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Winning the Game

How Sport for Development supports the psychological well-being of adolescent refugees

A case study from Greece

BARÇA FOUNDATION & unicef

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Contents

Executive Summary

Since the year 2000, UNICEF has advocated for the role of sport, recreation and play in child development from early childhood to adolescence. During the initial stages of UNICEF's involvement in the field of sport for development (S4D), the potential benefits of sport were verified by research as summarized in the UNICEF report *Sport, Recreation and Play* (2004). In 2006, a pioneering partnership was signed between UNICEF, the Barcelona Football Club (FC Barcelona) and the FC Barcelona Foundation (Barça Foundation). Since then, over four million children in seven countries have been reached through UNICEF programme support and humanitarian action, amounting to over €22 million. The partners' focus has been to improve children's lives through sport, play, education and protection.

Through the partnership, UNICEF Innocenti[1] launched the first phase of the research: *Getting into the Game* (2021a) exploring the global literature on sports' impact on children. Findings suggest that sport, when appropriately delivered, can be a positive factor in four key areas: education, social inclusion, child protection and empowerment. Building on the initial research, the second phase, *Playing the Game* (2021b) drew on ten qualitative in-depth case studies with S4D organizations from different contexts around the world to develop an evidence-based framework for S4D programming targeting children and youth.

This third phase, *Winning the Game*, closes the circle by looking at how S4D can be used to improve the mental health of programme participants, therefore focusing on a crucial outcome of psychological well-being. Here, 'winning' is not determined by a score or through competition, but by participation: how engagement with peers through S4D may improve personal and social skills that play out – on a pitch, court, or wherever S4D takes place, and beyond. By focusing on a programme implemented with refugee adolescents in Greece, the study collects qualitative and quantitative data to understand how S4D and mental health are linked. The findings and lessons learned aim to speak globally to all S4D organizations, as well as policymakers and donors aiming to harness the power of sport to reach social development goals.

Key findings

- Over one quarter of adolescent refugees surveyed were flagged for mental health issues, yet they scored fairly high in surveyed dimensions related to positive psychological well-being
- Key successful S4D programmatic mechanisms include:
  - An appealing session structure that provides a balance of movement and reflection
  - Supportive, trustworthy coaches and organizational staff
  - A physically and emotionally safe/secure environment and atmosphere
- When adolescent refugees participate consistently, they report feeling enjoyment, safety, and a sense of belonging through S4D; in turn, they display positive behaviours in and out of sessions

1 UNICEF Innocenti was formerly known as 'UNICEF Office of Research – Innocenti' and since 2022 has been known as 'UNICEF Innocenti – Global Office of Research and Foresight'.

Recommendations[2]

S4D organizations can improve the effectiveness of their programming for refugees by:

1. Ensuring language translation during a session so all participants receive the same messaging.

Participants will miss important lessons if they do not understand the conversations taking place. Recruiting assistants or coaches to support in language translation could better support participants while providing someone from the camp community with an opportunity to (further) develop their skill set or a potential career pathway.

2. Providing adequate information-sharing between implementing staff/coaches and caregivers.

Staff need to give caregivers a clear description of the S4D programme, including expectations, session structure and safety measures; in return, caregivers can become great allies to staff and coaches in reinforcing the values and positive behaviours learned through S4D.

3. Providing frequent training opportunities to coaches from the displaced community.

Refugee coaches join for several reasons, including their love of sport, working with participants, interest in the programme etc. Training on S4D methodology and psychological well-being needs to take place often, given the turnover of camp residents, including coaches and participants. Options for training may include face-to-face, a training of trainers, or outsourcing to other organizations that have a comparative advantage (such as mental health professionals supporting S4D and S4D professionals demonstrating sport interventions in supporting mental health).

4. Developing an explicit gender strategy that addresses the barriers preventing girls and women from participating in sport-based programming.

For young women and men to feel comfortable participating in S4D, create a space that is welcoming for all participants. This may be done by, for example, involving more female coaches, coupling sessions with educational support, or addressing other barriers that prevent participants (especially females) from joining.

5. Increasing efforts at integration among refugee and local adolescents.

Arranging games and/or S4D sessions provides an opportunity for local players and refugee players to mix teams, which may encourage inclusion and teamwork. The time spent engaged in sport may contribute to participants finding similarities, rather than differences from one another.

6. Establishing a 'sports library' facility.

Sports shoes, clothing and equipment are not always available to refugee participants. An established place for borrowing these materials not only prevents injury by making sure these players are properly equipped, but is a signalling mechanism to others that they belong.

Governments and donors can harness the power of S4D by:

1. Advocating and supporting S4D programmes as a key tool for adolescent well-being.

This report contributes to a growing body of evidence demonstrating how S4D contributes to physical and mental well-being in multiple ways. Sport should be seen as a key intervention that contributes to social, educational and health-related outcomes. It can also play a role in building peace and stability among young people who may otherwise lack positive experiences in their lives.

2. Making longer-term investments to support what the targeted population needs.

Monitoring, evaluation and learning (MEL) requires resources, but is essential for programmes to be effective. MEL informs on what works and what does not, and how to increase programme resiliency and guide scale-up efforts.

3. Facilitating improved coordination and clear communication among organizations that support (young) refugees.

S4D cuts across technical areas and policy spheres (e.g. education, health, protection etc.). Formal and informal coordination mechanisms need to be optimized to ensure that S4D receives proper consideration.

2 More details and guidance can be found at the end of this report on page 40

Introduction

For adolescents whose lives have been uprooted, Sport for Development (S4D) programmes can play a role in improving their psychological well-being. This study aims to show **what mental health can look like for refugee adolescents** ages 11–19,[3] and understand the process through which their participation in an S4D programme may affect their well-being. The focus is not only on mental health outcomes but also on the intervening **mechanisms** and the implementation modalities that bring about positive change.

By studying the Barça Foundation's S4D programme, SportNet[4], the research builds a mental health profile of adolescent refugees who participated in the programme during the summer of 2022 in two locations in Greece: Athens[5] and the island of Lesvos[6]. Data were collected through a mental health survey, session observations, and qualitative interviews with programme participants, their parents/caregivers[7], coaches and implementing staff. The results have implications for S4D organizations that want to improve their programming (especially those working with adolescent refugees) as well as governments and donors that support S4D.

Box 1. Key definitions

Adolescents refers to those between the ages of 10 and 19. Adolescents experience a transition period between childhood and adulthood and with it, significant growth and development. As children up to the age of 18, most adolescents are protected under the Convention on the Rights of the Child. *UNICEF Data*

Asylum-seekers are people whose request for sanctuary has yet to be processed. *UNHCR*

Mental Health and Psychosocial Support (MHPSS) refers to any type of local or outside support that aims to protect or promote psychosocial well-being and/or prevent or treat mental health conditions *UNICEF* (adoption of Inter-Agency Standing Committee Guidelines)

Refugees are persons who are outside their country of origin for reasons of feared persecution, conflict, generalized violence, or other circumstances that have seriously disturbed public order and, as a result, require international protection. *UNHCR*

Sport for Development (S4D) refers to the use of sport, or any form of physical activity, to provide both children and adults with the opportunity to achieve their full potential through programmes that promote personal and social development. *UNICEF Innocenti*

3 The focus on 11–19-year-olds captures the nexus of the UNICEF definition for adolescents and the ages of participants in the S4D programme.

4 The SportNet methodology was previously known as FutbolNet.

5 Implemented by the organization CHEERing.

6 Implemented by the organization Movement on the Ground.

7 For the rest of this report, the term 'caregivers' will be used as a catch-all term to refer to parents and caregivers.

1. How this study conceptualizes mental health and psychological well-being among adolescents

Mental health is a complex field of study and terminology is often imprecise and overlapping. In essence there is a division between language referring to the prevention, detection and treatment of ill-being (commonly known as disorders) versus that relating to the promotion of positive aspects of well-being. In this study, to understand the 'mental health' profile of adolescents, we cover both ill-being and well-being: ill-being indicating symptoms and difficulties with mental health, often relating to life stressors and traumas (Rapley et al., 2011); well-being indicating the presence of positive mental health and wellness (Antonovsky, 1987). To understand the role of S4D, we focus on the positive contributions and refer to 'psychological well-being'.

1.1 Ill-being symptoms and difficulties

Most mental health difficulties emerge during adolescence: half of all lifetime mental health difficulties are established by age 14, and 75 per cent by age 24 (Kessler et al., 2005). When left untreated, mental health difficulties can cause enormous personal and family suffering and impair role functioning, decrease adherence to treatments, and lower educational attainments (Davidson et al., 2015; Gore et al., 2011). Building emotional resilience in adolescence can delay the onset and mitigate future deleterious impact (Skrove et al., 2013).

Mental health problems in children and young people represent a major burden in relation to impact on health and quality of life (Baranne and Falissard, 2018). Globally, it is estimated that 15 per cent of children and adolescents have a mental health difficulty (Polanczyk et al., 2015). Depression and anxiety among young people are considered a major global challenge (Patton et al., 2016). In the 2012 World Health Organization's (WHO) global community consultation with adolescents, mental health was the most important problem reported by adolescents (WHO, 2015). Up to 40 per cent of children experience mental distress that impacts on everyday life (Downey, 2003).

There are several common mental health difficulties among children and young people. Estimates suggest these difficulties are experienced by between 1 in 30 and 1 in 16 5–17-year-olds; however the rates are likely higher in reality, owing to limitations in the research data (Erskine et al., 2017). Common difficulties include depression, anxiety, post-traumatic stress disorder, eating difficulties including anorexia and bulimia, conduct disorders typified by antisocial behaviour, and attention deficit disorders sometimes including hyperactivity. Some difficulties have observable signs, including withdrawal, lack of engagement and/or emotional expression, aggression, anger, inability to concentrate, and difficulties in social relationships with peers and adults. However, many experiences of mental distress are internal, including feeling low or anxious and engaging in rumination or worry, and cannot be inferred from behaviour (Henley and Robinson, 2011). Typically, girls are more likely to exhibit internalized symptoms of distress whereas expressions of anger and aggression are more common in boys (Arakelyan and Ager, 2021).

The diagnosis of mental health difficulties in children is not without its critics. Some are concerned about possible overdiagnosis and overuse of medications with children (Merten et al., 2017). Others point to the impact of family and context as needing attention, rather than locating the problem in the child through use of diagnosis

(Behere et al., 2017). Some argue that diagnoses pathologize a normal reaction to difficult circumstances (Price-Robertson, 2018). Finally, although the current Diagnostic and Statistical Manual (which provides criteria for diagnoses) includes the importance of considering culture, societal influences and differences in experience and expression of mental health difficulties are still not well integrated (Thornton, 2017). Understanding the experience of mental health for children and young people from around the world requires a conceptualization broader than diagnostic categories.

1.2 Well-being characteristics

Good mental health is characterized by coping with normal stressors in life and continuing to function well. This includes having a positive sense of self, others and the future; experiencing positive emotions; engaging in behaviours that are adaptive; and maintaining family and social relationships (Fusar-Poli et al., 2020). Holistic understanding of someone's mental state includes a consideration of these positive constructs (Bolier et al., 2013). Rather than experiences of symptoms, outcomes include self-esteem, hope, self-worth, social relationships and strengths (Compas and Millstein, 1993).

For adolescents, mental well-being covers a sense of connectedness to others, being pro-social and engaged in activities, living in a safe and supportive environment, having opportunities to learn and work, and having a positive sense of self and purpose (Ross et al., 2020). Significant resilience has been observed among young refugees and asylum-seekers (Foka et al., 2021; Marshall et al., 2016). These young people can experience elements of positive mental health despite the trauma that has disrupted their development.

2. How adolescence affects us, and becomes more complex in displacement

2.1 Mental health during physical and psychological transition

Grounding this study in a life-course perspective gives depth to the added-on challenges that refugee adolescents face. Regardless of anyone's life circumstances, the period of adolescence can be a highly emotional and turbulent time, even in stable situations. Through phases of growth and development, mental health evolves, is complex, and is influenced by a multitude of biological and social factors. UNICEF research (Richardson et al., 2021) shows that a person's 'core capacities' – or life skills and competences – develop over the early part of the life course, through childhood and adolescence, contributing to their well-being and development.

Studies show that there are similarities across cultures that can play a role in mental health, even while the transition period of childhood to adulthood differs hugely in different contexts (Watters, 2017). For example, from infancy, engagement with primary caregivers can be crucial in the later development of positive psychological well-being (Bornstein, 2013). Further, as children develop, so do their cognitive abilities and social relationships with friends and others (e.g. teachers, coaches etc.) outside the immediate family; young children begin to understand themselves and interact with their peers in an increasingly sophisticated manner, both positively and negatively (Hay et al., 2004). The start of adolescence brings

major changes through puberty, shifts in the importance of different social relationships, and major neurological developments that underpin behavioural and emotional changes (Dahl et al., 2018). Adolescents are expected to develop some degree of autonomy from their families. This can be a challenging time for any young person, negotiating independence while still needing social and familial support (Dahl et al., 2018).

2.2 The added challenge of being a refugee during this period of life

Human development is universal, but adolescent refugees face additional difficulties contributing to a unique sense of 'normalcy'. Various push and pull factors influence a person (or their family) to leave their home, their support systems and familial environments. Although the reasons may vary, there are common milestones involved in leaving one's home country to resettlement.[8] For those seeking asylum, Fazel and Stein (2002) focused on three primary stages a person goes through, exposing them to various stressors that may affect their psychological well-being: 1) in their country of origin; 2) on their journey to safety; and 3) when resettling in a country of refuge (for the purposes of this study, their life in camp).

When the 'refugee crisis' in Europe began, United Nations High Commissioner for Refugees (UNHCR) and International Organization for Migration (IOM) stated that persecution, conflict and poverty forced over one million people to flee to Europe in 2015 (UNHCR and IOM, 2015). UNICEF and other organizations have called for specific actions to protect all refugee and migrant children (including adolescents). As of the publishing of this paper, the situation remains dynamic, but the reasons why people seek refuge in other countries remain the same (such as war, violence and poverty). Lustig et al. (2004) found that among child and adolescent refugees who suffer from significant conflict-related exposures, reactions to stress may be mediated by coping strategies, belief systems and social relations.

But the development of psychological consequences due to conflict depends on the stage of the exposure, the length of the conflict, and contextual factors (Piñeros-Ortiz et al., 2021). However, in some cases, hope remained as a motivating factor to move ahead (Koikkalainen et al., 2019).

Once a person leaves, their journey to safety is often not a linear process of emigrating from their country of origin to a receiving country (Innes, 2015). As reported by the IOM: "migration is increasingly multidirectional, frequently involving return to countries of origin for short or long periods of stay, often followed by back-and-forth movement between two or more countries, or migration onward to new destinations". For many people arriving in Greece, the sea crossing is just the final step in a journey that has involved travel through conflict zones or deserts, the danger of kidnapping and torture for ransom, and the threat from human traffickers (UNHCR, 2019). Other reports document that refugees fleeing war and threats continued to experience violence during their journeys (Ben Farhat et al., 2018).

Exposure to violence can happen at any point on a person's journey, but victims may not have an opportunity to seek help or care until they arrive in a refugee camp. A recent study using data collected by Médecins Sans Frontières in Lesvos, Greece found that over half the reported violent incidents occurred in transit (Belanteri et al., 2020). Additionally, the organization Médecins du Monde (MDM), which was consulted for this

8 For the purposes of this study, the term 'resettlement' is used to refer to the current state of people living in in camps and is considered temporary with the aim of moving ahead.

study (January 2022) revealed that sexual violence and the complexity of reporting incidents is common throughout refugee camps in Greece, including the Mavrovouni camp in Lesvos. Beyond physical medical support, the need for mental health care often exceeds the capacity of available mental care services (Belanteri et al., 2020; MDM, 2022).

Another cause of ongoing stress for young refugees and their families is the asylum process itself. Uncertainty around legal aspects and a lack of transparent information or feedback on application status are often sources of frustration. This protracted process and lack of communication can only exacerbate the distress experienced by refugees. As a culmination of all these factors, young refugees find paths of resiliency, but can experience psychological difficulties, including post-traumatic stress disorder, depression, anxiety and grief (Möhlen et al., 2005; Kalantari et al., 2012).

3. How sport for development can improve the psychological well-being of refugee adolescents

3.1 The potential of S4D's influence on well-being

S4D programmes use sport to achieve a variety of aims, including those linked to the Sustainable Development Goals (SDGs), including SDG 3 (good health and well-being), SDG 4 (inclusive and equitable quality education), SDG 5 (gender equality), SDG 10 (reduced inequalities), and SDG 16 (peaceful and inclusive societies). Additionally, the Convention on the Rights of the Child[9] recognizes that **every child has the right** to rest, relax, play and take part in cultural and creative activities.

Evidence from the literature shows that sport-based interventions contribute to the realization of human rights and global goals in a variety of ways, including research on the links between physical activity, sports and mental health and well-being outcomes (Sabe et al., 2022; Hamilton et al., 2016; Purgato et al., 2021; Wells et al., 2019). Studies have demonstrated that leisure and engagement in fun is essential to young people's development and their psychological well-being (Gadais et al., 2021) and that it contributes to self-development through the acquisition of soft and hard skills (Calmeiro et al., 2021).

As documented in *Getting into the Game* (UNICEF, 2021b), S4D can be used to promote **education, social inclusion, child protection and empowerment** as well as a variety of other important aspects in the life of a child or adolescent. Although the evidence is building, there is a need for more studies to measure the contribution of S4D to well-being though evidence from participants, coaches and caregivers collected by S4D organizations.

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9 Article 31 of the Convention on the Rights of the Child (CRC)

3.2 S4D in displaced settings

It is possible for S4D programmes to tackle different aspects of psychological well-being, either explicitly as a programmatic goal or implicitly through engagement. Based on work from multiple organizations (UNICEF, 2021b; UNHCR, IOC and Tdh, 2018; GiZ, 2017 and 2019) S4D in refugee camps or other displaced settings often incorporates different programmatic objectives, including:

- Personal and social development
- Protection
- Social inclusion and cohesion
- Health (physical and mental)

Sport-based interventions may shape the way individuals perceive and experience their own **mental health** and psychological well-being. **Physical activity** (including sport) has been shown to have positive impacts on how one relates to symptoms of depression, anxiety and post-traumatic stress (Rosenbaum et al., 2021). In different areas of their life, refugee adolescents may cope or try to manage upsetting emotions and memories by avoiding people and places (Mohamed and Thomas, 2017); but **participation** in sport-based interventions may counteract this by increasing participants' **social well-being** (Koopmans and Doidge, 2022). This happens through interaction, reduced isolation and a respite from unpleasant thoughts or 'rumination' (Ley and Barrio, 2019).

Developing social skills and building relationships is important for all adolescents, and sport-based interventions may contribute to **personal skill development** as well. Research shows impacts on young people's emotional management, their perceptions of themselves including self-confidence, perceptions of their future, and their sense of safety and opportunity in their environment (Bara et al., 2018; Koopmans and Doidge, 2022; Ley and Barrio, 2019; Paskevice et al., 2021). Additionally, participants may acquire **coping skills**, because things do not always go as they would like but they must react and get back in the game. An impact evaluation of a S4D programme in Pakistan documented that participation **reduces depression** (Karmaliani et al., 2020) while another study of an intervention in Iraq identified that S4D contributes to **social cohesion** among participants (Mousa, 2020).

Evidence shows that **protection** can be provided in multiple ways. Access to a **safe space** is fundamental for the well-being of refugee participants, so they can benefit from peer support, share feelings and freely express themselves (Marshall et al., 2022). The **supportive relationships** established with peers and adults (coaches) have also been qualified as protective factors contributing to resilience and equipping young people to deal with stress and reactions to trauma exposure (Henley et al., 2008). The result is that sessions may help refugees deal with a number of challenges and provide a break from their day-to-day lives, offering time away from stressors and negative feelings so that focusing on a game serves a stress release function (GiZ, 2017).

As adults and leaders of the sessions, coaches play a crucial role in ensuring that the experience is conducive to improved well-being for children and adolescents (UNICEF, 2021b). A review (Drožđek and Wenzel, 2018) of the role of coaches in trauma-sensitive interventions identifies a series of good practices for coaches:

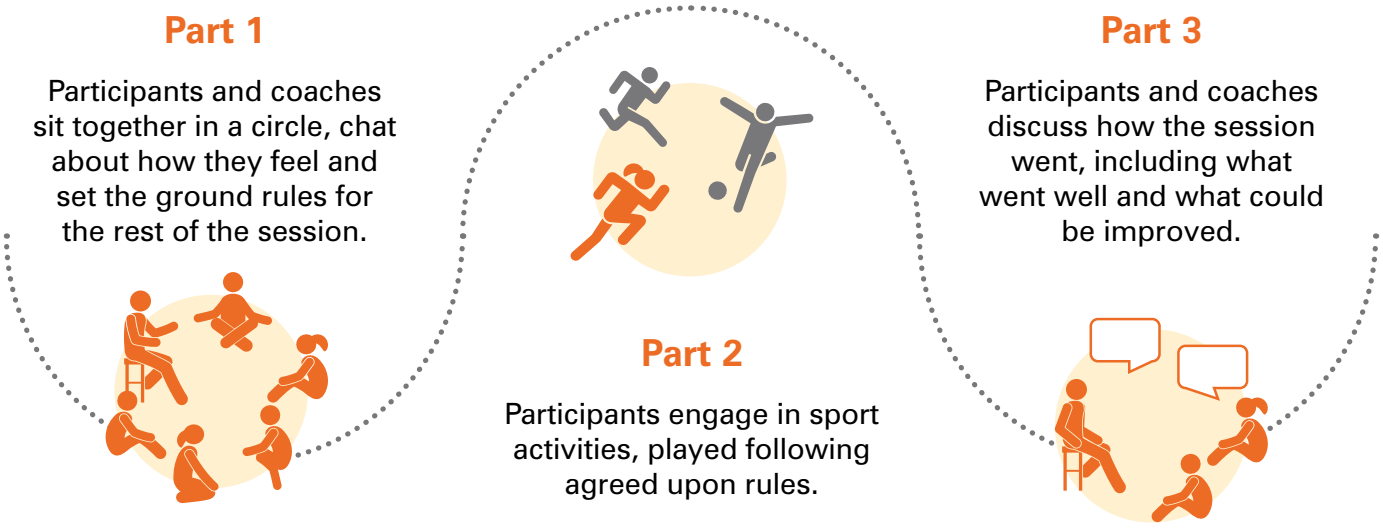
- Stimulate sense of safety – identify stressors, create safe space
- Identify and react to behaviour connected to trauma
- Identify, promote, activate skills and strengths of participants
- Keep session balanced, not too busy and not too boring
- Engage participants but without forcing
- Stimulate reflection and introspection
- Adequate communication

Study focus: The S4D intervention

The SportNet methodology has a three-part structure (see Figure 1 below). In the first part, children and coaches sit together in a circle, chat about how they feel and set the ground rules for the rest of the session. In the second part participants engage in sport activities following the agreed upon rules. In the final part, children and coaches discuss how the session went, including what went well and what could be improved. All sessions revolve around five core values: humility, effort, ambition, respect and teamwork. The game, played according to its rules, aims to make the children experience these values, and the discussion afterwards is intended to make them reflect on these values.

This S4D programme targets children from vulnerable groups such as unaccompanied minors, refugees, children with disabilities and children living in difficult and violent contexts. The methodology is used to promote a culture of cooperation, to give children an opportunity for integration, and to acquire life skills and values that will help them be successful in life.

Figure 1. The SportNet methodology uses this three-part structure



All sessions revolve around the five core values of **Humility, Effort, Ambition, Respect and Teamwork.**

Research questions, methods, data and design

1. Research questions

Based on the literature and findings from previous research, this study asks:

- **What is the mental health profile of adolescents in refugee camps in Greece?**
- **What are the key mechanisms in an S4D programme that influence the psychological well-being of adolescent refugees?**

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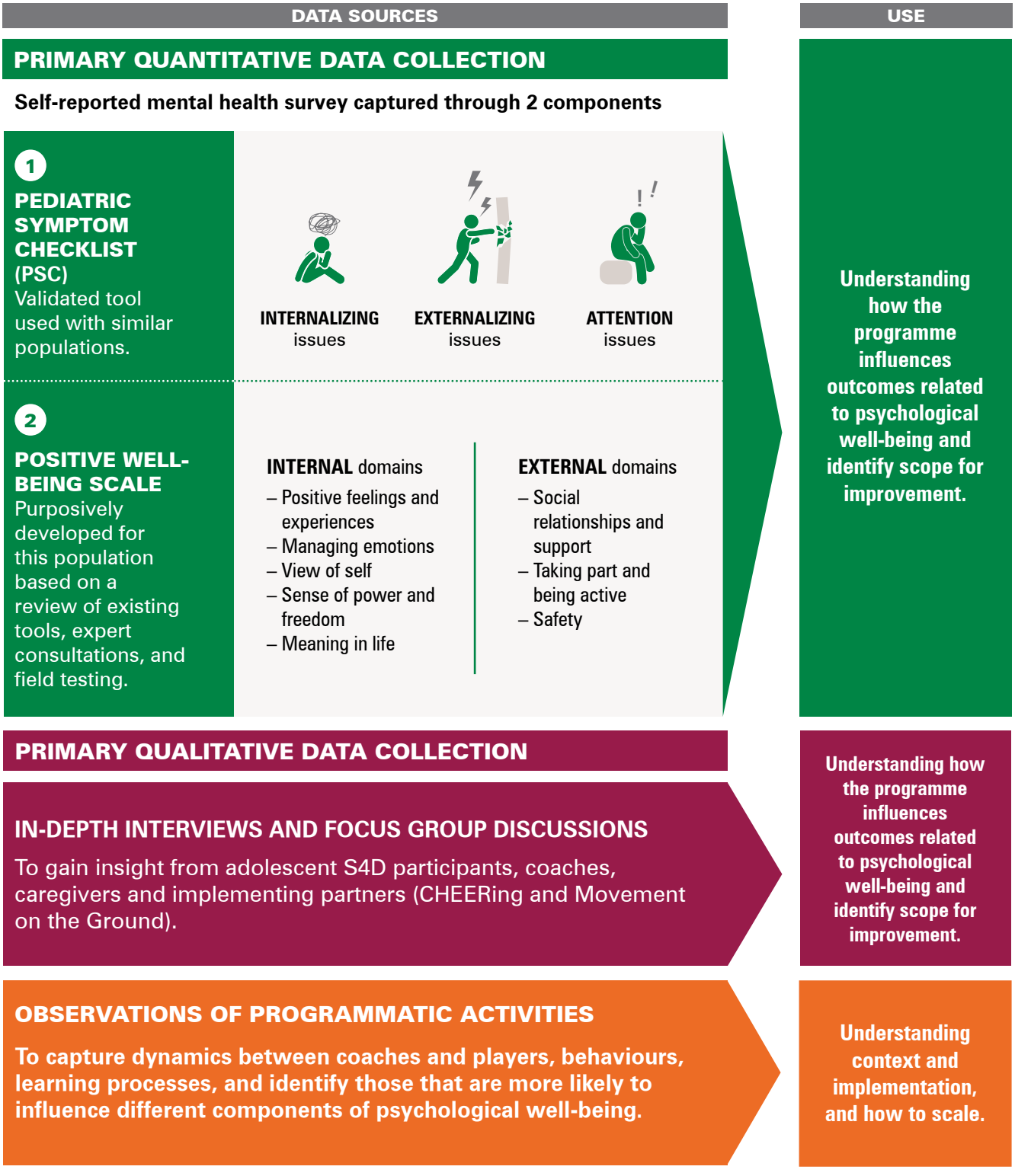
2. Methodology

This study used mixed methods, combining quantitative and qualitative analysis to understand the mental health status of refugee adolescents and how S4D may contribute positively to their psychological well-being (see Figure 2). Quantitative and qualitative data collection took place in parallel in two locations in Greece (Athens and the island of Lesvos) to ensure a comparative element could be considered in the analysis.

Figure 2. Data collection and sample



SAMPLE

PRIMARY QUANTITATIVE DATA COLLECTION

MENTAL HEALTH
Survey data collected with

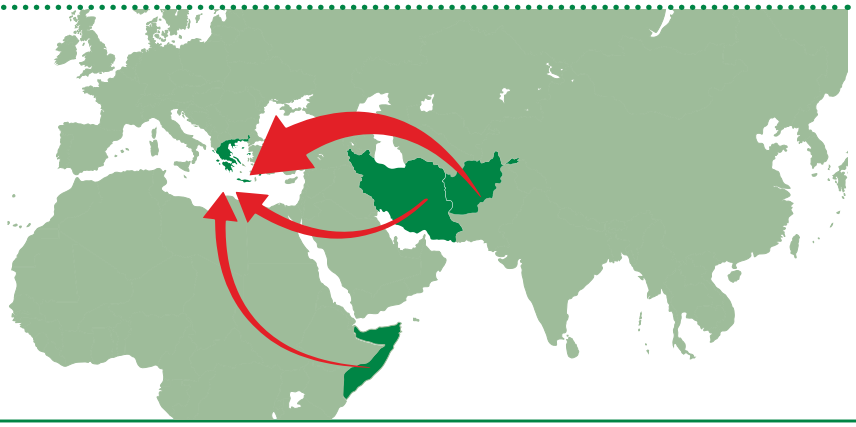
90 ADOLESCENT S4D participants

72 surveyed in Athens, 18 in Lesvos

Ages 11-19,
average age 14

46% FEMALES

89% of respondents were from Afghanistan, others came from Iran and Somalia



The designations employed in the maps contained in this report do not imply on the part of UNICEF the expression of any opinion whatsoever concerning the legal status of any country or territory, or of its authorities or the delimitations of its frontiers.

PRIMARY QUALITATIVE DATA COLLECTION

In-depth interviews (IDIs) and **focus group discussions** (FGDs) with

62 respondents

IDIs

4 Implementing Partners (CHEERing and Movement on the Ground)

6 coaches

11 caregivers

19 adolescent S4D participants

FGDs

2 with caregivers

4 with adolescent S4D participants

OBSERVATIONS OF PROGRAMMATIC ACTIVITIES

17 SESSION OBSERVATIONS

On average,
25 adolescents participated
2-4 coaches in each session

3. Tool development and analysis

3.1 Mental health tool

The **mental health tool** aims to capture a comprehensive picture of ill-being and well-being among refugee adolescents. Therefore, two components were used in the study: the **Pediatric Symptom Checklist (PSC)** (Jellinek et al., 1999) **and positive well-being scale.** Several stages led to the final tool development, which first included a rapid review of the literature to identify existing tools that could be used independently or in combination with the design of new tools. The review of literature and existing measures focused on the topics covered by this research project: the mental health of young people who are refugees receiving a S4D intervention. The findings were used to create a list of areas to be measured by the tool, to create a framework (see Figure 3).

Existing measures were listed and reviewed. The research team found that the PSC, a validated tool, translated into multiple languages and used with similar populations would be useful to capture ill-being. It identifies general psychosocial issues among children and adolescents, assessing externalizing, internalizing and attention issues. However, although there are many existing measures, there is no single measure that covers the positive mental health concepts that are most relevant to this study's population and to sport interventions in refugee settings. Through expert consultations with mental health professionals, the study team composed a new component to complement the information gathered through the PSC: the positive well-being scale, using and reframing questions from existing tools. The combination of an existing measure (PSC) and derivation of a new measure (positive well-being scale) was undertaken to create the final tool to be piloted (see Annex 1 for detailed tool development procedure).

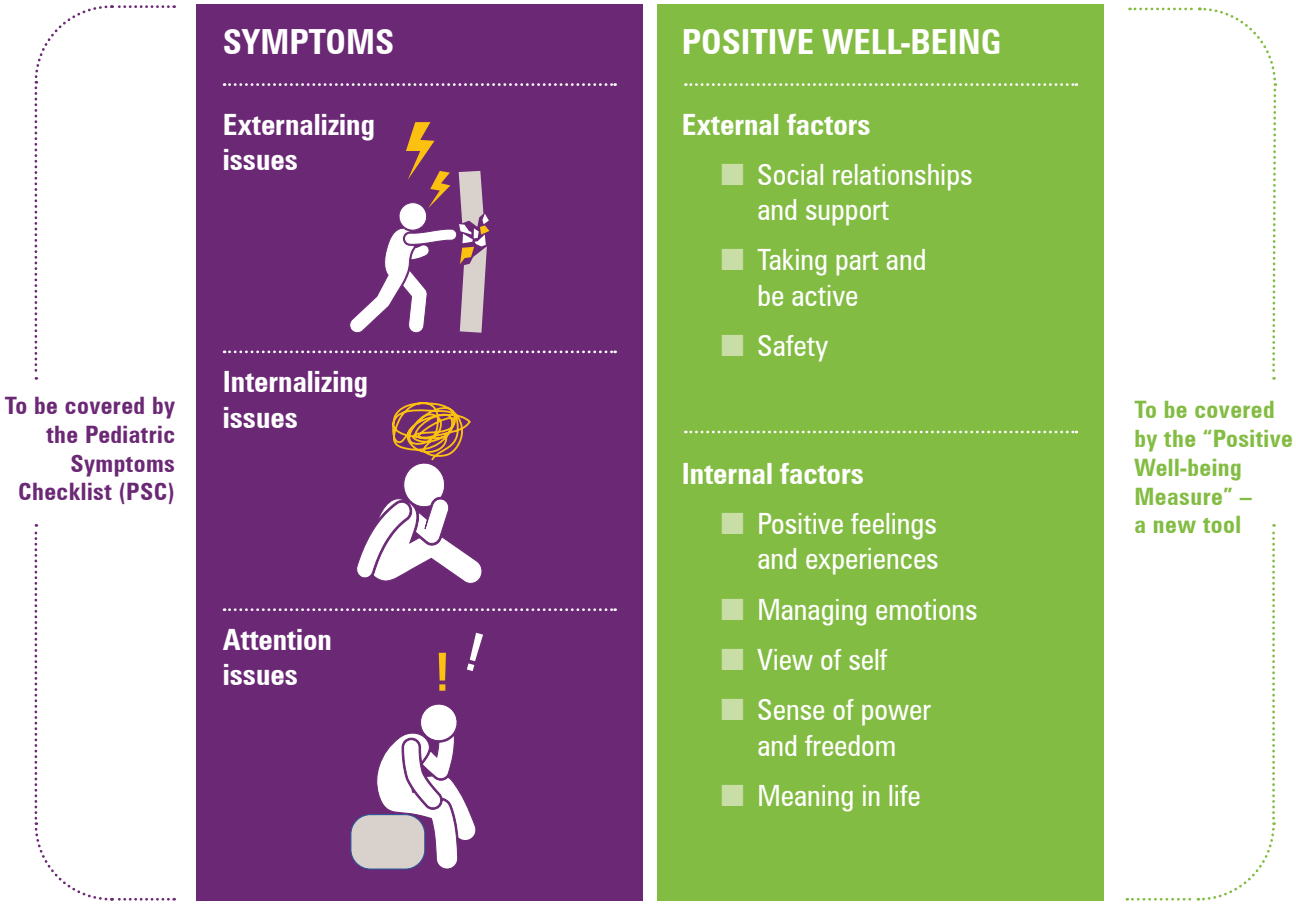
Note on research ethics: UNICEF Innocenti applied for ethical clearance for data collection study to both the Health Media Lab (HML) and the Institutional Review Board of the Office for Human Research Protections in the United States Department of Health and Human Services, both located in Washington, DC. Ethical clearance was granted in May 2022, prior to the fieldwork (June–July 2022).

To ensure the safe, fair and dignified treatment of participants, all data collectors were extensively trained in research ethics and abided by the UNICEF Procedure for Ethical Standards in Research, Evaluation and Data Collection and Analysis (Document number: CF/PD/DRP/2015-001, Division of Data, Research and Policy, 2015).

Prior to quantitative and qualitative data collection, all research participants gave their permission to be part of this study. Each respondent was made aware that their participation was voluntary and that they had the right to refuse to participate at any time without penalty if they wished. They were also given pertinent information to enable them to give informed consent to participate. The research team obtained the participant's or caregivers' (in cases where the participant was a minor) permission through writing or verbal consent prior to interacting with the participant.

In the field, and prior to administration of data collection, consent was obtained from all participants (See more in 'Note on research ethics', right). Before piloting the psychological well-being survey component the research team met with an **adolescent advisory panel** of 5 young people (3 girls; 2 boys) approximately 14–16 years in age.

Figure 3. Measures relating to the Mental Health Tool Framework



The panel was held to assess their cognitive understanding of multiple concepts and gain feedback on questions that were determined to be sensitive in nature or had been flagged by programming staff as potentially out of place among a refugee population. The young people provided their feedback via translator, which gave the researchers necessary information on improved word choice for questions as well as which inquiries could be dropped as they may trigger severely negative experiences among respondents.

Overall, the full participants' mental health survey (the PSC and positive well-being scale) was administered with 90 participants, of whom 72 were in Athens and 18 in Lesvos. Participants were recruited based on a set of inclusion and exclusion criteria[10], with the aim of collecting data from as many of the active participants as possible within the set criteria. The sample included adolescents aged 11 to 19 (with the average age being 14) of which 46 per cent were females (48 per cent in Athens and 33 per cent in Lesvos). The average age of female respondents was 13, below the group average, reflecting reports from implementing partners that older girls prefer to focus on their studies or other activities. The majority (89 per cent) of the sample came from Afghanistan, while the rest of the adolescents came from Iran (9 per cent) and Somalia (2 per cent). The requirement for being included in the sample was that a child needed to have attended at least one session before being surveyed. The average adolescent in the sample had been participating in the programme for five months (with a minimum of one month and a maximum of two years).

10 Inclusion criteria: female and male adolescents, aged 11–19 years; exclusion criteria: adolescents unfamiliar with the programme structure (e.g. newly recruited participants, joining within the last two weeks prior to data collection).

The mental health data captured by both components was analysed using STATA and results were broken down by demographic characteristics such as gender, age (above and below 13 years of age), location (Athens or Lesvos) and length of exposure to the programme (more or less than two months[11]).

Table 1. Sample

	All	Boys	Girls	11-13 years	14-19 years	ATHENS	LESVOS	<=2 months	>2 months
Age	13.7	14.3	13			13.8	13.3	13.3	14
Gender	0.456			0.571	0.317	0.486	0.333	0.564	0.373
Months of participation	4.67	5.63	3.51	4.06	5.39	5.11	2.89		

3.2 Observation tool

The observation tool is a mixed-method instrument developed to collect information during S4D sessions, capturing the mechanisms that may contribute to the well-being of adolescent participants. Quantitative data were collected on the location, environment and the number of participants and coaches (including their gender). The tool was piloted during the initial week of data collection in Athens and updated to systematically capture how the session was structured, which activities were performed and the level of engagement among the participants.[12] Additionally, qualitative data captured the researchers' open observations, in-session discussions and post-session feedback from the coaches to gauge their impressions and assessment of how well the values and topics were covered.

The observation tool captures various pro-social behaviours that participants and coaches separately may engage in during a session. Each behaviour observed was recorded and the data collector could further elaborate on what happened, therefore providing both

The **PSC** consists of 17 items, and the respondent is asked how often they experience what is described. Answer options are 'never', 'sometimes' and 'often' corresponding to a score of 0, 1 and 2 respectively and the total score is computed by adding up the scores for the 17 questions. The cut-off value that determines that the child might have psychosocial issues is 15. In addition, it is possible to compute three sub-scores more specifically, namely attention issues, internalizing issues (related with anxiety and depression), and externalizing issues (related with conduct). These sub-scores are computed by considering only a subset of items in the checklist and have their own cut-off points (see Annex 2 for detailed methodology).

The **positive well-being scale**, being a newly developed tool, does not have guidelines or reference values; we therefore generate indexes for each mental health domain identified in the tool development phase and report the score as average score to the questions measuring each domain.

11 Based on anecdotal feedback during the scoping mission, multiple programme implementers reported that when participants consistently joined S4D, positive behavioural changes could be observed at around the two-month mark.

12 The structure is similar to the World Bank's TEACH tool for time allocation during school lessons

quantitative and qualitative data. While the list of participants' behaviours was developed based on the literature and recommendations from implementing organizations, the section concerning actions by the coaches is based on a review of the role of coaches in trauma-sensitive interventions (Drožđek and Wenzel, 2018).

A total of 17 sessions were observed in Athens and Lesvos. The quantitative data were analysed with particular emphasis on the differences between the two locations to capture differences in implementation that could be linked to how the programme is received.

The qualitative data were used as a source of examples and anecdotes to corroborate findings from interviews with the participants and coaches. This specific qualitative data often contains perceptions and assessments of the data collectors, who were extensively trained by UNICEF Innocenti on data-collection methods and child protection protocols, and can therefore serve as an additional source of information.

3.3 Interviews and focus group discussions

Qualitative sampling involved the purposive selection of the two locations in Greece (Athens and Lesvos) where partners implement S4D. The qualitative component of the study used interviews and focus group discussions (FGDs), conducted over a four-week period with translators for each discussion. Respondents were selected from the same group of participants that took part in the mental health surveys. In addition to those **participants, caregivers, coaches and organizational staff implementing the programme** were interviewed. The aim of this component was twofold:

a) to capture the thoughts, opinions and behaviours of refugee adolescents, complementing the quantitative data collected on their well-being; in combination, these data contribute to a more comprehensive understanding of their mental health profile

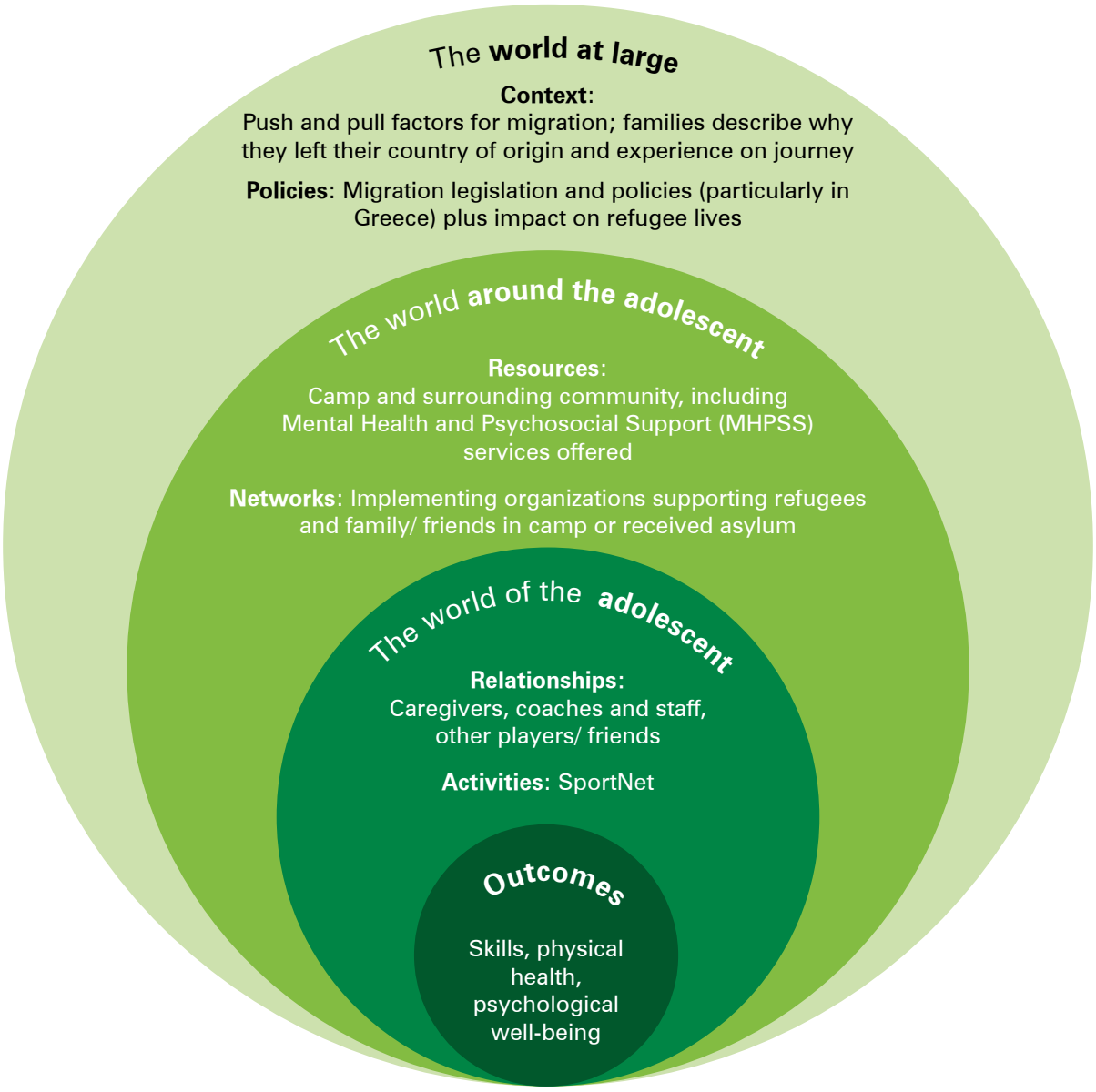
b) to further explain the perceived impact of programmatic mechanisms observed through S4D sessions that may positively influence adolescent well-being

The interviews and FGDs with the 62 respondents were transcribed word-for-word in documents. Through Thematic Content Analysis, all qualitative data were coded for elements that were anticipated by the team (deductive codes), informed by Barça programming manuals (namely the programme's theory of change), previous studies and literature relating to the psychological well-being of adolescents, as well as predetermined elements agreed between partners in the co-creation process.

Findings and discussion

This section is organized in response to the two research questions of this study: 1) What is the mental health profile of adolescents in refugee camps in Greece? and 2) What are the mechanisms in an S4D programme that influence the psychological well-being of adolescent refugees? The findings are contextualized by the adoption of a multidimensional framework (UNICEF Innocenti, 2020) demonstrating how well-being outcomes are connected to the world at large, the world around the adolescent and the world of the adolescent. This perspective provides a more nuanced understanding, illustrating the interconnectedness between outcomes and influential determinants (see Figure 4).

Figure 4. Multidimensional framework



1. RQ 1: What is the mental health profile of adolescents residing within refugee camps in Greece?

To better understand the layers and complexities that contribute to the mental health profile of the refugee adolescents, components of 'the world at large', 'the world around the adolescent' and 'the world of the adolescent' are studied. 'The world at large' includes the context and policies relating to migration into Greece, 'the world around the adolescent' refers to the resources and networks available through life in a refugee camp and 'the world of the adolescent' is composed of the relationships around the adolescents (family/caregivers, friends, coaches, S4D programme implementers) and 'outcomes' captured by the voices of the participants themselves.

1.1 The world at large: Refugee adolescents in Greece

According to UNICEF, Greece has received over a million refugees since the beginning of 2015, of whom 37 per cent are children. Greece is one of the major entry points into Europe, with recent reports from the Greek Ministry of Migration and Asylum stating that the number of people arriving decreased in 2021, with periodical increases in certain locations and that half of those who arrived entered through land borders with Türkiye, rather than the islands. Movement from island reception centres to mainland Greece became a priority among overcrowding and deteriorating conditions. From January to November 2021, more than 14,000 refugees and migrants were transferred from the Greek islands to the mainland, significantly reducing the number of refugees and migrants in reception facilities on the islands, the majority of whom continue to reside on the island of Lesvos.

The respondents in this study provided examples from their lives on the challenges refugee adolescents in Greece are currently facing and how their involvement in an S4D programme may affect their psychological well-being. In line with other literature, young refugees and their families from this study have also been exposed to a range of risks, including violence, exploitation, and abuse in their country of origin, during their journey to Greece, and within camps.

A father residing in Lesvos explained why his **family left their home** and how it had affected his son: **"Yes, they** [my children] **used to have some friends. But there was an explosion, it happened in a praying place, in a mosque. Back in Afghanistan, they lost a lot of friends there. The oldest child, he is not speaking a lot. Because he has some problem, he was in shock because of the explosion…So sometimes he is shaking, and he is not speaking too much."**

A mother based in the Malakasa Camp also described difficult moments on her family's **journey**: **"When we moved from Iran to Türkiye, it was a very small car, smaller than this bus and there were so many people in the car. It was so much pressure; it was so hot – 3 hours we were the back of a van. And there were so many pressures, and my husband is stronger than us, I am weak, and he kept himself and me and my children were in front, and he pushed the rest of the people to not fall on my children and it was very bad. After 3 hours, we had a little water to drink and wash our hands and our faces".**

On arrival in **Greece**, refugees can often face a new set of challenges. Organizations providing support in camps (medical, educational, food delivery etc.) described coordination challenges between authorities responsible for the health and safety of refugees and migrants, negative societal attitudes towards these individuals, and a shortage of space for accommodation. The evolving situation and movement of

people means the camps throughout the country are constantly being restructured to cope. Respondents in both locations who experienced life in the former Moria camp (Lesvos) at the height of the refugee crisis described extreme overcrowding and the obstacles they experienced in the aftermath of the camp burning down.

1.2 The world around the adolescent: Environmental influences

In both locations, respondents describe the physical, social and economic living conditions as 'difficult' for several reasons. On an **institutional level**, one implementing partner suggested that **systematic racism** is a major issue in Greece, as the refugees **"… are not getting access to services,** [and] **are treated really badly."** It is also recognized that securing jobs can already be difficult for local residents, but it is more difficult for adults and adolescents within the refugee population, as they have the added challenge of a **language** barrier. A refugee coach from Athens states, **"…life is difficult, but especially if you are a foreigner and you don't speak the language and communicate with someone, it is more difficult."** Although they face obstacles, several respondents indicated that they felt safer in Greece than their home country and hoped to integrate within Europe.

Safety within camp was a concern and a stressor for residents in both locations. From the interviews, examples of poor living conditions, exposure to bad language and fighting among residents were cited as concerns among the adult respondents. The research team observed that the current camp (Marovouni) on the island of Lesvos is near the sea and lacks green space; the conditions can be harsh, especially in extreme temperatures as observed in January and June/July. On the mainland, in Malakasa Camp, an implementing partner described the social environment among children and adolescents as tense: **"Fighting, fighting. They fight with each other. They throw the stones… most of them because the camp full of stones. And sometimes they throw it to their containers, to their glasses, to their … to each other."** Even in these situations, there were few reported differences from the interviews on how boys and girls perceive their safety within camp. One female adolescent from the Malakasa Camp stated that, **"My father says camp is not very safe** [and tells me] **don't go out of the container so much"**, and another female from the same camp said, **"I am feeling unsafe when I am alone."**

The **asylum-seeking process** compounds the daily stressors experienced and weighs heavily on the minds of the camp residents. With some notifications moving faster than others, or families and friends being separated in the process, the status of participants and their caregivers, as well as the coaches, affects everyone's psychological well-being. A father living in Lesvos for four years said that his son kept losing friends and continuously asked, **"When are we leaving from this camp? Everyone is leaving, and why are we still here?"**

A mother based in Athens also described the difficult realities she faced: **"I have two rejections, that's what I am thinking about. Two rejections of my interview. I am worried what will happen for me, for my family, for my children with their rejection. What can I do? When we got our rejection … cash card finished, food finished, and I don't have enough money to buy socks, a pair of socks for my child. When he goes to the football, for example, he needs, in a pair of socks, but I can't buy good socks for him."**

Organizations similar to those in this study (Movement on the Ground and CHEERing) that work within camp structures provide support (including implementation of S4D), and strive to give dignity back to the refugee camp residents. Camps may have organizations that offer or support access to mental health and psychosocial support services (MHPSS), but these services

may be difficult for refugees to access for multiple and complex reasons (see Box 2 on UNICEF MHPSS priorities). Also, the refugee camp environment is not a positive space that fosters growth and development for adolescents. One implementing partner in Lesvos observed that **"The young people have a lack of choice. If we talk about any young person in the camp, even their clothes are not their choice. It's something that has been donated, and it has been offered to them and so they have to wear that. It is not their choice. So, it's like, you're stepping into future where nothing is in your hands. I think that's a very serious problem for them. They are facing challenges that make them feel more weak, perhaps, than strong."**

Box 2: UNICEF and MHPSS

The UNICEF Mental Health and Psychosocial Technical Note states that: "MHPSS is an institutional priority for the UN and for UNICEF … UNICEF's MHPSS approach promotes inclusion for people of all ages, genders, abilities, ethnicities and living situations. Children and adolescents are particularly prioritized, and all sectors are encouraged to incorporate MHPSS approaches to support children and family's mental health and well-being" (UNICEF, 2019).

1.3 The world of the adolescent: Relationships and activities

1.3.1 Social relationships and support

Caregivers from this study supported adolescents in multiple ways, including in their decision-making and encouraging their development for their future. Adolescents from Athens and Lesvos indicated that most caregivers were supportive of their participation in S4D. Parents often came to the pitch to watch and are welcome to do so right from programme enrolment. One mother from Athens reported that the entire family encouraged play and participation in S4D through engagement: **"After dinner, when we eat dinner together, my children they go out to the football field inside the camp and play together and I go and play – all of us play together."**

It was also reported that some caregivers were not supportive, or they were ambivalent about adolescent participation. In these cases, caregivers believed that the sessions may interfere with schooling, or they did not think girls should be playing. Since this study did not speak directly to participants/ caregivers that opt out of the programme, a coach from Athens explained: **"They (caregivers) think that football or the training is not for them** [their child]**, especially for the girls. The parents don't understand, they don't want to. Like why the girls are playing football; it is not acceptable. And we talk about that every time** [we meet]**, especially when we have the meeting with the parents."** Similarly, a coach from Lesvos explained, **"As much as possible I can tell family that 'We have sessions. I am the coach. We are taking the children outside to play football and bringing back here'. We explain that the training is something different from the school… As much information to the family. But if the family doesn't want** [to get involved]**, you can't do anything."**

This feedback indicated that there were challenges to overcome in both locations, but coaches and staff made efforts to address the concerns of parents and caregivers. By sharing information, they could address assumptions about scheduling and discuss participation, while respecting cultural beliefs.

Caregivers and participants reported that more adolescents had made **friends in camp** than not. Out of the reported friendships, six also noted that these friendships were established through S4D. However, the situation was unstable

and constantly evolving, which affects these friendships, and subsequently the psychological well-being of the adolescents. One mother from Lesvos stated: **"My son had lots and lots of friends before, but after they got the asylum and others left the island, he got depressed. Nowadays because of some new arrivals, he has a few friends. He made some friendships."**

Implementing partners offered a crucial broader overview of working with multiple children and their families over a long period of time, as well as working for organizations operating within the specific camp context. Each of the partners interviewed worked closely with the children and adolescents involved in S4D, and they were well known through other camp activities. As described by one implementing partner in Lesvos, when they look at *all* the children and adolescents in the camp (not just S4D participants), they observe that adolescents struggle to engage: **"I think the teenagers we see, they don't have a lot of motivation to get out of their houses."** They also provided examples of 'aggressive' behaviour when describing boys and girls, but boys were more associated with displays of anger and fighting and girls more commonly referred to as showing sadness.

Coaches were sourced from the refugee community; therefore, they had an intimate knowledge of life inside camp and what the participants are experiencing. In Athens, additional coaches (Greek and Irish) were also working with the children; but in Lesvos, all coaches were from camp with occasional support from (external) coordinators. Although their path to reach Greece had not been the same, and they were from various places, they shared the common experience of living in the refugee camps and seeking asylum. All participant respondents reported positive relationships with the coaches, but the engagement was limited to the field. Beyond simple greetings or discussing football, there were no reports of adolescents engaging in greater depth with coaches outside of the sessions. The same was true for engagement between coaches and caregivers. This could be due to language differences, as one implementing partner from Athens noted, **"…you know that language is an enormous barrier, they (the coaches) can't really communicate directly with the parents."**

The coaches' observations and perspective on the children's mental health and well-being was insightful as they understood the circumstances and living conditions. Their responses reflecting on the children's mental health in camp were mixed. Overall, all coaches regardless of location acknowledged the 'bad experiences' children had gone through or were still experiencing through life within camp. The behaviour and actions of children observed ranged from noticeable unhappiness to being withdrawn from interaction. As one coach in Lesvos noted, **"They (the children) are trying to little bit laughing but they are more sad, like nervous."** It should be noted that not all observable behaviour was negative. Some cases spoke to the resiliency of the children. In Athens, a coach commented **"A lot of times I'm glad to see reactions from the kids like any kid his age has. And you do not see a refugee kid, but like a … kid who wants to play, who wants to win."**

1.3.2 Activities of refugee adolescents

Many participants and their caregivers described their daily routines, having established a 'normal' rhythm given the parameters of living in a refugee camp: wake up, eat, brush teeth, go to lessons, go to S4D training etc. Adolescents in both locations were also busy with other activities, including school, work and chores. In 16 cases, respondents indicated that adolescents were taking language classes, including English, German, Greek and Dutch. The interviews indicated that schooling was not always a positive experience for refugee adolescents, with examples of teachers not having enough time to devote attention to the students, or adolescents struggling with the lessons. One father in Athens indicated that the lack of positive association with school was why they supported their child's S4D participation: **"My son is not very good in**

the school, in education. That's why, one of the reasons, that we sent him because he likes football and he maybe is good at it and through training maybe he will become better and improve himself."

In addition to their studies or contributing to the needs of their families, refugee adolescents also needed to be 'on-call' to respond to any official questions about their asylum status. Implementing staff and coaches were aware that S4D sessions may come second, especially if immediate needs were not addressed. A soccer coach in Athens noted: **"Sometimes I think to myself that the schedule and the activities, they don't have the time … we don't have a picture of the family situation and what difficulties they might identify.** [Even with] **some basic items provided, they struggle, these families struggle so the soccer practice can be a luxury."**

1.4 Measuring participants' mental health situation

Given the influential factors that may affect an adolescent, the research team further assessed the status of mental health based on self-reported answers to two survey components measuring ill-being and well-being: the Pediatric Symptom Checklist (PSC) and positive well-being scale.

1.4.1 Findings from the Pediatric Symptom Checklist and interviews

Table 2 shows the share of respondents who report psychosocial issues as measured by the full checklist and the three subscales of the PSC. A full breakdown of scores for individual questions is reported in Annex 2.

As shown in the first column of Table 2, over a quarter of respondents (27 per cent) are above threshold for psychosocial issues; this is also what was captured for internalization issues (28 per cent). A smaller proportion were identified as having attention issues (13 per cent) and externalization (16 per cent) issues. Boys were more likely to be flagged for psychosocial issues than girls (29 per cent, versus 24 per cent). Boys were more likely to be identified as having internalization issues, which can relate to anxiety and depression (31 per cent of boys, versus 24 per cent of girls). A slightly higher proportion of boys were flagged for attention issues while girls were identified for having slightly more externalization issues, which can be linked to disruptive behaviour.

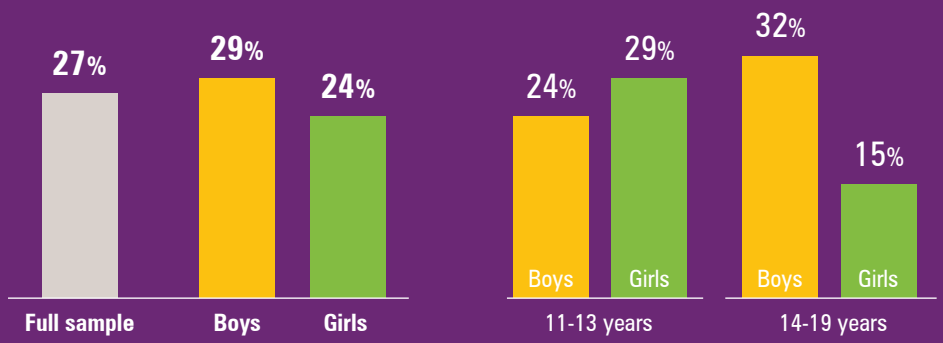
While the proportion of adolescents with possible psychosocial issues was the same among both younger and older age groups[13], the results for different subscales differed. The proportion of younger adolescents (ages 11–13) identified for attention and externalizing issues was higher than the proportion of older adolescents (ages 14–19) with these issues. But older adolescents were more likely to be flagged for internalizing issues, which can manifest in individuals withdrawing from social situations or developing unexplained physical symptoms.

Participants who took part in the interviews further elaborated how they internalize or externalize emotions, giving examples and making connections between their management of emotions and participation in the sessions. Off the pitch, participants mentioned that they tried to handle tough situations alone, sometimes by keeping busy with other activities (e.g., playing on a mobile phone or going swimming) when they were upset. The interviews revealed that the young people surveyed did not always feel comfortable expressing emotions, particularly when it came to crying. While five participants mentioned crying (and subsequently feeling better), two respondents (one player, one parent) mentioned that adolescents repress tears to manage emotions. Adolescents left alone with feelings of sadness or

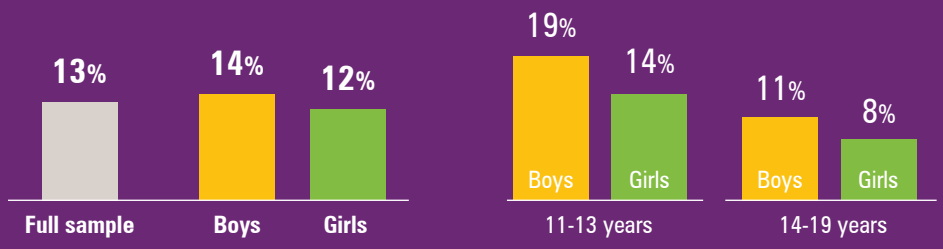
13 Age-disaggregated findings are based on the overlap of UNICEF adolescent age ranges of 10–19 years and the grouping of 'younger' and 'older' adolescent participant groups involved in the S4D programme, separated around 13/14 years of age.

Table 2. Results from the Pediatric Symptom Checklist

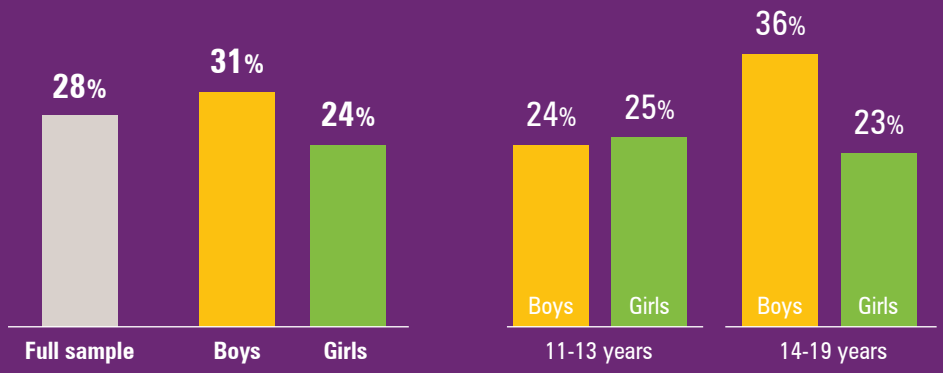
Adolescents flagged for PSYCHOSOCIAL issues



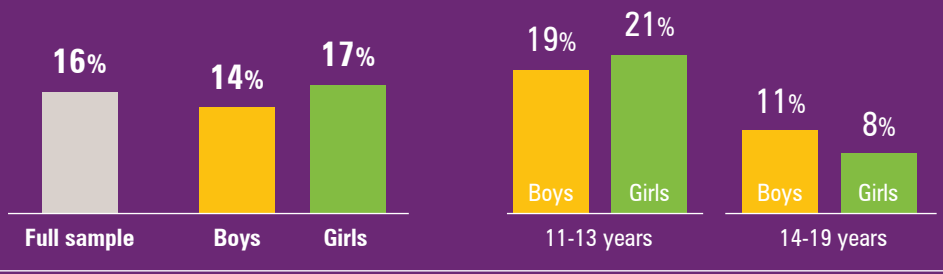
ATTENTION issues



INTERNALIZING issues



EXTERNALIZING issues



Note: Each item of the PSC receives a score of zero, one or two points, with the scores for all 17 items summed for the total score. A child is then flagged for psychosocial issues if the total score is above the validated cut-off of 15 points. For the three subscales a similar process is followed but using different cut-off points and only adding up points for subsets of questions. This implies that it is possible for a child to be flagged for one of the sub-scales but not for the overall psychosocial scale.

The PSC captures psychosocial issues, which are not surprising considering the difficult situations adolescent refugees are in. However, this doesn't take away from the adolescents' abilities to cope with hard situations, and this resilience is captured in the following section.

uncertainty expressed loneliness as well. One male participant in Lesvos said: **"I will go and sit in my isobox and feel depressed. If anybody comes to me, I will speak with them, but nobody will come to me. I will sit in the house and be lonely when the football session is cancelled."**

Caregivers, siblings and friends were all named as people that participants can turn to when they are unsure or need support in emotional matters. Outside of sessions, coaches were not explicitly mentioned by any respondents in either location as people that participants would seek out for support; however, they were recognized by all types of respondents as people the participants felt safe expressing emotions and opinions to during sessions. Coaches noted that females particularly had been able to find their voice and respectfully disagree with others in sessions. Athens-based coaches noted several positive changes with female players. One of them said: **"I notice that they** (girls) **are not afraid to say their opinion. They express themselves very freely within the coaching and sometimes they really prefer how they can play an activity differently … they are becoming more vocal and more autonomous and** [I feel] **that there is space to speak up and suggest something."**

1.4.2 Findings from the positive well-being scale and interviews

The PSC captured psychosocial issues, which is not surprising considering the difficult situations adolescent refugees are in. However, this doesn't take away from the adolescents' ability to cope with hard situations and overcome adversity. This resilience was captured through the positive well-being scale component, as well as through interviews. In complement to the survey scores reported below, adolescents also provided responses that indicated a sense of determination both on the pitch (**"…if something is more challenging, I try to do it, to learn it better…"**) and off (**"I don't feel so much upset or sad.** [If] **I feel sad, not so much because it changes again … because I am sure it changes again"**).

Through the positive well-being scale, it was possible to calculate scores for eight mental health domains that relate to good mental health. As seen in Table 3, respondents scored fairly high (around three out of four) across all domains. Interestingly, the domain in which respondents scored highest relates to having a sense of meaning or a sense of purpose. We cannot directly attribute this positive observation exclusively to S4D as only active participants were interviewed,

Table 3. Results from the positive well-being scale

Mental health domain	Full sample	Boys	Girls	11-13 years		14-19 years	
				Boys	Girls	Boys	Girls
Social relationships and support	2.9	2.9	2.8	3.0	2.8	2.8	2.9
Positive feelings and experiences	3.1	2.9	3.2	3.1	3.2	2.8	3.4
Safety	2.9	2.6	3.1	2.9	3.1	2.5	3.2
Sense of self	3.4	3.4	3.4	3.7	3.3	3.2	3.4
Taking part and being active	3.1	3.1	3.2	3.2	3.2	2.9	3.2
Managing emotions	3.0	2.9	3.1	3.1	3.0	2.7	3.2
Sense of power and freedom	3.1	3.1	3.2	3.4	3.2	2.8	3.2
Meaning in life	3.7	3.6	3.7	3.7	3.6	3.6	3.9

Note: The scores can range between 0 and 4, with 0 indicating the lowest score in the mental health domain and 4 indicating the highest.

but qualitative evidence suggests that the adolescents' commitment to the S4D programme was giving a sense of purpose and meaning to their life.

Participants of 14 years old and above tend to score slightly lower than younger ones; however, the difference is not large in magnitude and often it is not statistically significant. Boys and girls do not differ significantly either, except for the safety domain, which suggests that girls tend to feel safer than boys. Scores from children who have participated in the programme for some time are slightly lower than those for children who joined more recently. One possible explanation for this is that children who have been in the programme longer have likely lived in the camp longer, too. Furthermore, adolescents in Lesvos scored slightly better in six of the domains; many aspects might contribute to this difference, including the journey that brought them to their current camp, prospects for the future, current living conditions as well as the programme they participate in.

In digging deeper on the positive domains, interviewed participants were asked, "What does football mean to you?" The answers varied and touched on multiple domains; some saw it simply as a sport, providing physical movement, and improving health, while to others it represented much more – a future. From the discussions with the players, many of the adolescents specifically mentioned their aim to become a professional football player. This may indicate that the association of the S4D programme with FC Barcelona may sometimes be confusing or misleading to the players that join, especially in cases when there is a language barrier between staff and participants or their families, and it is difficult to clarify that SportNet is an S4D programme, not a training programme.

As one implementing partner noted, **"… they** [the participants] **still think that they could play for Barça, but at least they've got something to think about … this is not only about Barcelona FC, all the children playing football think that someday they will become football players, they don't want to go to school, they want to play football."** This is a challenge that any global or well-known club implementing an S4D programme may face: more transparency may be needed regarding the realities of programmatic aims and any misalignment with the outlook of players. In this case, given the refugee population and the sense of purpose they may find through the trainings, it is a delicate balance to manage these expectations, but may give them space to have hope and find meaning in their lives.

This is not to say that the programme cannot give direction or purpose beyond dreams of playing football. On the contrary, the values taught, and the implicit and explicit lessons learned, may stay with the young participants as they become adults and long after they leave the refugee camp. One implementing partner noted that they know former participants that have gone on to professional careers, and some have become volunteer coaches and coordinators themselves, driven by the values they learned through the programme to develop confidence and become a leader.

2. RQ 2: What are the key mechanisms in the sport for development programme that influence the psychological well-being of adolescent refugees?

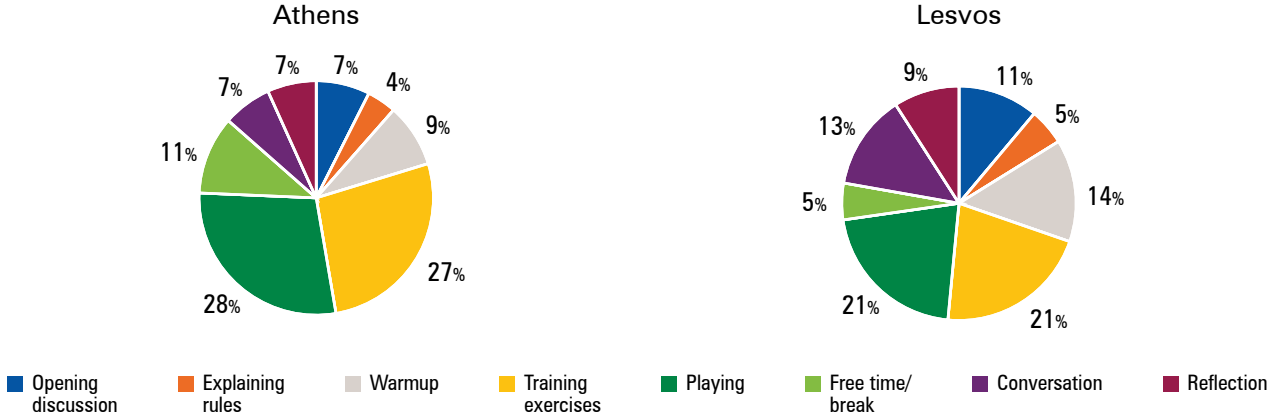
Through thematic content analysis, this study identifies **key successful programmatic mechanisms** that emerged from the data as contributing to the well-being of refugee adolescents. We first introduce the programmatic context of what was observed and organize the mechanisms according to: 1) session structure and components, 2) staff and coaches, and 3) environment and atmosphere. These mechanisms were determined by the systematic categorization of themes that emerged from the data. In connection to these components, interviewees provided insight into how S4D contributes to **personal and social development** and ultimately, psychological well-being. As one participant said, **"My physical skills changed, my social skills, my way of thinking. Through teamwork, passing, kicking…".** This section seeks to explain how S4D organizations can accomplish this outcome in other settings.

2.1 Composition of S4D sessions

During the time this study was conducted (June–July 2022), some variations were noted in how the same programme was implemented in different locations; indeed, each organization decided how to structure sessions based on the reality on the ground and resources. Out of a total of 17 observations (8 in Athens and 9 in Lesvos), the research team documented that Athens-based sessions lasted on average two hours, while Lesvos-based sessions lasted on average one hour and 15 minutes. This makes sense considering that in Athens children were attending from multiple locations from around the city, including the refugee camp in Malakasa. Children typically arrived by public transportation (train, bus, or combination of both); during the weeks when the research was under way, a bus was arranged by the organization from the camp to reach the football pitch, so it made sense to spend more time playing once there. In Lesvos, participants were taken out of camp to Spanos Academy, a short five-minute bus ride.

Figure 5 shows the share of session time dedicated to various activities. In Athens, a larger share of the session was dedicated to physical activity (either warm-up, exercises or play) and more time was devoted to breaks, which is likely linked to the fact that sessions were longer.

Figure 5. Differences in implementation



2.1.1 Participation

Sessions in Athens had on average 40 participants, of whom 16 were girls (however two of the sessions included in the sample were male-only and one female-only). Sessions in Lesvos had on average 13 participants of whom 4 were female; however, the average doesn't reflect the fact that two sessions were for females specifically, while others (divided by younger males and older males) had between zero and two females that occasionally joined. Regardless of gender, respondents requested more S4D: when asked if they would make any changes to the programme, most participants and their caregivers stated that they (or children in their care) would like either longer or additional sessions.

Many caregivers stated that they were supportive of initial enrolment and participation in S4D, but friends had a heavy influence on participants joining and consistently returning to sessions. One implementing partner in Lesvos noted that through word-of-mouth among young people, participants sometimes joined before the organization had a chance to invite them: **"It is always a little bit different than when the kids find out about us and they just jump in the session ... you come with, someone, you know, who is your friend or your buddy in the session, there's a difference in the confidence."**

A male participant from Athens very clearly explained his motivation for joining and consistently attending S4D sessions: **"For me, this programme is for spending time with my friends and doing the training."** This simple statement sums up how multiple participants responded when asked why they joined initially and why they returned. For others, S4D participation also offered a short break from difficult realities **and a sense of freedom**. As one partner in Athens said, **"...the participation is giving them the stability of some kind that they are not getting from other places and it is consistent, it is reliable, it is positive, they're getting stability out of it and I think this is what matters."** Coaches were aware of this, as one Athens coach stated, **"I try to be good with all of them when they are coming to the field to make them forget, and enjoy the moments with us..."**

Indeed, participants commonly reported experiencing freedom through S4D participation, when they left refugee camps for sessions (at the Redi field in Athens, and Spanos Academy in Lesvos), spent time with friends on the way to a session (train ride in Athens; bus ride in Lesvos), and got the chance to play. An implementing partner in Lesvos noted: **"SportNet sessions are a good escape. We have some participants that have serious issues in their families ... So those kids they are very consistent, I think because they might find something in the session that they don't find the house. They are being accepted, they are being heard."**

Consistent participation in S4D can contribute to **positive behaviour and attitude changes**, as described in the interviews. Caregivers noticed a difference in how responsible their child had become since joining S4D. An Athens-based mother noted: **"My son, was very lazy, now he comes back, from the sessions, he washes his socks, he is taking a shower, he is happy, he does more."** Implementing partners also mentioned changes in relation to responsibility and how the sessions helped give the participants structure and a schedule (especially in the summertime). As a result they learned how to be more disciplined about being on time and preparing themselves to play.

When discussing long-term behaviour changes, coaches and the implementing partners considered the groups of adolescents they had worked with through S4D over time, noting changes they have observed from players coming and going. They focused on positive changes that are noticeable on and off the pitch, carrying over to other activities. One partner in Lesvos described: **"When we see that a kid is more cooperative in the sport session, their teachers will say the same about the**

classroom. It's always when a kid is being more social or more open or cooperative … then it's the same in both activities."

2.1.2 Do males and females have similar or differing experiences?

One of the biggest differences between the sessions is that girls and boys held separate training sessions in Lesvos, while in Athens they were in mixed groups. This division was not a set structure, but fluid, depending on the wants/ needs of the population that the implementing partners were working with. As described by the Lesvos implementing organization, female-only sessions reflect the request of the parents in the current population: **"…in their culture it's unacceptable for girls to have physical exercises with boys … when they slowly become teenagers, the parents, you know, won't even allow it. So, it's not that the girls don't want it.** [Having separate sessions for girls] **really depends on the population and their desires."**

On the other hand, in Athens mixing the different genders in the sessions had been welcomed by participants and their families, and coaches had seen benefits. A coach in Athens noted: "**We are living in a camp, in a social environment where people separate girls and boys. But now girls and boys play together, they come together, they can play all together. It is very good that this can happen through the programme. It was one of the best parts of the football programme – mixing boys and girls."**

When observing the participants in-session, the researchers noted any indication of boys and girls experiencing S4D differently. For the most part they had similar experiences; the only diversions were noted when adolescents needed additional support. For example, a girl struggling to concentrate participated in four of the sessions observed in Lesvos, and on these occasions one of the coaches would engage with her frequently while still trying to involve her in the group activities. The same happened in one session where a boy seemed to need extra attention. On one occasion, one of the participants was also asked to stay close to the adolescent with special (attention-related) needs.

Sessions in Athens had on average 3 coaches (all men), while in Lesvos, there were usually 4 coaches with at least one female coach (Movement on the Ground's Sports Coordinator) present about half of the time. It is important to note that the research study may have affected the typical engagement of coaches as, for example in Athens, the female coach of the implementing organization, CHEERing was working with the research team on interviews instead of in her usual role of participating in the session. The presence of a female coach was not consistent. When interviewed, players did not specify if a female coach made a difference in their participation or the way they engage in programming; however, it seemed to be an issue for caregivers of female adolescents: One parent in Lesvos commented **"They** [the parents] **have concerns about that** [male coaches with girl players]." Future research could explore if *non-participating* adolescents (especially girls and their caregivers) reveal if this is a key component for their enrolment and consistent participation in the programme.

2.2 Key mechanism #1: Session structure appeals to adolescents

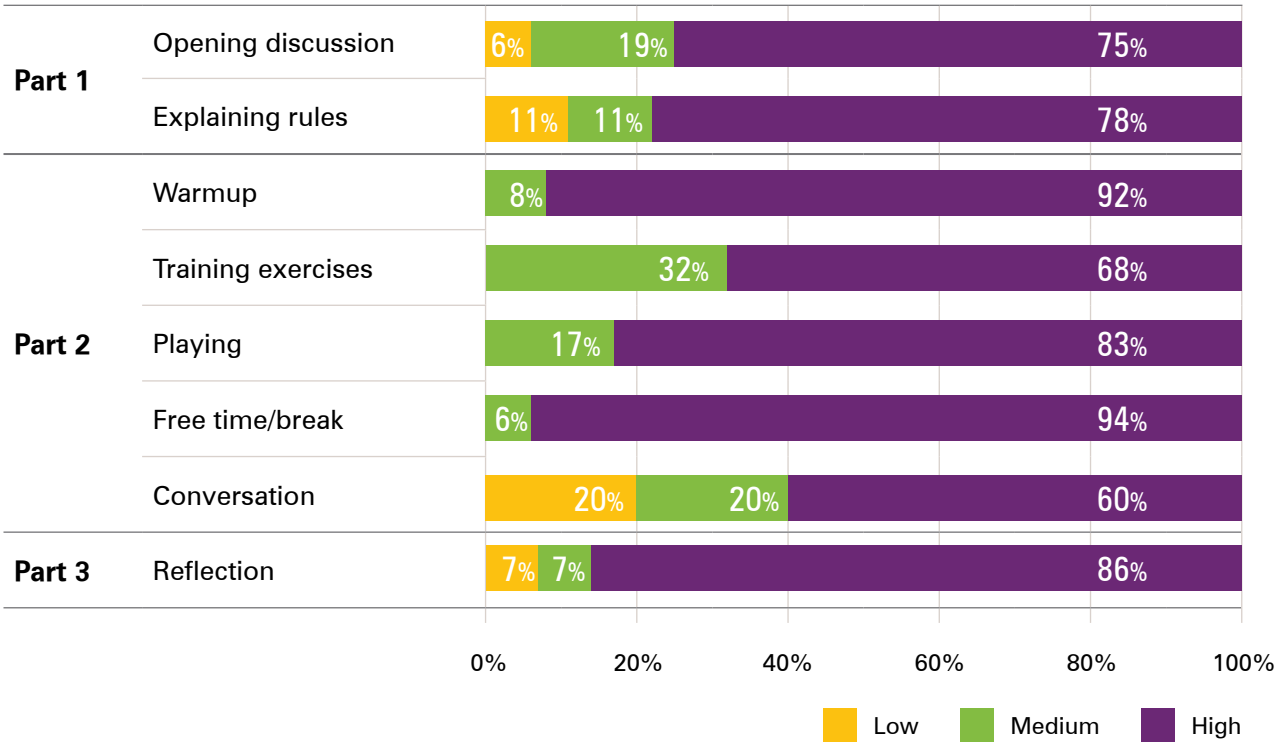
2.2.1 Movement and play

Interviews with the participants suggest that S4D offers space and opportunities for adolescents to learn and play, with a significant amount of session time dedicated to being active. This is attractive for many adolescents, particularly the refugee population. One implementing partner stated the aim was for them **"… to feel good when they leave the field … they feel good just tired on their body, not in their mind."** This seems to be working as most players and caregivers in both locations spoke about how physical movement generated **positive feelings** both during and after sessions, which was a major reason why children return to the pitch (or were encouraged to do so by their caregivers). These feelings were often associated with **physical improvements** (e.g. running, strength etc.) and well as **tactical skill development** (e.g. passing, shooting etc.).

When S4D sessions are similarly structured across locations, players can count on similar elements every time they show up: opportunities to speak and listen, move and play, and reflect on actions. Figure 6 shows engagement during the session, by type of activity.

Observations of the sessions found that, **when movement of the body was involved, adolescents were most engaged**, and there was no low engagement during these periods. **Being active** during a session makes the adolescents focus on the activity in hand, which can provide a mental break from the difficulties of life off the pitch. Since each session requires adolescents to concentrate on what is in front of them – a ball, developing a skill, reflecting on their actions etc. – their minds are focused on the moment. As one adolescent said: **"Sometimes we are sad and sometimes our mind is busy, and we are thinking a lot. When we are going to play, they change the mood that we have."**

Figure 6. Engagement, by activity type



When there was a **language barrier**, adolescents also took physical cues from coaches and other players on how to engage in the activities. They followed by example, learning the concepts (and sometimes the language as well) as they played. A female (Somali) player in Lesvos, who found it difficult to communicate with others stated, **"When I play football, I speak through my body and I speak high (meaning high volume-like PASS, PASS)".**

2.2.2 Value-based curriculum content

When it comes to the curriculum, five core values of the programme are taught – **Humility, Effort, Ambition, Respect and Teamwork.** These are considered the '**D**evelopment' aspect of 'S4**D**' that the trainings offer. Social components or values offered through S4D may make these programmes stand out from other sport training sessions offered, as the refugee adolescents in both locations often reported joining S4D consistently over other trainings. In this case, learning the value-based curriculum takes place through discussion, but it also comes through moments of physical play. It is interesting to note that none of the parents and caregivers interviewed for this study explicitly knew about the values that the adolescents were learning in session. However, they did notice behaviour changes in participants that reflected the values being discussed among their peers and coaches.

In Athens, the coaches focused on a different core value each *session*, whereas in Lesvos they focused on one value each *week*. While each session can cover more than one value, in the time observed the predominant value captured during the research period was teamwork (41 per cent), followed by humility (29 per cent) and effort (18 per cent). Ambition and respect were the main values in one session (6 per cent each). Each value is introduced at the beginning of the session, and in some sessions also revisited at the end. The coaches often prompted the players to connect the value being taught in that session to examples both on and off the pitch. This seemed to create a sense of connection for the players that the lessons learned in training are also applicable to other areas of life. It should be noted that these times for discussing the values were limited due to lack of a common language/understanding between participants and coaches. Due to the evolving refugee population, the coaching staff and players do not always speak the same languages, so the important messaging about values was lost on some participants because there was not a coach or another child with the same language skills to translate and communicate the discussion.

The interviews revealed that respect and teamwork were discussed the most among participants.[14] A male player in Lesvos: **"We use what … we learn from Spanos** [leader of local academy where they play]**. Like how to share the ball, how to respect each other, how to trust someone that we pass the ball."** Participants also discussed **respect** they receive and give – not just when they are playing football, but in their daily lives. This value was quite important to the respondents we spoke with, as they emphasized the need for young people to demonstrate respect towards themselves and others, especially older people. A female player from Athens stated that, **"When I learn the values, I use the values in life. I am helping my mom, I respect more my sister and at the sessions I respect the other players as well."**

Understanding **teamwork** was described as both a challenge and a learning opportunity by the participants, coaches and implementing partners. By being able to **relate to others**, participants find ways to work together. A male participant from Athens stated: **"I don't have any problem with other people who have a different background, so I come here and we are all friends."** The coaches and staff would strive to demonstrate teamwork through their own actions as well. As the implementing

14 In the analysis of the data from the participant interview and focus group discussion transcripts, deductive codes based on the five values of the S4D programme were used to determine the frequency of the values taught.

partner in Lesvos said, **"you won't make it yourself, even if you are the best coach in the world. You need to be in collaboration with the other coaches. You need to make teamwork even with the kids, because sometimes maybe the kids will translate for you.** [laughs] **So it's a team game."** The message is certainly getting through to the participants, as they discussed their reflections: **"Even if you make a goal, it is not really important. So, it is better to play teamwork and to give the ball, the opportunity to everyone to play, not just one person."**

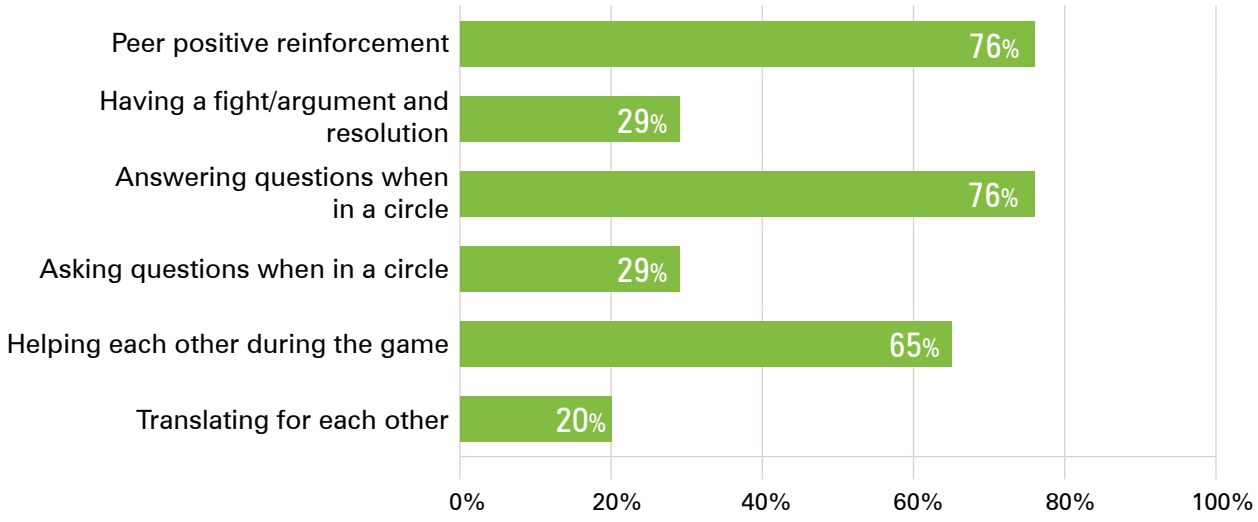
2.2.3 Opportunities to develop positive, pro-social behaviour

Beyond the core-value curriculum, what makes these S4D sessions unique are built-in opportunities for learning respect through **speaking and listening**. As an implementing partner in Lesvos described: **"…everybody can face everybody, and you have the opportunity to raise your hand and talk. Like you will be- your ideas will be heard. I think that's really important. So, you might play freely and everything, but the time will come that you- you will sit down together with the rest of the team or the opponent team and you will reflect on that."** It is in these moments that adolescents feel they can be seen and heard by their peers and their coaches.

When it comes to **conflict resolution** and managing emotions during a session, the participants used various strategies to control themselves and work through disagreements with others. Three respondents mentioned ignoring negative behaviour, such as bad language or kicking during a session. One male player (16 years) from Athens said, **"I cannot control others or the problems, but I can control myself."** Retaliatory behaviour such as 'kicking' or 'hitting back' was mentioned three times by participants.

According to data from the observations and interviews, coaches are key facilitators in resolving conflict during sessions. Their interventions include physically removing participants to offer them a break and a chance to calm down and/or verbally supporting players to find a solution. Players mentioned the respect they had for coaches, noting their influential engagement when tensions arise. Female players from Lesvos stated, **"The coach will stop playing and trying to find reasons why they are**

Figure 7. Percentage of sessions in which pro-social behaviour by participants was observed



Note: Total number of observed sessions: 17.
A relatively low number of occurrences may be that a certain behaviour was not needed or applicable.

fighting each other. [He says], **'Respect each other and say sorry to each other'. After we continue ... Every time the coach says something, we accept it."**

When the research team observed the sessions, they noted interactions among players that reflected some of the dynamics discussed in the interviews. Figure 7 shows the number of sessions in which a series of desirable participant behaviours were observed. It is important to note that a relatively low number of occurrences might be due to the fact that a certain behaviour was not needed or not applicable.

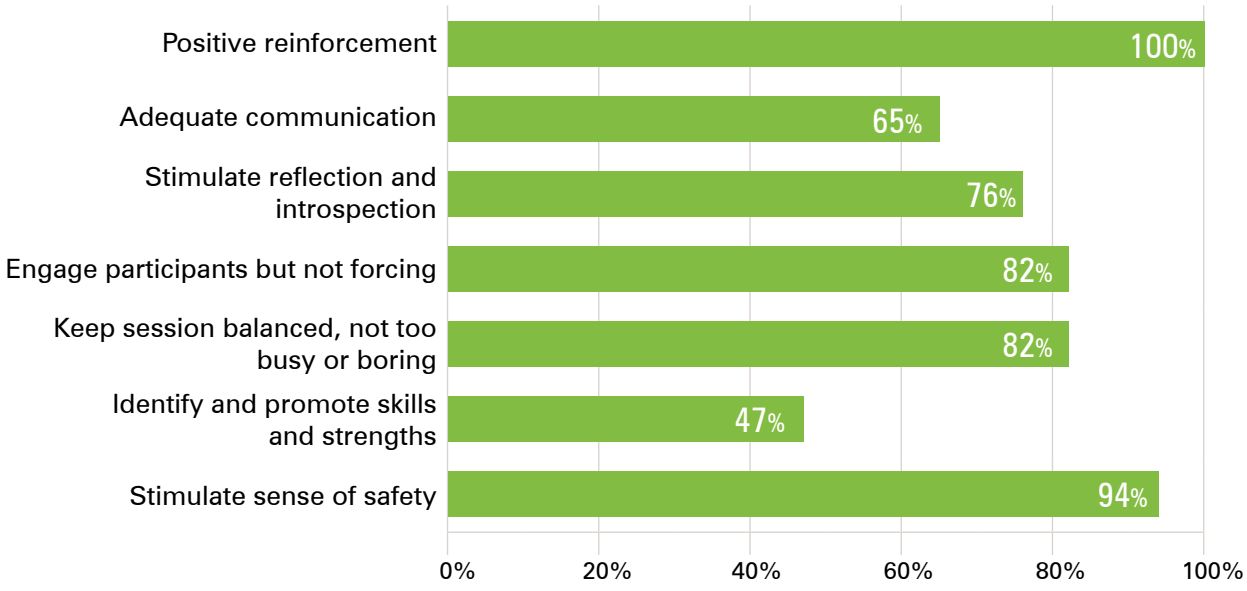
2.3 Key mechanism #2: Supportive, trustworthy coaches and organizational staff

While the interviews did not indicate that there was a lot of interaction outside of sessions between coaches and players or their caregivers, there was **trust between the families and the coaching staff**. This was demonstrated in conversations about safety (see more in the next section). The families also expressed trust in the implementing organizations in each location. CHEERing and Movement on the Ground had established themselves in a positive light and work closely with the camp residents; they were well respected.

Respondents confirmed that coaches were **confident leaders and role models** for the adolescents they worked with each day; implementing partners in Athens and Lesvos recognized that this contributes to being an 'effective coach'. Respondents from both organizations also believed that patience and good communication skills are key characteristics for this role. As one partner in Lesvos said, **"You need to be communicative. Even with body language. If a kid is talking to you, you show your attention to this child. You are present and you are there for them."**

Besides statements given by the organizational staff on the perceived value of the coaches, the coaches themselves provided examples of the ways they **empower participants** via the relationships

Figure 8. Percentage of sessions where desirable actions by coaches was observed



Note:Total number of observed sessions: 17

they build through S4D. Their actions, however small, lay the groundwork for how the participants engage in the programme and can spill over into their lives. For example, one coach in Athens commented specifically on how coming together at the start of each session gave female players the sense of freedom to express themselves respectfully among their peers and in the presence of a trustworthy adult: **"A lot of times before practice starts, we all (girls) get together, have a conversation before we start and it's very interesting because they express their opinion, they suggest things, they disagree, and it's all done with a lot of respect."**

Session observations showed that coaches were engaging and positive in their interactions on the pitch when it was time for play. Figure 8 shows the number of sessions in which the coaches were seen performing some desirable actions. It is important to note here that 'positive reinforcement' from the coaches was observed in every session, regardless of location.

Positive reinforcement is part of creating a **supportive atmosphere** on the pitch, and was perhaps a reason why the participants respected the coaches they worked with in the sessions. Part of this includes demonstrations of fairness and kindness towards the players; similarly, coaches valued the relationships they were building. As one coach in Athens said, **"This group is not a typical football group, it is like a family."** The implementing partners encouraged their coaching staff to engage with participants in similar ways:

- **"Make them** [participants] **free and relaxed, don't let them think about their problems, just they think about the football."** (Athens)
- **"Show them** [participants] **that we care, that we love them, that we are there for them."** (Lesvos)

Beyond the participants' positive feelings, it is important to note that **coaches also found engaging in S4D to be a positive experience** for them as well. One Athens coach stated, **"…they (the participants) come with a lot of enthusiasm, running around and they carry that atmosphere over to the families and that is why they keep coming. I also like watching girls play, because it's quite a male-dominated sport and I really like seeing how much they enjoy it."**

Coaches and implementing partners alike indicated the need for additional staff training, especially when it comes to addressing the psychological well-being of children and adolescents. As people move frequently and the camp contexts evolve rapidly, this may require more frequent face-to-face engagements with lead sport organizations and/or organizations working in the field of mental health to meet these needs.

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2.4 Key mechanism #3: Physically and emotionally safe environment and atmosphere

When it comes to safety concerns, the majority of players in Athens and Lesvos said that they felt safe when participating in or travelling to an S4D session. Parents, on the other hand, reported mixed feelings around safety. In both locations, **coaches and staff, friends and other players** were named as the top reasons for making parents and players feel safe; injury was the primary cause for concern, named by one player and multiple parents in both locations.

One noticeable difference between the two locations in relation to safety was **transportation** to the external fields: in Lesvos, respondents said it was a positive factor in safety, whereas in Athens it was a cause for concern. In Lesvos, the short bus ride of 5 minutes was organized by the implementing partner, Movement on the Ground, and players were always accompanied by coaches. In Athens, players came from Malakasa Camp as well as from around the city; they travelled on their own on public transport for over an hour to get to the pitch.

When a player arrives, the **environment** where a session takes place is known to be an important factor for children to feel safe and free to play; in both locations, the sessions observed took place in adequate and clean spaces. About a third of the sessions had a few people watching from outside; noise or voices from outside were recorded in five of the observed sessions and when sessions took place in Spanos Academy in Lesvos, some gaps in the net surrounding the pitch meant that the ball would sometimes go out and a group of children would be sent to retrieve it. Because the observations were conducted during summer, the high temperatures posed a challenge in some of the sessions; the coaches, aware of this issue made sure to give frequent water breaks. These water breaks were for all the children playing, but coaches observed if specific children started to get tired or dehydrated, and timed the breaks accordingly.

As well as paying attention to the physical environment, the coaches in both locations implemented **predictable rules and structure** for the adolescents' safety (in only case was it noted that the session was not well structured, resulting in confusion for coaches and players). Overall, it was recorded that the players were **"all involved on the field"** and **"seemed to know what to do at all times"**; in one documented session, specific rules against aggressive play were established from the beginning. While the structure laid the groundwork for the session, the coaches' actions on the pitch reinforced the feeling of safety. The researchers noted overall that coaches were "**engaged and present**", "**consistent**", and maintained positive relationships with the participants. It was recorded that in turn **"participants seek advice from the coaches"** and **"children feel free to express and address any issue with them".**

But being part of this programme means more than playing a sport: it is also about engaging in the discussions about the core values and developing personally and socially. With the players surrounded by **friends and dependable coaches**, each session can create a sense of belonging when other areas of life may not feel inclusive (i.e., living in a refugee camp, separated from the rest of the community). A coach from Athens described how the safe space gave room for young people to build on friendships: **"They have this opportunity with the other kids, to get to know each other, make friends and play together in a very controlled setting."**

When friendships and trust are built, **confidence** grows. As the implementing partner in Athens said, **"…some of them** [participants] **didn't speak, especially the girls … but now they speak with the boys."** In both Athens and Lesvos, organizational staff and coaches said that children may feel shy or nervous in the beginning, but soon feel comfortable after repeated positive experiences. It was estimated that it could

take anywhere from a couple of weeks to a couple of months to notice the change. For the refugee population, gaining confidence and resiliency is particularly important. One Athens implementing partner noted: **"… they are part of this system (programme) that values them and gives them more confidence to go forward, because you know, they are not in control of anything…"**

While relationships with friends and coaches contributed to confidence, having the right **equipment (shoes and clothing)** to play was also an important safety factor for participation and creating a sense of belonging. Sourcing funding to go towards sports kits/clothing including t-shirts, shorts, sweatshirts and shoes may be a challenge for all organizations. But according to the respondents interviewed, having the football boots or a uniform goes beyond appearance; it can be an important signal that refugee adolescents fit in with other young people their age. A parent from Lesvos connected this directly to the psychological well-being of their child: **"If they have good clothes, good shoes they are happy and the mind is clear."** In another example, an implementing partner in Lesvos described a hard moment for a young person when playing in a tournament with local Greek adolescents: **"We had an event where kids were playing with local kids in the big stadium in Mytilini, and one of the kids was in very simple sports shoes. He was crying because he wanted, you know, to play with football boots as the rest of the children."**

Caregivers in Lesvos and in Athens were also concerned because having the right equipment can be a safety issue. Indeed, during observations, several young people were wearing sandals to play, losing them frequently throughout the session. This lack of safety can result in a lack of participation. One male player, 16, stated, **"This is the reason that I didn't come in last few months. I want to play football … I need different shoes."** The implementing partners worked hard to address these issues: Movement on the Ground started a "Sports Library" for kids to borrow clothes, balls, shoes; CHEERing looked for ways to fundraise to fill the gap – giving children shoes and uniforms for the games played with local adolescents, even washing the uniforms at their own homes. They did this because they could see how important it was for the players: **"…the uniforms that we have they wear it in training, and I think with a lot of pride. It helps them feel like they are on a team. And I think it** [team gear] **helps them feel at ease, they don't stand out based on looks, based on the clothes they are wearing, that they are equal in the same context."**

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Lessons learned and recommendations

Sport for development (S4D) programmes can be attractive and engaging to refugee adolescents at a time when their lives lack stability. Building on findings from *Getting into the Game* (UNICEF Innocenti, 2021a) and *Playing the Game* (UNICEF Innocenti, 2021b), this study focuses on a single S4D programme, implemented in multiple locations aiming to understand the S4D mechanisms may contribute to positive well-being among adolescent refugees. The lessons learned may be applicable to other S4D organizations working with similar populations and beyond.

Considering all of the above – creating a safe environment, rules and structure, trustworthy coaching staff, opportunities to be seen and heard, as well as developing social skills with others – refugee adolescents are able to be present to enjoy what S4D can offer. The interviews confirm that S4D provides an enjoyable experience. Participants enjoy football and the opportunity the sessions bring for them to develop their physical, personal and social skills. Nearly all respondents discussed how players enjoy the sport of football (with only three respondents mentioning dislike). The social element of making friends and learning physical tactics around the game were both mentioned as the main reasons why participants enjoy the sessions.

The mental health of the refugee adolescents that took part in this study is shaped by the world around them and the experiences they have encountered prior to life within camp. These experiences are coupled with the biological changes that occur for all people in this stage of life, which are often stressful or challenging on their own. While S4D seems to provide a break from difficult realities, primary concerns about asylum status remain.

Interestingly, the group from this study seemed to find a sense of meaning and purpose as indicated in the quantitative self-reported mental health survey, demonstrating that hope and optimism are not lost.

To understand the key components of the programme which may influence psychological well-being, it is important to take a step back to consider a wider picture. This study highlighted that success in reaching participants and their families can be facilitated when funding and implementing partners have aligned missions. In this case, the shared aim to give more dignity to refugees and support their integration into local contexts through sport created an enabling environment for adolescents and their families. Caregivers especially spoke about the trust they had in participating organizations, and that trust was extended to the coaches affiliated with these organizations (and who were refugees as well) leading S4D sessions.

Coaches reinforced this trust by consistently demonstrating fairness and respect towards players; it was reported that the players in turn showed respect to the coaches. Through the structures put in place by the implementing organizations, the rules, predictable routine, and player expectations, a feeling of safety was created for most of the participants (as well as their caregivers). The balance between physical movement and reflection ensured that adolescents of differential skill levels could have fun and develop through participation, whether from a personal, physical or social viewpoint.

As a result, respondents from each group (participants, their caregivers, coaches and implementing partners) stated that the

value-based curriculum was being applied in the participants' lives. This intentional value-based teaching potentially makes S4D programmes stand out from other organized sport options offered in camps. Overall, participants were able to identify ways they had changed through S4D participation, positively affecting their well-being.

To better support adolescents in refugee camps, more support is needed among actors working in and around sport. Below are suggestions for organizations implementing sport for development programmes, as well as for governments and donors that support them.

The following recommendations are relevant for **S4D organizations** that want to improve the effectiveness of their programming, particularly when working to improve the psychological well-being of adolescent refugees:

1. Ensure language translation capacity during a session:

S4D's value-based methodology teaches adolescent refugees important lessons through physical play and reflection. However, opportunities may be missed due to language barriers between coaches and players, and coaches and caregivers. These barriers can prevent players from fully engaging in discussions about values and prevent families from understanding the aims of the S4D programme. Organizations that recruit coaches from the displaced community often do so from a sport-interest perspective, but they can also seek volunteers with the necessary language skills and train them as coaches/ assistant coaches. This may provide refugees with increased capacities and a possible future pathway to a career. An alternative and potentially more stable option may be to partner with other NGOs, public programmes, etc. that could support language translation, depending on the context of operation and services available.

2. Provide adequate information-sharing between staff/coaches and caregivers:

From the beginning, lines of communication need to be open to communicate programmatic expectations, structure and safety. This can be done by organizing information-sharing sessions, where everyone can receive the same information and listen to others' feedback and questions. It is also useful to invite caregivers to observe S4D sessions, as this may further reassure them that the programme is safe. With staff/coach support, caregivers can be great allies in reinforcing the values and pro-social behaviours learned through S4D.

3. Provide frequent training opportunities on S4D methodology and psychological well-being to coaches from the displaced community.

a. **S4D methodology:** Due to the evolving refugee situation, many coaches may be new to camps and need new or updated trainings on S4D methodology. Face-to-face trainings may be preferred, but are dependent on an organization's budget; a more affordable option may be through a training of trainers.

b. **Psychological well-being:** As coaches may likely be an entry point for participants to share their thoughts and feelings, S4D organizations can partner with MHPSS professionals for additional assistance (likely to be sourced from within the refugee camp). MHPSS staff could:

   i. Train refugees in mentorship roles – including coaches and/or older adolescents – in Psychological First Aid (PFA) and other methods to become a part of the solution and potentially positively impact their broader environment. (See sportanddev, 2022 for an example of a PFA initiative from the Olympic Refuge Foundation.)

ii. Observe sessions to identify programmatic strengths and areas for improvement and/or ensure the correct referral protocols.[15] To maximize the benefit, MHPSS staff may need training in physical activity to better facilitate referrals/uptake (Rosenbaum et al., 2021).

iii. Determine the level of psychological support specific individuals may need, including intervention beyond S4D sessions. This may also involve caregivers and/or family members to ensure a more holistic approach.

4. Develop an explicit gender strategy that addresses the barriers preventing girls and women from participating in sport-based programming.

In both locations, adolescent girls were less likely to participate in S4D than adolescent boys. Closing the gender gap in S4D participation means creating an environment that is respectful and welcoming to all, and an initial step is recruiting more female leaders to coaching positions to attract more female players. UNICEF research shows that in many sectors, such as health care, business and education, female leaders adopt practices that lead to better outcomes; further, having more female leaders often contributes to higher aspirations for girls (Bergmann et al., 2022). It is also important to identify other things that may increase girls' participation. For example, consider combining S4D sessions with academic/language tutoring; for many refugee families[16] educational opportunities are attractive as they may have been limited in their country of origin. When educational opportunities are combined with S4D, a more holistic approach to addressing development and well-being can be taken which may appeal to adolescent refugees (especially females) and their families.

5. Increase efforts at integration among refugee and local adolescents.

Social integration, inclusion and cohesion through S4D is of high interest among many stakeholders working in the field. In both locations, participants may have been given opportunities to play with adolescents in local communities, but due to events such as COVID-19, organizations (involved in this study and elsewhere) may have cut back on these events. If possible, organize games and mix the local players and refugee players to avoid raising tensions and encourage inclusion and teamwork. Participation may break down cultural barriers on both sides, but more research is needed to understand the extent to which individuals may act as agents of change beyond the sports realm, leading to more cohesive communities.

6. Establish a 'sports library' facility.

With a lack of choice in their lives, refugee participants want more ways to play and fit in. Organizations can establish a sports library similar to one which operates in Lesvos (see the example of a Klabu clubhouse). Players have access to balls, equipment and clothing, which opens access to sport and increases the well-being of the participants. Furthermore, if these are physical establishments within a camp, they can have multiple purposes, such as a safe space for women in camp to come together or be used as a meeting space to view sporting events. Where possible, community ownership should take priority.

15 Referral protocols include a series of actions or steps to take when identifying and providing services to a child or adolescent in need of psychological support. Protocol pathways are unique to each context, depending on available resources. For example, within Lesvos' Mavrovouni camp, Médecins du Monde (MDM) leads these efforts and works in close cooperation with the S4D implementing partner, Movement on the Ground, to identify and support vulnerable young people and their families.

16 The majority of participants from this study originated from Afghanistan, where opportunities for girls to engage in education and sporting activities are limited. The recommendation is based on the experience of Nagin Ravand, Danish-Afghan UEFA licensed football coach and founder and director of the organization Globall

The following recommendations will support **governments and donors** to harness the power of S4D:

1. Advocate and support S4D programmes as a tool for adolescent well-being.

As outlined in this report, S4D is linked to several outcomes that affect the well-being of adolescents in refugee populations. Depending on wider development aims, S4D may contribute to different SDGs; thus incorporating sport across social, education and health-related policies can help support agendas and strategies aimed at building peace and stability among young people, who may otherwise lack positive experiences in their lives. Additionally, decision makers aiming to understand the benefits of physical activity and ways to mitigate health risks can look to WHO guidelines on public health recommendations for all ages and abilities (WHO, 2020).

2. Make longer-term investments to support what the targeted population needs.

All S4D programmes need to build in crucial monitoring, evaluation and learning (MEL) components so that programme staff can understand how effective implementation is and improve it. When gathering evidence on programmes that work with refugee children, adolescents and their families, specific methodological, ethical and logistical issues need to be considered to protect these vulnerable populations. Tailoring MEL to the context and the participants requires resources, but this process is essential for learning what works and what does not to increase the resiliency of the programme and to guide scale-up efforts. More guidance can be found in UNICEF Innocenti's *Playing the Game* (2021b) report and toolkit.

3. Facilitate improved coordination and clear communication among organizations that support (young) refugees.

The composition of refugee camps is constantly changing because of people continuously moving in and out. Organizations respond to the ebb and flow of people, but for those implementing S4D, communication and coordination challenges may be compounded as sport-related programming is often impacted by decisions emanating from a cross section of technical areas and policy spheres (e.g. education, health, MHPSS, protection etc.) (see Sport for Development, n.d.). Formal and informal coordination mechanisms need to be optimized to ensure that S4D receives proper consideration. Therefore:

a. In partnership, governments and the donor community should assess the opportunity, feasibility and costs of establishing **formal coordination mechanisms** involving relevant public institutions as well as local stakeholders that support S4D and/or adolescent well-being. By leveraging existing frameworks, structures and resources that already have clear organizational roles and responsibilities, a more harmonized approach and reduced duplication of efforts may ensure that adolescents and their families get the psychological support and services they need.

b. To complement formal coordination frameworks, actors on the ground need to understand where S4D fits into the local humanitarian ecosystem and assess opportunities to participate in or leverage **low-cost, organic mechanisms for day-to-day coordination**. This could, for example, take the form of social media-based platforms or messaging applications to establish communication and coordination channels between designated officials of local agencies that support refugees.

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Annex 1: Detailed development process of mental health tools

i. Rapid literature review

A rapid review of the relevant literature was conducted with the aim to 1) identify existing tools that may be suitable and 2) explore the way in which mental health is conceptualized in the literature to inform combinations of tools or the design of new tools. This project covers four topics: **mental health** of **young people** who are **refugees/asylum seekers** receiving a **sport for development** intervention. Our literature search then needed to draw on all four topics. (See Annex 1a for complete search strategy). Searching major databases of published research, we identified: 1) studies relating specifically to refugee child mental health measures in relation to S4D and 2) reviews of refugee child mental health measures. In addition, we also identified 3) major studies relating to the measurement of child mental health in general, as illustrated below. Expert recommended literature was also integrated, based on discussion with subject experts and consultants.

Following the literature search, the abstracts (summaries) of the identified studies were rapidly appraised for potentially relevant information. This was based on basic inclusion criteria: measures or discusses mental health/ mental well-being in children generally or adolescents specifically. Studies that did not include children in our age range (11–19) were not included. Priority was given to papers that fell into category 1) mental health measures for refugee children in relation to S4D interventions, then moving to 2) mental health measures for refugee children more generally, and finally we considered major frameworks and studies that cover measurement of mental health in children more generally. To collate and manage this information, a basic table was completed. Data were extracted from the studies to summarize the population, presence of a focus on S4D interventions, study type, measures used, and how mental health was conceptualized either by the measures used or in the data from young people directly. The literature on mental health for children who are refugees/asylum seekers is enormous, leading us to focus on recent systematic reviews and very recent, highly relevant original studies, in addition to locating key studies frequently referred to by other articles. Data were extracted from 101 studies. This was supplemented by knowledge of additional relevant studies, some identified through complementary work being undertaken by UNICEF to identify the evidence and map out gaps in relation to child and adolescent mental health and psychosocial support interventions (Sharma et al., 2022).

There are some limitations. This approach used rapid reviewing and it is possible that not all relevant studies were identified. Furthermore, we used only papers already published in academic sources. There may be tools that are well used but have never been published academically, or conceptualizations of mental health used by actors in this arena that are not present in the literature we located.

ii. Initial findings regarding important areas to be captured by the mental health tool

This section provides a summary of the initial findings. The scope of the tool and focus on Sports for Development interventions is set out first, with a summary of the relevant literature identified specific to these interventions. Next, a summary of areas of importance and potential measures for mental health symptoms is provided. Third, there is an overview of the importance of including positive mental health aspects and key areas revealed from the literature review.

An overview of findings of how sports for development interventions may impact mental health

The intended scope of the mental health tool is linked to the Sports for Development interventions. While poverty, separation from parents, not speaking the local language and a history of trauma are all highly relevant to the mental health of children/young people in refugee camps, these factors are not amenable to change via Sports for Development intervention. The scope of the tool then relates to the scope of these interventions.

Sports intervention relate to child-centred outcomes of the child/young person's perceptions and experiences of their own mental health, particularly low mood or depression, anxiety, fear, PTSD and externalizing difficulties of violence and aggression. This is outlined in the first two columns of Table 1 below.

Positive mental health concepts are highly relevant to sports programmes. Sports programmes for refugees and asylum seekers aim can provide positive affect and support social well-being (Koopmans and Doidge, 2022). These programmes can provide opportunities to experience joy and positive affective states, in addition to experiences of safe social interactions, building inter-personal relationships, supporting self-efficacy, experience of mastery of an activity, and self-regulation of emotions (Ley and Barrio, 2019). Sport-based interventions for refugee/ asylum seekers can impact on children and young people's emotional management; their perceptions of themselves including self-confidence; perceptions of their future; social skills building their relationships with others; and their sense of safety and opportunity in their environment (Bara, Crespo, Escriba, Puigjaner and Miret, 2018; Koopmans and Doidge, 2022; Ley and Barrio, 2019; Paskevice, Pozeriene, Dyka, Asauliuk and Olefir, 2021). Leisure and engagement in fun is seen as essential to children and young people's development and their psychological well-being (Gadais, Decarpentrie, Charland, Arvisais and Paquito, 2021). Further detail is provided in the section on positive mental health concepts.

'Pathology' and symptoms

The literature is clear that many refugee/ asylum seeker children experience significant mental ill-health. There is robust evidence that this clusters around main clinical issues of post-traumatic stress, depression and anxiety (Mina Fazel, Reed, Panter-Brick, & Stein, 2012; Höhne, van der Meer, Kamp-Becker, & Christiansen, 2020; Reed, Fazel, Jones, Panter-Brick, & Stein, 2012). This is entirely understandable, given the experiences prior to their displacement, during their journey, and within the camps / during resettlement.

A wide range of symptoms and difficulties were identified by our literature review. Table 1 shows the range of symptoms and diagnoses covered, both specifically in sports interventions and more generally in our population. Internalizing and externalizing difficulties were most commonly found, with physical ('somatic') symptoms of emotional distress and difficulties sleeping also frequently revealed. Somatic symptoms and difficulties sleeping typically correlate highly with internalizing symptoms (Buchmüller, Lembcke, Busch, Kumsta, & Leyendecker, 2018).

Table 1. Evidence reporting different mental health symptoms with asylum seeking and refugee children

Symptoms / mental health problems	Evidence from Sports related interventions with refugee/ asylum seeking children	Evidence from general studies with refugee/ asylum seeking children
'Internalizing' symptoms – including depression, anxiety, fear, worry, post-traumatic stress disorder	(Draper, Marcellino, & Ogbonnaya, 2020; Due, Heer, Baak, & Hanson-Easey, 2019; Eames, Shippen, & Sharp, 2016; Kaya, Faulkner, Baber, & Rotich, 2022)	(Arakelyan and Ager, 2021; Blackmore et al., 2020; Borsch et al., 2019; Cayabyab, O'Reilly, Murphy, & O'Gorman, 2020; Celik, Altay, Yurttutan, & Toruner, 2019; Çeri and Özer, 2018; Chase, 2013; Costa, Biddle, & Bozorgmehr, 2021; Curtis, Thompson, & Fairbrother, 2018; Doumit, Kazandjian, & Militello, 2020; Mina Fazel et al., 2012; M. Fazel and Stein, 2002; Flood and Coyne, 2019; Hodes and Vostanis, 2019; Pietro et al., 2021; Smith, 2020; Speidel et al., 2021; Tam, Houlihan, & Melendez-Torres, 2017; Thabet and Thabet, 2018; Vossoughi, Jackson, Gusler, & Stone, 2018)
Externalizing including aggression and violence	(Eames et al., 2016; Ha and Lyras, 2013)	(Blackmore et al., 2020; Borsch et al., 2019; Celik et al., 2019; Çeri and Özer, 2018; Mina Fazel et al., 2012; Flood and Coyne, 2019; Pietro et al., 2021; Speidel et al., 2021; Vossoughi et al., 2018)
Somatic symptoms including appetite and fatigue	None found	(Arakelyan and Ager, 2021; Borsch et al., 2019; Costa et al., 2021; Davidson, Murray, & Schweitzer, 2010; Doumit et al., 2020; Mina Fazel et al., 2012; M. Fazel and Stein, 2002; Flood and Coyne, 2019; Yayan, 2018)
Problems sleeping	(Due et al., 2019)	(Smith, 2020; Vossoughi et al., 2018) (Celik et al., 2019; Chase, 2013; M. Fazel and Stein, 2002; Flood and Coyne, 2019; Richter et al., 2020)

Positive mental health concepts

The wider literature on the measurement and conceptualization of child mental health and well-being among refugee and asylum-seeking children revealed several factors of importance in relation to positive mental health. These were derived from the data extracted during the literature review, which was a summary of key findings. Related concepts were brought together into themes of importance. Table 2 summarizes these concepts that were found or theorized to be relevant to positive mental health. (Annex 1b provides a detailed list of all the relevant references.)

Framework for the mental health tool

The resulting framework for the mental health tool is provided below.

Table 2. Relevant positive mental health concepts

External factors
Social relationships and support
Belongingness, friendship, community and social support
Supportive relationships with adults & parents
Pro-social behaviours
Interpersonal skills and respecting others
Taking part and being active
Participating
Being active
Opportunities to learn and play
Safety
Safety, including emotional safety

Internal factors
Positive feelings and experiences
Fun / positive experiences / positive affect
Hope and optimism
Gratitude
Managing emotions
Self-regulation of emotions
View of self
Self-efficacy
Competency
Self-esteem / self confidence
Development of identity
Sense of power and freedom
Agency / empowerment / sense of control (capacity to act and exert power)
Autonomy / sense of freedom (perceived freedom to act)
Meaning in life
Meaning in life / sense of purpose

iii. Overview of existing measures

Based on the studies considered during the literature review, a total of 92 existing measures of relevant constructs to symptoms and positive mental health were identified (Annex 1c). A number of measures capture symptoms of mental health problems. Despite significant research in this area, researchers note that there is lack of measures developed outside a Western cultural context and many measures have not had their properties validated with different cultures or in different settings, such as refugee camps (Paalman, Terwee, Jansma, & Jansen, 2013). Many measures focus on just one set of symptoms or difficulties, be that depression, trauma, or anxiety for example. A combined measure is required, as the evidence shows that young refugees may experience a large range of mental health difficulties. Furthermore, to guide our selection of measures, our research is based on a child-centred understanding of mental health. Self-report measures for the young people to complete with interviewers allow the voice of the young person to be better represented. This is important in mental health measurement in particular, as parent or other proxy rated measures frequently under-report distress for young asylum seekers/ refugees (Fängström et al., 2019).

The 'Strengths and Difficulties Questionnaire' or 'SDQ' (Goodman, Meltzer, & Bailey, 1998) is commonly used, as is the 'Pediatric Symptoms Checklist' or 'PSC' (Pagano et al., 2000). Both measures assess externalizing and internalizing difficulties. The SDQ also assesses conduct problems, hyperactivity, peer problems and pro-social behaviour. Conversely, the PSC also covers somatic (physical symptoms of mental distress), social and academic difficulties. Both the measures have been used in refugee camps with young people (Akhtar et al., 2020; Bryant et al., 2022; Hamdan-Mansour, Abdel Razeq, AbdulHaq, Arabiat, & Khalil, 2017). Both are freely available and have been explored in multiple languages. Challenges with collecting data using parent versions of the SDQ have been observed

in refugee camps, particularly with parents not answering all the questions (Cartwright, El-Khani, Subryan, & Calam, 2015). These measures do not cover trauma specifically. The CRIES-8 scale has been frequently used to assess trauma symptoms and has been shown to perform well with young refugees/asylum seekers (Guido Veronese, Pepe, Cavazzoni, Obaid, & Perez, 2019).

Different positive mental health constructs have been measured, often with specific measures per construct. Although there are a large number of existing measures, there is no one measure that covers the positive mental health concepts that are of most relevance to our population and to sports interventions in our setting.

iv. Expert consultation

Experts in the field of child refugee well-being and mental health were consulted via email, short anonymous survey and virtual meetings. An overview of their input is provided.

- A simple domain structure bringing together measurement of symptoms as well as positive mental health was arrived at through expert discussion. The contents of the positive mental health aspects were considered important by experts, to ensure consideration of strengths and resilience. Importantly, the social worker and psychologist working in the refugee camp in Lesvos both felt that the overall domain structure for the positive mental health measure was relevant and appropriate to their experience in their context.
- For measures of symptoms, a range of options were discussed. Two experts endorsed the use of the 'Strengths and Difficulties Questionnaire' (Goodman et al., 1998), while three expressed concern about this measure owing to difficulties with cultural and situational relevance with respect to children from a range of cultures in refugee camps, and potential difficulties with ceiling effects where most refugee children score very highly. The alternative of the 'Pediatric Symptom Checklist' (PSC) (Pagano et al., 2000) was suggested, with experts suggesting this covers similar constructs to the SDQ, and appears to have good validity in different cultures. The PSC measure is currently being used by a large, multinational research project examining psychological well-being in youth refugees ('Refuge-Ed').
- One expert recommended the use of the EPOCH measure that covers the positive psychology constructs of Engagement, Perseverance, Optimism, Connectedness and Happiness (Kern, Benson, Steinberg, & Steinberg, 2016). We could however locate no published studies demonstrating that this measure had been validated for use with our population. Items from this measure were used as part of an item pool (questions taken from related measures) to help construct the non-symptom elements of the tool.
- Similarly, the PROMIS tools were also recommended, which were not identified from existing systematic reviews or our searches for literature relevant to children/young people who are asylum seekers/refugees. The PROMIS measures cover anger, anxiety, depression, life satisfaction, meaning and purpose, positive affect, psychological stress, sleep disturbances, peer relationships and family relationships (PROMIS, 2022). These measures were developed in high-income countries and have not been extensively used with asylum seeker/refugee populations.
- Another expert recommended the use of 'PSYCHLOPS', which has been used with refugee populations (Lindegaard et al., 2022). This measure is idiographic – participants describe the main problem

affecting them (Ashworth, Evans, & Clement, 2009). This measure can be a useful indicator of change over time owing to therapy; however, it is less useful for providing a snapshot of someone's mental health status across a range of areas.

- For novel measures, the use of visual response scales with a maximum of 5 choices was supported. The image of a glass with nothing it in to being full was suggested as an incremental scale that has previously worked well cross-culturally with young people. Further input suggested that the glass was too abstract and that smiley faces would be preferred.
- Although initially a trauma-specific measure was recommended (CRIES-8), experts in the field suggested that this was too clinical for the scope of the current project. The data were to be collected by trained enumerators, rather than clinical personnel. As such, the decision was made not to specifically measure trauma symptoms, with particular concerns about asking the participants to think about distressing material without necessarily being able to manage arising distress.

v. Selection and creation of tools

Based on the literature review and expert input, the Pediatric Symptom Checklist (PSC) was selected to assess the symptoms. The literature review highlighted the importance of focusing on more than just symptoms (Foka, Hadfield, Pluess, & Mareschal, 2021).

As there is no measure of positive mental health that covers all the aspects of relevance to our population and in relation to sports interventions, a bespoke 'Positive Well-being Measure' was created, following standard processes for developing measures (Boateng, Neilands, Frongillo, Melgar-Quiñonez, & Young, 2018; Streiner, Norman, & Cairney, 2014). This was generated from the literature review. Each planned factor was conceptually composed of linked domains (shown in Table 2 and detailed in Annex 1b).

a. Generating candidate questions

Existing measures covering these constructs were inspected to provide ideas for wording of questions (predominantly from those identified through the literature reviewing). The candidate questions covered all the factors and their intended subdomains, shown in Table 2. It is ideal in a questionnaire to have more than one item to measure each intended factor (Streiner et al., 2014). As such, at least two items (typically four) were generated for each theoretical domain within each factor. A list of questions was written and shared with the research team and experts in the field providing sports interventions. Their suggestions for amendments were used to generate a long-list of candidate questions (Annex 1d). We received subsequent feedback from an expert in running sports interventions for this population that the gratitude items were not appropriate. These were subsequently dropped.

b. Translation and back-translation

Using standard processes (Streiner, Norman, & Cairney, 2014), the long-list of items was translated into Farsi, French and Arabic, covering the language requirements of our intended participants. English versions were sent to professional translators. One translator completed the forward translation into the target language. A second translator then translated that back into English. The research team inspected the English back-translations and noted any queries or differences. This included ensuring the strength of the wording was suitable to convey the strentgh of emotion or to ensure that the concept itself was well translated. For example, the phrase candidate item "I have enough say

in how I spend my time" was translated as "I have lots to say about how I would like to spend my time", revealing a clear difference in meaning. Questions requiring edits were translated and back-translated again, with final versions capturing a similar meanings.

c. Young person's expert advisory panel

Experts reviewing the measure and the researcher writing it had some concerns about the relevance and comprehensibility of some of the items. As such, we convened an expert panel. Following consent, we explained that we needed their help to make our work better and we would ask them what they thought about the questions we had made up. We explained briefly the purpose of the study. It was made very clear that they were the experts, there to help us learn. Following the panel, the young people taking part received a small gift of thanks. The panel was composed of five young people aged 14–15 years. The panel included three girls and two boys. The group spoke and interacted happily with one another, as they already knew each other from the football club. They were able to both agree and disagree with what was being said by another young person, and openly explained when they felt our ideas did not make sense. These were all Farsi speakers. We asked them to talk about core concepts from our question topics and also asked them specifically about how they understood particular items. This advisory panel was conducted through an interpreter. Extensive notes were taken during the panel by one of the researchers. The panel revealed several key findings:

1. Young people spontaneously talked about their social relationships and free time when talking about their well-being. Further, when asked specifically about safety, they talked about feeling safe with other people and while doing their sports activities. This provides initial support for the relevance of our external factors.

2. They spontaneously talked about things they wanted to do and, although not voiced explicitly as such, described outline goals such as playing more football, spending time with friends, and learning more at school. This supported the factor linked to positive experiences and the goal element of meaning in life.

3. In their talk, both positive emotions and the presence of sadness were described. Despite concerns from experts, the young people spontaneously and clearly spoke about fun, in particular in relation to football. The inclusion then of a positive focus and positive emotions was supported, specifically as this project focuses on the experiences linked to the S4D intervention.

4. The items relating to how they feel about themselves were not liked by all the young people. Some clearly felt that asking this could be upsetting to young people who did not feel good about themselves. They rejected several questions and selected the question "There are things that I know I am good at" to capture self-esteem linked constructs. The view of self factor was challenging to address in a sensitive and relevant way.

5. The young people talked about helping each other manage difficult emotions and reflected for themselves on staying calm to help their younger siblings. The concepts around the managing emotions factor were well understood.

6. Although the literature states that collective agency is particularly important to youth well-being, in relation to S4D (UNICEF, 2019), this concept was not understood by the young people. The concept of personal agency and freedom to choose was understood, with the concrete example of ability to select, or not, what to do with their free time. The factor of sense of power and freedom then reduced to focus on personal agency more specifically.

Changes were made to the items included before further piloting.

d. Piloting

Following the advisory panel, adjustments were made to reduce items relating to agency and perceptions of self, delete items specifically linked to judgments of oneself and collective agency, and select best examples from the long-list of the remaining items. A pilot measure was then constructed for testing. A group of nine young people aged around 13–15 completed the measure on paper, with verbal administration to support, via an interpreter. The research team noted questions from the young people about particular items or difficulties in the understanding of the wording or meaning of the items. The young people were asked to describe what they felt the questions meant. This allowed us to identify that the measure needed to be around 20–25 questions long to retain their interest and attention. We dropped items that the young people did not readily comprehend or where their reported understanding was not what as intended – for example the question "Because I cope well, I can stay calm when facing difficulties" was understood less well than the alternative "If things do not go as I want them to, I can stay calm". The latter was retained for the final measure. Importantly, the researchers also noted the way in which the response scale was understood and used. All the participants immediately understood and could describe the use of the smiley face response scale. All participants appeared thoughtful while completing the questionnaire and used the range of response options, rather than simply reporting that everything was positive.

Table 3. Final English version of questions for the positive well-being measure

Number	Question	Factor
1	I feel supported by my friends	Social
2	Looking forward, I think more good things than bad things will happen	Positive
3	I talk to adults around me about how I feel	Social
4	I usually expect to have fun	Positive
5	I can ask for help from people when I feel I am not safe	Safety
6	There are lots of things that I do well	View of self
7	I have enough chances to do what matters to me, for example learning or playing	Taking part
8	I feel that I am in control of my thoughts and feelings	Managing emotions
9	I often feel cheerful	Positive
10	I know what is important to me	View of self
11	I get to choose what I do with my free time	Sense of power and freedom
12	If things do not go as I want them to, I can stay calm	Managing emotions
13	There are things in life I know I am good at	View of self
14	People around me try to support each other	Social
15	I feel connected to people around me	Social
16	I am kind to other people	Social
17	I have goals in my life	Meaning
18	I feel that I can participate with groups of other young people	Taking part
19	I can usually manage what happens to me	Sense of power and freedom
20	I feel safe to walk around the place where I live	Safety
21	My days contain things that are interesting	Positive
22	I can share my experiences and interests with other young people	Social

e. Final measure

Despite our intention to have at least two items for each intended domain, within the intended factor, this was not done. This was due to the need to keep the measure at an appropriate length to retain the young people's interest and attention during administration. Furthermore, some of our intended domains were not relevant or comprehensible to the young people. The final internal structure of the measure is simplified, covering the five factors from Figure 3, but not the internal domains from Table 2. The English version of the questions for final measure is shown in Table 3, which also shows the intended factor for each item.

Limitations

There are a number of limitations to the development of the measure. First, the conceptualization was based on a desk-based literature review, rather than direct input from young people. The approach of in-depth qualitative work, leading to culturally relevant measures has been successful in other contexts (Betancourt et al., 2009; Bolton, Wilk, & Ndogoni, 2004). While every effort was made to reflect the voices of young people through the inclusion of and attention paid to qualitative studies capturing their views, the process of a literature review necessarily reflects the ideas and understanding of the researchers. Second, no youth involvement was possible during the literature review. Further, no youth involvement was included during the generation of candidate items. The advisory panels and piloting were conducted only with Farsi speakers, predominantly from Afghanistan. This limits our measure as the viewpoints of young people from other cultures were not included. This is a major issue, as the very fundamental conceptualization of positive mental health and well-being is strongly linked to context and culture (Bass, Bolton, & Murray, 2007; Bolton, 2001; Fernando, 2014; Gadeberg, Montgomery, Frederiksen, & Norredam, 2017; Kien et al., 2019; McEwen et al., 2021; Mills, 2013; Paalman et al., 2013; Panter-Brick et al., 2018).

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Annex 1a – Complete search strategy and databases used for the development of the mental health tool

Searching PsycInfo, Medline, AMED, CINHAL, SPORTDiscus and Education Source. Search conducted 16/03/22.

Search terms:

1. Child terms	TI (Child* or adolescen* or teen* or adolescence or teenager or youth* or young people or young person or kid* or minor* or boy* or girl* or juvenile) OR AB (Child* or adolescen* or teen* or adolescence or teenager or youth* or young people or young person or kid* or minor* or boy* or girl* or juvenile)
2. Mental health terms	TI (Well-being or mental health or mental illness or depressi* or anxiety or anxious or stress or mental disorder* or post*trauma* or resilience or coping or emotion*) OR AB (Well-being or mental health or mental illness or depressi* or anxiety or anxious or stress or mental disorder* or post*trauma* or resilience or coping or emotion*)
3. Measures terms / conceptualization terms	TI (Measure* or scale* or questionnaire* or instrument* or indicator* or domain* or concept* or tool* or evaluation or framework) OR AB (Measure* or scale* or questionnaire* or instrument* or indicator* or domain* or concept* or tool* or evaluation or framework)
4. Refugee terms	TI (asylum* OR refugee* OR fled OR flee OR migrant* or immigrant* or displaced* OR unaccompanied) OR AB (asylum* OR refugee* OR fled OR flee OR migrant* or immigrant* or displaced* OR unaccompanied)
5. S4D terms	TI (Sport* or physical activit* or physical fitness or football or soccer or tennis or swimming or running or cycling or physical exercise or basketball or martial art* or surf* or athlete* or yoga) OR AB (Sport* or physical activit* or physical fitness or football or soccer or tennis or swimming or running or cycling or physical exercise or basketball or martial art* or surf* or athlete* or yoga)
6. Literature review	TI (review of literature or literature review or meta*analysis or systematic review or meta*synthesis or scoping review) OR AB (review of literature or literature review or meta*analysis or systematic review or meta*synthesis or scoping review)

Combination of search terms and resulting number of records

Search number (see above table for full terms)	Number of records retrieved by databases
1. Child terms	4884511
2. Mental health terms	3642187
3. Measures terms / conceptualization terms	11735650
4. Refugee terms	192329
5. S4D terms	3056512
6. Literature review	1104755
7. 1+2+3+4+5	158 (114 when duplicates removed)
8. 1+2+3+4	5984 (5049 when duplicates removed)
9. 1+2+3+4+6 limited year 2012	271 (171 when duplicates removed)
10. 1+2+3+6 limited yr2016	8330 (6840 when duplicates removed)

Results from searches 7 and 9 were downloaded and inspected in full. These represent information specific to refugee child mental health measures in relation to S4D and reviews of refugee child mental health measures. In addition, results from searches 8 and 10 were rapidly inspected for major frameworks and approaches to understanding child mental health in general.

Annex 1b – Details of findings from the literature review relating to concepts for positive mental health

Concept	Linked to how sports intervention may work	Other studies
Social relationships and support		
Belongingness, friendship, community and social support	(Carlman, Hjalmarsson, & Vikström, 2020; Cheung-Gaffney, 2018; Draper et al., 2020; Eames et al., 2016; Fader, Legg, & Ross, 2019, 2020; Hoare, 2020; INEE and EASEL, 2020; Kaya et al., 2022; Koopmans and Doidge, 2022; Ley and Barrio, 2019; Luguetti, Singehebhuye, & Spaaij, 2020; Morela, Elbe, Theodorakis, & Hatzigeorgiadis, 2019; Nunn, Spaaij, & Luguetti, 2022; Pink, Mahoney, & Saunders, 2020; M. A. Whitley, Coble, & Jewell, 2016) (Adamakis, 2022; Due et al., 2019)	(Arakelyan and Ager, 2021; Cavazzoni, Fiorini, & Veronese, 2022; Cayabyab et al., 2020; Curtis et al., 2018; d'Abreu, Castro-Olivo, & Ura, 2019; Doumit et al., 2020; Mina Fazel et al., 2012; M. Fazel and Stein, 2002; Flood and Coyne, 2019; Forrest-Bank, Held, & Jones, 2019; Hettich, Seidel, & Stuhrmann, 2020; Kalaf and Plante, 2019; Mitra and Hodes, 2019; Newnham, Kashyap, Tearne, & Fazel, 2018; Popham, McEwen, & Pluess, 2021; Smith, 2020; Speidel et al., 2021; Ungar and Theron, 2020; UNICEF, 2021a, 2021b; Guido Veronese and Pepe, 2020; Vossoughi et al., 2018) (Fängström et al., 2019; Feen-Calligan et al., 2020) (Ben Farhat et al., 2018) (Höhne et al., 2020; Purgato et al., 2018; Reed et al., 2012; Ulrich et al., 2021)
Supportive relationships with adults and parents	(Pink et al., 2020)	(UNICEF, 2021b) (Mitra and Hodes, 2019) (Popham et al., 2021) (Speidel et al., 2021) (Ungar and Theron, 2020) (Newnham et al., 2018)
Pro-social behaviours	(M. Whitley and Gould, 2010)	(Elsayed, Song, Myatt, Colasante, & Malti, 2019; Forrest-Bank et al., 2019; Panter-Brick et al., 2018; UNICEF, 2021b; Vossoughi et al., 2018)
Interpersonal skills and respecting others	(Eames et al., 2016; Pink et al., 2020) (INEE and EASEL, 2020; M. Whitley and Gould, 2010; M. A. Whitley et al., 2016)	
Taking part and being active		
Participating	(Adamakis, 2022; Due et al., 2019; Fader et al., 2020; Hoare, 2020; Ley and Barrio, 2019; M. Whitley and Gould, 2010)	(Curtis et al., 2018; Demazure, Baeyens, & Pinsault, 2021; Mina Fazel et al., 2012; Hettich et al., 2020; Kalaf and Plante, 2019)
Being active	(Eames et al., 2016)	
Opportunities to learn and play	(Eames et al., 2016; M. A. Whitley et al., 2016)	(Cavazzoni et al., 2022; Forrest-Bank et al., 2019; UNICEF, 2021a, 2021b; G. Veronese, Pepe, Cavazzoni, Obaid, & Yaghi, 2021b)
Safety		
Safety, including emotional safety	(Cheung-Gaffney, 2018; Draper et al., 2020; Due et al., 2019; Fader et al., 2019) (Fader et al., 2020; Koopmans and Doidge, 2022; Nunn et al., 2022; Pink et al., 2020)	(Chase, 2013; Fängström et al., 2019; Mina Fazel et al., 2012; UNICEF, 2021a; Vossoughi et al., 2018) (Ben Farhat et al., 2018; Cavazzoni et al., 2022; Feen-Calligan et al., 2020; Flood and Coyne, 2019; Hettich et al., 2020; Höhne et al., 2020; Rapoport, Poole, Kazanas, Mourtzaki, & Bump, 2020; Speidel et al., 2021; G. Veronese et al., 2021b)

Concept	Linked to how sports intervention may work	Other studies
Positive feelings and experiences		
Fun / positive experiences / positive affect	(Draper et al., 2020; Eames et al., 2016; Fader et al., 2020; Hoare, 2020; INEE and EASEL, 2020; Kaya et al., 2022; Koopmans and Doidge, 2022; Ley and Barrio, 2019; M. A. Whitley et al., 2016)	(Cavazzoni et al., 2022; Demazure et al., 2021; Flood and Coyne, 2019; Kalaf and Plante, 2019; Smith, 2020; UNICEF, 2021b; Vossoughi et al., 2018)
Hope and optimism	(INEE and EASEL, 2020) (INEE and EASEL, 2020)	(Cayabyab et al., 2020; Celik et al., 2019; Chase, 2013; UNICEF, 2021b) (Forrest-Bank et al., 2019; Kalaf and Plante, 2019) (Cavazzoni et al., 2022; Pietro et al., 2021) (Foka et al., 2021; Purgato et al., 2018; Rapoport et al., 2020; G. Veronese et al., 2021b) (Speidel et al., 2021; Ungar and Theron, 2020; Guido Veronese et al., 2019)
Gratitude	(Fader et al., 2020)	
Managing emotions		
Self-regulation of emotions	(INEE and EASEL, 2020; Ley and Barrio, 2019) (Eames et al., 2016)	(Arakelyan and Ager, 2021; Cavazzoni et al., 2022; Cerniglia and Cimin, 2012; Elsayed et al., 2019; Mancini, 2020; Popham et al., 2021; Speidel et al., 2021; Ungar and Theron, 2020) (Feen-Calligan et al., 2020)
View of self		
Self-efficacy	(INEE and EASEL, 2020; Kaya et al., 2022; Pascoe et al., 2020; Pink et al., 2020)	(Cavazzoni et al., 2022; Hettich et al., 2020; Popham et al., 2021; Ulrich et al., 2021; Ungar and Theron, 2020; Guido Veronese et al., 2019)
Competency	(Fader et al., 2019; Kaya et al., 2022; Ley and Barrio, 2019; Morela et al., 2019; M. A. Whitley et al., 2016)	(UNICEF, 2021b)
Self-esteem / self-confidence	(Cheung-Gaffney, 2018; Draper et al., 2020; Eames et al., 2016; Ha and Lyras, 2013; Hoare, 2020; Pink et al., 2020)	(Arakelyan and Ager, 2021; Cavazzoni et al., 2022; Elsayed et al., 2019; Mina Fazel et al., 2012; M. Fazel and Stein, 2002; Foka et al., 2021; Forrest-Bank et al., 2019; Kalaf and Plante, 2019; Pietro et al., 2021; Speidel et al., 2021)
Development of identity	(Eames et al., 2016; Ha and Lyras, 2013; Kaya et al., 2022)	(Ben Farhat et al., 2018; Curtis et al., 2018; M. Fazel and Stein, 2002; Kalaf and Plante, 2019; Ungar and Theron, 2020; Vossoughi et al., 2018)
Sense of power and freedom		
Agency / empowerment / sense of control (capacity to act and exert power)	(Draper et al., 2020; Eames et al., 2016; Ha and Lyras, 2013; INEE and EASEL, 2020; Ley and Barrio, 2019; Luguetti et al., 2020; M. Whitley and Gould, 2010)	(Cayabyab et al., 2020; M. Fazel and Stein, 2002; Feen-Calligan et al., 2020; Flood and Coyne, 2019; Rapoport et al., 2020; Ungar and Theron, 2020) (Arakelyan and Ager, 2021; Cavazzoni et al., 2022; Hayes, 2021; Smith, 2020; UNICEF, 2021a, 2021b; Guido Veronese et al., 2021a; Guido Veronese et al., 2019; G. Veronese et al., 2021b; Vossoughi et al., 2018)
Autonomy / sense of freedom (perceived freedom to act)	(Adamakis, 2022; Ley and Barrio, 2019; Morela et al., 2019)	(Ben Farhat et al., 2018; Chase, 2013; Mitra and Hodes, 2019; Rapoport et al., 2020; Ulrich et al., 2021; Vossoughi et al., 2018)
Meaning in life		
Meaning in life / sense of purpose	(Eames et al., 2016)	(Arakelyan and Ager, 2021; Cayabyab et al., 2020; Chase, 2013; Curtis et al., 2018; Kalaf and Plante, 2019; Ungar and Theron, 2020)

Annex 1c – Identified existing mental health measures

Measure name	Scope
AAS-C– Appetitive Aggression Scale for children	Aggressive behaviour only
AEGIS-Q – unAccompaniEd miGrant mInorS' physical, psychological, legal, spiritual, social and educational needs	Physical, psychological, legal, spiritual, social and educational needs
AESC– Anger Expression Scale for Children	Anger. 26 items covering trait anger, anger expression, anger in/hostility, anger control. 6–17-year-olds– Arabic version available with good validity (Hamdan-Mansour et al, 2013)
AFI=Adolescent Friendship Inventory	Friendship– 6 subscales covering different aspects of friendship
APAI – Acholi Psychosocial Assessment Instrument	Culturally relevant constructs similar to depression, anxiety and conduct problems, specific to war affected adolescents in Uganda
ASIC – Acculturative Stress Inventory for Children, derived from the "SAFE-C" Acculturative Stress Scale for Children	Acculturative stress only. Covers perceived discrimination and immigration related experiences (similar to a list of life events).
AYMH – Arab Youth Mental Health	Mental health covering depression and anxiety as a screening tool . 21 items
AYPA – African Youth Psychosocial Assessment	Covers internalizing, externalizing, and somatic complaints
BDI– Beck Depression Inventory	Depression only. Typically used with adults.
CATS-C– Child and Adolescent Trauma Screen	Trauma exposure. 7–17-year-olds, self-report. 15 items
CBCL– Child Behaviour Checklist, also called YSR for Youth Self Report – Achenbach Youth Self-Report and the Child Posttraumatic Stress Disorder Symptom Scale	Internalizing and Externalizing problems, attention problems, social problems, thought problems. Has been validated in different cultural contexts, according to Gadeberg, A. K., Montgomery, E., Frederiksen, H. W., & Norredam, M. (2017). Assessing trauma and mental health in refugee children and youth: a systematic review of validated screening and measurement tools. European Journal of Public Health, 27(3), 439–446.
CDI– Child Depression Inventory	Depression only. Covers specific symptoms seen in childhood– nocturnal enuresis and encopresis, absent mindedness and somnambulism. 6–17 years old
CD-RISC– Connor-Davidson Resilience Scale	Resilience. Typically used with adults and developed for adults
Cederblad questionnaire for children's mental health	Appears to be general mental health questionnaire.
CES-DC – Centre for Epidemiological Studies Depression Scale for Children	Depression only
CFI – Children's Function Impairment	Functioning on tasks seen as important in specific culture. Approach has been trialled in Uganda and Rwanda, CFI measure developed in Nepal
CfOS – Concern for Others Scale	Pro-social behaviour– 10 items, feelings and concern for, desire to help other people
CHQ – Child Health Questionnaire	Health-related quality of life
CHS – Children Hope Scale	Hope including agency
CIS – Columbia Impairment Scale	Focuses on functioning: interpersonal relations, broad psychopathological domains, functioning in job or schoolwork, and use of leisure time.
CLS – Cantril's Ladder of Life Satisfaction: Current Life Satisfaction	Single item rating of life satisfaction
CPSS – Child PTSD Symptom Scale	PTSD symptoms only. Self-report. 27 items

Measure name	Scope
CPTCI-S – Child Posttraumatic Cognitions Inventory Short Version	Trauma thoughts and cognitive patterns of PTSD
CPTSR-20 – Child Post-Traumatic Stress Reaction Scale – 20 items	PTSD only
CRIES 13 or CRIES 8 – Children's Impact of Event Scale	PTSD only
CSCS – Piers-Harris Self Concept scale	Self-concept covering self-esteem– feelings about themselves and how others react to them. 12 items for popularity and 10 items for happiness / satisfaction.
CSES – Collective Self-Esteem Scale	Four aspects relating to self-esteem. Evaluations of one's social groups or identities: public, private, membership and importance. 16 items
CYRM – Child and Youth Resilience Measure	Resilience. Does include indication of relationships family and friends and sense of safety with family, in addition to opportunities to learn. 28 items in original. Panter-Brick's adapted version 12 items – 3 factors– individual, relational and contextual resilience. Great validity . Scored 1–5 using visual prompt of glasses progressively full of water.
DASS-21 – Depression, Anxiety and Stress Scale– 21 items	Depression, anxiety and stress
DSI – Daily Stressors Inventory	Self-report of 'minor' everyday stressors and hassles
DSRS – Depression Self-Rating Scale, sometimes referred to as "Birleson" DSRS	Depression
DSSYR – Daily Stressors Scale for Young Refugees	Daily stressors specific for young refugees. 7 items.
GAD-7 – General Anxiety Scale (this is typically an adult measure)	Anxiety only. Covers various general symptoms of anxiety. Typically used with adults
GHQ-12 or GHQ-28 – General Health Questionnaire	General mental health
GSE – General Self-efficacy scale	Self-efficacy. 10 items, however multiple versions exist. Typically used with adults
HDS – Human Distress Scale	Psychological distress. 12 items. Developed for use with conflicted affected adolescents in West Bank.
HSA – Holistic Student Assessment	Social-Emotional Development: Self-reflection, trust, optimism, empathy, assertiveness, action orientated, emotional control
HSC – Hopelessness Scale for Children	Hopelessness only.
HSCL-37-A-or HSCL-25, sometimes referred to as 'Hopkins' – Hopkins symptom checklist measures 37 items for Adolescents (25-item version also used)	It includes 10 anxiety items (e.g., Feeling tense or keyed up), 15 depression items (e.g., Crying easily), which together create a 25-item internalizing subscale, and 12 externalizing items (e.g., Arguing often). The items are rated on a 4-point scale that ranges from 1 (never) to 4 (always). Has been validated in different cultural contexts, according to Gadeberg, A. K., Montgomery, E., Frederiksen, H. W., & Norredam, M. (2017). Assessing trauma and mental health in refugee children and youth: a systematic review of validated screening and measurement tools. European Journal of Public Health, 27(3), 439-446.
HTQ – Harvard Trauma questionnaire (there are other trauma specific measures but this is the most used)	PTSD only
IES – Impact of Event Scale	PTSD only
IWRITE – Impact of War-Related Trauma Events for trauma	PTSD only

Measure name	Scope
KidCope	Covers distraction; social withdrawal; cognitive restructuring; self-criticism; blaming others; problem-solving; emotional regulation; wishful thinking; social support; resignation
KIDSCREEN-10	Well-being, including psychological well-being (moods and emotion, self-perception), autonomy and parent related autonomy, parent relation and home life, financial resources), peers and social support, school environment.
LEC-5 – Life Event Checklist for DSM-5	Traumatic life events only
LSES – Lifespan self-esteem scale	Self-esteem – here it's global self-esteem rather than in relation to specific areas. 4 items.
MADRS – Montgomery-Åsberg Depression Rating Scale – Self Assessment	Depression only
MDMQ – Multidimensional Mood Questionnaire	Mood in the moment (affect)
MFQ=Mood and Feelings Questionnaire, there is also a Short version– – SMFQ	Depression
MSLSS – Multidimensional Student Life Satisfaction Scale	Satisfaction with school, family, friends, environment and overall satisfaction. 40 items. A short 6 item version is available.
MSPSS – Multidimensional Scale of Perceived Social Support	Perceived social support
PANAS-C – Positive and Negative Affect Scale for Children	Experience of emotions/ affect only
PCL-5 Posttraumatic Stress Disorder Checklist	PTSD symptoms only. Designed for adults and veterans
PEDQ-CV – Perceived Ethnic Discrimination Questionnaire	Discrimination, belongingness
PEDS – Pediatric Emotional Distress Scale	Measures trauma symptoms in young children. 21 items, parent report.
PHQ – Patient Health Questionnaire (This is typically an adult measure)	Depression, anxiety, and somatic symptoms. Various versions exist.
PQOL – P(a)ediatric Quality of Life Inventory	QoL related functioning– – physical, emotional, social, school
PSC – Pediatric Symptom Checklist	Internalizing, externalizing, somatic, social and academic difficulties.
PSS – Perceived Stress Scale	Perceived experience of personal stress
PSSMS – Psychological Sense of School membership scale	Belonging
PTSD-8	PTSD
PTSD-RI – Post-Traumatic Stress Disorder Reaction Index.	PTSD
PTSS-C STAI – Spielberger State – trait anxiety UCLA PTSD Index for DSM-IV, the Post-traumatic Stress Symptoms in Children	PTSD only
RATS – Reaction of Adolescents to Traumatic Stress questionnaire	PTSD only
RCMAS – Revised Children's Manifest Anxiety Scale.	Anxiety symptoms
RHS – Refugee Health Screener	Anxiety, depression, PTSD
SC-A – or SOC-A Sense of Community of Adolescents scale – 12 items – linked to a specific community.	Sense of community– – satisfaction of needs and opportunities for involvement; support and emotional connection with peers; support and emotional connection in the community; sense of belonging; and opportunities for influence.

Measure name	Scope
SCARED – Screen for child anxiety related emotional disorders – 5 items	Anxiety symptoms, specific to children. Has an item about being scared in the house.
SCAS– Spence Children's Anxiety Scale	Breaks anxiety down across a range of specific symptoms – separation, social phobia, OCD, panic, personal injury, generalized anxiety.
SCECV – Survey of Children's Exposure to Community Violence	Exposure to violence in the community
SCSI – Schoolagers' Coping Strategy Inventory	Ways of coping
SCWP – Scales for Children Afflicted by War and Persecution	Information about demographic features and analyzes the experiences in the home country and during the flight. It also contains a depression, anxiety, and somatization scale.
SDC – Somatoform Dissociation Questionnaire	Dissociation relating to psychological distress, that is experienced physically
SDQ – Strengths and Difficulties questionnaire	Emotional symptoms, conduct problems, hyperactivity, peer problems, pro-social behaviour. Translated into various languages and properties explored with refugees by Stolk et al (2017)
SEARS – Social-Emotional Assets and Resilience Scale	Sources of resilience and strength
SEHS – Social Emotional Health Survey	Self-efficacy; Self-awareness; Persistence; School support; Family support; Peer support; Emotional regulation; Empathy; Self-control; Optimism; Gratitude; Zest
SERAIS – Social Emotional Response and Information Scenarios	Hostile attribution bias; Emotional orientation; Emotion dysregulation; Interpersonal negotiation strategies– focused on social emotional learning
SES – Rosenberg's Self-Esteem Scale	Self-esteem
SLE – Stressful life events	List of life stressors and traumas. Designed for adult veterans
SRDS – Self-Report of Depressive Symptoms.	Depression symptoms only
SSS-8 – Somatic Symptoms Scale	Somatic symptoms of mental health difficulties
STAI – Spielberger State–trait anxiety	Anxiety, with a focus on understanding the extent to which someone is in an anxious state (temporary) as well as being more generally anxious (as a trait).
SVQ – Shame Variability questionnaire	Shame
SWBAS-18F – Subjective Well-being Assessment Scale	
SWEMWBS – Short form Warwick Edinburgh Mental Well-being Scale	Subjective mental well-being
WCAAS – War Child Agency Assessment Scale	Agency– seen as a multidimensional concept from competence to have agency to agency within relationships and everyday activities
WHO-5 – World Health Organization 5 item well-being measure	Overall well-being
WHODAS – World Health Organization Disability Assessment Scale – self and parent report disability assessment	Measures disability across all health problems. Not mental health specific.
WQT – Wellness Quest Tool	Focusing on supporting young people to be active in their mental health care, and covers importance of identifying priorities of young people.
WTQ – War Trauma Questionnaire	PTSD only
WTSS – War Trauma Screening Scale	
YLOT – Youth Life Orientation Test	Optimism and pessimism

Annex 1d – Long-list of candidate questions in first initial draft.

These questions are organized by intended factor and domain.

INTERNAL FACTORS **Domains** and areas	**Questions**
Positive feelings and experiences	
Fun / positive experiences / positive affect	1. I usually expect to have fun 2. I have fun times 3. I often feel cheerful 4. My days contain things that are interesting
Hope and optimism	5. Every day, I look forward to having a good day 6. When things are going badly, I know it won't be like this all the time 7. Looking forward, I think more good things than bad things will happen
Gratitude	8. Each day, I feel thankful for what I do have 9. I often feel grateful to the people around me 10. When I look at the world, I see lots to be grateful for
Managing emotions	
Self-regulation of emotions	11. If I make a mistake, I can admit that 12. I feel that I am in control of my thoughts and feelings 13. If things do not go as I want them to, I can stay calm
View of self	
Self-efficacy	14. I can usually deal with what happens to me 15. If I try, I can solve most difficulties 16. I can stick to my aims and reach my goals easily 17. Because I cope well, I can stay calm when facing difficulties
Competency	18. There are lots of things that I do well 19. I know I can deal with unexpected events 20. There are things in life I know I am good at
Self-esteem / self confidence	21. I feel like I am a good person 22. I have respect for myself 23. I am happy with the person I am 24. I am strong
Development of identity	25. I understand my thoughts and feelings 26. I enjoy learning about myself 27. I know what matters to me 28. I enjoy the cultural and family traditions from where I can from
Sense of power and freedom	
Agency** / empowerment / sense of control (capacity to act and exert power)	29. I can find ways to solve my problems 30. I am able to change some things around me 31. When young people work together, we can try to change things
Autonomy / sense of freedom (perceived freedom to act)	32. I get to choose what I do with my free time 33. I take part in making decisions about my life 34. I have got enough say in how I spend my time
Meaning in life	
Meaning in life / sense of purpose	35. I feel like my life has a purpose 36. I have goals in my life

EXTERNAL FACTORS	
Social relationships and support	
Belongingness, friendship, community and social support	37. I feel connected to people around me 38. I have a friend who helps me when things are not going well 39. I feel like a part of my community 40. I am accepted by my friends 41. People here try to support each other 42. I can share my experiences and interests with other young people 43. I have at least one friend 44. I feel supported by my friends 45. There are people who care about me
Supportive relationships with adults & parents	46. There are adults around me who always want me to do the best I can 47. My parents or carers really help and support me 48. I talk to adults around me about how I feel
Pro-social behaviours	49. If someone gets hurt, I try to help them 50. I try to share what I have with other people 51. I am kind to other people 52. I cooperate with the people around me
Interpersonal skills and respecting others	53. I try to understand what other people are thinking and feeling 54. I wait my turn when talking and listen to what other people are saying most of the time
Taking part and being active	
Participating	55. I feel that I can participate with groups of other young people 56. I am interested in activities in the camp
Being active	57. I am included in activities 58. I like being active 59. I have enough things to do in the day
Opportunities to learn and play	60. I feel I have enough places to play 61. I can identify opportunities to learn and develop skills 62. I have enough chances to do what matters to me, for example learning or playing
Safety	
Safety, including emotional safety	63. I can ask for help from people when I feel I am not safe 64. I feel a sense of safety when I am with my family/carers 65. I feel safe to walk around the place where I live 66. In my area there are safe places to play

Annex 2: PSC guidelines for analysis

Attention problems subscale

- Fidgety, unable to sit still
- Daydreams too much
- Distracted easily
- Has trouble concentrating
- Acts as if driven by a motor

Scoring: Children with subscores greater than or equal to 7 usually have significant impairments in attention

Internalizing problems subscale

- Feels sad or unhappy
- Feels hopeless
- Is down on him or herself
- Worries a lot
- Seems to be having less fun

Scoring: children with subscores greater than or equal to 5 usually have significant impairments with anxiety or depression

Externalizing problems subscale

- Fights with others
- Does not listen to rules
- Does not understand other people's feelings
- Teases others
- Blames others for is or her troubles
- Takes things that do not belong to him or her
- Refuses to share

Scoring: children with subscores greater than or equal to 7 usually have significant problems with conduct.

Annex 3a: PSC scores for individual questions by respondent's characteristics. Values range from 0 to 2[17]

	All	BOYS	GIRLS	11-13 years	14-19 years	ATHENS	LESVOS	<=2 months	>2 months
Fidgety, unable to sit still	0.811	0.857	0.756	0.816	0.805	0.806	0.833	0.821	0.804
Feel sad, unhappy	0.75	0.854	0.625	0.771	0.725	0.732	0.824	0.658	0.82
Daydream too much	0.911	0.816	1.02	0.959	0.854	0.944	0.778	0.872	0.941
Refuse to share	0.778	0.735	0.829	0.939	0.585	0.833	0.556	0.744	0.804
Do not understand other people's feelings	0.811	0.776	0.854	0.755	0.878	0.792	0.889	0.769	0.843
Feel hopeless	0.567	0.612	0.512	0.592	0.537	0.625	0.333	0.359	0.725
Have trouble concentrating	0.753	0.735	0.775	0.708	0.805	0.732	0.833	0.821	0.7
Fight with other children	0.371	0.367	0.375	0.354	0.39	0.408	0.222	0.308	0.42
Down on yourself	0.533	0.612	0.439	0.408	0.683	0.514	0.611	0.538	0.529
Blame others for your troubles	0.433	0.408	0.463	0.469	0.39	0.444	0.389	0.436	0.431
Seem to be having less fun	0.865	0.857	0.875	0.958	0.756	0.817	1.06	0.949	0.8
Do not listen to rules	0.844	0.694	1.02	1.04	0.61	0.889	0.667	0.949	0.765
Act as if driven by a motor	1.04	0.959	1.15	1	1.1	1.08	0.889	1.08	1.02
Tease others	0.315	0.313	0.317	0.333	0.293	0.31	0.333	0.282	0.34
Worry a lot	0.764	0.776	0.75	0.75	0.78	0.847	0.412	0.632	0.863
Take things that do not belong to you	0.281	0.354	0.195	0.333	0.22	0.282	0.278	0.231	0.32
Distract easily	0.73	0.816	0.625	0.653	0.825	0.746	0.667	0.692	0.76

17 Note: Each item of the PSC receives a score of zero, one or two points, with the scores for all 17 items summed for the total score. A child is then flagged for psychosocial issues if the total score is above the validated cut-off of 15 points. For the three subscales a similar process is followed but using different cut-off points and only adding up points for subsets of questions. This implies that it is possible for a child to be flagged for one of the subscales but not for the overall psychosocial scale.

Annex 3b: Well-being scores for individual questions by respondent's characteristics. Values range from 0 to 4[18]

		MH domain	ALL	BOYS	GIRLS	11-13 years	14-19 years	ATHENS	LESVOS	<=2 months	>2 months
1.	I feel supported by my friends	Social	2.82	2.73	2.92	2.85	2.78	2.7	3.28	3.05	2.64
2.	Looking forward, I think more good things than bad things will happen	Positive	3.42	3.38	3.47	3.53	3.29	3.46	3.28	3.42	3.42
3.	I talk to adults around me about how I feel	Social	1.94	2.02	1.85	1.66	2.27	1.93	2	2.14	1.8
4.	I usually expect to have fun	Positive	3.28	2.98	3.63	3.49	3.05	3.2	3.65	3.49	3.14
5.	I can ask for help from people when I feel I am not safe	Safety	2.83	2.62	3.07	3.08	2.53	2.74	3.17	3.03	2.68
6.	There are lots of things that I do well	View of self	3.39	3.38	3.39	3.47	3.29	3.41	3.28	3.47	3.32
7.	I have enough chances to do what matters to me, for example learning or playing	Taking part	3.17	3.04	3.32	3.33	2.98	3.15	3.22	3.36	3.02
8.	I feel that I am in control of my thoughts and feelings	Managing emotions	3.11	3	3.24	3.24	2.95	3.07	3.28	3.36	2.92
9.	I often feel cheerful	Positive	2.91	2.75	3.1	2.96	2.85	2.76	3.53	3.18	2.69
10.	I know what is important to me	View of self	3.5	3.62	3.37	3.53	3.46	3.51	3.44	3.5	3.5
11.	I get to choose what I do with my free time	Sense of power and freedom	3.28	3.25	3.32	3.38	3.15	3.25	3.41	3.33	3.24
12.	If things do not go as I want them to, I can stay calm	Managing emotions	2.93	2.77	3.12	2.86	3.03	2.94	2.89	3	2.88

18 Note: The scores can range between 0 and 4, with 0 indicating the lowest score in the mental health domain and 4 indicating the highest.

13.	There are things in life I know I am good at	View of self	3.29	3.29	3.3	3.46	3.1	3.29	3.29	3.39	3.22
14.	People around me try to support each other	Social	2.86	2.96	2.75	3.04	2.66	2.77	3.24	2.81	2.9
15.	I feel connected to people around me	Social	3.2	3.27	3.12	3.39	2.97	3.11	3.59	3.08	3.29
16.	I am kind to other people	Social	3.53	3.52	3.54	3.48	3.59	3.52	3.56	3.61	3.47
17.	I have goals in my life	Meaning	3.67	3.64	3.71	3.63	3.72	3.66	3.71	3.66	3.68
18.	I feel that I can participate with groups of other young people	Taking part	3.03	3.04	3.03	3.02	3.05	3.07	2.88	2.95	3.1
19.	I can usually manage what happens to me	Sense of power and freedom	2.99	2.87	3.12	3.13	2.83	3	2.94	2.97	3
20.	I feel safe to walk around the place where I live	Safety	2.92	2.69	3.2	3.04	2.78	2.82	3.33	3.23	2.68
21.	My days contain things that are interesting	Positive	2.63	2.53	2.73	2.49	2.78	2.57	2.83	2.74	2.54
22.	I can share my experiences and interests with other young people	Social	2.72	2.71	2.73	2.69	2.76	2.71	2.78	2.82	2.65

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