intervention,

she 'wanted to communicate with other people more'. Over 70% of the respondents who noticed a change lived in Vinh.

> **'Before I joined the club, my happiness had been staying alone. I'd done everything on my own. I had a hobby which was playing an instrument and my room was where I felt comfortable. I felt happy when I was in my room and I was happy with everything about me. I isolated myself. I didn't want to get involved with other people. But when I joined the club, I wanted to communicate with other people more.'**
> (15-year-old girl, Nha Trang, who participated in the baseline and led intervention activities)

In addition to changes in personal hobbies and making new friends, some adolescents also mentioned that their relationships with friends have improved. The changes in their friendships include being 'more open', 'sharing more concerns' with their friends and 'become more friendly'. Some students also reported using the knowledge that they learnt from the intervention to listen and to help their friends solve problems.

> **'Yes. There were some students in my class who also joined the club and I've gotten closer to them than before. We barely spoke to each other but after joining this club, I understand and communicate with them more. Some people become more friendly with other people in the class.'**
> (18-year-old young woman, Nha Trang, selected by a psychologist to take part in this study)

> **'It [relationship with best friends] did change a bit in a positive direction after I joined the programme. For example, I can apply the skills I acquired when a friend has psychological issues, talk to them, listen to them, solve their problems.'**
> (17-year-old boy, Nha Trang)

5.5 Indirect effects of the intervention and spontaneous initiatives

This section explores whether the intervention had any effects on those who were not directly involved and whether any spontaneous initiatives may have started either during the intervention period or potentially after. The majority of adolescent respondents in the qualitative study reported that the intervention had no impact within the classroom or wider school. According to them, there were few participants in the intervention, so any impact has been limited to those who were members of the psychology club, while other students in the schools were not affected. When asked whether they had noticed any changes in the school since the club started, two adolescents said:

> **'No, because not so many participated, so actually on paper it seemed like there were many but in fact only a few participated, around a dozen. So I haven't seen many changes.'**
> (17-year-old girl, Vinh, selected by a psychologist to take part in this study)

> **'I'd say that only the club's members have changed, not the school in general.'**
> (16-year-old girl, Vinh, who led intervention activities)

Some key informants, such as teachers (particularly teachers who were involved in supporting the organisation of the initiative), did mention some changes in themselves. They also suggested that these changes might have extended to other school colleagues. As these changes are mainly related to mental health literacy, we will discuss this in more detail in Section 6.

Data from the outcome harvesting check-ins (see Annex 1) with the country team shows that there have been changes in the schools that have implemented the intervention. For example, students in one of the schools in Vinh created their own Facebook page. Unlike the Facebook page set up by the intervention, which was used to test the tech solutions and collect data, this Facebook page was managed by the students and open to all students in the school. As a result, the members of this open Facebook group published materials about adolescent mental health, leading to a high level of engagement in terms of likes, comments, and sharing from across the school. The page has gained many followers and has motivated other students to participate in the testing of tech solutions.

The country team also noted that this particular school has shown the strongest uptake of ideas derived from the solutions tested by the project. This can be attributed to the high level of engagement from both students and school staff in the intervention activities and the topic of mental well-being. In addition, being an urban school, the students were observed to be well-versed in social media and digital technologies, further facilitating communication and discussions.

Other evidence of spontaneous initiatives or the indirect impact of the intervention was found in Nha Trang, at the second qualitative check-in (see Section 3.2). It seems that the school board suggested hosting sessions for entire schools, where students involved in the intervention and the psychology clubs would talk to their peers about the activities and goals. These additional introductions and school-wide meetings were held in three out of four schools, with students introducing the club and facilitating a session about their chosen topic. The feedback from students and teachers was overwhelmingly positive. One team member said, 'Other students were excited, and teachers were amazed by what students could do'. The local psychologist also reported being surprised by how well the students conducted the session and how much enthusiasm they generated among other students. The research team believes that these efforts made a significant contribution to spreading the word about the clubs among other staff and students within the school community.

The research team observed a positive development in school staff engagement as they implemented both tech and non-tech solutions in various educational activities. In Nha Trang, for example, one teacher had only limited involvement in the intervention at first because of a busy school schedule. However, after witnessing some of the sessions conducted with students, the teacher became genuinely interested in the topic and the approach taken to test potential solutions with student groups. The research team subsequently discovered that this teacher had organised meetings with other teachers to discuss the progress and impact of the intervention. They also reached out to other teachers in the city to share insights about the successful implementation of the intervention in their school. The teacher expressed a keen desire to sustain the clubs even after the intervention's conclusion. Nevertheless, they would require support and resources to facilitate the clubs' activities and discussions.

The engagement of local psychologists has also led to potential spontaneous activities and/or impact. The efforts of one local psychologist have been particularly noteworthy: they have become very popular among students for their ability to introduce fun and innovative club activities, alongside their expertise in group facilitation. This psychologist proposed the establishment of an office within the school dedicated to addressing adolescents' mental health. While such an initiative would require approval from local line agencies and authorities, the research findings from the intervention could provide valuable evidence to support and inform this decision. The psychologist also expressed their willingness to continue to facilitate student groups if authorised to do so by their line manager at the hospital. This underscores the potential benefits of providing new services and support to school students, provided that adequate resources are available.

The consistent and ongoing engagement of the country research team with the school boards in the intervention's locations played a crucial role in overcoming an initial lack of interest and in gradually raising awareness among a wider group of stakeholders about the intervention's benefits. Regular check-ins allowed the team to address various issues related to its implementation, such as student dropout rates. In Nha Trang, the research team collaborated with the school boards to spread awareness about the project's activities, particularly the psychology clubs, to a broader audience within the schools. As a result, the country team is optimistic about the sustainability of the knowledge and solutions that are being tested and shared within this school.

Finally, in Vinh, two noteworthy changes have occurred as result of the intervention. At one school, a teacher who also serves as a Youth Union leader has been designated to take charge of the club in the future, which could ensure continuity and dedicated leadership. In addition, a manager from the Provincial Youth Union has also displayed a keen interest in the intervention. This local agency has been running a life-skills training club for adolescents, and the manager has proposed integrating the psychology club activities and themes into the existing club. The intervention has been an opportunity for the manager to explore the inclusion of mental health initiatives within the organisation's activities.

6 Effects of the intervention on access to and use of formal mental health services

This section draws on findings from the qualitative endline study to discuss respondents' current access to and use of formal mental health services, as well as possible changes as a result of their participation in the intervention. First, we provide a brief snapshot of current mental health service provision, drawing on the findings of the baseline study. We then explore current access and use of formal services, including any challenges. Finally, we describe any changes as a result of the intervention.

6.1 Mental health services at site level, and key stakeholders relevant to adolescent mental health and psychosocial well-being

As described in Section 1, mental health services in Viet Nam are delivered through national and provincial psychiatric hospitals, outpatient facilities, commune health stations, day treatment facilities and community-based psychiatric inpatient units. In terms of mental health services available in the study sites, findings from the baseline study show that direct mental health services are provided through school psychological counselling services and hospitals or clinics providing mental health/psychiatric services. Study participants at baseline also mentioned programmes that were not focused directly on mental health provision, yet supported aspects of adolescent well-being. These included extra-curricular activities and life-skills programming (see Annex 9, Table A9 in Samuels et al., 2022, for further details).

Annex 7 shows the key actors and policy-makers at the study sites, their purpose, and the work they carry out in relation to adolescent mental health. This is drawn from a stakeholder mapping exercise conducted at baseline to distinguish primary and secondary stakeholders, depending on whether the project was likely to engage with them. The mapping considered the relationships between the stakeholders and the extent to which each was likely to affect adolescent mental health and well-being (see Annex 10 in Samuels et al., 2022, for further details of this stakeholder analysis.)

6.2 Access to and use of formal mental health services

This section describes respondents' experiences with using formal mental health services, and any shifts observed over time. Almost **all adolescent participants in the endline qualitative study had never accessed any mental health or psychosocial support service.** One of the few who said that she had used formal mental health services was a 17-year-old female participant in Vinh. She reported having travelled to the capital city for a psychological assessment. She did not mention any information sources or fees that were paid but did reveal that not all of her adult acquaintances were in favour of the choice she made to seek out treatment.

Before her psychological assessment, she had no information about any locations for mental health services in her local area. It seems that her friends and family were supportive of her treatment and maintained a favourable perception of support for mental health. She was accompanied by

family members throughout the process. She was not, however, able to articulate the reason for her appointment or what she was being treated for, even though she admitted patterns of self-distancing prior to the assessment. In the end, the doctor prescribed medication for her, without any other form of support. This made her feel that nothing much had changed.

> **'Actually, they just gave me medications, then I took them. Nothing much.**
> (17-year-old girl, Vinh, who led intervention activities)

Among the adult respondents, one grandmother of an 18-year-old female participant in Nha Trang recalled having sought formal treatment in a private mental health clinic. She first searched for professional help in a mental hospital as a result of depression brought on by family conflicts. However, unsatisfactory treatment in this hospital led her to seek help elsewhere (where was not stated). Since then, treatment over the course of around two years had helped her get 'back to normal', reducing her insomnia symptoms. She did not explain her information sources, family support or fees.

In terms **of who is more likely to access formal mental health services**, some adult respondents and a few adolescents, two-thirds of them in Vinh, reported that people who live in cities are more likely to seek mental health services than those in more rural areas. They gave various reasons for this, reporting that people in cities tend to be 'more concerned about their mental health'; that there are more likely to be counselling centres nearby; and that these centres are usually well equipped to meet their needs.

Female adolescents in a focus group discussion in Vinh also noted that the expanding reach of social networks was having an effect on the growing need for formal mental services for people of their age. In their words, more problems might arise among groups of students because urban teenagers have easier access to online social networks. Friends are encouraged to go out and socialise more by appointments that are made online. When that happens, there is a higher risk of 'problems', 'conflicts', 'controversies' and 'scandals'. They felt that these tendencies could lead to mental health disorders. Given that those in rural areas have limited access to social networks, they are less likely to face these kinds of issues.

> **'I think there are differences because in the cities, we will have many problems... As for those who live in the countryside, they rarely have access to [online] social networks. With fewer devices, they will not have to think or be influenced... I think that's the difference between those living in the countryside and those living in the cities.'**
> (Participant in FGD with adolescent girls aged 15–17, Vinh)

Access to formal mental health services was also seen as being affected by socioeconomic status (SES). A few adult respondents felt that well-off families were more likely to access mental health services, particularly private options. Similarly, adolescent boys in Nha Trang taking part in a focus group discussion associated the use of formal mental health services with young people and 'juveniles' from wealthy and knowledgeable families.

6.3 Challenges with access to and use of formal mental health services

Study participants raised a number of challenges in relation to their access to and use of formal mental health services, with some highlighting the interlinked challenges of a lack of mental health services, lack of awareness of the services, and a reluctance to access mental health support. As described by one key informant:

> 'The mental health programme for young people seems to be unpopular, unsynchronised, and underdeveloped. As a result, parents are not well aware, even teachers sometimes do not understand, so I think it is necessary to put it into practice more widely.'
> (Key informant, teacher – Hưng Bình school, Vinh)

Turning to access specifically, several adults and adolescents discussed multiple issues that act as barriers to accessing mental health care. At a basic level, the scarcity of mental health services was raised, particularly outside the major cities. A number of key informants noted that mental health services were 'almost non-existent for rural and mountainous areas'.

Even where services do exist, there are challenges. Two psychologists stated that even where there are mental health hospitals, there are too few staff to carry out all the work that is needed, and there is no support after hours. Another key informant said that even if mental hospitals exist, this is not always what is needed:

> 'Most treatments are medications. However, not all mental illness can be treated by medication. People don't need much medication. They need one person to help them. That is very important.'
> (Key informant, local authority – Youth Union, Nha Trang)

A few respondents also noted that even if the hotline or online counselling services exist, few students use them, with students preferring consulting teachers. Others felt that such services were not safe, presumably referring to confidentiality.

> 'The online counselling offices and hotlines are rarely used by the students. Even though we propagate and print out official documents, I personally feel that they are rarely used. Only direct consultation from the teachers at schools.'
> (Key informant, Local Authority – Department of Education and Training, Nha Trang)

It was also noted that mental health service provision is often not regulated sufficiently, and there is no systematic provision of such services, with activities being 'spontaneous' instead. Similarly, it was observed that services may be of poor quality and there were concerns about 'the legitimacy of the service', particularly whether they were being run by 'professional psychiatrists with proper training'.

> 'There are no places for them to come to... where they can trust. We need more places like that. There are no official organisations that are in charge of the information and the guidance [on mental health issues]... Sometimes we have to figure things out by ourselves since there are

> no official places... like, a place where students can come to when they have problems. There is no place like that in Khanh Hoa. [All activities] are spontaneous. Even this club. There are no regulations stating that every school has to run a club [about mental health] and there is no official position for the personnel to hire a professional. Like in the case of the Youth Union. It's a place to support students. The person who is in charge gets paid so they have responsibilities to do those tasks in return. Right now it's not the case [for the mental health sector]. It's all spontaneous.'
> (Key informant, headteacher – Hà Huy Tập school, Nha Trang)

At an individual level, the most frequently mentioned reason among adolescents for not seeking mental health support, even if there are services, was their lack of awareness of such services. Both adolescents and adult respondents reported that adolescents (and indeed others) did not access mental health services because they were 'unaware of any facilities in their regions or communities', with a service provider also noting that 'our promotion [of mental health services] is not strong'. Closely linked to this is a concern that adolescents, according to a local psychologist, 'may not know those are the symptoms of a mental health problem' which, also according to adolescents, leads to some of them being 'indifferent about mental health'. One teacher said that part of the issue is that 'even their parents do not fully understand their child's problem'.

> 'When providing support for a student with a mental health problem, the biggest obstacle is that even their parents do not fully understand their child's problem. They are not able to fully grasp what their child is going through mentally. I think, to best support a student requires a collaboration, not only from the school, but also, with the student's family, and even the society. If the family cannot understand their child thoroughly, it will be difficult to support the student.'
> (Key informant, teacher – Nghi Lộc 5 school, Vinh)

In addition, adolescents and adults both mentioned the following as barriers to accessing mental health support: 'fear of stigma or ridicule'; 'lack of trust' between respondents and mental health professionals; 'lack of confidence' and 'shyness' (with those who are 'bolder, more open' accessing support from, for example, a teacher 'the student strongly trusts'); and a perception that mental health services are only for those with severe cases (see also Section 4 for attitudes towards mental health).

> 'I sometimes think, when adolescents are experiencing difficult situations, they may not know where to seek help. Because, when they have a chance to work with us, they are already in the late stage. However, when one struggles in a situation, they may not know those are the symptoms of a mental health problem. That's the issue with communication and issue with the development of an illness. When they know they have a problem, they may still not know where to look for help. Due to the stigma around mental disorders, they only think that treatment is for severe ones, and not for mild symptoms. Sometimes, they are embarrassed. Apart from the hospital, they don't know any alternatives for help. I think those are the difficulties and shortcomings.'
> (Key informant, psychologist, Nha Trang)

> **'The biggest difficulty is my own shyness... I'm afraid to communicate with strangers.'**
> (Participant in FGD with adolescent girls aged 15–17, Vinh)

> **'At the grassroots level, there are few students actively seeking out services. Service is not available. For some students who are bolder, more open, perhaps they will share with friends, or look to the homeroom teacher. But that teacher must be someone the student strongly trusts. Teachers also have to be extremely sociable and understand students, love students, love children, then students will actively find teachers to confide in. In general, there are problems that are difficult to talk about, for example, or there are many children who cannot discuss with their parents, but share with their teachers.'**
> (Key informant, Local Authority – Department of Education and Training, Vinh)

While a few respondents claimed to know of a couple of places that provide mental health support, they never felt the need to access these services. The reasons given included: having 'too many responsibilities (schoolwork)'; finding them 'overwhelming' or 'unpleasant' or 'rarely patronised'; or because the adolescents themselves are too shy or reserved and uncomfortable around strangers. One 14-year-old male student in Vinh described his own emotional problems as 'passing visits', which he could handle on his own:

> **'...because I find my worries fading away quickly. I only get upset for a moment, then forget about it and go back to being happy.'**
> (14-year-old boy, Vinh)

Other obstacles in accessing and using formal mental health support included financial barriers, with one local psychologist in Vinh saying, '... not everyone with mental health problems has enough money to seek help from these services'. Transportation issues were raised (related to both the cost of and distance to a support location) as well as time constraints, with participants often having to take time off work or school to access services.

In addition to the hardships already mentioned, one local psychologist in Nha Trang reported that people stop accessing formal services for many reasons, with a common perception that they are 'too lazy to return' or have a preference for medication over psychotherapy. Some patients want quick results, which psychotherapy cannot provide, and so opt for traditional medicines and promises of a fast fix.

> **'...psychotherapy will not give immediate effects. It takes a long time and sometimes people are impatient. If they want something more effective, they will believe in using medicine, one of the traditional methods. They think it will be beneficial for them.'**
> (Key informant, local psychologist, Nha Trang)

There were mixed views on whether the respondents would use formal mental health services if possible. One 14-year-old female participant and a few adult respondents said that they would access these services if given the option, or would permit their children to do so.

> **'I will [use mental health services] if I have problems.'**
>
> **'When I have problems related to depression or stress or something.'**

> 'I will take [my child] there on Saturday or Sunday. They have to go to school on weekdays.'
>
> (Participants in FGD with parents of children attending Nguyễn Huệ school, Nha Trang)

In contrast, one 15-year-old boy in Nha Trang stated that even if given the option, he would not seek psychosocial support because he is 'not ready to share [his issues] with anyone'.

6.4 Any changes as a result of the intervention

This section explores the perceptions of participants of any changes in access to and use of mental health services as a result of the intervention, drawing on the qualitative study. Given that relatively few participants, especially adolescents, mentioned accessing and using mental health services, the qualitative endline study has only limited data on this issue. However, there are some accounts of changes, particularly from key informants and parents.

For example, a headteacher in Vinh stated that prior to the intervention, students who were detected to have significant mental health concerns at school were referred to a specialist clinic for further diagnosis and treatment. After the intervention, he said that adolescents took a more active role in advocating for the use of formal mental health services rather than just waiting to be referred by the school authorities. Similarly, the mother of an 18-year-old female participant said that the intervention helped her daughter to convince family members of the need to seek professional mental health services for a sick cousin.

> 'Previously, one of her cousins, who was a sophomore in college, was depressed, so she advised her aunt to take him to see a psychologist. It is right that he went to see a psychologist because he is better now... He used to wander around like a madman, yet he didn't say anything... His parents took him straight to the psychiatrist in Ho Chi Minh City. After treatment, now he's stable.'
> (IGT with 42-year-old mother of 18-year-old young woman who was selected by a psychologist to take part in this study, Nha Trang)

Finally, and at a wider level, one key informant noted that, as a result of the intervention, Nha Trang province has now produced new implementation plans to disseminate information to young people aged 16–30 on the basics of mental health and well-being, aiming to underline the importance of mental wellness. There is also increased provision of counselling and 'social relations/interactive groups in schools, formed to help students learn and practice while also improving student-teacher interactions'.

> 'Well, regarding the community, there weren't many plans before, but now according to the province's implementation plan, mental health issues will be widely disseminated to everyone, especially young people from 16–30 years old. The plan will be like talking to them about the basics of mental health and wellness, so that they begin to learn to recognise the importance of mental health. The plan started late last year and continues this year. It begins to have a wider spread, which means that it will be implemented specifically in schools, even in localities and youth unions.'
> (Key informant, local psychologist, Nha Trang)

7 Effects of the intervention on coping strategies

This section describes the coping strategies adopted by adolescents to deal with their mental ill health, drawing on both the quantitative and qualitative data. It examines both positive and negative coping strategies and aims to identify any changes brought about by the intervention. We first present findings from the quantitative survey (the Kidcope scale) and then from the qualitative study.

7.1 Description of findings from the quantitative study (Kidcope scale)

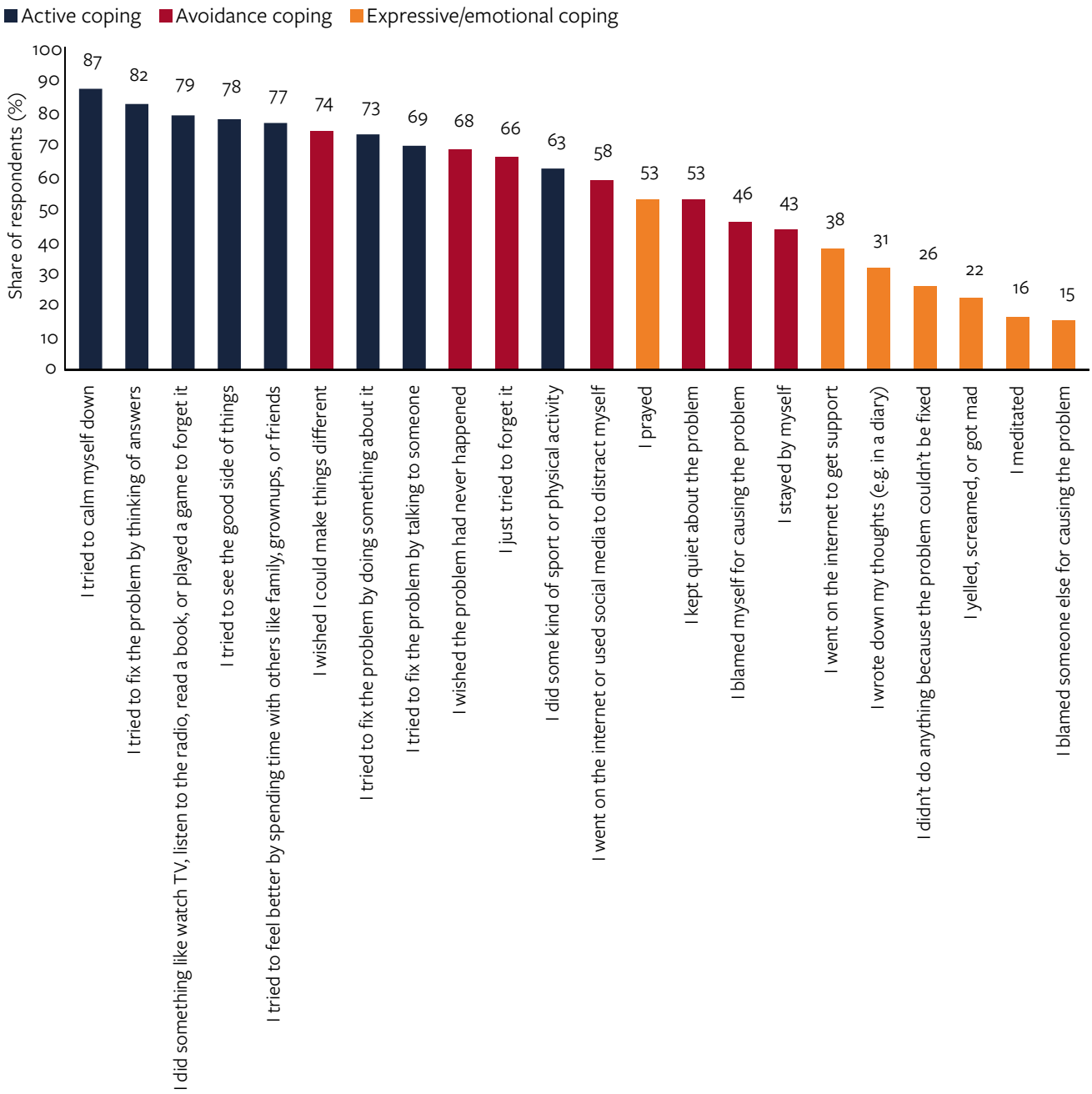
Adolescents' coping strategies were measured with the Kidcope scale, consisting of 22 items, with the answers of Yes=1 and No=0.[35] Subscales for three types of coping strategies were produced after exploratory factor analysis during the baseline study: active coping, passive coping, and expressive or emotional coping (see details on the exploratory factor analysis in Annex 2b and online annex tables data).

Figure 9 presents the share of respondents who agreed with each statement and the classification of statements according to the three broader coping strategies. It shows that **active coping** is the most common strategy of all, and includes problem-solving, seeking social support, looking for distraction, emotional regulation, or cognitive restructuring. **Avoidance coping** is the second most common strategy, including wishful thinking, social withdrawal, self-criticism, and some items on seeking distraction. **Expressive or emotional coping** strategy is the least common of all three, and participants' responses related to emotional regulation, blaming others, social withdrawal, and cognitive restructuring. The three final scales were rescaled to range from 0 to 100, with higher values representing a higher tendency among adolescents to use certain types of coping strategies.

As part of the analysis, we examined whether the intervention had any effect on changing the coping strategies of the adolescents participating in the intervention compared to those in the control group. The evidence indicates that some changes took place, particularly in relation to the use of avoidance coping (self-criticism, wishful thinking, and social withdrawal), and to the use of expressive or emotional coping (yelling, getting mad or blaming others).

35 The original Kidcope scale consists of 15 items. An additional 7 items were included during the piloting stage before the baseline study. See further details on the development of the scale in Annex 3.

Figure 9 Coping activities used when last feeling tense or facing problem or difficulty (measured at baseline level)



Note: Active coping responses are shown in blue; passive coping in red; and expressive/emotional coping in orange. These three dimensions were the result of exploratory factor analysis to identify the latent structure. Results from the exploratory factor analysis are available in Annex 2b and Excel Annex.

Figure 10 presents the results for the control and treatment group at the broader scale level, and for the set of items for which statistically differences were observed. In the Annex 2f we present the results for all items, as well as the demographic breakdown at the scale level, together with a series of robustness tests with the adjusted figures.

Active coping: Little if any change was observed in active coping. Variations in the index were not statistically significant. At the item level, the treatment group saw a significant decrease in the statement "I tried to calm my self down" from 90.2% to 84.2% (p=0.047), and in the statement "I tried to feel better by spending time with others like family, grownups, friends" from 79.2% to 70.3% (p=0.026). In turns, the control group saw an increase in item 10: the share of the control group who agreed with the statement 'I tried to fix the problem by doing something about it'. This rose from 74.5% at baseline to 81.4% at endline (p=0.001). In contrast, the share of the treatment group who expressed agreement with that statement was 78.2% at baseline and the change was not statistically significant (p=0.373). It is not entirely surprising that active coping did not significantly increase in the treatment group, given that their use of this strategy was already quite high in comparison with other strategies from the outset.

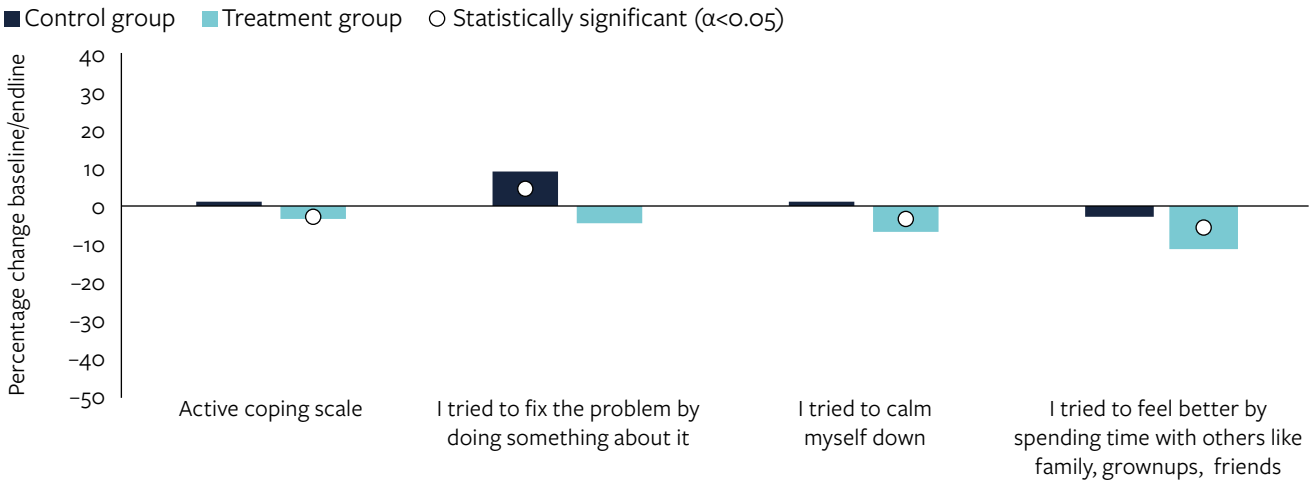
Avoidance coping: The use of avoidance coping varied significantly at the item level. Even if changes were not statistically significant at the scale level, the observed shifts at the item level suggest that the intervention had some positive effects. For example, the share of the treatment group who reported 'blaming myself for causing the problem' recorded a statistically significant decrease among the treatment group from 50.7% to 29.9% (p=0.001), while it increased among the control group from 45.6% to 53.3% (p=0.003). Similarly, the share of the treatment group using 'wishful thinking' as a coping strategy also registered a statistically significant decrease. The percentage of students in the treatment group who agreed that 'I wished the problem had never happened' decreased from 78.2% to 74.7% (p=0.003), while it remained unchanged among the control group at around 75%.

Overall, we observed an increase in social withdrawal in both the control and treatment groups (items 5 and 4); however, this was either higher or only statistically significant among the control group, suggesting that the intervention may have limited any increase in social withdrawal among the treatment group. The use of the internet or social media for distraction increased by a roughly equal amount for both groups. In conclusion, even if the net effect at the scale level was negligible and not statistically significant, changes at the item level indicate that the intervention did have an effect on the use of avoidance coping strategies among the treatment group.

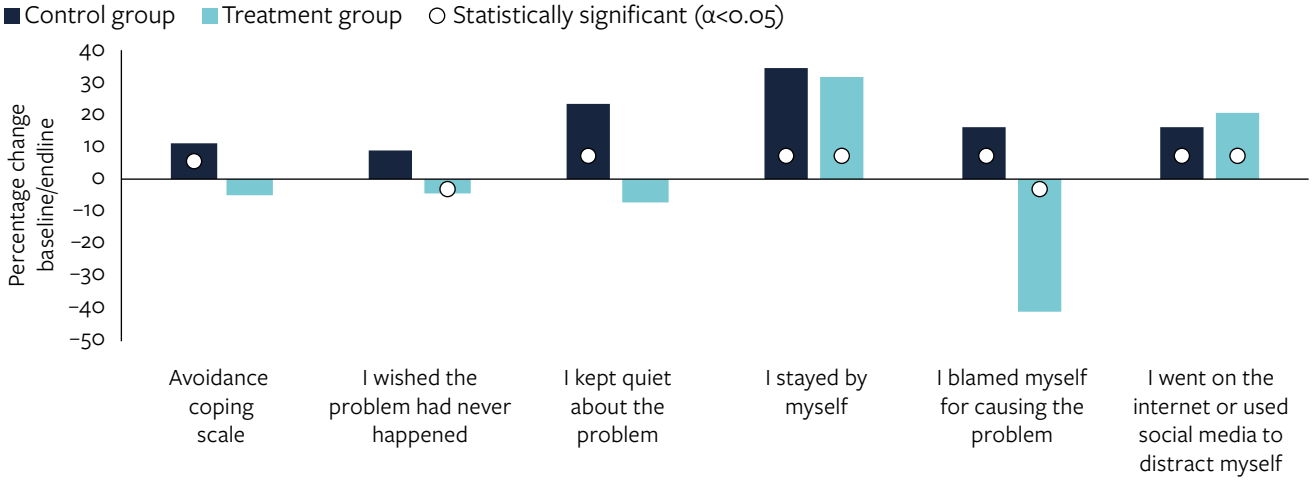
Expressive or emotional coping: The impact of the intervention on the use of expressive or emotional coping strategies is even clearer. We observed a statistically significant decrease in the index measuring the use of these coping strategies among the treatment group with a reduction from 29.5% to 25.7% (p=0.018). No statistically significant change was registered for the control group. Looking at each item gives insights into the specific changes that occurred. The share of the control group agreeing with the statement 'I yelled, screamed or got mad' rose from 21.9% to 27.3% (p=0.15), while there was no change among the treatment group, with the share remaining at around 18% (p=0.113). Again, this indicates that the intervention limited the increase in the use of this coping strategy among adolescents who took part. In contrastthe share of the treatment group who expressed signs of social withdrawal (i.e. agreement with the statement 'I didn't do anything because the problem couldn't be fixed') fell from 25.8% to 14.8% (p=0.004). Similarly, the share of those who 'prayed' fell for the treatment group from 54.1% to 43.7% (p=0.026). In short, the intervention appears to have the effect of decreasing the use of emotional coping strategies among the treatment group.

Figure 10 Changes in ways of coping with mental health challenges (Kidcope scale) by control and treatment group

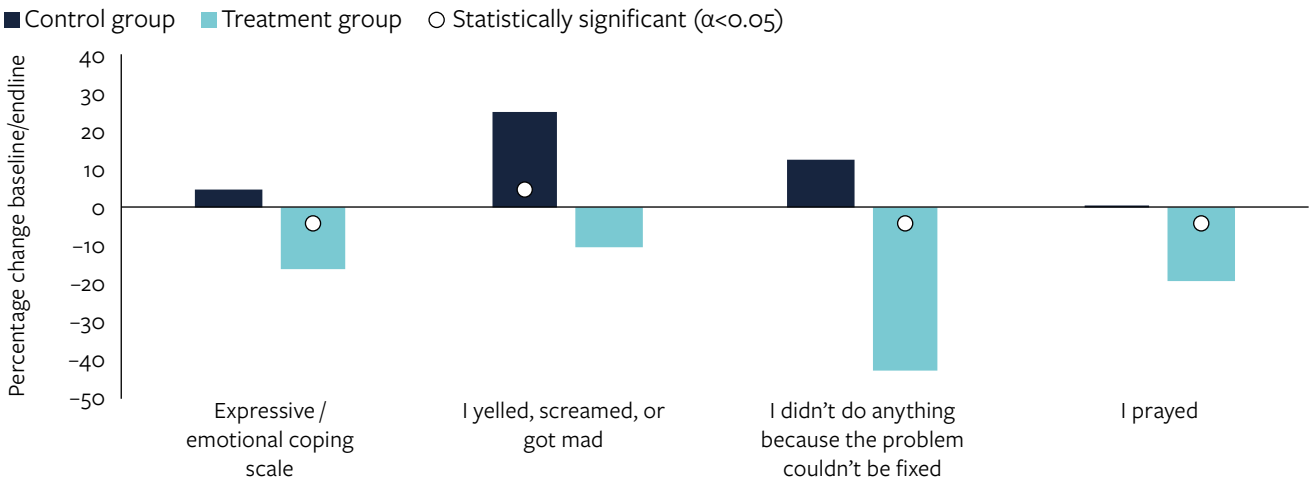
a: Active coping



b: Avoidance coping



c: Expressive or emotional coping



7.2 Positive coping strategies – findings from the qualitative study

Two main ways of coping were mentioned by respondents in the qualitative endline study: talking to/confiding in someone, and using distractions. This is consistent with the quantitative findings, where 67% tried to solve the problem by talking to someone, and 79% tried to distract themselves by watching TV, listening to the radio, reading a book or playing. Although the quantitative study found no statistically significant increase in the use of these strategies, the statements from the qualitative study provide insights on how these coping strategies were used. In Section 7.4 we discuss whether there are any changes as a result of the intervention that emerge in the qualitative study.

7.2.1 Talking to/confiding in someone

Similar to the findings from the baseline study, the majority (two-thirds) of adolescents in the endline study, who mentioned talking or confiding in people as a way of coping, were female. In addition, some adult respondents (both key informants and parents) reported talking to or confiding in someone or being aware of relatives who talk to someone when they are in mental distress. According to them, the resulting conversations included school bullying, academic struggles, sexual orientation/identity struggle, and friendships and familial issues. The decision about who to speak to (parent, friend, teacher...) appeared to depend on the issue that needed discussion, as this example suggests:

> 'I choose stories that my friends can understand, such as issues related to studying, grade and family issues between my mom and me. But my family and my friend's family are different, so sometimes the conflicts in our families are not the same, so I just keep them to myself and I only confide in my mom. I think my friends can listen and give advice, but they are not in the same situation as me, so they can't fully understand.'
> (17-year-old girl, Nha Trang, who led intervention activities)

Some adolescent respondents said they felt comfortable **talking to their parents** about topics that made them unhappy, stressed, anxious, or if they were experiencing any other type of mental discomfort. This was reiterated by some adult respondents, who also noted that some adolescents see their mothers as 'best friends' who are always available to them and who validate their feelings. As a result, most adolescents choose to **confide in their mother rather than their father**. Girls accounted for two-thirds of the adolescents who spoke to their parents and preferred to confide in their mother over their father. Respondents reported discussing 'serious matters' with their parents, while others discussed 'academic pressure', family concerns, strained friendships and their gender identity.

> '...when I'm sad, I have some problems, related to studying and family, I will also tell my mother. When my father scolds me, I also tell my mother.'
> (15-year-old girl, Nha Trang, who was selected by a psychologist to take part in this study)

> '...when she [my daughter] shared that someone seemed to not like her, I only said "Not every relationship will be perfect. Not everyone will like you, some will love, some will hate you. That's okay that you react when someone doesn't like you".'
> (IGT with 41-year-old mother of a 14-year-old girl who took part in the intervention, Vinh)

A handful of adolescent respondents reported that they **turn to their siblings** for mental health support. This was confirmed by a few mothers of adolescents in Nha Trang. One 18-year-old female participant said she found her sister helpful because the 'insights she often shares are based on past similar experiences'.

More than half of adolescent and adult respondents agreed that when the former need someone to talk to, they prefer to **confide in friends.** Adolescents often told their friends about their concerns about school, family, or friendship because they believe their peers listen, are more understanding, 'empathetic', and know how to make them feel better (e.g. by making jokes).

> 'I only talk to my friend. [They] encouraged me and made jokes to improve my mood.' (Participant in FGD with adolescent girls aged 17–18, Nha Trang)

> 'My friend often listens to what I have to say. They quite understand me, so the talk is easy.' (17-year-old boy, Nha Trang)

Some adolescents reported talking to their teachers to ask for help if they were being bullied at school, but not really sharing their emotional issues.

Some adult and adolescent respondents stated that they prefer **not to discuss** their problems with others because they believe they are 'too personal' or insignificant. One 17-year-old female participant stated that she did not share because she was 'frightened of offending others' or fearing the gossip that might result. Others simply like 'to be alone' or dislike sharing. One 14-year-old female participant admitted that she is still afraid to ask her teachers for help when needed. The choice not to share with others, particularly with parents and teachers, might reflect a sense of distance from adults regarding emotional matters or difficulties in communicating personal feelings and thoughts with others.

7.2.2 Using distractions as a way to cope with stress

The majority of the adolescents and a few adult respondents claimed that they employ various types of **distractions** to cope with mental stress. The most prevalent types of **diversions** identified were 'sports', 'playing an instrument', reading, studying, social media, 'video/online gaming', and 'listening to music'. See also Section 5.4 for a discussion on protective factors for mental health.

> 'When I'm sad... I usually find something to relax like reading a book or using the phone.' (14-year-old girl, Vinh, who participated in the baseline and intervention activities)

7.3 Negative coping strategies – findings from the qualitative study

This section explores negative coping strategies and categorises them by those that are more avoidant (e.g. sleeping), those that are linked more to engaging in risky behaviours (substance abuse), and those that involve aggression towards others.

7.3.1 Avoidant behaviour

Four adolescent females and two male participants, five of whom were from Vinh, reported **sleeping** to cope with stress, anxiety, or sadness. Sleep, according to one 15-year-old girl, helps because she 'doesn't have to think once she's asleep'. A few adults and some adolescent boys and girls, nearly evenly distributed across

both cities, reported that they **isolate** themselves from family and peers when in mental distress.

A few stated they would usually go somewhere to 'be alone and cry'. When asked how adolescents cope with problems, one participant in a focus group discussion for adolescent males in Vinh simply said: 'being alone'.

7.3.2 Engaging in risky behaviours

The risky behaviours observed included emotional eating, self-harm, suicide ideation and substance abuse. **Emotional eating** was reported by one girl who said that she turned to food for comfort as a way to cope with stress, particularly when facing academic pressure.

> **'After eating, I no longer feel s..stressed out... I just eat... without any restraint, in an uncontrollable manner. Especially when I'm extremely stressed out during the exam season...'**
> (17-year-old girl, Nha Trang, who participated in the baseline and intervention activities)

Three adolescent females and one male (evenly split between the two study sites) also reported **hurting themselves** on purpose in response to stress to get rid of their intense negative feelings. Beating themselves, punching through hard or glass objects, 'hurting themselves with sharp objects', and 'physically overexerting themselves' were the methods most commonly described.

> **'I usually inflicted pain on myself. I usually wound or pinch myself to feel better. Or I will eat a lot of extra spicy food to feel less burdened by my emotions.'**
> (14-year-old girl, Vinh)

According to one key informant, a teacher in Vinh, some students have shown signs of depression, demonstrated self-destructive behaviours and even expressed **suicidal thoughts**. Two female participants acknowledged having had suicidal thoughts when upset or depressed. It seems that for some adolescents, their emotional pain and suicidal ideation were not always recognised or validated by adults. The mother of a 14-year-old male participant said that she told him to 'get rid of these thoughts' and 'there is nothing to be worried about that much'.

> **'When I was in grade 10, I was sick, many things happened so I thought of committing suicide.'**
> (17-year-old girl, Nha Trang, who participated in the baseline and intervention activities)

Two adolescent respondents, a 15-year-old female and a 17-year-old male, reported having **smoked** cigarettes. According to the 17-year-old male, from Vinh, an older girlfriend introduced him to smoking in 10th grade to help him regulate his emotions when he was unhappy, and he would smoke 'When I'm upset or when I have an argument... then I feel calmer'. The girl smoked on occasion, particularly two years previously as a way to cope with upsetting family situations. Both respondents reported that smoking made them feel calm and relieved. No other adolescents admitted having ever smoked tobacco, and none reported that they **had ever taken any illicit substances**. Similarly, a few adult respondents believed that their children had never used drugs.

More than half of the adolescent participants, aged 13–18, reported having consumed alcohol at least once. Drinking is popular in Viet Nam as a way to bond with others, and people drink on both normal and special occasions. Indeed,

some adolescents reported that they drank 'every time they hung out with friends, went out to eat with family', or at family reunions. Beer (mainly Strongbow) and wine were the beverages cited most frequently. One 16-year-old female participant had drunk 'Soju', a mild alcoholic beverage. This 'light drink' is quite popular among youth and seen as acceptable for girls. These respondents were almost evenly split between Vinh and Nha Trang, but of the adolescent participants who reported consuming alcohol, 60% (14 out of 23) were females.

Adolescents also revealed a variety of motives for drinking, the most common being peer pressure or the desire to fit in with their peers, recreation, curiosity, coping with stress or other types of pressure, and sadness. When asked how alcohol made them feel, a few adolescents stated they felt bolder, more confident, 'less tired', relieved of stress, or less depressed. Others, however, complained that it gave them a headache and made them feel dizzy, sick or nauseous. A few adolescents stated that they just felt 'normal'.

> **'[when drinking beer] I didn't need to worry about others or what I'd do after I finished studying. I felt that I can comfortably blend in the group. I found that stress-relieving and was very pleased.'**
> (18-year-old young woman, Nha Trang, who was selected by a psychologist to take part in this study)

7.3.3 Engaging in aggressive behaviours to others

A handful of adolescent respondents resident in Vinh (with no gender differences) said that they had seen or used **aggressive behaviour** to cope with various types of psychosocial stress, including when they had been bullied. This behaviour could be verbal, but could also include fighting or lashing out at others.

> **'Regarding bully or conflict with others… , some students can't really resolve it, which can result in conflict, fighting and quarrel… when our staff caught them fighting… , they just said they've been bullied for so long so that now they just want to fight back.'**
> (Key informant, headteacher – Lê Viết Thuật school, Vinh)

> **'…sometimes when I lose control, I become harsh with my friends.'**
> (15-year-old girl, Nha Trang)

7.4 Any changes as a result of the intervention

This section explores the extent to which these coping strategies, especially those that are negative, have changed as a result of the intervention. On the one hand, we explore whether risky behaviours have reduced, and on the other, we examine whether positive coping strategies have increased.

7.4.1 Reduction of risky behaviours

According to findings from the qualitative study, the intervention has had an effect in terms of reducing risky behaviours. For example, some adolescent participants, particularly 10 out of 11 females and 2 out of 3 males who had previously self-harmed, observed a change in their habits. As one 17-year-old girl in Vinh explained, they now

turn to more positive coping strategies such as talking to someone, or challenge their negative thoughts, rather than hurting themselves:

> **'...I had... hurt myself. But... now not anymore. Now, I will find a friend to talk to cope with my sadness.'**
> (17-year-old girl, Vinh, who was selected by a psychologist to take part in this study)

> **'Perhaps after I learnt the lessons about anxiety disorder, stress and depression, I thought to myself that I should stop and not let the negative thoughts get the better of me. I just have to change it.'**
> (14-year-old girl, Vinh)

Similarly, while only two adolescent respondents reported smoking, the 15-year-old girl reported that the intervention helped her quit. Again, there was a change observed for adolescents who drank alcohol, with a few adolescent respondents observing a change or a reduction in their alcohol consumption since they joined the intervention.

> **'It [respondent's drinking habit] lessened after I joined. I find it unnecessary, and it is also harmful to my health.'**
> (17-year-old boy, Nha Trang)

7.4.2 Engaging in positive behaviours to cope with problems

As mentioned above, some adolescents now engage more in positive coping methods as a result of the intervention. A few who had previously lashed out, or responded to stress in an aggressive manner, said they had noticed a shift in their interactions with friends and siblings after taking part. They claimed to have become **more empathetic, patient, more in control of their behaviour, kinder in their conversations and in the ways they engage with people**, as well as more aware of the feelings of others.

> **'If the friend who sits next to me does something wrong, I will tell him instead of hitting him. [This change] is partly because of the club, partly because of my teacher. I also think it's the right thing to do.'**
> (18-year-old young woman, Nha Trang, who took part in only one intervention session)

> **'So now when I lose my temper, I choose to be silent. I consider it as if nothing happens, then when I feel calmer, I talk [to my friend] again.'**
> (15-year-old girl, Nha Trang)

Similarly, it appears that some adolescent boys and girls learnt how to better regulate their own emotions and manage stress, anxiety and other obstacles as a result of taking part in the intervention. They learnt other strategies (e.g. cooking) to manage stress and focused on finding a solution instead of venting at others or sinking into negative emotional states.

> **'Back in the day, the first thing I did being upset was lash out at people around me. I would also lose my motivation for studying. But now that I've learnt a few things about psychology, whenever I do a terrible job in my test or I'm struggling, I'll find a solution and keep working hard.'**
> (14-year-old boy, Vinh)

7.4.3 Seeking help

Some respondents also mentioned how taking part in the intervention had resulted in them being more willing to seek help. Some adolescent respondents noted that it had taught them not only how to prevent, treat and care for their own mental health issues, but also how to care for others around them who were also struggling with various mental health conditions. Some of the 'treatments' mentioned included more formal services such as 'psychological examinations', but others were more informal, such as socialising with friends, family or loved ones. A few adult respondents also reported learning how to recognise students or adolescents in need of mental health support and provide the necessary care.

> **'I started to notice more. Personally, I pay more attention, even tell the students that they can join the club so you can change if you are having any problems. Overall, I see changes in myself.'**
> (Key informant, teacher – Hà Huy Tập school, Nha Trang)

7.4.4 No change

There were some reports of the intervention having no change on coping strategies. Some adolescents (and two parents) reported that they had seen little or no change in the way they cope with mental distress since the intervention. One 18-year-old female participant claimed she 'only attended one session and hence, saw no effect'. A 14-year-old girl reported no change in her habit of bullying others, and one 15-year-old girl reported that there had been no change in her self-harming behaviour since the intervention, as shown by the researcher's questions and her answers. They did not give any reasons for the lack of change.

> **Q: 'After joining the club, what did you think about this?'**
>
> **A: 'I wanted to improve. Why did I hurt myself? I also wanted to share more with others.'**
>
> **Q: 'With that desire, has it changed anything?'**
>
> **A: 'No, it hasn't.'**
>
> **Q: 'The behaviour's still there, right?'**
>
> **A: 'Yes.'**
>
> **Q: 'Do you think of any other solutions in the future to reduce negative behaviours that affect your body?'**
>
> **A: 'No, I don't.'**
>
> (Exchange with 15-year-old girl, Nha Trang, who participated in the baseline and intervention)

Regarding substance use, the 17-year-old male who reported smoking admitted he still smokes after the intervention. Some adolescents said that it had had no influence on their drinking behaviours because it did not address alcohol consumption and they only drank on occasion.

8 Effects of the intervention on technology usage for mental health

As described in Section 3, the digital component of the intervention co-created with students consisted of a private Facebook group for each school, alongside a phone-based application called MoodTracker+. The Facebook groups were spaces where club members could share mental health materials, ask any questions arising from the in-person component of the intervention, or just share other related issues (including their personal stories). With the MoodTracker+ application, adolescents could record their daily emotions and feelings and could note down their thoughts. In this section we explore the effects of the technology solutions on participants and their views on technology usage, particularly in the area of mental health care.

8.1 Use of technology

8.1.1 Which technology and for what?

The vast majority of adolescent and adult participants in both the qualitative and quantitative endline study in Vinh and Nha Trang reported having a phone, and most of these were smartphones (see Figure 11). While a few adolescent participants in the qualitative study stated that they did not own a phone, they could borrow one from their parents. Some adult respondents also said that they occasionally lent their phones to younger children for research and entertainment.

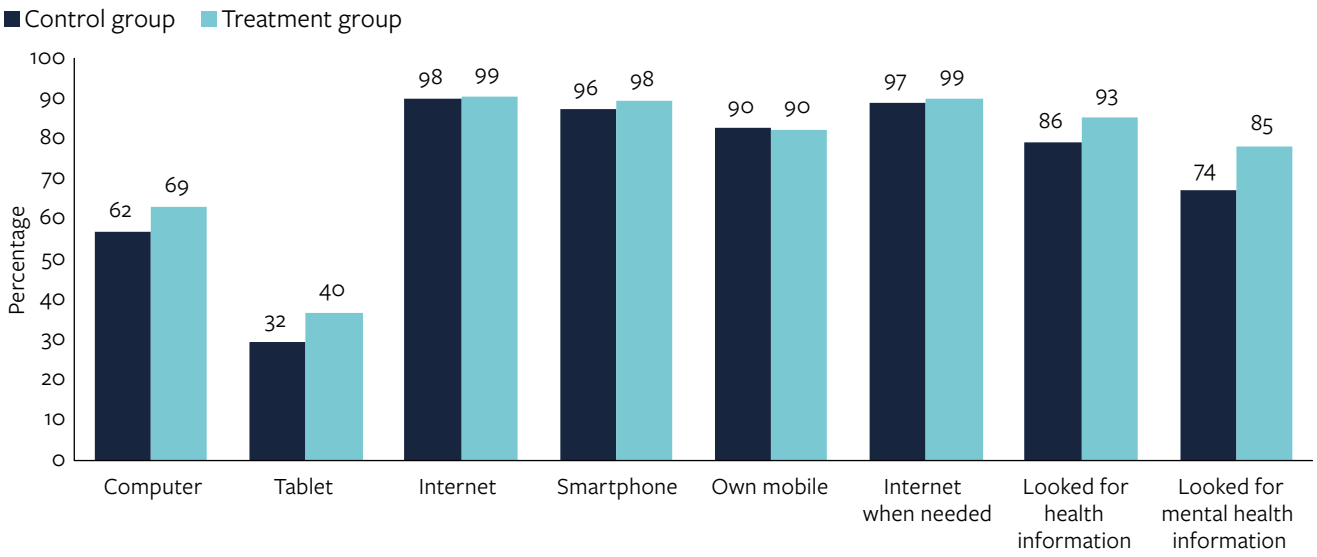
More than half of the adolescents in the qualitative study, nearly 70% of whom were female, and a few parents (most of them in Vinh), reported owning a computer (similar findings were found in the quantitative study, and in the baseline study, Samuels et al., 2022). Some adolescent respondents in the qualitative study stated that they did not own a computer, but a few could access one from their parents, neighbours, or relatives when necessary. In addition, all adult participants reported sharing their computer with their children or a co-worker at least once, primarily for educational purposes. There were no significant differences between sites or gender in this group.

The quantitative endline survey found that students in the treatment group had slightly more access to this technology than students from the control group (see Figure 11): 69% vs 62% in relation to computers, respectively, and 32% vs 40% in relation to tablets. The reason for this slight difference is likely to be related to a slight selection bias, with students in the treatment group having a slightly higher SES.[36]

When discussing their use of devices, a few adults and nearly half of the adolescent respondents in the qualitative study reported using the internet to access diverse resources. The most frequently cited uses were for academic purposes and going through 'academic materials to assist with their studies and homework'. Other common purposes for the use of the internet related to social media platforms such as Facebook, YouTube and Zalo, and entertainment activities like video games.

36 The sample weight corrects for most of this selection bias, but some divergence still remains.

Figure 11 Access to technology for the control and treatment groups



Twelve adolescents in the qualitative study (three of whom were male, with no difference by research site), stated that they had looked up mental health information on the internet or knew of some websites about mental health. However, they could not provide specific information about the name of these websites or their contents. In the quantitative survey, however, more than 85% had looked for health information and more than 70% had looked specifically for mental health information. Those in the treatment group had done so more frequently – around 10% more.

8.1.2 Advantages of technology use

Participants referred to various benefits of using technology in relation to mental health care. Those most frequently mentioned were the internet's 'education and diversity of information'. More specifically, participants felt that the most practical role of technology in mental health support was to provide information and 'disseminate knowledge about this field to people', particularly in a quick and visually pleasing way, as one key informant explained:

> **'I think the main role of technology in mental health support is to convey information in a quick and convenient manner. It has a lot of advantages, as I've mentioned, it brings rich, diverse, scientific, eye-catching and colourful information, which highlights the content that they want to convey to others through information technology.'**
> (Key informant, headteacher, Nha Trang)

In addition to knowledge about mental health conditions, some participants regarded personal sharing on social networks like Facebook groups as a useful source of online information. A group of female students in Vinh gave the example of an online page where women shared their journey in overcoming mental illnesses. Furthermore, as a way to transmit information, technology was considered to reach a bigger audience, providing 'access to more people and more sources of information'.

Another major advantage of technology solutions reported by participants was that it could also provide the option of 'anonymity, which enables adolescents to open up more', because people

with mental health problems might feel reluctant to talk to someone else in person, even to a professional, about their issues. This observation was brought up by both male and female adolescents, predominantly in Nha Trang.

> **'It can be said that the person who is experiencing psychological problems can express their problems more easily (through the internet/online), without being shy or worrying about their information being disclosed.'**
> (Participant in FGD with male students, Nha Trang)

Other participants mentioned the convenience of technology, which means it can be accessible from anywhere at any time. This makes it a suitable solution to deal with emergency problems in a timely manner and to make 'around-the-clock support' possible.

> **'From my view, technology can solve the students' problems on a regular basis. In our school, I usually see that the students can immediately contact support if they are having problems. But we can't always do that with direct support. Especially in the school context, we can't do it at any time because students might need to rearrange their schedule, along with other things... And sometimes it might be late. So the combination of two will be more suitable, personally.'**
> (Key informant, teacher, Nha Trang)

Compared to traditional methods like in-person appointments with professionals, study participants also observed that using technology could be time-saving and cost-effective, particularly for those who do not live near any mental health facilities.

> **'I think technology will be beneficial to people in remote areas, like mountainous areas. Because the facilities are under-developed there. Plus, some people, such as those who are unconfident about their looks, will prefer technology.'**
> (Participant in FGD with male students in Vinh)

A number of key informants also spoke about the benefits of using technology for mental health care, particularly because young people are already familiar with it and find it exciting.

> **'Technology is now more open. In the old days using technology required a budget, like creating a website, or having a professional tech guy. Now we can use it straight away, so it is quite convenient, without many difficulties.'**
> (Key informant, local authority, Nha Trang)

Other participants, both adolescents and adults, talked about the entertainment value of technology. Technology was seen as providing many healthy ways for adolescents to 'unwind and occupy themselves' as well as relieve stress by watching movies or chatting with friends.

8.1.3 Challenges of technology

Although the use of digital approaches is perceived by many respondents to have various advantages, according to the endline qualitative

study, some challenges were also observed. The first was that not all young people have access to smart devices or internet connections because of the prohibitively high purchasing costs.

> **'I have to earn and save up every single penny to pay for mobile services... but they are too expensive.'**
> (IGT with 59-year-old mother of 17-year-old girl, Vinh)

A number of participants expressed their concerns about the reliability, legitimacy and effectiveness of internet information, with a local psychologist saying that it 'cannot be guaranteed'. A teacher also raised similar concerns, stressing the importance of the in-person component as part of the intervention:

> **'Like on Facebook, there are Facebook pages, or different private groups for people to share their stories. But those are social platforms, I am not sure about its effectiveness. I think that's good because it is easy to share. [But] if there are alternative [psychology] clubs, like our non-technology solutions, it will be much more useful.'**
> (Key informant, teacher, Nha Trang)

Others noted that even if access to the internet is possible, some people might find it challenging to use because they are not familiar with technology-related skills. Some adult respondents, in particular, pointed out the possible risks for adolescents, such as being exposed to 'inappropriate internet content', 'public pressure and influence', cyber-bullying and/or developing an unhealthy 'addiction to digital devices'. All of this was observed to not only jeopardise adolescents' mental health but also to distract them from their other obligations.

Online privacy invasion was also raised as a challenge. Some male adolescents, in particular, were worried that there would be a likelihood of their private life being exposed if they used digital technology to access mental health support.

> **'I think on one hand, some websites, groups, if they are truly related to psychology they will be good, but on the other hand, some people could take advantage of these websites to expose other people's private life.'**
> (Participant in FGD with male students, Nha Trang)

In addition, respondents felt that there were many external factors that people could not control when it comes to using technology as a support resource, including the quality of the internet connection (as mentioned above) or its use as a private space for conversation. A group of parents in Nha Trang, for example, mentioned that using a mental health mobile app could be a distraction to young people: they might be texting their friends instead of focusing on the initial purpose.

Compared to data collected from the baseline interviews, there were no notable changes recorded in the perception of participants regarding the use of technology to support mental health care. Most of the challenges and the benefits of technology mentioned in the baseline interviews were also raised by participants after the implementation of the intervention. One of the reasons could be the relatively limited participation of students in the technology component of the intervention (see Section 8.2).

8.1.4 A blended approach?

In general, participants in the qualitative endline study noted both advantages and challenges in using technology for mental health support. This was expressed during a focus group discussion in Nha Trang with boys aged 17–18, one of whom noted that: 'it [technology] plays a role in supporting mental health and it also contributes a part to mental health issues'. As a result, the majority of participants favoured conventional in-person mental health support or a combination of both in-person and online approaches.

For those who advocate for a more conventional approach for mental health care, in-person support was considered to be more direct, clearer to understand, 'more focused and caring' and able to 'solve things in a more logical and assured manner'. Similarly, it was observed that with face-to-face support, there are more options for activities that could facilitate socialisation; for example, the use of mental health clubs in schools or communities, or sporting activities.

Some adolescents and a headteacher in Nha Trang stated that in-person meetings should be prioritised over virtual meetings in order for the patient and mental health practitioner to build a connection through personal interaction. One 18-year-old female participant from Nha Trang also mentioned that, although online interactions encourage anonymity, they make it harder to 'communicate and read emotions through body language or facial expressions, as well as for therapists or psychiatrists to adequately demonstrate compassion or empathy'.

Such views came predominantly from Nha Trang, rather than Vinh. This may be because the main facilitator in Nha Trang (the local psychologist) took a more open approach when engaging with the students, was a supportive companion rather than an adult instructor, and encouraged the club members to build connections with each other. In addition, even the two urban schools in Nha Trang are located far from the city centre. As the local psychologist said, locals would not view these as 'centre' schools. Our teams had the impression that students in Nha Trang were less familiar with technology than students in Vinh, which is why they preferred in-person support.

> **'Currently, in-person meetings are the top priority... Actually, the direct interaction between people will provide a better sense, in feeling the words, gestures, actions, attitudes, etc.'**
> (Key informant, headteacher, Nha Trang)

> **'When having direct support, the person who advises or helps young people will understand better and have a more visual perspective. Online support is for when you live far away or you're not confident enough to go there in person, you can consult through... online counselling.'**
> (Participant in FGD with female students, Nha Trang)

Participants in the qualitative endline study referred to several ways in which technology could be involved in mental health support for adolescents, particularly when combined with a face-to-face or in-person approach. A teacher in Vinh, for example, suggested that technology could 'provide various supporting channels, such as Facebook and Zalo, via which professionals can reach a large audience and handle multiple difficulties anonymously for students' who are unable to attend the sessions. Another teacher

from Nha Trang noted that this depended on the situation:

> 'For example, if students are at home, we must use the technology approach. We could use the face-to-face approach if students are at school.'
> (Key informant, teacher – Nguyễn Thái Học school, Nha Trang)

In addition to these logistical issues, the timing of the use of technology vs in-person approaches also depends on the severity of a person's mental health conditions. Several male adolescents and an education official in Nha Trang believed that online assistance would be more suitable for non-chronic problems while 'serious matters can then be resolved in person'.

> 'I think that mental health-related problems are not necessarily chronic disorders that we can't deal with and we have to go to a doctor [because of it]. We can solve them in other ways, and we don't have to go to a doctor. Not necessarily.'
> (Participant in FGD with male students, Nha Trang)

Overall, technology, despite numerous advantages, is regarded only as a supplement to direct face-to-face and in-person support for adolescents' mental health. The use of technology could be the very first step in the process, when people can look up information. Ultimately, however, face-to-face or in-person support from a professional remains essential and irreplaceable.

> '... the more I think about it, the more I think about the importance of the non-technological part. The reason is that technology just plays a part of my relief, but has not contributed much in the treatment. For therapy, you have to go to see psychiatrists, or enter some courses, and attend monthly activities to know more ways to deal with problems.'
> (Participant in FGD with female students, Vinh)

> 'Personally, I think this [technology] is also a quick channel to search for the basics, and the first steps... we also need to find a real expert in this field to talk to more effectively. For instance, if I have those symptoms, I will go online and find information about it. It would show up with a bunch of anxiety or depression symptoms or something. That is a first step for people to visualise the problem. But people don't know about it in-depth or whether the information is true or not.'
> (Key informant, local psychologist, Nha Trang)

8.2 Effects of the intervention on technology usage

8.2.1 Implementation of the technology solutions in the project

Data from the intervention indicates that the Facebook group was not as active as initially expected (see Table 12). Only a few students were active in posting information, with slightly more activity in Hà Huy Tập and Nguyễn Huệ schools. The posts vary in their numbers and types, including photo or video sharing, text status, and handout materials. Given the number of viewings, comments and reactions, it is clear that the greatest amount of activity took place in Hà Huy Tập school.

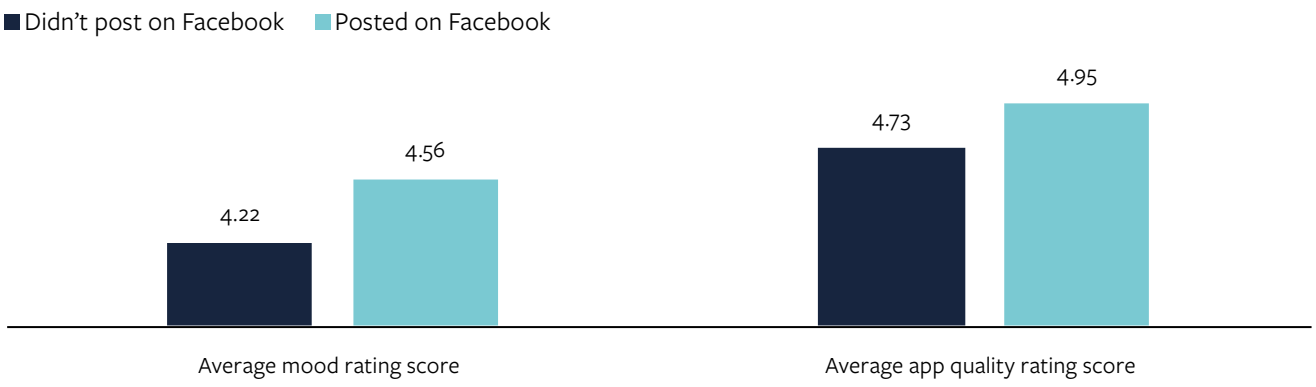
Using data from the MoodTracker+ app, we were able to measure the mood of those students who were most active in posting on Facebook (see Figure 12). We found that their mood was significantly better than the average for other students, and they rated the MoodTracker also better indicating that they were more engaged with (and positive about) the intervention.

Several factors could explain the differences by school. Some are in rural areas where students are less familiar with technology and digital approaches, such as social media. Some of the students may not have smartphones. The role of club leaders is also important – they were very active in some schools, reminding other students about the Facebook group and encouraging them to join its activities or using the app.

Table 12 Facebook group activities

School	Number of posters	Number of posts	Number of views	Number of comments	Number of reactions
Hưng Bình	1	6 photos of questionnaires	13	0	2 likes
Lê Viết Thuật (this FB group is public)	1 (only admin can post)	2 text statuses, 22 photos	N/A	>1800	>3000 likes
Nghi Lâm	1	8 photos of club activities	30	0	13 likes
Nghi Lộc 5	1	1 text status, 7 photos, 1 video clip of club activities	25	0	16 likes
Lam Sơn	1	1 text status, 14 handout files, 50 photos, 2 video clips of club activities	49	1	17 likes
Hà Huy Tập	3	7 text statuses, 9 handout files, 49 photos, 3 video clips of club activities	800	34	1100 likes
Nguyễn Huệ	2	3 text statuses, 4 handout files, 10 photos of club activities	108	0	8 likes
Nguyễn Thái Học	1	5 text statuses, 6 handout files, 79 photos, 12 video clips of club activities	188	5	50 likes

Figure 12 Average mood for students who posted or didn't post on Facebook (n=6 students posted on Facebook)



In contrast, the MoodTracker+ app was considerably more popular with 87 students across all the schools using it (see Table 13). Students from Lê Viết Thuật and Hà Huy Tập schools used the app the most based on various indicators in Table 13. In Lê Viết Thuật school alone, students logged into the app 1,199 times. In contrast, the app was not very popular among students from Hưng Bình and Nghi Lộc 5 schools, with only 7 and 4 students (respectively) using the app. Students logged into the app less than a dozen times in total in each school.

Testimonies from the students in the qualitative component of this study provide some indication of their perceptions of the MoodTracker+ app.

> 'Since I knew an application called MoodTracker+, I've used it as a diary. I often use it to write down my thoughts, my questions, irritations... I use it as a diary on my mobile phone.'
> (17-year-old boy, Vinh, who led intervention activities)

> 'In my opinion, since I joined the club, I have had the MoodTracker+ to share... diaries. When a friend feels pent-up and doesn't know whom to talk to, they can share there. Although it's just writing down their emotions, they can partially relieve what's stored inside.'
> (Participant in FGD with female students, Nha Trang)

> 'I quite like the technology solution because instead of... You know, normally, writing a diary is one method for mental release. Therefore, the app on the phone will substitute the diary. Phones will be more convenient and users can write comfortably in private. Generally, if my diary is revealed, my friends and my parents can read it. However, here on the app, only I know my own world, so I can relax, enjoy, express my heart, and record the stories of my day. That's why I find the application quite interesting.'
> (Participant in FGD with female students, Vinh)

Table 13 Activity in the MoodTracker+ app across schools (n=87 students)

	Hà Huy Tập	Hưng Bình	Lam Sơn	Lê Viết Thuật	Nghi Lâm	Nghi Lộc 5	Nguyễn Huệ	Nguyễn Thái Học
Number of students used the app	15	7	8	23	14	4	9	7
Number of times they logged in to the app	430	12	344	1199	467	10	136	388
Average mood rating (worst mood = 1, best mood = 6)	4.00	3.36	4.65	4.25	5.01	4.38	4.31	3.84
Average quality of the app rating (worst rating = 1, best rating = 5)	4.78	5.00	4.67	4.68	4.46	3.33	4.60	4.89

8.2.2 Changes in technology usage

According to the quantitative survey, access to technology did not change considerably between baseline and endline (see Figures 13 and 14). However, some adolescent participants in the qualitative component reported a decrease in their use of technology after participating in the intervention. They credit the shift to their efforts to limit screen time and use it more responsibly in order to avoid addiction and other harmful effects on their health. Others also spoke about limiting usage as the result of a 'desire for more face-to-face social engagement'.

> '[since the intervention] I usually use my phone in a way that's a bit regulated. I usually set a time for myself to use it. When the time is up, my phone rings and I will get up to do what I need to do.'
> (17-year-old girl, Nha Trang, who led intervention activities)

Interestingly, adolescent girls taking part in a focus group discussion in Vinh expressed rising interest in seeking psychology information online, despite a decrease in their use of technology.

The quantitative survey confirms this finding. The independent t-test comparing baseline and endline found a statistically significant increase in mental health information-seeking behaviour among the treatment group ($p<0.05$) but no change among the control group ($p>0.05$). This suggests that the intervention has had an effect on information-seeking behaviour.

Figure 13 Changes in technology usage among the treatment group

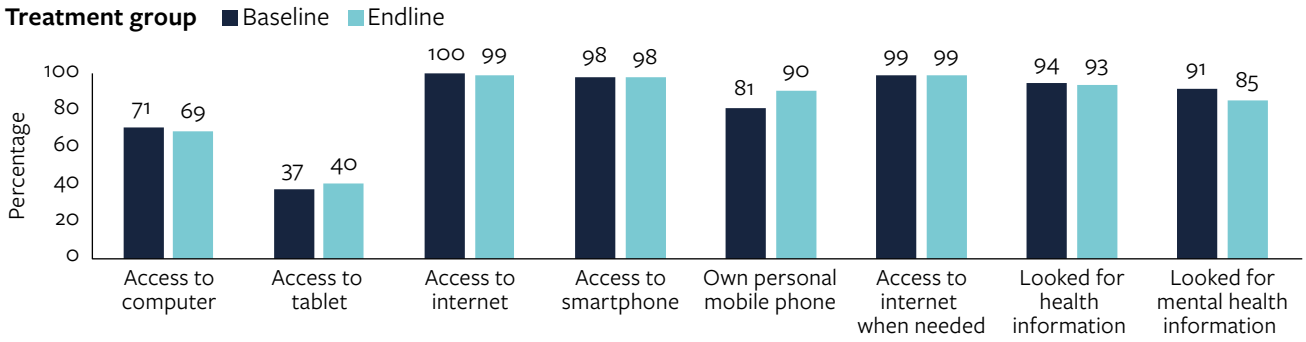
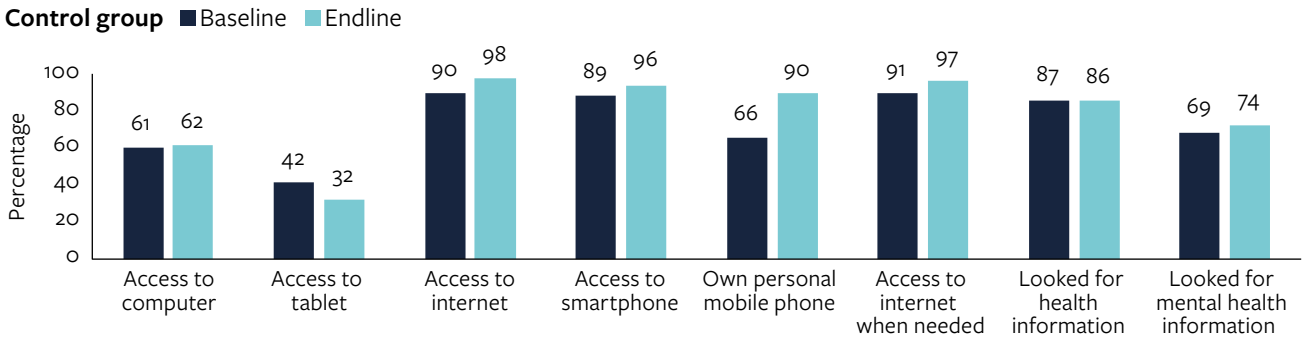


Figure 14 Changes in technology usage among the control group



A handful of mostly male adolescents and adult respondents (with no difference by site) also said, however, that their use of technology increased following the intervention because of the need for more 'online research' and social media participation (presumably referring to the Facebook groups and the MoodTracker+ app). More importantly, this surge in technology usage was attributed to an increase in mental health information-seeking behaviour. Some adolescents said that they looked up mental health topics on the internet to prepare for the club sessions and 'researched some of the mental health reference links supplied during the intervention sessions'. Meanwhile, several adolescents searched for more detailed knowledge about the symptoms of, and treatments for, mental health conditions or coping techniques.

> **'For example [the respondent searched online for] what is depression, or how to prevent school violence, or domestic violence, things like that.'**
> (17-year-old girl, Vinh)

> **'[the respondent searched online for] signs and symptoms to identify people with mental health problems, the definition of mental health problems, and whether I have mental disorders. How to interact with people with mental disorders, or something like that.'**
> (Participant in FGD with female students, Nha Trang)

One adolescent girl reported that since the intervention, she had used technology to help her friends with psychological problems and had become a reliable source of support for them through online interactions.

> **'Previously, I didn't... didn't use the internet much. But after participating in the programme, some of my friends had some problems. Their mentality was not stable at that time, so... I was online on the internet to support them. It's like I'm the one with whom they share and relieve their sadness.'**
> (15-year-old girl, Nha Trang)

Not only did adolescents look up mental health knowledge on websites, they also accessed social media platforms like Facebook groups as a source of information and support.

> **'I did improve in seeking sources of information. As in, I followed and engaged in more fan-pages on Facebook. I also joined a few Facebook pages and groups relating to my mental health.'**
> (17-year-old boy, Nha Trang)

A teacher in Vinh also noticed more students using technology to understand more about their own psychological problems, including how to deal with and how to explain those problems.

> **'It [technology usage] increases, using psychology... students use technology to solve psychological problems. Students learn how to apply it. In the past, students often paid little attention to reasons why they are like that.'**
> (Key informant, teacher, Vinh)

9 Conclusions and recommendations

9.1 Summary of findings

Our analysis of baseline and endline data allows us to draw various conclusions regarding the effects of the intervention among adolescent participants and those around them. Overall and across the board, the quantitative survey found that the intervention had a greater and more positive effect on boys and on students with a low socioeconomic status. These students started with a much lower baseline, and we observed very large improvements as a result of the intervention.

We first explored **mental health literacy** (Section 4) and found that the intervention had a statistically significant and positive effect on mental health literacy in both Nha Trang and Vinh, with this effect being particularly significant among boys, younger students aged 12–15, and especially among students with a low SES. However, statistically significant improvements in mental health literacy were observed in all SES groups.

In terms of **knowledge about what is good for mental health**, the quantitative survey found that the intervention had a statistically significant positive effect only among male students and among those with a low SES, while there were no statistically significant changes observed among female students or among students with a medium or high SES. In the qualitative study, nearly half of the adolescent respondents said that their general awareness and knowledge of mental health had improved after the intervention (as was also observed by teachers and their parents). In comparison with the quantitative study, more females reported this improvement than males, and they were predominantly from Vinh. The inconsistency may be due to girls having more awareness from the start, and this may have been confirmed or emphasised as part of the participation in the intervention.

In terms of **knowledge about mental health support programmes or services**, almost half of the adolescent respondents in the endline qualitative survey reported being aware of these, with psychiatric hospitals being the service mentioned most frequently. This type of mental health service was also mentioned most often during the baseline qualitative interviews. There was no evidence of any change in the level of knowledge of mental health services among endline qualitative study participants when compared to baseline. This may also be because sources of mental health service information were not covered in the intervention.

The quantitative survey investigated whether the intervention increased knowledge of where to seek information on mental health, finding that there was little or no effect overall, other than a statistically significant increase among students with a low SES. Similarly, the quantitative survey found little or no change in terms of an **improvement in attitudes towards mental health services among study participants,** except for – once again – a large and statistically significant improvement among students with a low SES. The qualitative results, however, showed that adolescents felt more empowered to use digital platforms to seek help.

The qualitative study explored **attitudes towards people with mental health problems**. Despite the intervention, stigma towards those with mental health problems appears to remain in the study sites according to both adolescent and adult

study participants. The reasons for its persistence, according to the participants, include lack of awareness or understanding of mental health/ ill health. Some respondents, however, perceived that stigma had decreased over time, and that people were more understanding and sympathetic to those experiencing mental illness.

In addition, nearly half of the adolescent respondents felt that the intervention had improved their own awareness of and attitudes towards people struggling with mental health challenges. At the same time, however, some adolescents reported that the intervention had little or no effect on other people's attitudes (and there was no significant difference by site). The reasons they gave for this included the intervention's limited reach and a lack of adequate information on the harmful effects of stigmatisation.

Despite improvements in mental health literacy among intervention participants, the intervention did not register statistically significant improvements on the **mental health of the participants themselves**. The results of the Strengths and Difficulties Questionnaire (SDQ) show that the intervention did not generate statistically significant effects on the incidence of **emotional problems**. However, the control group did show a statistically significant increase in emotional problems, suggesting that the intervention may have had a preventive or protective effect, especially among boys in Vinh.

The intervention also did not have a statistically significant effect on **behavioural and prosocial problems**, with little or no change observed in the treatment group, albeit with some exceptions, e.g. a reduction in behavioural problems among boys and those with a medium SES. The intervention also appears to have little or no effect on the well-being of the participants as measured by the **WHO-5 scale**, but once again, with the same exceptions. It may be that it was too soon to see gains from mental health literacy converted into improvements in participants' well-being.

The baseline and endline qualitative studies found similar **risks and drivers of mental ill health as well as protective factors.** The drivers included negative self-image, conflicts within the family, conflicts with and bullying among peers, and academic stress, with girls often more susceptible to these risk factors than boys. The protective factors were often mirror images of the drivers of mental ill health, and included being able to engage in leisure activities, having a strong family unit, having close friends and doing well academically.

The change reported most frequently as a result of the intervention, according to the endline qualitative study, was seen in adolescents' negative views of themselves, with some adolescents saying that they had changed and were able to resolve aspects about themselves that they disliked after the intervention. Some adolescents also reported that their relationships with parents and family members had improved. Others observed that their friendships had improved, and that their social interaction with peers had increased, with some saying that they had made new friends. When asked about changes related to other factors, such as academic pressure, most students reported that while the pressure to do well was still there (i.e. the driver had not changed), their ability to cope had changed as a result of the intervention.

Turning to **the effects of the intervention on coping strategies**, quantitative evidence based on the Kidcope scale indicates that the intervention had an effect, particularly on the use of avoidance coping strategies and expressive or emotional coping strategies. Although no statistically

significant changes were observed for **avoidance coping** at the scale level, analysis at the item level suggests that the intervention had a positive effect on this type of coping (e.g. a reduction in self-blaming or wishful thinking). The impact of the intervention on the use of **expressive or emotional coping** strategies is even clearer. The endline study showed that the intervention had the effect of significantly reducing or limiting the use of expressive or emotional coping strategies among the treatment group compared to the control group (particularly yelling, screaming, getting mad, or expressing signs of social withdrawal). No significant changes were observed in the use of **active coping mechanisms.**

The endline qualitative study identified a range of positive and negative coping strategies that was similar to that found in the baseline qualitative study. The positive strategies included talking to or confiding in someone (including parents, siblings, friends and teachers) and using diversions such as sports or music. On the negative strategies, adolescents spoke about avoidance (such as isolating themselves), engaging in risky behaviour (such as self-harm and suicide ideation), and being violent towards others.

The endline qualitative study found that the intervention has had an effect on reducing risky behaviours. For example, some adolescents who had previously self-harmed have turned to more positive coping strategies, such as talking to someone or challenging their own negative thoughts. Adolescents also noted that, as a result of the intervention, they are better able to regulate their emotions, manage stress and anxiety and to not lash out, and to be more empathetic and patient – echoing the results from the quantitative study. Finally, some respondents also mentioned that taking part in the intervention had resulted in them being more willing to seek help.

The final section explored the **role of technology in addressing mental health issues and the effects of the digital component** of the intervention. The vast majority of adolescent participants and adults in the qualitative and quantitative endline study in both Nha Trang and Vinh reported having phones – most of them smartphones. Access to computers and tablets was also mentioned by a good number of respondents. The most frequently cited use for these devices was for academic purposes, although more than 85% of adolescents in the quantitative survey had looked for health information in general, and more than 70% had looked for mental health information in particular.

The qualitative study asked respondents about the benefits of technology for mental health care. Responses included that it allowed people to access educational materials widely and in a quick and visually pleasing way; that it allowed people to access information anywhere at any time; and that it was time-saving and cost-effective, particularly for those who live far from mental health facilities. Anonymity and privacy were also mentioned as benefits.

Challenges with technology were also observed, however. These included the fact that not all young people have access to smart devices or internet connections because of the expense. There were also concerns about the reliability, legitimacy and effectiveness of information; a lack of technology-related skills, with some people missing out; and concerns around exposure to inappropriate online content, as well as invasions of privacy.

There was no notable change in the perception of participants about using technology to support mental health care between the baseline and endline qualitative studies. Most of the benefits

and challenges mentioned in the baseline interviews were also mentioned by participants after the implementation of the intervention. One suggestion that emerged from both the baseline and the endline qualitative study was the need for a blended approach that combines in-person and technology solutions to address mental health, with participants suggesting various ways in which this combined approach could be provided.

According to the quantitative survey, access to technology did not change considerably between baseline and endline, partly because access was already very high from the start. Mixed views emerged from the endline qualitative study, with some adolescents reporting a decrease in their use of technology after the intervention, as a result of concerns about addiction. However, a handful of mostly male adolescents and adult respondents said that their use of technology rose following the intervention, partly because of their need for more online research, including seeking out mental health information, and partly because of their participation in intervention activities (such as Facebook groups).

9.2 Participants' suggestions to improve the intervention, mental health awareness and service access

During our endline research, participants in the qualitative study made various suggestions to improve the intervention as well as broader recommendations to improve mental health awareness and service provision and access. The project team also made various suggestions based on their own observations over the course of the study and as a result of findings from the data collection.

Many respondents wanted the intervention to continue, with suggestions that the approach should also be scaled up to reach more schools. For this to happen, not only is there a need to find more mental health professionals or teachers to run the psychology clubs, but there is also a need to find more financial resources.

There was also a suggestion that the intervention could be implemented in other settings, such as women's and farmers' unions. While children were taking part in the intervention at school, their parents could take part in complementary activities and training through these unions.

Adolescents and adults (including teachers) called for more awareness-raising about the intervention within the schools themselves, among parents and carers and more widely, making the following suggestions:

- run a school-wide campaign to attract more participation
- affiliate/group the clubs and link them with other schools
- carry out exchanges ('outings') between schools on this topic
- showcase the intervention through, for example, films and photos.

Ways to improve the intervention were also proposed and included:

- the increased involvement of parents or carers and, potentially, the inclusion of training on parenting practices
- an enhanced digital component, with a more eye-catching app and more online platforms such as online forums and anonymous blog posts

- additional components for the in-person sessions, such as more outdoor activities – i.e. games, and the integration of mental health knowledge into these games
- the targeting of areas and students with particular needs, including those with a low academic performance.

Suggestions were made to improve the logistics of the intervention, including:

- have students from one class, rather than different classes, taking part in the intervention, which could make the group more cohesive
- ensure the presence of a good facilitator – there were mixed views on this; whereas some wanted a professional psychologist to facilitate the sessions, others suggested that the facilitator should be a teacher, as the students would be more likely to listen to them and attend the sessions when called, etc.
- consider running the intervention at the weekend (on Sunday morning or afternoon) so it can be separated more clearly from school and so that the sessions can last longer
- run the outdoor activities on a Friday afternoon to attract more people
- review the frequency of the intervention, including exploring whether it is feasible to run it every week and whether this might increase retention and reduce dropout.

At a broader level, there were recommendations to continue to raise awareness and provide information on mental health including through:

- the increased provision of handbooks, documents, online information and videos
- talk shows in school assemblies and other school-related events targeting students
- awareness-raising and activities related to mental health services for students and, importantly, at the local or commune level (including the possibility of training on parenting skills as mentioned above)
- the promulgation and promotion of mental health lessons by the Ministry of Education and their eventual inclusion in the curriculum.

Also at the broader level, recommendations emerged around increasing the availability of free mental health services, particularly outside cities and targeting youth. These included:

- Online services (as mentioned mostly by adolescents), which included:
  - more fan pages on Facebook, which could either be created and curated by mental health experts or managed by students, drawing on the mental health knowledge provided by the experts
  - regular and entertaining online shows on mental health, including through YouTube
  - greater use of the MoodTracker+ application (developed for this intervention), which was seen as an interesting app that could be used as a diary and could also be extended for use to students who are not part of a club but who are facing difficulties
  - using TikTok to raise awareness: adults mentioned an existing TikTok show called 'adolescent voice', which was listened to by both parents and teachers
  - setting up a telephone hotline to provide mental health services
  - online counselling
  - using radio to promote awareness.
- In-person or place-based mental health services (as mentioned by both adolescents and adults), including:
  - having a 'go-to person' who could provide one-to-one mental health advice, if requested:

some respondents felt that this should be a mental health professional; others mentioned that this could be a teacher; others said that the person should be from inside the school, rather than an outsider
  - having a place at school where students can share their challenges in a confidential manner
  - having more fun activities, which would help mental health indirectly, such as volunteering, outdoor activities, and having groups where people with the same hobbies can gather and share their perspectives.
- Blended approaches to combine both digital and in-person activities were mentioned – with each approach supporting and building on the other.

It was observed that supply-side inputs would be needed to provide the services recommended by the participants in this study. The suggestions included:

- more training, including a focus on youth for those already providing psychological services
- increasing the number of people providing mental health services
- regulating and systematising the provision of mental health support, including through schools
- exploring ways to embed psychology clubs within the school curriculum.

At a broader level, it was proposed that the awareness of mental health services and their provision, particularly for adolescents, needs to go beyond hospital environments and out into the community through schools and district health facilities. This will also allow for the wider promotion and sharing of knowledge and information about mental health.

9.3 Next steps and sustainability

In this section we explore interest in continuing the intervention, as expressed by the schools, school boards and wider authorities, based on the responses and perceptions of our key informants. A handful of teachers interviewed in the schools in both areas where the intervention took place indicated **positive interest from the school in the programme**. One teacher in Nha Trang, for example, described a willingness to 'collaborate and support because they see that the students have a great potential for participation', while another suggested that their school wanted to 'organise a sharing session for the whole school' and 'to replicate the programme's activities' (particularly those that also involve parents, because they perceived conflicts between parents and children as an area to be addressed). One headteacher also indicated that they were 'personally' invested in the results of the intervention.

Respondents had mixed views when asked about **commitments at levels higher than that of schools, such as the school board level**. A few key informants indicated that there was support at this level because of a commitment to 'mental health nurturing' and 'extra-curricular events'. Another key informant mentioned that while they might be supportive, whether they will keep their word remains to be seen.

There were also mixed views on **commitments to the intervention from local authorities**. One local authority representative claimed that they would support the programme 'with full force'; however, they also suggested that the intervention required support from other governmental departments. Other key informants, however, were more sceptical, saying that they had seen no interest from the authorities in the intervention so far, that the local government 'is

not aware of this project' and that they 'won't see anything special in this project'. One key informant said that no organisations are committed to sponsoring the intervention because 'the scope of the programme... is small' and it 'has not [been] implemented in outside society so they... have not recognised the impact'.

There were very few responses on perceptions on whether external funders might be in a position to fund this intervention in the future. A few key informants noted that they 'don't collaborate with NGOs', working instead with state departments as part of state targets. However, one key informant suggested that if a mobile app was implemented, then the 'Youth Union', the 'Provincial Counsel of the Ho Chi Minh Young Pioneers Organisation (HYPO)', and the 'Provincial College Students Association' may be willing to help.

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