

# Play to be Active for Life

Understanding How Adolescent Girls in Uttar Pradesh  
Move & What Gets in the Way



*A Baseline Study of Physical Activity, Physical Literacy and Barriers to Participation among Adolescent Girls in Government School in Uttar Pradesh*

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# Acknowledgments

*"Udaan means flight. Not every girl gets there on her own. This project was built to take her there."*

Play to Be Active for Life set out to answer one question: what does it actually take for an adolescent girl in a government school in Uttar Pradesh to move freely, move well, and believe her body is capable? This report and the workbook *Meri Udaan Meri Pehchaan: Gati, Gyan aur Muskaan* are our first attempt at that answer.

We are deeply grateful to **Capri Sports and UP Warriorz** for making it possible. Their support went beyond funding. They understood that for girls in government schools, a playground is often the only space that belongs to them.

**The Right Pitch** gave us something we couldn't have built ourselves: existing relationships with schools, teachers, and girls who already knew their faces. We worked within it and are grateful for it.

**The SSF field and facilitation team** built this project on the ground. They assessed in December cold, facilitated in summer heat, held a skeleton in front of forty twelve-year-olds, and re-entered data when the timeline demanded it. Every data point in this report was collected.

At the heart of this report are **243 girls** across eight schools in Lucknow, Barabanki, and Kanpur Dehat. They gave us their time and their honesty. This report is made of what they shared.

We also thank the **school principals, teachers, and school authorities** who opened their classrooms and playgrounds to a team they did not yet know.

## Contributors

Role	Name
Lead-Athlete & Women Initiatives, SSF	Mrs. Aditi Mutatkar
Research Project Lead & Report Author, SSF	Ms. Manasi Sataalkar
Subject Matter Expert - Physical Activity & Physical Literacy	Dr. Baskaran Chandrasekaran
Data Analysis and Report Writing	Ms. Varsha Vadlamani
Design & Layout	Ms. Sneha Chhatre
Field & Technical Team	Ms. Harshini Yadav, Ms. Reetha Sabu, Ms. Pragati Thombre, Ms. Rishita Raj, Mr. Shivam Talreja
Workshop Facilitation Preparation	Mr. Praveen Kumar Naidu

# About the Partners

## Simply Sport Foundation

Simply Sport Foundation (SSF) is committed to making sport more inclusive by bridging gaps in athlete welfare, focusing on grassroots development, policy advocacy, and research-driven interventions. The foundation works to ensure that all athletes, regardless of gender or background, receive the support needed to thrive in their sporting careers.



SSF has previously led the Simply Periods Initiative in Uttar Pradesh - a structured menstrual health literacy program for female athletes across 12 districts that reached over 1,200 participants and demonstrated measurable improvements in knowledge, training confidence, and menstrual management practices. Through initiatives like Simply Periods and Play Without Pause, SSF has built deep expertise in gender-responsive sport systems, female athlete health, and evidence-based intervention design.

## Capri Sports, UP Warriorz

UP Warriorz is a professional women's cricket team based in Uttar Pradesh, competing in the Women's Premier League (WPL). Owned by Capri Global, the team debuted in the inaugural WPL season in 2023. Known for its bold and fighting spirit, the UP Warriorz blends seasoned international stars with rising Indian talent.



Beyond the pitch, UP Warriorz takes its responsibility to leverage sport as a platform for social change seriously. Through its impact mission 'Beyond the Scorecard,' the team invests in partnerships around women's inclusion in sport, mental health awareness, and education. UP Warriorz has been recognized as India's only sports team to serve as a Generational Equality Ally (change agent) via UN Women.



## The Right Pitch

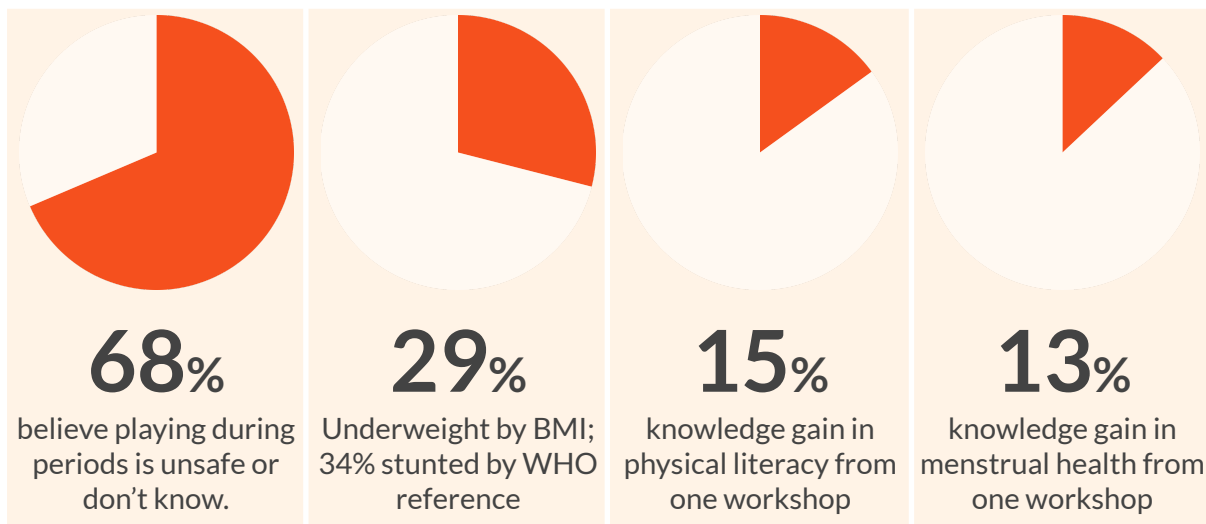
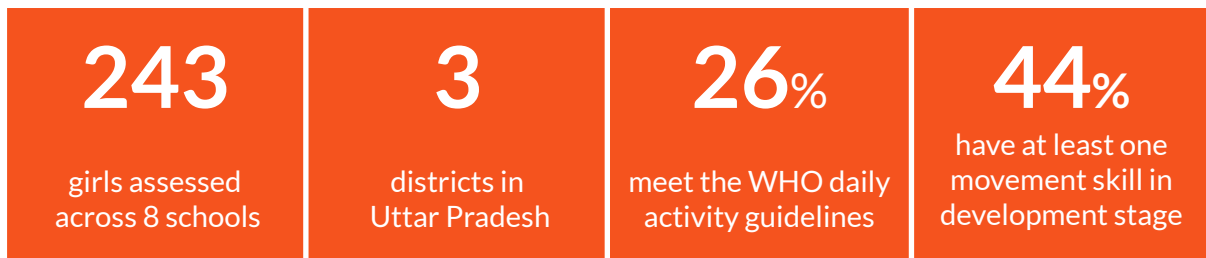
The Right Pitch (TRP) is a sport-for-development organization that uses cricket as a vehicle for life skills and the National Education Policy's 4Cs (critical thinking, collaboration, creativity, and communication). TRP operates a fellowship model that places trained facilitators in government schools across Uttar Pradesh.



# Executive Summary

*She is twelve. She walks two kilometers to school and sweeps the kitchen floor before she leaves. She enjoys playing; 87% of the girls we surveyed said the same. But her school offers one recess break in a six-hour day. No one has taught her to throw. She believes exercise during her periods will hurt her, even though she hasn't had one yet. Across the eight schools we visited, her situation was typical.*

This report presents findings from Play to Be Active for Life, a three-month pilot reaching 243 adolescent girls across government schools in Lucknow, Barabanki, and Kanpur Dehat. Guided by the COM-B behavior change framework, the project measured physical activity, movement skills, body composition, menstrual health knowledge, and barriers to participation simultaneously. A four-module workshop with same-day pre/post assessment and four focus group discussions completed the picture. The result is the first combined dataset on physical activity, movement skills, and menstrual health beliefs for girls in UP government schools, data that NEP 2020 and Khelo Bharat Niti 2025 call for but that didn't exist until now.



## What Data Showed:

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### 1. Girls enjoy being active, but the school day is not designed for movement.

Motivation is not the barrier; 87% of girls said they enjoy physical activity, and 85% said they feel confident being active. Yet, 65% sit for six or more hours a day at school, with only one recess break, and only 26% meet even a rough proxy for WHO daily activity guidelines.

The movement that does happen is incidental, walking to school and household chores, rather than structured. In focus groups, girls described play as restricted to specific designated days: "Fridays and Saturdays are when it's our 8th class's turn to play." When time and structural constraints are removed, 42% of girls are active for two or more hours, suggesting the desire is there, but the school day is not making room for it.

**Recommendation:** Schools should introduce at least two recess periods per day and designate a 30-minute daily movement slot within the existing timetable. This requires a district level directive through the Basic Shiksha Adhikari, not individual school-level requests, and can be implemented within one academic term at no additional cost.

### 2. Fundamental movement skills are not improving with age, because no one is teaching them.

Girls aged 13 and above scored no better on any of the seven assessed movement skills than girls aged 8–12. The school years are producing zero measurable skill progression. Throw is the most urgent gap: one in four girls has not reached basic competence. Kick and jump follow.

Meanwhile, 84% of girls said they could throw or catch a ball, but when assessed, 57% of that group scored at or below half marks. Without structured skill development, girls have no frame of reference for what competence looks like; they believe they can because they have never been shown what mastery involves.

**Recommendation:** Training generalist teachers or embedded fellows to deliver daily FMS instruction (starting with throw, kick, and jump) is where the evidence points. The SPARK trial showed trained generalists can deliver 82% of specialist PE outcomes<sup>1</sup>. India does not need to wait for PE teachers. It needs to equip the people already in the building.

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<sup>1</sup> Sallis, J.F., McKenzie, T.L., Alcaraz, J.E., Kolody, B., Faucette, N., & Hovell, M.F. (1997). The effects of a 2-year physical education program (SPARK) on physical activity and fitness in elementary school students. *American Journal of Public Health*, 87(8), 1328–1334.

### ***3. Menstrual myths are taking hold before girls ever get their periods, narrowing the window to intervene.***

Among girls aged 8–12, the majority of whom have not yet started menstruating, 77% already believe activity during periods is unsafe or say they don't know. The misinformation is being internalized before they attain puberty. Among menstruating girls, the impact is tangible: 43% say painful periods stop them from being active, 37% take school holidays because of periods, and 29% skip Physical Education class / PT Period specifically.

But these misconceptions are directly addressable; after a single workshop session, understanding of reproductive anatomy improved by 16 percentage points, and 54% of girls who gave open-ended feedback named menstrual health as their most memorable learning. For many, this was the first time anyone had taught them about their own bodies in a structured, non-judgmental setting.

**Food for Thought:** Delivering pre-menarche menstrual health literacy in Classes 5–6, through existing platforms like Meena Manch's 35,000+ school groups in UP, is critical. The beliefs are forming right now.

### ***4. A single workshop session shifted knowledge meaningfully, but sustaining that shift requires more than a single visit.***

The workshop produced an overall knowledge gain across six domains in a single session, with the largest shifts in physical literacy (from 42% to 58% correct) and menstrual health (from 54% to 68% correct), the two areas where misconceptions were most common

But even after the workshop, over 40% still could not correctly identify an example of exercise, and a third still associated fitness primarily with body shape. Same-day knowledge gains are encouraging, but they are not behaviour change. The workbook, the trained Activity Leader, and the peer support structure are designed to sustain what a single session starts, but only if the training architecture is built. That starts with certifying a small Master Trainer cohort inside the implementing organisation, so the capacity lives permanently within the system.

**Food for Thought:** CSR investment should build the permanent capability like training, materials, and evidence. The government should own the recurrent delivery - timetabling, teacher training, and monitoring. Getting that division right is what determines whether the programme outlasts any single funding cycle.

# Context & Rationale

# Context & Rationale

## Why physical activity and physical literacy matter, and why now, for girls in Uttar Pradesh

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Globally, 84.7% of adolescent girls don't meet WHO activity guidelines.<sup>2</sup> In India, the gap is worse: girls average seven fewer active hours per week than boys, and in schools, children get just 16 minutes of physical activity per day; less than a third of what's recommended.<sup>3</sup> In Uttar Pradesh, home to over 47 million adolescents, the evidence base to understand, let alone address, this crisis barely exists.

Those are the numbers. But numbers do not explain why a girl who tells you she loves sport still sits out on the days her periods come, or why a girl who can describe a balanced diet eats only tea and biscuits for breakfast, or why a girl who scores well on a self-reported confidence scale cannot throw a ball with competence. Girls say they like sports but can't throw a ball properly. That's not a contradiction, it's a physical literacy gap. It's what happens when no one teaches them how to move. That is the gap this project set out to diagnose.

***85% of adolescent girls globally do not meet the WHO's recommended 60 minutes of daily physical activity.***



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<sup>2</sup> Guthold, R., Stevens, G.A., Riley, L.M., & Bull, F.C. (2020). Global trends in insufficient physical activity among adolescents: a pooled analysis of 298 population-based surveys with 1.6 million participants. *The Lancet Child & Adolescent Health*, 4(1), 23–35.

<sup>3</sup> Bhawra, J., et al. (2023). Results from India's 2022 Report Card on Physical Activity for Children and Adolescents. *Journal of Exercise Science & Fitness*, 21(1), 74–82.

## 2.1 Why Do Physical Activity and Physical Literacy Matter?

The WHO recommends that children and adolescents aged 5–17 get at least 60 minutes of moderate-to-vigorous physical activity per day, mostly aerobic, across the week.<sup>4</sup> This is not a target for athletes. It is the minimum threshold for healthy development in any child. The returns on meeting it are well-established: improved cardiorespiratory and muscular fitness, stronger bones, better mental health, reduced anxiety and depression, and measurably better academic outcomes.<sup>5</sup> And the habits stick; activity patterns formed during adolescence are among the strongest predictors of whether someone is still active at 30.<sup>6</sup>

**But physical activity alone does not tell the full story.** A child can have access to a playground and still not play. She can know that exercise is good for her and still avoid it. She can participate in PE class on the two days a week it is offered and still disengage from movement for the rest of her life the moment school ends. **What determines whether physical activity becomes a lifelong habit rather than a school-day obligation is physical literacy.**

Physical literacy is defined as the motivation, confidence, physical competence, knowledge, and understanding to value and take responsibility for engagement in physical activities for life.<sup>7</sup> It is not a talent. It is a developmental capacity, built through quality movement experiences, supportive environments, and the gradual accumulation of skills, knowledge, and self-belief that make a person feel at home in their own moving body. A physically literate individual does not merely participate in activity, they value it, understand it, and sustain it across their lifetime.<sup>8</sup>

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<sup>4</sup> Bull, F.C., Al-Ansari, S.S., Biddle, S., Borodulin, K., Buman, M.P., Cardon, G., Carty, C., Chaput, J.-P., Chastin, S., Chou, R., Dempsey, P.C., DiPietro, L., Ekelund, U., Firth, J., Friedenreich, C.M., Garcia, L., Giber, M., Jago, R., Katzmarzyk, P.T., ... Willumsen, J.F. (2020). World Health Organization 2020 guidelines on physical activity and sedentary behaviour. *British Journal of Sports Medicine*, 54(24), 1451–1462.

<sup>5</sup> Poitras, V.J., et al. (2016). Systematic review of the relationships between objectively measured physical activity and health indicators in school-aged children and youth. *Applied Physiology, Nutrition, and Metabolism*, 41(6), S197–S239.

<sup>6</sup> Telama, R., et al. (2014). Tracking of physical activity from early childhood through youth into adulthood. *Medicine & Science in Sports & Exercise*, 46(5), 955–962.

<sup>7</sup> Whitehead, M. (2010, 2019). *Physical Literacy: Throughout the Lifecourse*. Routledge.

<sup>8</sup> Rudd, J.R., Pesce, C., Strafford, B.W., & Davids, K. (2020). Physical literacy ,a journey of individual enrichment: an ecological dynamics rationale for enhancing performance and physical activity in all. *Frontiers in Psychology*, 11, 1904.

## THE FOUR DOMAINS OF PHYSICAL LITERACY

<b>Physical Competence</b>	<b>Confidence &amp; Motivation</b>	<b>Knowledge &amp; Understanding</b>	<b>Affective Development</b>
Movement skills, FMS, fitness, body management	Self-belief, enjoyment, intrinsic drive to stay active	Health literacy, why movement matters, safe activity during menstruation	Emotional relationship with movement, sense of belonging

*The four domains must be developed together. Physical competence without confidence rarely sustains participation. Confidence without knowledge collapses when cultural myths about menstruation go unchallenged. All four interact, which is why single-component interventions so consistently fail to produce change that lasts.*

Several countries have operationalised this concept through national frameworks - Australia identifies 30 elements across physical, psychological, social, and cognitive domains; Canada's PLAY tools are used widely in schools; the UK has embedded physical literacy in national sport strategy. In each case, the conversation has shifted from "are children playing sport?" to "are children developing the capabilities to be active for life?"

***India has begun to move in this direction - the Khelo Bharat Niti 2025 explicitly names physical literacy as a core component and calls for its integration with school curricula under NEP 2020. But the gap between policy language and ground-level implementation remains wide. India does not yet have a standardised physical literacy assessment, and no programme has produced the diagnostic data that implementation requires. This project begins to fill that gap.***

Physical literacy also sits at the foundation of sport development. The Long-Term Athlete Development framework, adopted by over 50 sports federations globally, places it at the base of the first three developmental stages, before any sport specialisation begins.<sup>9</sup> Without a broad physical literacy base in childhood, talent identification is arbitrary, dropout rates are high, and elite pathways remain accessible only to those who receive quality movement education at home or in well-resourced private schools. In India, where the ambition to produce elite athletes at scale is embedded in national policy, this is an argument that should be impossible to ignore.

<sup>9</sup> Balyi, I., Way, R., & Higgs, C. (2013). *Long-Term Athlete Development*. Human Kinetics.

## 2.2 The Gender Gap in Physical Activity

The gender gap in physical activity is global, but in India, it is particularly pronounced, structurally reinforced, and widening with age.

Across 146 countries, 84.7% of adolescent girls fail to meet WHO guidelines, against 77.6% of boys. Between 2001 and 2016, while boys showed marginal improvement, girls showed none at all.<sup>10</sup> The gap was not closing. It was growing.

In India, the State of Sports and Physical Activity (SAPA) report - published in September 2024 by the Sports and Society Accelerator (SSA) and Dalberg Advisors, and the first nationally representative, granular baseline of sport and physical activity participation in the country, found that girls and women average seven fewer active hours per week than boys and men, that only 10% of adults play any sport, and that urban women engage in 385 fewer active minutes per week than rural women and 249 fewer minutes than urban men.<sup>11</sup> The rural-urban dimension matters for Uttar Pradesh specifically: urban inactivity rates are 1.5 to 2 times higher than rural rates, with at least 28% of urban adolescents inactive against 13% in rural areas. In urban and semi-urban government schools, the structural constraints on girls' movement compound: less outdoor space, more sedentary commutes, greater social scrutiny, and stronger expectations around both academic performance and domestic productivity. Yet the evidence base to understand how these dynamics play out across UP's geography, urban Lucknow, semi-rural Barabanki, and rural Kanpur Dehat is almost entirely absent.

**What drives this gap?** The SAPA report identifies three interlocking structural barriers that are particularly severe for girls.

1. **Time poverty**—girls bear a disproportionate domestic burden from early adolescence, leaving them with less discretionary time for physical activity than boys.
2. **Care burden**—expectations around household responsibilities, sibling care, and family support actively consume the after-school hours that are girls' only available window for movement.
3. **Safety**—access to outdoor spaces, independent mobility, and participation in community activity are all more restricted for girls than for boys across most of India's social contexts.

***These are not personal choices. They are the architecture of gendered daily life, and any physical activity programme that ignores them will be dismantled by them.***

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<sup>10</sup> Guthold, R., Stevens, G.A., Riley, L.M., & Bull, F.C. (2020). Global trends in insufficient physical activity among adolescents: a pooled analysis of 298 population-based surveys with 1.6 million participants. *The Lancet Child & Adolescent Health*, 4(1), 23–35.

<sup>11</sup> SSA & Dalberg. (2024). State of Sports and Physical Activity (SAPA) Report. Sports and Society Accelerator.

## 2.3 Adolescence as a Critical Window - Ages 10 to 17

If childhood is when physical literacy is built, adolescence is when it is either consolidated or lost. Four things happen during these years that make the window between ages 10 and 17 uniquely consequential for girls.

**Menarche changes everything:** The decline in girls' physical activity is steeper and begins earlier than boys', and it accelerates around menarche.<sup>12</sup> Globally, between 25% and 61% of girls restrict or avoid physical activity during menstruation, driven by pain, stigma, inadequate facilities, and cultural norms that frame the menstruating body as compromised.<sup>13</sup> India was the most represented country in that evidence base, with 15 studies. SSF's own experience through the Simply Periods Initiative, delivered across 12 districts of UP, reaching over 1,200 participants, confirmed how deeply embedded this norm is in grassroots sports settings.<sup>14</sup> Yet, biology runs in the opposite direction: light-to-moderate activity during menstruation is not only safe but reduces pain and improves mood.<sup>15</sup><sup>16</sup> The norm and the evidence are not in dialogue with each other. That gap, between what girls believe about their bodies during menstruation and what their bodies are actually capable of, is one of the most directly addressable barriers in girls' physical literacy development.

**Identity solidifies, and forecloses.** Adolescence is when a girl's sense of who she is, what she is capable of, and which activities belong to her becomes fixed. Girls who enter adolescence without adequate movement skills are significantly less likely to see themselves as physically active or to pursue physical challenges.<sup>17</sup> Social norms associating vigorous activity with masculinity, not femininity, become internalised during this window, not as external rules but as beliefs about the self<sup>18</sup>.

**Habits crystallise.** Activity patterns established during adolescence are among the strongest predictors of adult activity levels, girls who are active between ages 9 and 18 are significantly more likely to maintain active lifestyles into their twenties and thirties. And the quality of the experience matters: adolescents who develop positive feelings about movement, who feel good while and after being active, sustain those habits far more reliably than those who participate through obligation alone<sup>19</sup>. Programmes that reach girls during this window with structured,

<sup>12</sup> Dumith, S.C., Gigante, D.P., Domingues, M.R., & Kohl, H.W. (2011). Physical activity change during adolescence: a systematic review and a pooled analysis. *International Journal of Behavioral Nutrition and Physical Activity*, 8, 66.

<sup>13</sup> Harvey, S., et al. (2025). Adolescents, menstruation, and physical activity: insights from a global scoping review. [86 studies, 33 countries.]

<sup>14</sup> Simply Sport Foundation. (2024). *Play Without Pause: Understanding Menstrual Health and Physical Activity among Adolescent Female Athletes in Uttar Pradesh*. Mumbai: SSF.

<sup>15</sup> Harvey, S., et al. (2025). Adolescents, menstruation, and physical activity: insights from a global scoping review. [86 studies, 33 countries.]

<sup>16</sup> Van Eijk, A.M., et al. (2016). Menstrual hygiene management among adolescent girls in India: a systematic review and meta-analysis. *BMJ Open*, 6(2), e010290.

<sup>17</sup> Robinson, L.E., et al. (2015). Motor competence and its effect on positive developmental trajectories of health. *Sports Medicine*, 45(9), 1273–1284.

<sup>18</sup> SSA. (2024). *Active Equity Issue Brief*. Sports and Society Accelerator.

<sup>19</sup> Rhodes, R.E., & Kates, A. (2015). Can the affective response to exercise predict future motives and physical activity behavior? *Annals of Behavioral Medicine*, 49(5), 715–731.

enjoyable movement experiences are not merely improving present health. They are laying down the behavioural architecture for active adult lives.

## 2.4 Why This Matters for India

Improving physical activity and physical literacy among adolescent girls sits at the intersection of four national priorities. Each makes the case for investment more compelling, not less.

On the **health** front, India is experiencing a rapid epidemiological transition.

Non-communicable diseases, cardiovascular disease, diabetes, obesity, and mental health conditions, now account for the majority of mortality, and onset is occurring at younger ages than in other countries<sup>20</sup>. Physical inactivity is a key modifiable risk factor. If current inactivity trends continue, the SAPA report projects 200 million more adult NCD cases and 45 million more obese adolescents by 2047, with additional annual healthcare costs exceeding INR 55 trillion.

On the **education** front, the National Education Policy (NEP) 2020 explicitly emphasizes holistic development, including physical education, sport, and wellbeing. NEP 2020 eliminates the rigid separation between curricular and extracurricular activities, stating that sport and physical education should be taught and assessed with the same rigour as academic subjects. It calls for sports-integrated learning as a cross-curricular pedagogical approach and embeds fitness assessment into the school framework. The Khelo Bharat Niti 2025 reinforces this by integrating physical literacy into the education system from early childhood and proposing a School Fitness Index as a national monitoring tool<sup>21</sup>. Yet implementation remains uneven - most government schools in the country still lack timetabled physical education, trained PE instructors, or any structured mechanism for assessing whether children are developing the movement competencies that both policies now mandate.

On the **gender equity** front, physical activity and sport have been shown globally to improve girls' self-efficacy, build social networks, strengthen agency, and create pathways to leadership. The SAPA report estimates that by 2047, increased sport participation could motivate 11 million girls to take up a sport for the first time, linked to improved agency and potentially creating 600,000 additional women entrepreneurs and leaders.

On the **sport development** front, India's ambition to compete at the highest levels of global sport, reflected in the Khelo Bharat Niti's vision of hosting the Olympic Games by 2036<sup>22</sup>, rests on a foundation that does not yet exist for most children. The Long-Term Athlete Development framework, adopted by over 50 sports federations worldwide, places physical literacy at the base of its first three stages<sup>23</sup>, before any sport specialization begins. Without that base, talent

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<sup>20</sup> Arokiasamy P. India's escalating burden of non-communicable diseases. *Lancet Glob Health*. 2018 Dec;6(12):e1262-e1263. doi: 10.1016/S2214-109X(18)30448-0. Epub 2018 Oct 3. PMID: 30292427.

<sup>21</sup> National Education Policy 2020. Government of India, Ministry of Education.

<sup>22</sup> Ministry of Youth Affairs and Sports. (2025). *Khelo Bharat Niti 2025: National Sports Policy*. Government of India.

<sup>23</sup> Balyi, I., Way, R., & Higgs, C. (2013). Long-Term Athlete Development. *Human Kinetics*.

identification becomes a function of privilege rather than potential: only children who receive quality movement education at home or in well-resourced private schools develop the skill foundation that elite pathways require. Dropout rates remain high, the pool stays narrow, and medals remain the product of individual exception rather than systemic investment. Physical literacy is not peripheral to sport development. It is the entry point. A country that wants a broad, deep athlete pipeline must first ensure that its children, all of them, not only those who self-select into sport, can run, throw, jump, and move with competence.

The policy architecture to support all four priorities now exists. Both NEP 2020 and Khelo Bharat Niti 2025 emphasize holistic development, increased participation in sport, and the inclusion of girls within the sporting ecosystem. What is missing is the evidence base to implement them, particularly for the populations and geographies where the gap between policy language and lived reality is widest.

***This project is one of the first pilots in India to generate that evidence: assessing physical activity levels, physical literacy, fundamental movement skills, and the supporting role of menstrual health and nutrition among adolescent girls in government school settings in Uttar Pradesh.***

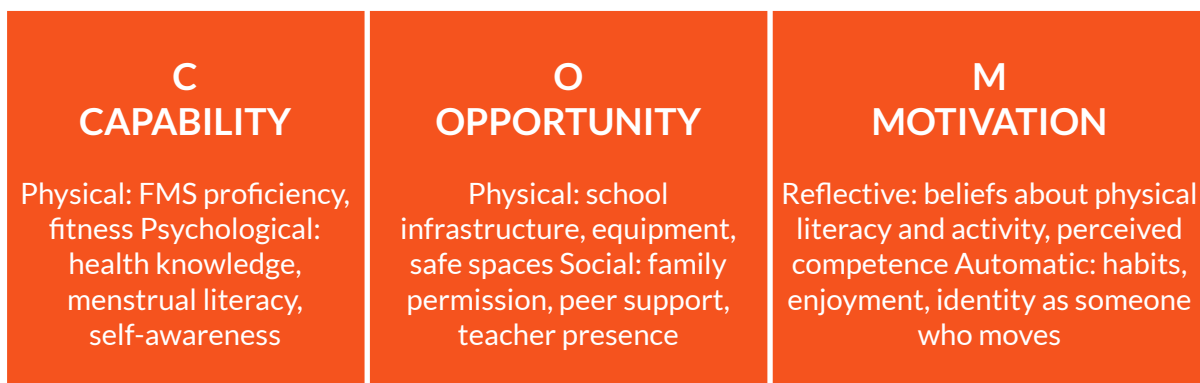


## 2.5 Why This Pilot Was Necessary

The preceding sections map a problem that is structural, gendered, and widening. Most physical activity programmes skip the diagnostic step; they begin with an intervention and assume they know what girls need. Play to Be Active for Life began differently. It began with a question: what does the evidence actually look like for adolescent girls in government schools in central Uttar Pradesh, across the full range of factors that shape whether a girl can, does, and wants to be active?

The framework guiding that question is the COM-B model of behaviour change<sup>24</sup>. To respond effectively to girls' inactivity, one must first know which condition - Capability, Opportunity, or Motivation, is constrained by how much, and at which level. A school that lacks equipment is an Opportunity problem. A girl who cannot throw is a Capability problem. A girl who avoids activity during her periods because she believes it is harmful is a Motivation problem. Each requires a different response.

### THE COM-B MODEL · Applied to Girls' Physical Activity in UP Government Schools



## BEHAVIOUR: Physical Activity Participation

*Source: Adapted from Michie, van Stralen & West (2011). Each of the five measurement dimensions in this project's baseline assessment maps onto one or more COM-B domains, making the diagnostic picture specific enough to act on, not just describe.*

All three can be present in the same girl at the same time, and in this project, the evidence suggests they frequently are. The baseline assessment was designed to measure across five dimensions that together map the full COM-B picture - capturing capability, opportunity, and motivation simultaneously rather than in isolation:

- **Physical activity levels**, how much girls are actually moving in a typical day and whether they meet basic WHO recommendations.

<sup>24</sup> Michie, S., van Stralen, M.M., & West, R. (2011). The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation Science*, 6, 42.

- **Physical literacy and FMS competency**, whether girls possess the fundamental movement skills and confidence needed to participate.
- **Barriers and facilitators**, the social, cultural, and structural factors that prevent or enable girls' participation in their specific UP context.
- **Body composition and nutritional signals**, whether underlying health status affects movement readiness.
- **Menstrual health and knowledge gaps**, the beliefs and practices around menstruation that directly influence girls' willingness to be active.

By measuring all five dimensions together across schools in Lucknow, Barabanki, and Kanpur Dehat, this project provides the first integrated evidence base of its kind for central Uttar Pradesh, a diagnostic foundation specific enough to design interventions, shape teacher training, and inform district-level policy.

The stakes are not abstract. The SAPA report projects 200 million additional NCD cases and healthcare costs exceeding INR 55 trillion annually by 2047 if inactivity trends continue. It estimates 11 million girls could take up sport for the first time, but only if someone builds the foundation that makes participation possible<sup>25</sup>. The policy framework now calls for exactly that. What has been missing is the evidence. That is what this report contains.



<sup>25</sup> SSA & Dalberg. (2024). *State of Sports and Physical Activity (SAPA) Report*. Sports and Society Accelerator.

# Project Design & Objectives

# Project Design & Objectives

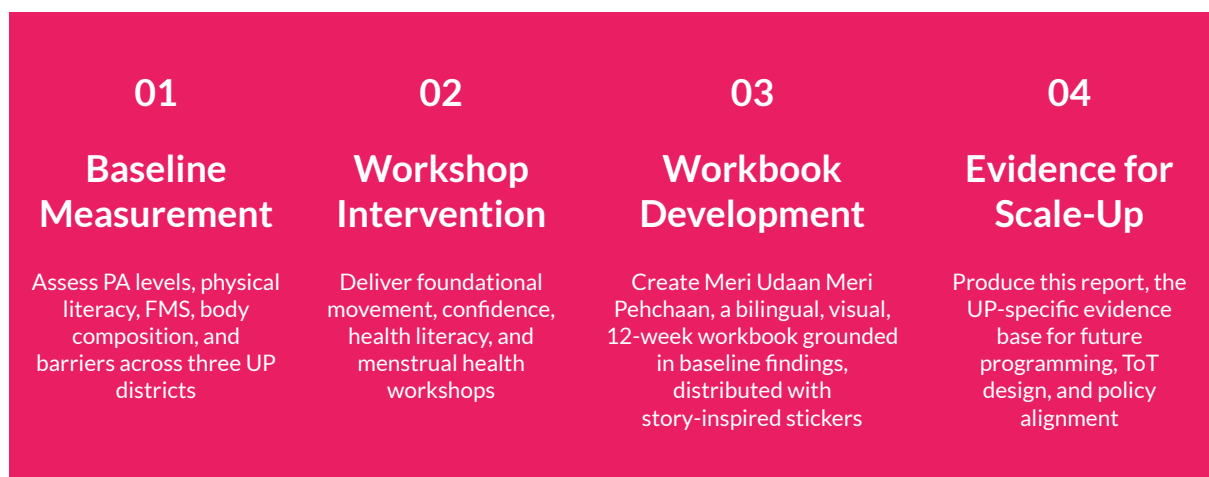
## How the project was structured, where it was delivered, and what it achieved

Play to Be Active for Life was a three-month pilot initiative implemented across government schools in three districts of Uttar Pradesh between November 2025 and March 2026. Its structure followed directly from its diagnostic purpose: before any intervention could be designed with confidence, the baseline evidence had to exist. Before the workbook could be grounded in girls' actual needs, the baseline findings had to be in hand. And before any recommendation could be made for scale-up, the full cycle - assessment, intervention, impact measurement, and reporting - had to be completed within a single, coherent project.

### 3.1 The Four Pillars

The project was organised around four pillars. Each pillar fed into the next: baseline findings shaped the workbook, the workbook shaped the workshops, and the workshops generated the data in this report.

#### THE FOUR PILLARS OF PLAY TO BE ACTIVE FOR LIFE



The four pillars were designed as a system. Pillar 1 (baseline evidence) directly informed Pillar 2 (workshop content) and Pillar 3 (workbook design). The learning from Pillars 2 and 3 enriches Pillar 4 (this report). None stands alone.

### 3.2 Timeline and Geography

The project ran across five months, with two field phases separated by a period of analysis and material development. The timeline below reflects what was planned, and, where real-world conditions intervened, how the team adapted.



- **November 2025** Project approved. Team recruited. Assessment tools developed and validated. Workshop outlines drafted. School coordination initiated with The Right Pitch.
- **December 2025 Phase 1** Baseline assessments in Lucknow and Barabanki. 6 schools covered across 4 days. Kanpur Dehat schools closed due to severe cold and district-announced holidays - rescheduled for Phase 2.
- **January 2026** Preliminary analysis of Phase 1 data. Insights used to finalise workshop modules and design the Meri Udaan Meri Pehchaan workbook. Two-day facilitator preparation residential in Bengaluru.
- **February 2026 Phase 2** Baseline assessments in Kanpur Dehat. Workshop delivery, pre/post knowledge surveys, and workbook distribution across 8 schools in all three districts. FGDs and KIIs conducted.
- **March 2026** Full data analysis across all three districts. Report writing, evidence brief production, and preparation of recommendations for scale-up and ToT programme design.

The three districts were selected to represent the geographic and contextual range of government school settings in Uttar Pradesh, from the state capital to a rural tehsil, and to build on The Right Pitch's existing school network and field relationships.

**Lucknow**, Urban and peri-urban. The state capital. Greater infrastructure, but also greater social scrutiny of girls in public spaces and stronger academic pressure.

**Barabanki**, Semi-rural, adjacent to Lucknow. Representative of the large band of peri-rural schools that form the majority of UP's government school ecosystem.

**Kanpur Dehat**, Rural district. Sharper infrastructure constraints, stronger traditional norms, and, as weather-related closures showed, more unpredictable operational conditions.

Findings that held across all three districts are more likely to apply across UP than findings from a single location.

### 3.3 Project Objectives

Four formal objectives guided the project. The table below states each objective alongside what was actually delivered, measured against the evidence gathered during implementation.

	Objective	Delivered
01	<b>Establish a UP-specific evidence baseline</b>	243 girls were assessed across 8 schools in 3 districts. Physical activity levels, physical literacy, FMS, body composition, menstrual health knowledge, and barriers were all measured.
02	<b>Deliver foundational Physical Activity and Literacy Workshops</b>	Four-module workshop delivered to 306 participants across 8 schools. Measurable pre/post knowledge gains in physical literacy (+14.9 percentage points) and menstrual health (+13.4 percentage points).
03	<b>Develop a contextualised activity workbook</b>	Meri Udaan Meri Pehchaan, a bilingual, visual, four-section workbook, was developed, printed, and distributed to all workshop participants, alongside a set of character-inspired stickers. Initial feedback from girls suggested they found it more engaging than their typical school materials.
04	<b>Produce an evidence brief for scale-up and ToT design</b>	This report includes baseline, impact assessment findings, COM-B diagnostic synthesis, and recommendations for Phase 2.

*All four objectives were achieved within the three-month implementation window. The evidence underpinning each is documented in the sections that follow.*

### 3.4 The Partnership Model

Play to Be Active for Life was made possible by a three-organisation partnership in which each partner contributed a capability the others could not replicate. The partners are introduced in detail at the beginning of this report; their specific roles in the project are summarized below:

Partner	Role
Simply Sport Foundation (SSF)	Technical and research lead: instrument design, data collection, analysis, workshop content, workbook co-creation, and this report.
Capri Sports, UP Warriorz	CSR partner: funding and institutional backing, with a public platform that gives the evidence a route to policymakers and federations.
The Right Pitch	School integration and access: existing school relationships, logistical coordination, and the trust with students and authorities that made three-district reach possible.



# Methodology

# Methodology

## How the study was designed, who it reached, and how data was collected

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The methodology for Play to Be Active for Life was designed around a central diagnostic question: not simply how much these girls are moving, but why, what combination of capability, opportunity, and motivational factors is shaping their physical activity and physical literacy, and where specifically do the constraints lie? Answering that question required a mixed-methods design that combined quantitative assessment with qualitative inquiry and baseline measurement with a same-day pre/post impact evaluation.

### 4.1 Study Design

The quantitative strand combined a self-reported physical activity and physical literacy questionnaire, an observer-scored fundamental movement skills (FMS) assessment, and a battery of anthropometric and body composition measurements. A knowledge-based pre/post survey was administered to a sub-sample of girls who participated in the workshop intervention, approximately half of all workshop attendees completed matched pre and post forms, yielding 190 paired responses for same-day knowledge acquisition analysis. The qualitative strand comprised focus group discussions (FGDs) with girls across four school sites, and key informant interviews (KIIs) with school principals and teachers.

The study design was diagnostic rather than experimental. It did not assign girls to control and intervention conditions for causal inference. Its purpose was to generate the first integrated, context-specific evidence base on adolescent girls' physical activity levels, physical literacy profiles, movement competence, body composition, and menstrual health knowledge in government schools across three districts of central Uttar Pradesh, and to identify, through qualitative inquiry, the socio-ecological factors shaping those outcomes.

### 4.2 Sample

The baseline assessment reached 243 adolescent girls across 8 government and government-aided schools in three districts of Uttar Pradesh: Lucknow, Barabanki, and Kanpur Dehat. Participants were drawn from Classes 6, 7, and 8, with ages ranging from 8 to 18 years and a mean age of 12.6 years. The sample was distributed across classes as follows: Class 6 (32%), Class 7 (31%), and Class 8 (37%). Just over half the sample (52%) were aged 13 or above; 48% were in the 8–12 age group. Of the 243 girls assessed, 43% (n=105) had started menstruating, with a mean age at menarche of 12.5 years (range: 10–16).

The three districts were selected to provide geographic and contextual diversity aligned with The Right Pitch's existing school network.

District	Character	Schools	Phase
Lucknow	Urban and peri-urban government schools	4 schools	Phase 1 (Dec 2025)
Barabanki	Semi-rural, adjacent to Lucknow	2 schools	Phase 1 (Dec 2025)
Kanpur Dehat	Rural; delayed entry due to school closures	2 schools	Phase 2 (Feb 2026)
<b>TOTAL</b>	3 districts · 8 schools · Classes 6–8	<b>8 schools</b>	Dec 2025 – Feb 2026

The workshop intervention was delivered across the same 8 schools during Phase 2. A pre/post knowledge survey was administered to 190 matched participants, providing the impact assessment data reported in Section 7.

A sub-sample of 118 girls was assessed using Bioelectrical Impedance Analysis (BIA) during the Phase 2 field visits, with approximately 14–15 girls from each school site. This sub-sample provides the body composition deep-dive reported in Section 5.6.



### 4.3 Data Collection Instruments

Eight instruments were used across the two phases. Each was selected or developed to address a specific dimension of the COM-B diagnostic framework, capability, opportunity, or motivation, and to produce data that no single instrument could capture alone.

#	Instrument	What It Measured	Administered By
01	<b>Bilingual PA Questionnaire (Hindi/English)</b>	Self-reported physical activity frequency and duration at school and home, sedentary time, school environment, PE access, and barriers to participation.	Self-administered with facilitator guidance Phase 1
02	<b>Physical Literacy Checklist</b>	Self-reported confidence, motivation, knowledge of PA benefits, support from family and school, and habit indicators across five sub-domains	Self-administered with facilitator guidance Phase 1
03	<b>Knowledge Check (Pre/Post)</b>	Knowledge across six domains: self-awareness, physical literacy, safety and care, menstrual health, nutrition, and goal setting, administered before and after workshops	Self-administered; collected same day of Workshop delivery Phase 2
04	<b>FMS Assessment 7 Skills</b>	Observer-scored rubric covering run, jump, overhand throw, catch, kick, single-leg balance, and leap. Scored on component-level criteria adapted from the Australian Framework	Trained facilitators (sports physiotherapists) Phase 1

#	Instrument	What It Measured	Administered By
05	<b>Anthropometry</b>	Height, weight, BMI-for-age, waist circumference, hip circumference, and waist-to-hip ratio. MUAC (mid-upper arm circumference) as proxy for muscle mass	Female assessors; private setting Phase 1
06	<b>Bioelectrical Impedance Analysis (BIA)</b>	Body fat percentage, skeletal muscle mass, subcutaneous fat, visceral fat, and resting metabolic rate (sub-sample of 118 girls).	Trained female assessors; sub-sample only Phase 2
07	<b>Focus Group Discussions (FGDs)</b>	Barriers, facilitators, menstrual health beliefs, gender norms, family dynamics, school environment, and aspirations. 4 FGDs conducted across school sites	Trained SSF moderators; girl-only groups Phase 1
08	<b>Key Informant Interviews (KIIs)</b>	Institutional support, infrastructure, PE delivery, and perceptions of girls' physical activity. Interviews with school principal and teachers	SSF facilitators; individual interviews Phase 1

The bilingual (Hindi/English) PA questionnaire and physical literacy checklist were developed by the SSF team with input from subject matter expert Dr. Baskaran, drawing on validated frameworks including CAPL-2<sup>26</sup> and elements of the PLAY tools<sup>27</sup>, and the International Physical Activity Questionnaire short form<sup>28</sup>, adapted for the age range and school context. All instruments were administered in girl-only settings by female facilitators.

The FMS assessment rubric was adapted from the Australian Framework for movement skill development<sup>29</sup>. Each skill was scored using component-level criteria, with raw scores later standardised to a 0–3 scale to allow cross-skill comparison. A safety protocol was in place for the leap assessment, administered only where the single-leg balance score was adequate and no pain or instability was reported.

The self-perception scales in the PA questionnaire and physical literacy checklist were simplified from Likert formats (1–5) to binary Yes/No responses on the advice of the subject matter expert, given the age range and literacy levels. As documented in the challenges section, this simplification, while necessary, introduced its own limitations (see [Section 8](#)).

<sup>26</sup> Longmuir, P.E., Boyer, C., Lloyd, M., Yang, Y., Boiarskaia, E., Zhu, W., & Tremblay, M.S. (2015). The Canadian Assessment of Physical Literacy: methods for children in grades 4 to 6 (8 to 12 years). *BMC Public Health*, 15, 767.

<sup>27</sup> Sport for Life Canada. (2013). Physical Literacy Assessment for Youth (PLAY): Tools for Assessing Physical Literacy. Canadian Sport for Life.

<sup>28</sup> Craig, C.L., Marshall, A.L., Sjöström, M., Bauman, A.E., Booth, M.L., Ainsworth, B.E., Pratt, M., Ekelund, U., Yngve, A., Sallis, J.F., & Oja, P. (2003). International Physical Activity Questionnaire: 12-country reliability and validity. *Medicine & Science in Sports & Exercise*, 35(8), 1381–1395.

<sup>29</sup> Department of Education, Victoria. (1996). *Fundamental Motor Skills: A Manual for Classroom Teachers*. Melbourne: Community Information Service, Department of Education.

## **4.4 Implementation Phases**

Data collection unfolded across two field phases, separated by a period of preliminary analysis, workbook development, and workshop preparation.

**Phase 1, Baseline Assessment (December 2025).** The first field visit covered Lucknow and Barabanki. Six schools were assessed across four days. The Kanpur Dehat schools scheduled for this phase were closed due to cold weather and district-announced holidays, necessitating a revised schedule. The Phase 1 team comprised two sports physiotherapists and two sports psychologists. Before field deployment, the team underwent a structured orientation covering data collection methodology, instrument standardisation, and FMS assessment protocols, including shared video references for FMS scoring. This phase also included the four focus group discussions and key informant interviews that form the qualitative data.

**Preliminary Analysis and Workshop Development (January 2026).** Data from Phase 1 was cleaned, entered digitally, and analysed to generate preliminary baseline insights. These insights directly informed the design of the Meri Udaan Meri Pehchaan workbook and the four workshop modules. A two-day residential facilitator preparation programme was held in Bengaluru with learning and development professional Mr. Praveen Kumar Naidu, focused on structuring workshop content for engagement and equipping facilitators to deliver sessions through play-based pedagogy with embedded reflective practices.

**Phase 2, Kanpur Dehat Assessment and Workshop Delivery (February 2026).** The second field visit covered all three districts across a 10-day window. Baseline assessments were completed in Kanpur Dehat, followed by workshop delivery, pre/post knowledge surveys, BIA body composition assessments, and workbook distribution across all 8 schools. The Phase 2 team comprised the same physiotherapists joined by two Sports for Transformation Fellows from the Dani Sports Foundation.

## **4.5 Ethical Considerations**

All data collection was conducted in accordance with principles of informed consent, confidentiality, and voluntary participation. Informed consent was obtained from school authorities and, where applicable, from parents and guardians before any assessment began. Girls were informed at the start of each session that participation was voluntary, that there were no right or wrong answers, and that their responses would be kept private and reported only in aggregated, anonymised form.

All assessments were conducted in girl-only settings. Anthropometric measurements, including height, weight, and body circumferences, were taken in private spaces by female assessors (who were trained in anthropometry measurements), with care taken to ensure no measurements or results were visible to other participants. BIA was administered in (Equipment, make) with the same privacy protocol. The FMS assessment was framed explicitly as a learning activity rather than a test, with facilitators instructed to create an encouraging

environment and to stop any skill assessment immediately if a participant showed discomfort or distress.

Focus group discussions were conducted by trained SSF moderators in Hindi, with participants reminded that the conversation was confidential, that no individual names would be reported, and that they were free to decline to answer any question or to leave at any time.

No identifying information appears in this report.



# Baseline Findings

# Baseline Findings

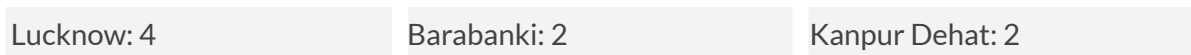
## 5.1 Demographics

We assessed 243 girls across 8 government schools in Lucknow, Barabanki, and Kanpur Dehat. They ranged from 8 to 18 years old, with an average age of 12.6. The sample split roughly evenly across Classes 6, 7, and 8, and roughly evenly between girls who had started menstruating (43%) and those who had not.

Baseline sample: 243 girls | 8 schools | 3 districts



Schools by district



### Age & class distribution



### Class distribution



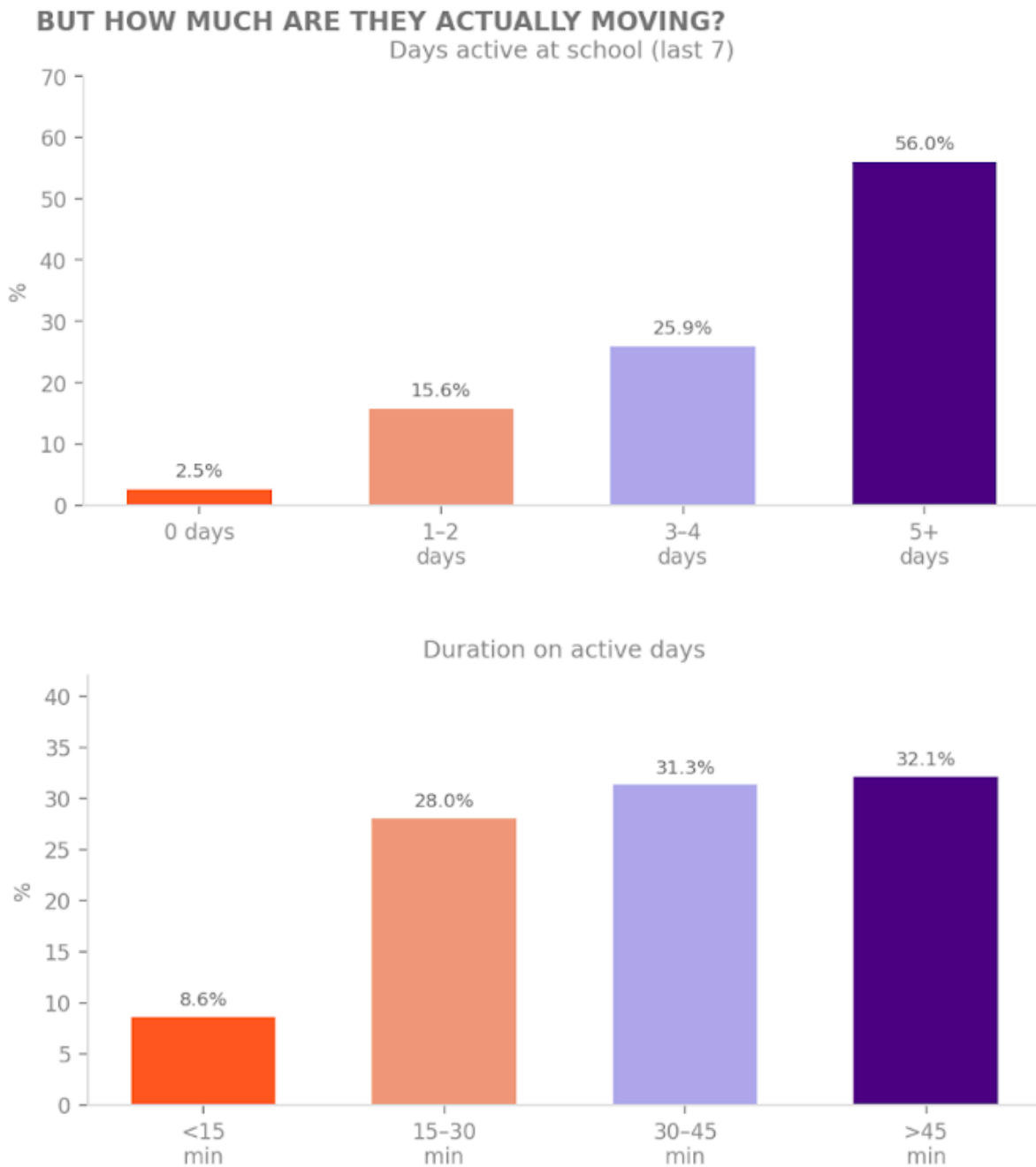
## 5.2 Girls Are Active. But Activity Is Incidental, Not Structured

COM-B domain: Opportunity: the school environment does not structure sustained movement into the day.

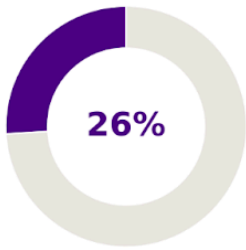
Self-reported activity and confidence



Most girls said they're active at school. 56% reported being active on five or more of the past seven days. 87% said they enjoy physical activity. 85% said they feel confident doing it. On the surface, these numbers look good.



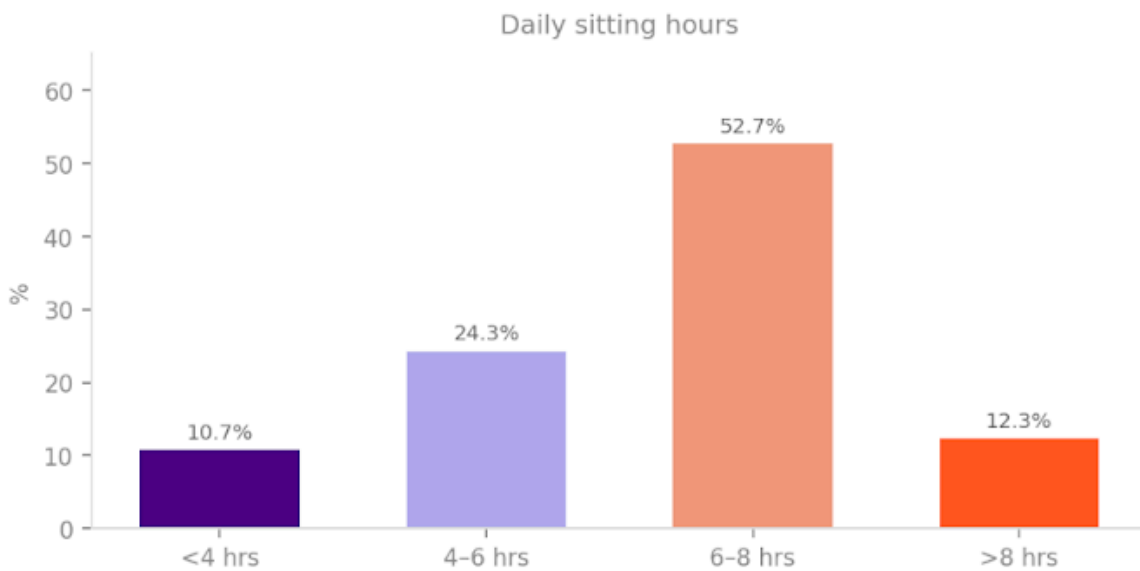
But look closer and the picture shifts. Of the girls who were active, only 32% moved for more than 45 minutes on those days. Most were active for less than 30 minutes. When we combine frequency and duration, only about one in four girls meets even a rough proxy for the WHO's 60-minute daily guideline, and that's based on self-report, which likely overstates the real number.



- Only 26% of girls meet a rough proxy for the WHO guideline of 60 min daily activity (active 5+ days, >45 mins per session)

The constraints are structural. 68% of girls get only one recess break per day. 65% sit for six hours or more. Schools have playgrounds (86% said theirs is safe) and most permit movement during class. But permission and infrastructure aren't translating into sustained activity.

### THE SEDENTARY SCHOOL DAY

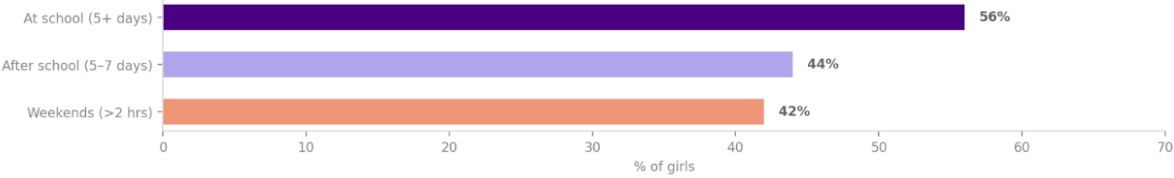


#### Recess breaks per day

- 1 break (68%)
- 2 breaks (27%)
- 3+ breaks (5%)

After school, activity drops further. 44% reported being active most days, but 35% of those were active for less than 30 minutes. Weekends were different: 42% reported being active for more than two hours. When time opens up, girls move. The desire is there. The school day isn't making room for it.

**WHERE GIRLS MOVE MOST**



**Qualitative Findings**

In focus groups, girls described the same thing. They described their daily movement as almost entirely incidental, walking or cycling to school, household chores before and after, with structured play restricted to designated days.

***"It takes 30 minutes walking and 20 minutes for cycling."***  
– Girl participant, FGD, Nawabganj

***"I clean the kitchen and mop the floor [before school]."***  
– Girl participant, FGD, Nijampur Majhi Gaon Road

***"Fridays and Saturdays are when it's our 8th class turn to play."***  
– Girl participant, FGD, Barabanki

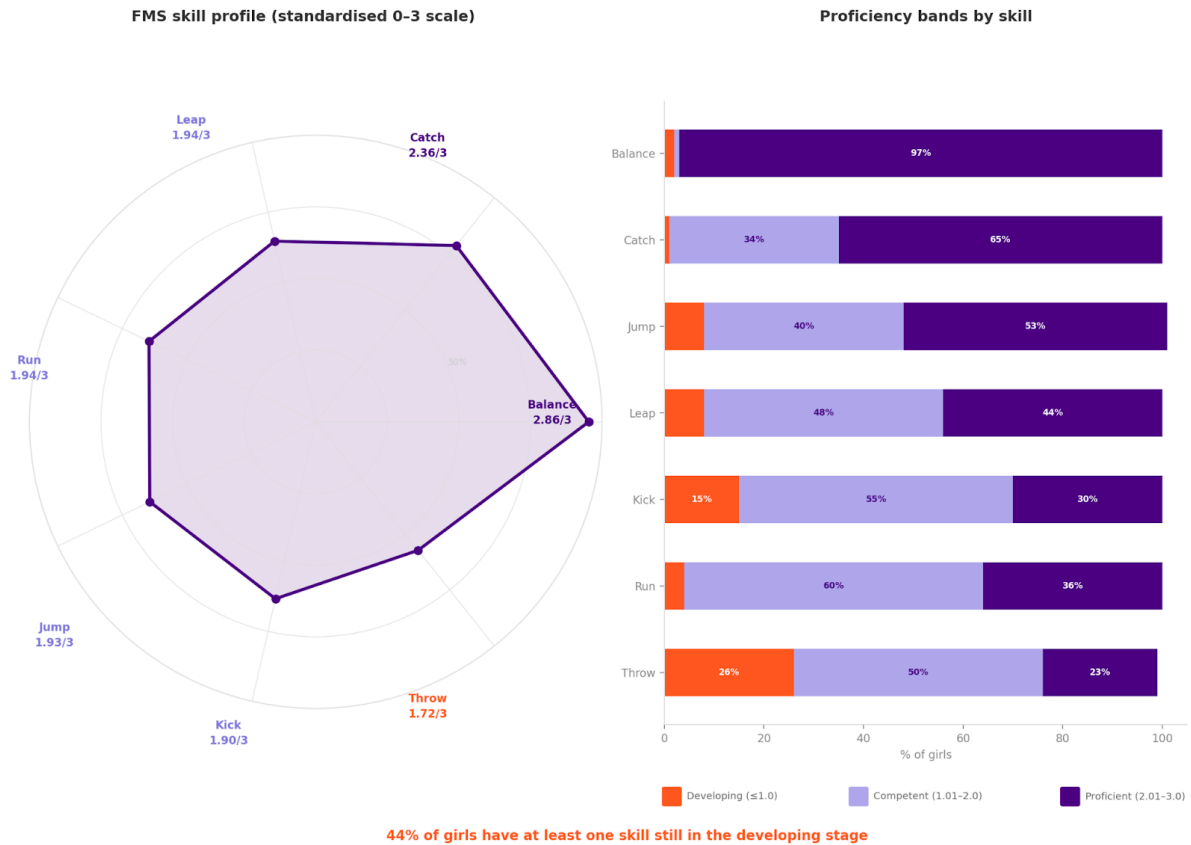
When asked what drains their energy, long hours of sedentary study were cited alongside menstrual fatigue, confirming that the school day structure itself works against movement.

### 5.3 Movement Competence Has Clear Skill Gaps; Confidence Does Not Match Reality

COM-B domain: Capability - fundamental movement skills were never taught and do not improve with age.

We assessed seven fundamental movement skills: run, jump, throw, catch, kick, balance, and leap. The average score was 24 out of 35, or 69% of the maximum. But averages hide the real story.

- Balance is the one skill where competence is near-universal. The mean score was 2.86 out of 3 (95% of maximum), and 97% of girls were proficient (scoring above 2.0). Only 2% remained in the developing stage. This skill, which requires no equipment, no instruction, and no partner, has developed through everyday movement.
- Catch was the second strongest at 2.36 out of 3 (79%), with 65% proficient. Notably, only 1% were in the developing stage, the vast majority have at least basic competence, even if not yet proficient.
- After that, a middle cluster of four skills scored in a narrow band between 1.90 and 1.94, but their proficiency profiles differed meaningfully:
  - Jump (1.93/3): 53% proficient, but 8% still developing. Nearly half the sample sits in the competent-but-not-yet-proficient band (40%).
  - Leap (1.94/3): Only 44% proficient despite a similar average to jump, with 48% in the competent band and 8% developing.
  - Kick (1.90/3): Only 30% proficient, with the largest developing segment among this cluster at 15%, one in seven girls has not reached basic competence in kicking.
  - Run (1.94/3): 36% proficient, but only 4% developing. The majority (60%) are competent but have not progressed further, running is functional but not refined.
- Throw was the weakest skill at 1.72 out of 3 (57%). The proficiency profile is the starkest in the dataset: only 23% of girls are proficient, 50% are competent, and 26%, one in four, remain in the developing stage. This is the only skill where over a quarter of the sample has not reached basic competence.



Overall, 44% of girls have at least one skill still in the developing stage. Only 56% have cleared the developing threshold on all seven skills. This means that nearly half the sample has at least one fundamental movement skill that has not yet reached basic competence, a gap that, if unaddressed, limits their ability to participate confidently in structured sport or PE.

The skills where proficiency is lowest, throw, kick, and run, are the object-control and explosive locomotor skills that form the foundation of most organized sports. Without competence in these skills, girls cannot confidently participate in games, sports, or PE activities that go beyond basic locomotion. The skill gap is not about fitness; it is about movement vocabulary.

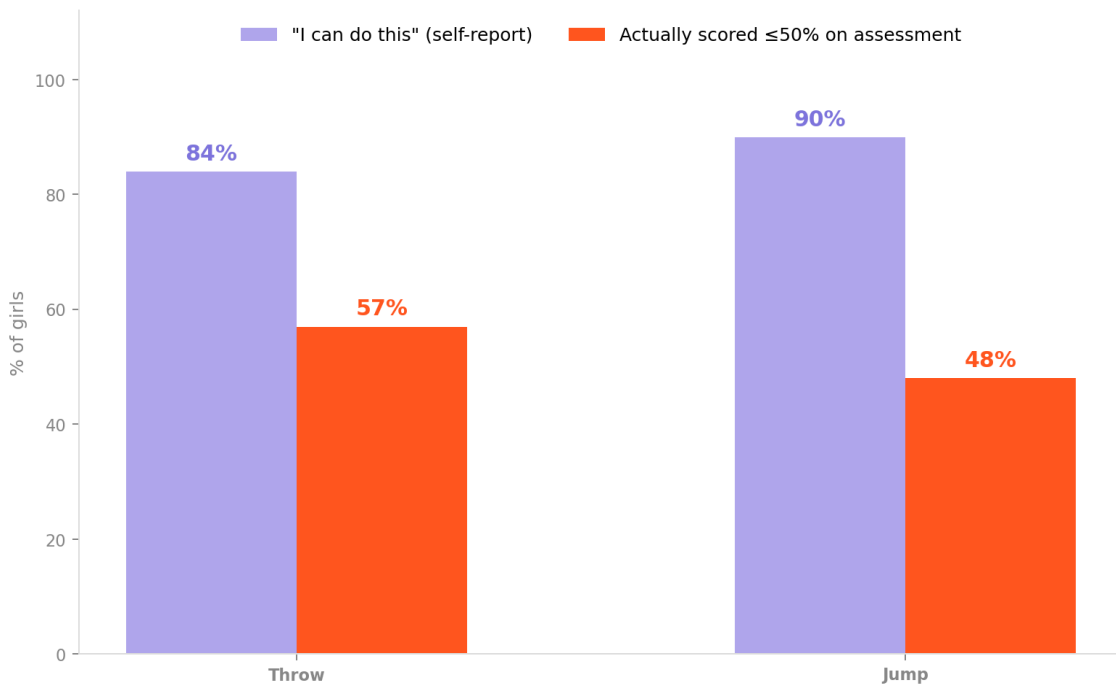
Age made no statistically significant difference to FMS scores. Girls aged 13 and above scored no better than girls aged 8–12 (mean 24.1 vs. 23.8,  $t = -0.55$ ,  $p = 0.58$ ,  $d = 0.07$ ). This flat trajectory suggests these skills are simply not being developed through the school years; there is no structured progression.

## The gap between confidence and competence

When asked, "I can throw or catch a ball," 84% of girls said yes. When assessed, 57% of that group scored at or below half marks on the throw.

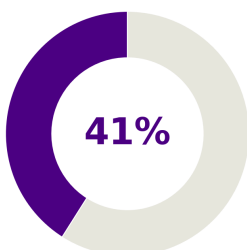
This isn't the girls' fault. Without structured teaching, they have no frame of reference for what good throwing looks like. They believe they can because no one has shown them what competence actually involves.

**"I can do this" vs actual performance**



It works the other way too. Among the 37 girls who said they were not confident doing physical activity, 41% actually scored above 70% on the total FMS assessment. These girls have the competence but not the self-belief.

Self-report surveys of confidence and perceived capability, which are commonly used to measure physical literacy, will significantly overestimate readiness if used without objective skill assessment. And conversely, girls who appear disengaged may simply need encouragement rather than skill-building. Measuring both is essential.



Among girls who say they are NOT confident (n=37)

- FMS score ≥ 70% (competent)
- FMS score < 70%

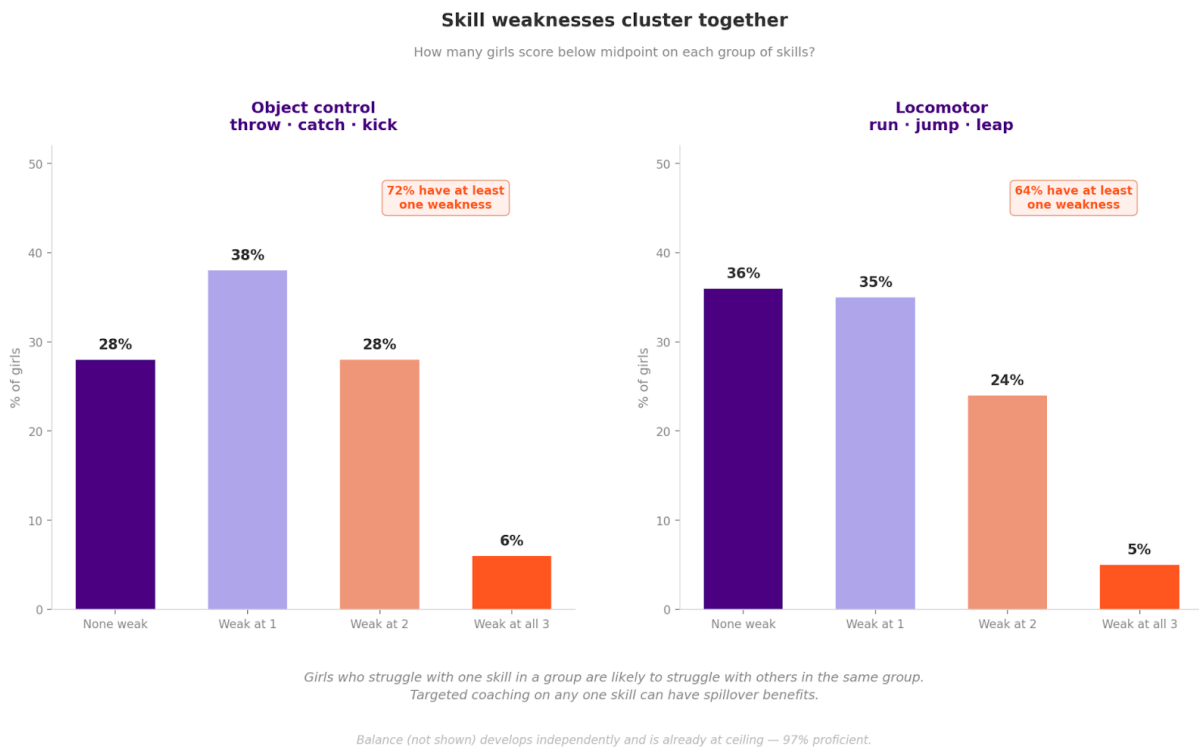
These girls have the skill but not the self-belief.  
Encouragement may matter more than skill-building

## Data Deep-Dive: Skills Cluster Together within Skill Families

When we look beyond individual skills and examine how weaknesses group together, a clear pattern emerges across both families of movement skills.

Object-control skills (throw, catch, kick) showed the tightest clustering. Only 28% of girls scored above the midpoint on all three. The remaining 72% had at least one object-control skill below the midpoint, and 34% were weak at two or more. The inter-skill correlations confirm the pattern: catch and kick were the most strongly connected, followed by throw and catch. A girl who struggles with one object-control skill is very likely to struggle with another; these skills develop as a connected group.

Locomotor skills (run, jump, leap) showed a similar but slightly less pronounced pattern. 36% of girls were above the midpoint on all three, while 64% had at least one weakness and 29% were weak at two or more. The correlations between locomotor skills were more modest, suggesting these skills are somewhat more independent of each other than object-control skills, but the clustering effect is still present.



## Qualitative Findings

In focus groups, girls expressed high confidence in familiar games like Kho-Kho and badminton but described avoiding activities where they lacked technique. The pattern mirrors the quantitative finding: confidence is high in the abstract but collapses when specific skills are required.

***"I feel a lot of confidence in playing Kho-Kho,"***

***– Girl participant, FGD, Barabanki***

***"I avoid bowling... I don't get my turn."***

***– Girl participant, FGD, Nawabganj***

***"I avoid Kabaddi... clothes get torn."***

***– Girl participant, FGD, Barabanki***

The avoidance of specific skill-based roles, bowling, fielding, and catching, is not a preference. It is a skill gap expressing itself as a social behavior. Girls without technique withdraw not because they dislike the sport but because participation without competence is embarrassing.

For both groups, this means weaknesses travel together, and so do improvements. Targeted coaching on any one skill within a family is likely to have spillover benefits to the others.



### 5.4 Menstrual Myths Are Suppressing Participation - And the Beliefs Form Before Menarche

COM-B domain: Capability + Motivation. Misconceptions about menstruation suppress both knowledge and willingness to be active.

#### Menstrual myths are suppressing participation

Among 105 girls who have started menstruating



Among the 105 girls who have started menstruating, the impact is tangible. 43% said painful periods stop them from being active. 37% take school holidays because of their periods. 29% skip PT class specifically.

But here's the deeper finding: the beliefs form before the periods do.

#### "Is it safe for girls to play during periods?"

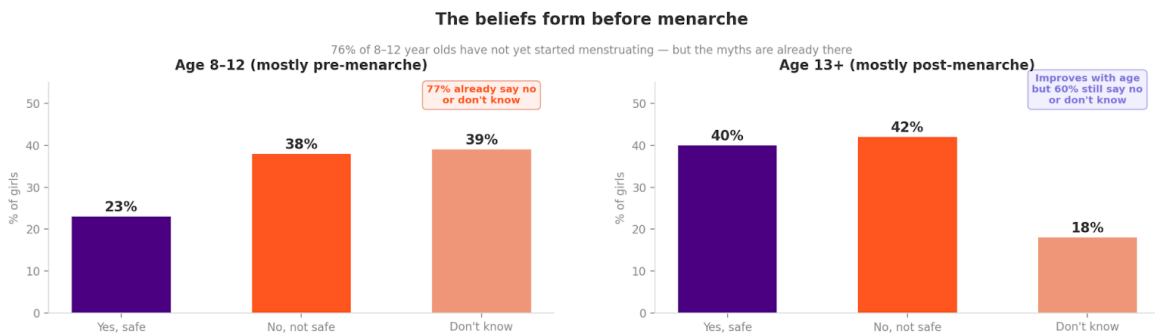
Full sample (n=243)



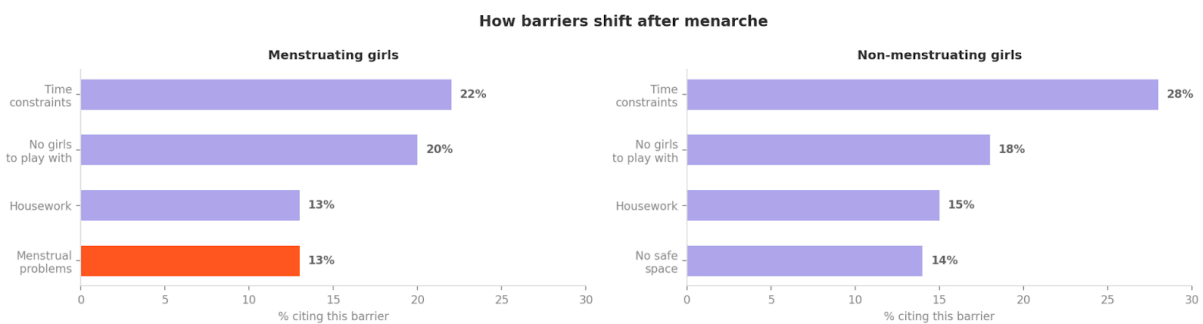
## Data Deep-Dive: Beliefs Form Before Menarche

When we disaggregate by age group, the pattern is clear. Among girls aged 8–12, the majority of whom (76%) have not yet started menstruating, only 23% said it is safe to play during periods. 38% said it is not safe, and 39% said they don't know. The misinformation is being internalised before girls ever experience a period.

Among girls aged 13 and above, knowledge improves somewhat: 40% said it is safe. But 42% still said it is not safe, and 18% were unsure. Even among older, menstruating girls, the belief that movement during periods is unsafe remains the majority view.



The barrier profile shifts too. Among girls who have started their periods, menstrual problems are the fourth most commonly cited barrier to physical activity (13%), after time constraints (22%), no girls to play with (20%), and housework (13%). Among girls who have not yet started their periods, menstrual problems do not appear in the top five, replaced by lack of safe spaces (14%).



**Menstrual health literacy must be delivered before menarche, not after.**

*By the time girls start their periods, the belief that they should withdraw from activity is already established.*

This is the window. Menstrual health literacy has to reach girls before menarche, not after. By the time they start their periods, the belief that they should withdraw is already locked in. And because these beliefs are reinforced by family, peers, and teachers, any intervention has to reach the people around the girls too, not just the girls themselves.

## Qualitative Findings

In focus groups, menstruation was universally cited as a factor that reduces energy and participation across all four sites. Girls described managing pain while continuing lighter activities but avoiding anything high-impact. The fear of staining was a persistent, specific concern.

***"Sometimes I can't play because of the pain."***

***– Girl participant, FGD, Barabanki***

***"About the stain, I [I] feel a bit afraid."***

***– Girl participant, FGD, Barabanki***

***"Everyone feels like that... then you are unable to play a bit."***

***– Girl participant, FGD, Barabanki***

When asked what they wanted to learn from a future program, the most direct answer came from Barabanki:

***"Which exercises should I do so that the pain is a little less?"***

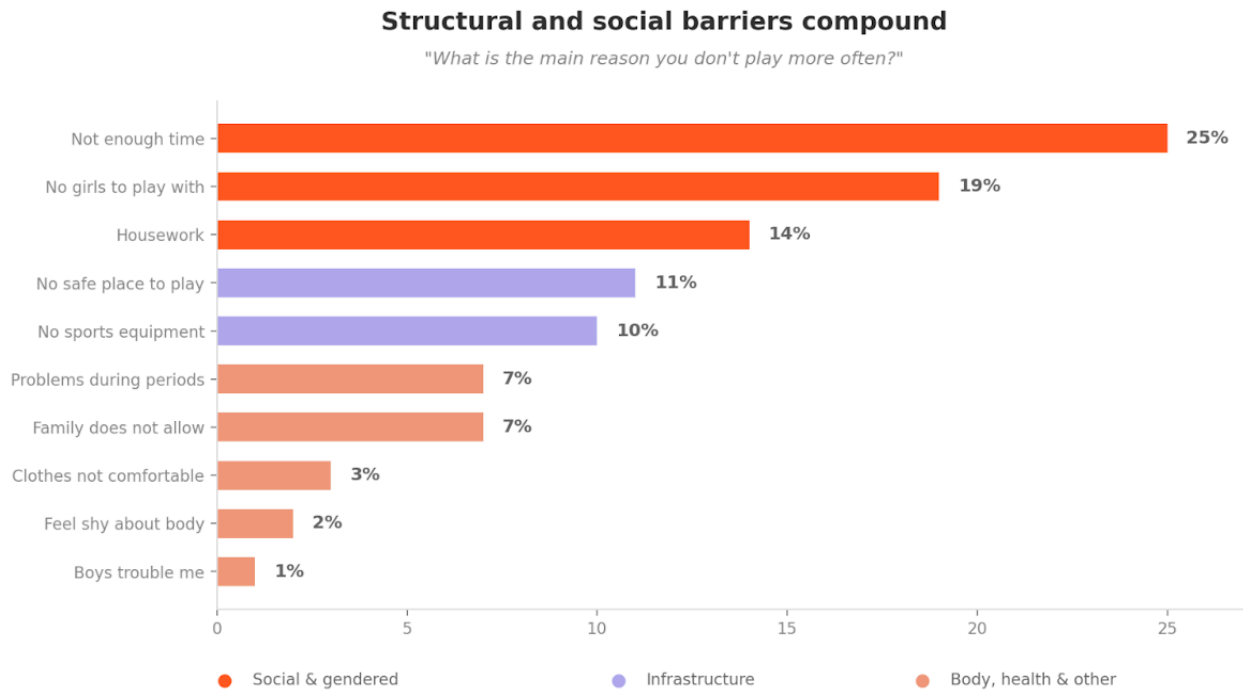
***– Girl participant, FGD, Barabanki***



## 5.5 Structural and Social Barriers Compound - Time Poverty, Peer Absence, and Domestic Burden - Opportunity

COM-B domain: Opportunity, time poverty, peer absence, uniform constraints, and domestic burden are structural barriers, not personal choices.

When asked to identify the single main reason they don't play often, girls' responses painted a picture of layered, gendered constraints.



**The top 3 barriers are not infrastructure problems — they are social and gendered.**

The top three barriers, (1) time, (2) peer absence, and (3) domestic work, are not infrastructure problems. They are social and gendered. Girls are time-poor because of household responsibilities, isolated because other girls in their community are similarly constrained, and burdened with domestic labor that competes directly with play.

School uniforms are a concrete but often overlooked barrier: 58% of girls said their school clothes are not comfortable for playing. This is not about preference, it is about whether the clothing girls are required to wear physically permits movement. For girls already navigating discomfort around body image (17% said they feel shy playing because of their body), uncomfortable clothing adds another layer of inhibition.



### School clothes: a hidden barrier

- Say school clothes are not comfortable for playing

For girls already navigating body image concerns (17%), uncomfortable clothing adds another inhibition layer

#### Qualitative Findings

The dupatta was the most frequently cited clothing barrier in focus groups mentioned independently at both Barabanki and Nijampur, not as a general complaint but as a specific, physical obstacle to running and playing.

***"The dupatta is the problem... it gets in the way while running."***

***—Girl participant, FGD, Nijampur Majhi Gaon Road***

***"Ma'am says to [remove it], but then we feel uncomfortable ourselves."***

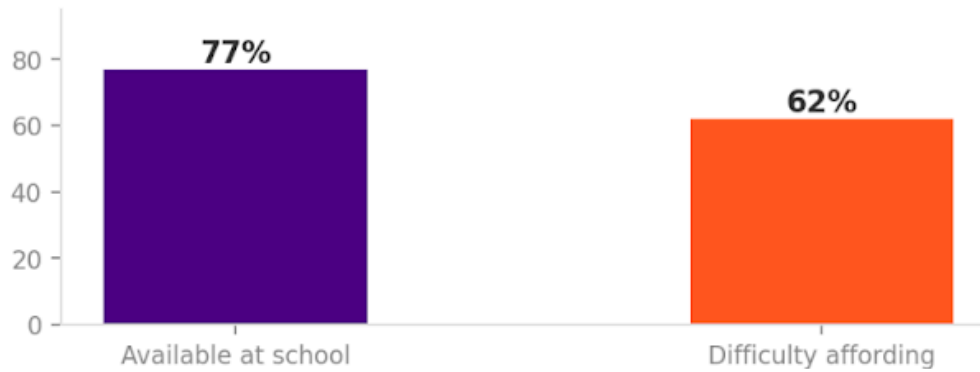
***—Girl participant, FGD, Barabanki***

This captures the tension : even when teachers give permission, internalized modesty norms make removal difficult. The barrier is structural and cultural simultaneously.

Equipment access tells a mixed story: 77% said sports equipment is available to them, but 62% reported some or great difficulty in affording equipment. The gap between availability at school and affordability at home matters for sustaining activity beyond the school day.

Family support was reported as high (83% said yes), but this did not translate into dramatically different activity levels - 46% of girls with family support were active five to seven days after school, compared to 37% without. Support in principle does not automatically overcome the structural barriers of time, space, and peer access.

### Equipment: available ≠ affordable



### Family support is high — but doesn't overcome structural barriers



#### Qualitative Findings

Focus groups complicated the family support picture. Most girls said parents encourage play, but community judgment creates friction, and play is almost always conditional on completing household work first.

**"My parents always say, 'Play, play.'"**  
 – Girl participant, FGD, Barabanki

**"Neighbours tell my mother to put me to housework, but my mother says let her do what her heart wants."**  
 – Girl participant, FGD, Nijampur Majhi Gaon Road

**"After going home I do housework and study."**  
 – Girl participant, FGD, Barabanki

This explains why family support only added 9 percentage points to activity levels. Support exists in principle, but the structures of daily life override it.

## 5.6 Body Composition and Nutritional Signals - Capability

COM-B domain: Capability. Underlying nutritional status affects movement readiness and energy availability.

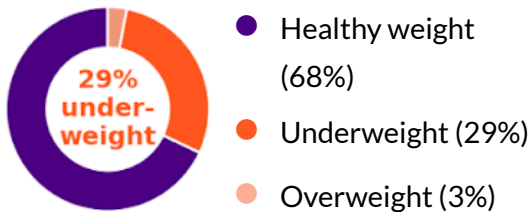
Anthropometric data was collected for 242 participants. Using CDC reference values, the weight status distribution was as follows: healthy weight 68%, underweight 29%, overweight 2.5%, and obese 0.4%. Nearly one in three girls is classified as underweight by international standards.

MUAC was collected for 204 girls: 75% were flagged orange (moderate malnutrition risk). However, when a sub-sample of 118 girls was assessed using Bioelectrical Impedance Analysis (BIA; Omron Karada Scan HBF-375), a different picture emerged. The BIA sub-sample was drawn by convenience, girls present and consenting during Phase 2 workshop visits, rather than by random selection. The mean age (12.9 vs 12.6 years) and district distribution were broadly comparable to the full baseline cohort.

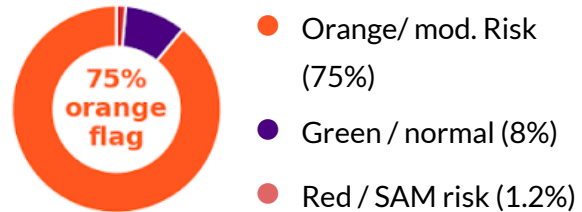
### Body composition and nutritional signals

Baseline anthropometry (n=242)

#### CDC weight status



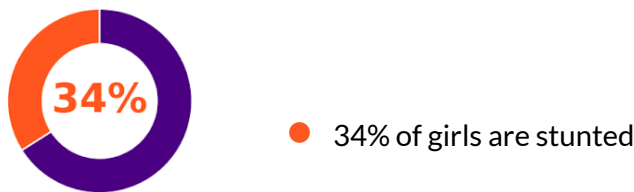
#### MUAC nutritional flags (n=204)



**Three key findings from the BIA sub-sample:**

1. One in three girls is stunted. 34% of the sub-sample fell below -2 SD of the WHO Growth Reference for height-for-age, consistent with national NFHS-4 data showing 34.4% stunting among Indian adolescent girls (Srihari et al., 2020). These girls are not outliers. They reflect a widespread pattern of chronic undernutrition.

**Overall stunting rate**

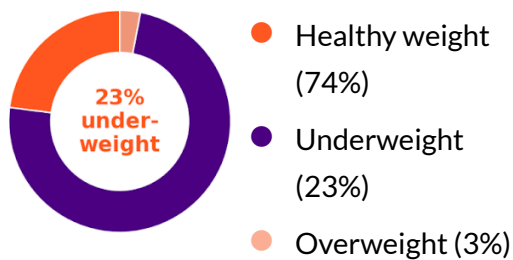


2. BMI misleads; BIA clarifies. By BMI, 23% of the subsample is underweight. By BIA, 87% have healthy body fat (15–25%). The gap reflects a population of small-framed girls, largely due to stunting, rather than acutely malnourished girls. BMI penalizes shorter girls even when their body composition is adequate.

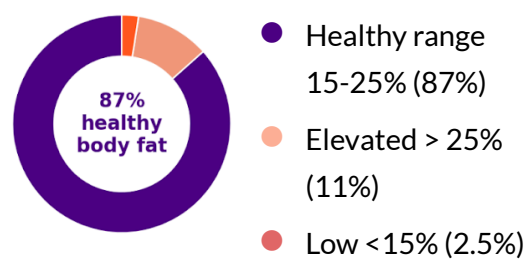
**What BMI misses – and BIA reveals**

*BIA sub-sample (n=118)*

**What BMI says**



**What BIA reveals**



3. MUAC is unreliable for this demographic. MUAC flagged 75% as at-risk, but BIA showed 87% with healthy body fat. In a lean adolescent population, MUAC tracks subcutaneous fat rather than lean mass<sup>30</sup>. Higher MUAC correlated with lower FMS scores ( $r = -0.24$ ) because it was measuring adiposity, not strength. Any programme using MUAC as a primary nutritional indicator in similar populations risks misdirecting the intervention.

The program implication: Underweight girls have resting metabolic rates 100 kcal/day lower than healthy-weight peers (841 vs 946 kcal/day), meaning they operate on a narrower energy margin. Movement competence showed no difference by weight status, the skill gap is about instruction, not nutrition. But any program increasing physical activity demand must ensure girls are adequately fueled.

The full BIA analysis, including stunting prevalence by age, the BMI-subcutaneous fat correlation, and the underweight vs healthy-weight body composition comparison, is provided in [Appendix C](#).

#### Qualitative Findings

The nutritional picture was visible in what girls described eating. Tea-based breakfasts with minimal protein were the norm across sites; several girls reported skipping breakfast entirely.

***"Sometimes we come having eaten paratha and tea."***

***– Girl participant, FGD, Barabanki***

***"I don't feel hungry in the morning."***

***– Girl participant, FGD, Barabanki***

School-provided midday meals and snacks were described as important energy sources, confirming that for many girls, the school meal is not supplementary but essential.

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<sup>30</sup> Behan, S., Belton, S., Peers, C., O'Connor, N.E., & Issartel, J. (2022). Exploring the relationships between fundamental movement skills and health related fitness components in children. *European Journal of Sport Science*, 22(2), 171–181.

## BASELINE DIAGNOSTIC: COM-B SUMMARY

What this project found – mapped to the behaviour change framework guiding the response.

<p><b>C</b> CAPABILITY</p> <p>Do girls have the knowledge and skills?</p>	<p><b>O</b> OPPORTUNITY</p> <p>Does the environment allow and support it?</p>	<p><b>M</b> MOTIVATION</p> <p>Do girls want to – and believe they can?</p>
<p><b>FMS never taught – no progression</b></p> <p>Girls score identically to boys on all 7 skills. The flat trajectory implies skills are not being developed through the school years.</p>	<p><b>No structured PE in the school day</b></p> <p>Average 16 min PE vs 60 min WHO guideline. The school has a PE teacher but does not deliver structured activity.</p>	<p><b>Enjoyment is high – NOT the barrier</b></p> <p>87% enjoy PE, 95% feel confident, 90% say school encourages girls to play. The desire to move exists. The systems to support it do not.</p>
<p><b>Throw is the most urgent skill gap</b></p> <p>28% still developing – only 23% proficient. 53% developing and jump 25% below. These skills require taught instruction, not free play.</p>	<p><b>Time poverty is the top barrier</b></p> <p>Household chores before and after school consume discretionary hours. Cooking cycles start 5am to cook and clean. Play is conditional on finishing domestic work first.</p>	<p><b>Pre-menarche beliefs suppress action</b></p> <p>38% of 8–12 year olds already believe there are things they shouldn't do before they have ever had a period. The belief is transmitted inter-generationally.</p>
<p><b>Confidence ≠ competence</b></p> <p>84% say they can throw; 57% score a half. 90% say they can jump; 48% score a half. No frame of reference for what competence looks like.</p>	<p><b>Peer absence compounds isolation</b></p> <p>19% cite 'no girls to play with' + peers frequently constrained by domestic and time pressures. Activity requires social permission individual motivation cannot give.</p>	<p><b>Identity: role, not capability</b></p> <p>In FGDs, girls named village and class roles as strengths – daughter, student – and none named a sport. Aspirations: police, IPS, teaching – not sport.</p>

<p><b>C</b> CAPABILITY</p> <p>Do girls have the knowledge and skills?</p>	<p><b>O</b> OPPORTUNITY</p> <p>Does the environment allow and support it?</p>	<p><b>M</b> MOTIVATION</p> <p>Do girls want to – and believe they can?</p>
<p><b>Menstrual myths are widespread</b></p> <p>63% say NOT able to play during periods. 40% believe period blood comes from the opening. 36% of 8–12 year olds hold these beliefs before even menstruating.</p>	<p><b>School uniform restricts play</b></p> <p>56% say school clothes uncomfortable for playing. Dupatta is the most cited barrier in FGDs – interferes with running even when teachers give permission to remove it.</p>	<p><b>Under-confident girls are capable</b></p> <p>41% of 'not confident' girls scored above 70% on FMS. They have the competence but not the self-belief. Early success experiences are the intervention.</p>
<p><b>Nutritional status affects readiness</b></p> <p>23% underweight, 36% stunted. Underweight girls have resting metabolic activity lower than healthy-weight peers (841 vs 946 kcal/day).</p>	<p><b>Equipment: available but unaffordable</b></p> <p>77% say equipment available at school. 71% say equipment unavailable at home – limiting sustained activity beyond the school day.</p>	<p><b>Weekends reveal latent demand</b></p> <p>42% are active 2+ hours on weekends – the highest activity window. When time and structural constraints are removed, girls choose to move.</p>

# **Intervention Mapping Post- Assessment**

# Intervention Mapping Post-Assessment

Most programs design a workshop and then produce materials to support it. This project reversed that sequence deliberately. The baseline assessment came first, producing the first integrated evidence base on adolescent girls' physical literacy in UP government schools. The workbook was designed next, directly shaped by what the evidence revealed. The workshops were built last, using the workbook's four themes as their organizing spine. What each girl received was not a supplement to the school visit; it was the centerpiece of a journey that the school visit introduced.

This section begins with the people who delivered the project, who they were and how they were prepared, before explaining the workbook, the workshops, and the philosophy that connected them.



## 6.1 Facilitator Preparation

Before a single girl was assessed, a workshop delivered, or a workbook page turned, two carefully sequenced preparation stages shaped the team that would make it all happen. This was not a large operation; a small field team of four to six people carried the project across three districts, two phases, and eight schools. Their preparation mattered because of that smallness. There was no institutional safety net. The team's shared understanding of what this project was for and how to deliver it with care was the quality control.

## Who Delivered It

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The field team across both phases was led by two sports physiotherapists who were present for all data collection and all workshop delivery. Their technical grounding in movement, body mechanics, and assessment methodology underpinned everything from the FMS observation protocol to the anatomy content. Alongside them, two sports psychologists joined Phase 1, bringing experience in survey administration, perception scales, and participant-centered facilitation.

In Phase 2, two Sports for Transformation Fellows from the Dani Sports Foundation joined the returning physiotherapists. These fellows brought something the technical team could not fully replicate: deep familiarity with government school contexts in Uttar Pradesh, the rhythms of a school day, the dynamics between students and teachers, and the particular way trust is built or broken in these settings.

Alongside them throughout both phases were The Right Pitch Fellows, the cricket coaches, and life-skills facilitators already embedded in the participating schools through TRP's fellowship model. The TRP Fellows were not program staff. They were the connective tissue: oriented on the project's purpose and methodology, they acted as the bridge between the visiting team and the participants, translating both literally and contextually. In schools where a new team arriving with clipboards and assessment tools might have generated wariness, the TRP Fellows' existing relationships with girls, teachers, and school authorities made the work possible.

## Two Phases of Preparation

PHASE 1 – ASSESSMENT PREP	PHASE 2 – WORKSHOP PREP
Lucknow – December 2025	Bengaluru – January 2026 – 2-day residential
<b>Purpose:</b> Scientific rigour and assessment fidelity	<b>Purpose:</b> Facilitation craft and adaptive delivery
<b>Led by:</b> Dr. Baskaran (SME)	<b>Led by:</b> Mr. Praveen Kumar Naidu (L&D)
<b>Focus:</b> Data collection methodology & instrument standardisation	<b>Focus:</b> How to facilitate rather than instruct
<b>Team learned:</b> Why each measurement exists and what it reveals	<b>Team learned:</b> Reflective facilitation – debrief > activity
<b>FMS calibration:</b> Reference videos + Field sessions for scoring consistency	<b>Props training:</b> Sketches, uterus models, resistance bands, food items
<b>TRP Fellows:</b> Orientated on project purpose and their bridge role	<b>Key shifts:</b> From script to judgment – adapting to real classrooms
Every assessment scored consistently across all schools	Not a script – the judgement to adapt one

The distinction between the two stages matters. Phase 1 required precision: every FMS assessment was scored consistently, every survey was administered without leading participants, and every anthropometric measurement was taken with the same protocol across all schools. Phase 2 required responsiveness. School playgrounds in February heat, classrooms without enough space, and rooms of girls who had never done bodyweight squats before do not follow a script. The Bengaluru preparation did not give the team a script. It gave them the judgment to adapt to one.

## **6.2 Meri Udaan Meri Pehchaan: Why This Name?**

***The workbook is called Meri Udaan Meri Pehchaan. In Hindi, it means My Flight, My Identity.***

The workbook is called Meri Udaan Meri Pehchaan, My Flight, My Identity. Udaan is flight: biomechanically, it is the phase of a jump where both feet leave the ground, a moment that demands strength, coordination, and trust in the body. In physical literacy terms, it is what becomes available when competence and confidence combine. The baseline confirmed this: leap scores were among the weakest FMS skills, not because girls were incapable, but because no one had taught them. "Pehchaan" is identity, the kind that is discovered, not assigned. In focus group discussions, when girls were asked to introduce themselves, most named their village and their class; almost none named a strength or something they were good at. The two words describe a single arc: udaan is what physical literacy makes possible; pehchaan is what follows from it, the self-knowledge that accumulates when a girl discovers, through her own body, what she is capable of.

The workbook's subtitle - Gati, Gyan aur Muskaan (Movement, Knowledge, and Joy), names its three animating values. Every activity, story chapter, and tracker was tested against one question: does this build movement competence, body knowledge, or enjoyment?

## **6.3 The Workbook**

### **From Evidence to Design**

**The workbook was designed in January 2026, directly from the Phase 1 baseline findings.** Each section was built to address a specific documented gap—the FMS skills chapter exists because the data showed skills were never taught; the menstrual health content exists because the data documented widespread misconceptions; the nutrition content exists because 29% of girls were underweight. This was not generic content adapted for context. It was context-specific content from the start.

These specific gaps, not generic assumptions about adolescent girls, became the workbook's brief. Each section was designed to address a documented constraint. The

movement skills section exists because the baseline showed a skills gap. The menstrual health content exists because the data documented near-universal misconceptions about periods and activity. The nutrition content exists because 29% of the sample was underweight. Evidence-based design is not a slogan here. It is the actual design process.

### Structure: Four Sections

The workbook is organized across four sections, each building progressively on the previous.

Weeks	Section	Core themes	Key activities
Weeks 1-4	Self Awareness	Identity · emotions · feelings tree · body agency · self-belief · what makes me, me?	Power Palette · feelings tree · colour-coded mind meter · Anjali story chapters
Weeks 5-8	What My Body Can Do	PA vs exercise vs sport · fitness components (strength, stamina, balance, agility) · major muscle groups · FMS skills as learnable, not innate	Muscle labelling · FMS technique cards · sport examples: kabaddi, badminton, cricket · weekly activity log
Weeks 9-10	My Care, My Safety	Injury vs tiredness · PRICE method · menstrual anatomy · hormones and PMS · why period pain happens · myths vs facts · light exercise helps, not harms	Anatomy diagrams · myth-busting cards · menstrual tracker · PRICE illustration
Weeks 11-12	Goals and Nutrition	Tiranga Thali balanced plate · hand-portion method · iron and protein for girls · hydration · SMART goal-setting · three-tracker system	Bento box / thali activity · weekly health tracker · food-mood-water tracker · SMART goal card

### The Anjali Character and Sticker Sheet

A fictional character named Anjali guides the workbook journey, inspired by UNICEF's Meena, whose stories already reach 35,000+ Meena Manch groups in UP government schools. Anjali is a contemporary, physical-literacy-centered evolution of that tradition: a girl from a government school who faces the same realities these girls face, periods, restrictive norms, and shared playgrounds. She makes mistakes and learns. Research consistently shows that narrative identification produces deeper attitude change than direct instruction, which is why the workbook teaches through her story rather than through clinical messaging alone.

The sticker sheet was designed to carry the visual layer the workbook couldn't; each sticker matched a specific story or chapter, giving it a face that the production timeline didn't allow for in full illustration.

**"They want a colorful, comic-style workbook to help them set goals and understand their body changes."**

**– FGD theme, Nawabganj**



## 6.4 The Workshop Sessions

### Design Logic: Activating the Workbook

The workshops did not try to cover everything in the workbook. They were not designed to. Four modules, delivered in a single intensive school visit, cannot replace sustained self-learning, and they were never intended to. Their purpose was different: to create a memorable entry point into each workbook theme; to give girls a physical, sensory experience of ideas that the workbook would then develop; and to spark enough curiosity that girls would continue the journey after the facilitators left.

Each module corresponded directly to one workbook section. The workshops activated the theme; the workbook sustained it.

#### THE FOUR WORKSHOP MODULES | February 2026

Module 1	Module 2	Module 3	Module 4
<b><i>Identity Who am I?</i></b>	<b><i>Movement &amp; Fitness</i></b>	<b><i>Understanding Your Body</i></b>	<b><i>Nutrition for Growth</i></b>
Movement as introduction, favourite pose, favourite dance. Strengths, not just roles.	PA vs Exercise vs Sport, experiential, not lecture. Endurance run, bodyweight strength, resistance bands, skeletal model. FMS: throw and jump.	Female anatomy, menstrual health, why periods happen, why activity during periods is safe. Uterus models, balloon anatomy, WASH hygiene.	Macronutrients through real food and measuring tools. Hand-portion rule. Tiranga Thali. Hindi songs, bento box activity.
Key insight: Girls are more than their work. Movement is a language of self.	Key insight: Fitness is learnable, not fixed.	Key insight: The body is capable, not fragile.	Key insight: Food is fuel, not fear.

After the four modules, facilitators walked girls through the workbook trackers and explained how to use them independently.



## 6.5 What Each Girl Received

Every girl who participated in the workshop sessions received:

### What Each Girl Received

8 schools • 3 districts • February 2026

01 One Workbook	02 Sticker Sheet	03 Menstrual Health Literacy	04 Movement Vocabulary	05 Her Name On It
Meri Udaan Meri Pehchaan. Bilingual Hindi-English. Four guided sections.	Character & story illustrations. The visual layer the workbook couldn't carry alone.	The knowledge that light activity during periods is safe – and why.	FMS as learnable skills – not innate talent. Throw, jump, kick, balance.	Personalised – because ownership is the first step in engagement.

We introduced the workbook during the workshop, walking girls through the first pages together. By the time they left, they knew what was inside. The goal was that the school visit created a habit-starter: girls who opened the workbook on their own that evening were already doing the program.



# Impact Assessment

# Impact Assessment

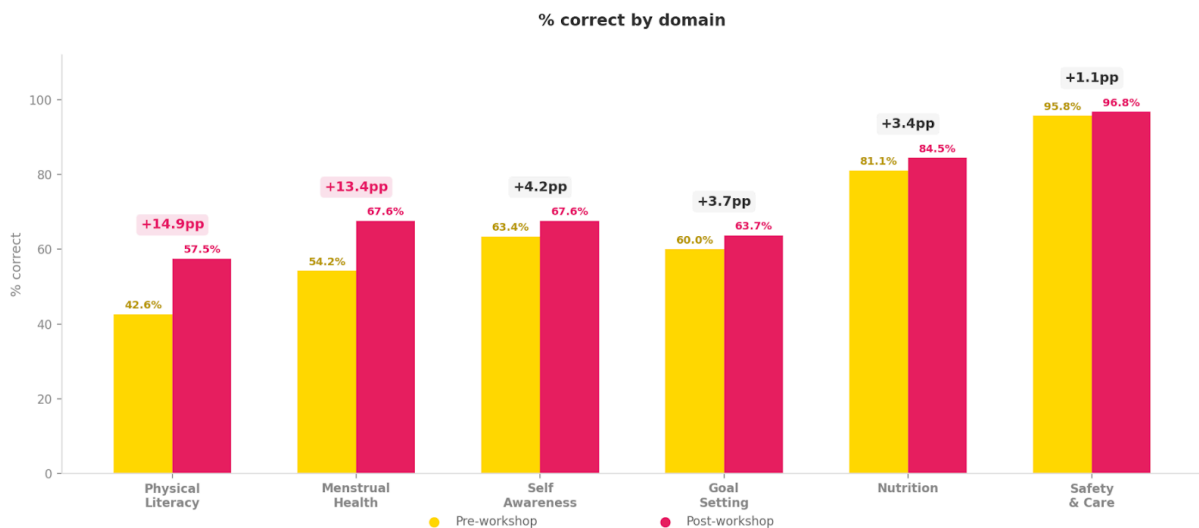
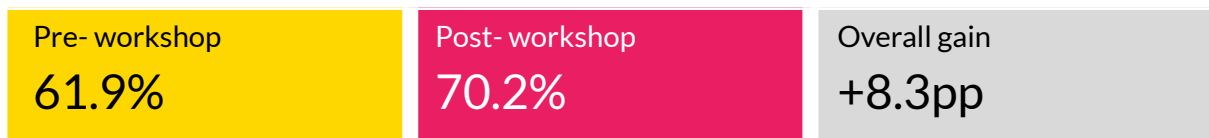
Before and after the workshop, a short survey was administered to 190 children across 8 school sites. The survey consisted of 11 knowledge-based questions spanning six domains: self-awareness, physical literacy, safety and care, menstrual health, nutrition, and goal setting. Responses were collected immediately before and after the workshop on the same day.

Overall, the proportion of correct responses increased from 61.9% (pre-workshop) to 70.2% (post-workshop), a gain of 8.3 percentage points. Improvements were observed across every domain, though the magnitude varied substantially. The largest gains were concentrated in two areas: physical literacy (+14.9 percentage points) and menstrual health (+13.4 percentage points), the domains where baseline knowledge was lowest and where the workshop content was most novel to participants.

Throughout this section, "percentage points" (abbreviated as pp) refers to the absolute difference between pre- and post-workshop scores, for example, a shift from 40% to 56% correct is a gain of 16 percentage points (pp).

## Impact assessment: pre vs post workshop knowledge

190 matched participants | 11 questions | 6 domains | Same-day pre/post



The largest gains were in exactly the domains where they were most needed:

**Physical literacy (+14.9pp) and menstrual health (+13.4pp) were both the lowest-scoring domains at baseline and the most novel content in the workshop.**

## 7.1 Physical Literacy: The Largest Knowledge Shift

Physical literacy showed the single largest domain-level improvement, rising from 41.6% to 57.5% correct (+14.9pp). This was driven by two questions that registered the biggest individual gains in the entire survey:

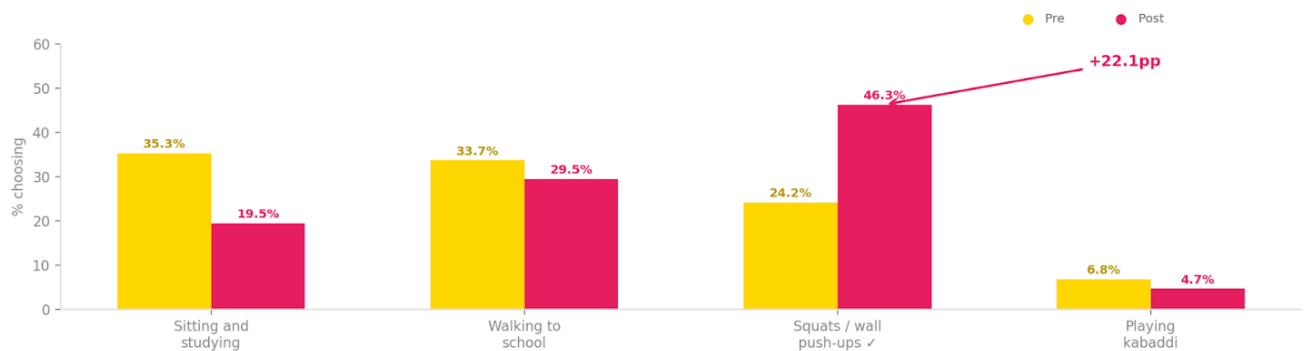
Question / Finding	Pre	Post	Gain
Recognising an example of exercise	24.2%	46.3%	+22.1pp
Identifying a component of fitness	45.8%	63.7%	+17.9pp
Understanding what fitness means (overall)	57.9%	62.6%	+4.7pp

- Recognising an example of exercise shifted from 24.2% to 46.3% correct (+22.1pp). Before the workshop, a third of girls identified "sitting and studying" as exercise, and another third chose "walking to school." After the workshop, nearly half correctly identified structured exercises like squats and wall push-ups. The misconception that everyday movement constitutes exercise, while understandable, has direct implications for whether girls believe they are meeting activity guidelines when they are not.

### Physical literacy: the largest knowledge shift

Domain improved from 42.6% to 57.5% correct (+14.9pp)

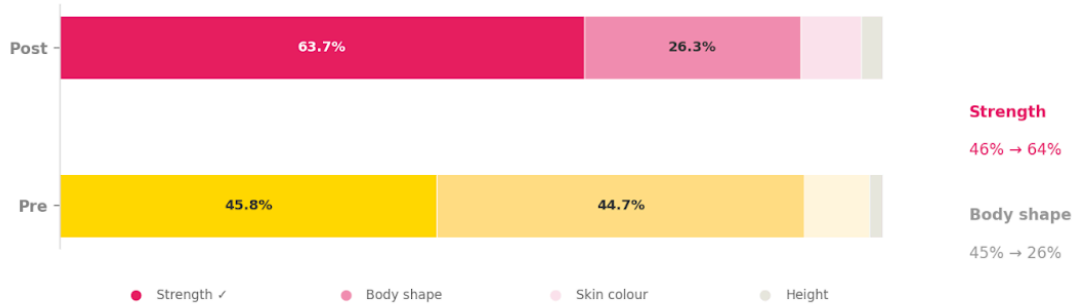
#### Q3: "Which is an example of exercise?" (+22.1pp)



- Identifying a component of fitness rose from 45.8% to 63.7% correct (+17.9pp). Before the workshop, nearly equal proportions of girls chose "body shape" (45%) and "strength" (46%). Afterwards, the shift toward strength was clear, with "body shape" dropping to 26%. This is a meaningful reframing: it suggests the workshop began to decouple girls' understanding of fitness from appearance and reconnect it to functional capability.

**Q4: "Which is a part of fitness?" (+17.9pp)**

Fitness decoupled from appearance, reconnected to functional capability



- Understanding what fitness means showed a modest gain from 57.9% to 62.6% (+4.7pp). The majority in both rounds chose the correct functional definition, suggesting a reasonable baseline understanding that the workshop reinforced rather than transformed.

**Q5: "What does fitness mean?" (+4.7pp)**



***From appearance to capability***

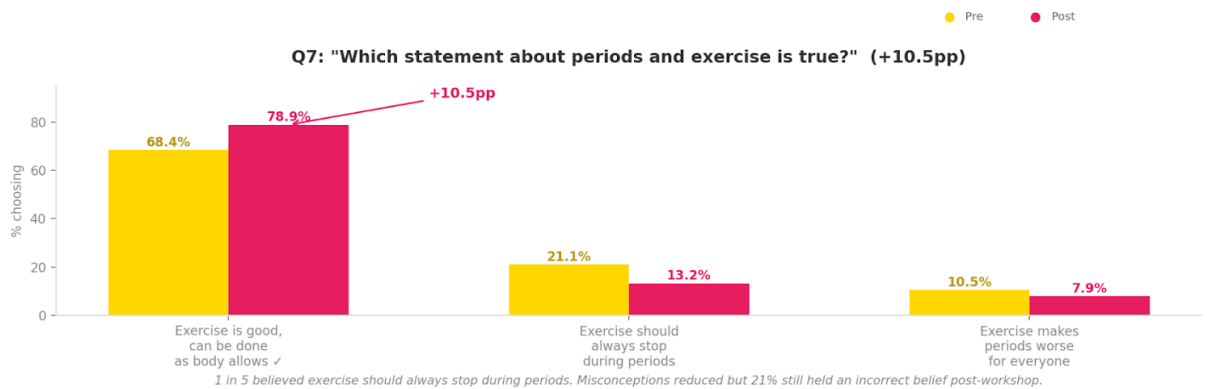
*Before the workshop, nearly as many girls associated fitness with how the body looks as with what it can do. After, two-thirds connected fitness to strength. This matters because it determines whether a girl sees physical activity as something meant for her or something meant for someone else.*

One honest caveat: even post-workshop, over 40% of girls still could not correctly identify an example of exercise, and over a quarter still associated fitness with body shape. A single session corrects knowledge meaningfully, but not completely. This is exactly the role the workbook is designed to play over 12 weeks.

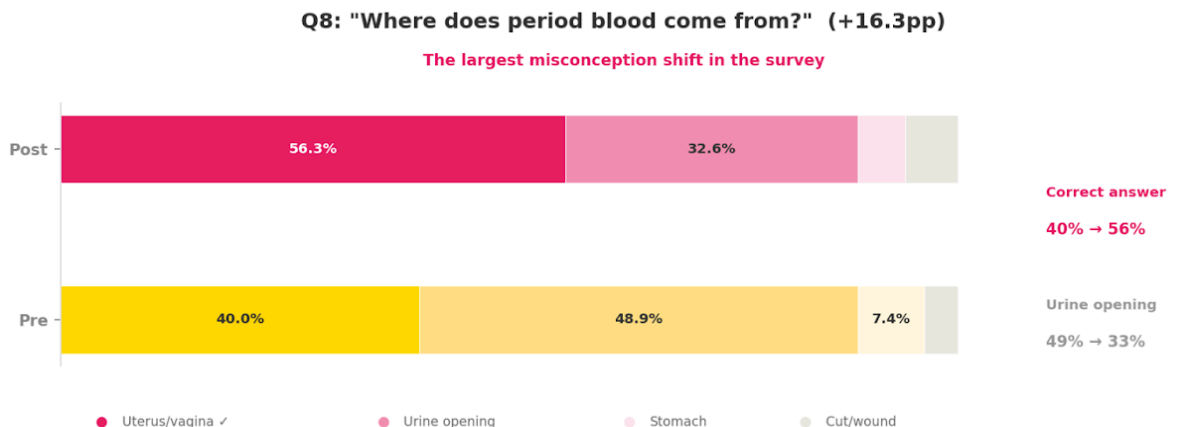
## 7.2 Menstrual Health: Breaking Through Misconceptions

Menstrual health knowledge improved from 54.2% to 67.6% correct (+13.4pp), driven by gains in both questions in this domain.

- The belief that exercise during periods is acceptable rose from 68.4% to 78.9% (+10.5pp). Before the workshop, one in five girls believed exercise should always be stopped during periods, and one in ten believed exercise makes periods worse. After the workshop, these misconceptions reduced. This is directly relevant to the baseline finding that 41% of girls believed it was not safe to play during periods; the workshop appears to have begun shifting that belief in the right direction.



- Understanding where period blood comes from improved from 40.0% to 56.3% (+16.3pp). Before the workshop, nearly half the girls (49%) believed period blood comes from the urine opening. This is not merely a factual error; it reflects fundamental confusion about reproductive anatomy that affects how girls understand and manage their bodies. The 16-point shift represents real learning, though 33% still held the misconception post-workshop, indicating that anatomical understanding requires more sustained educational support.

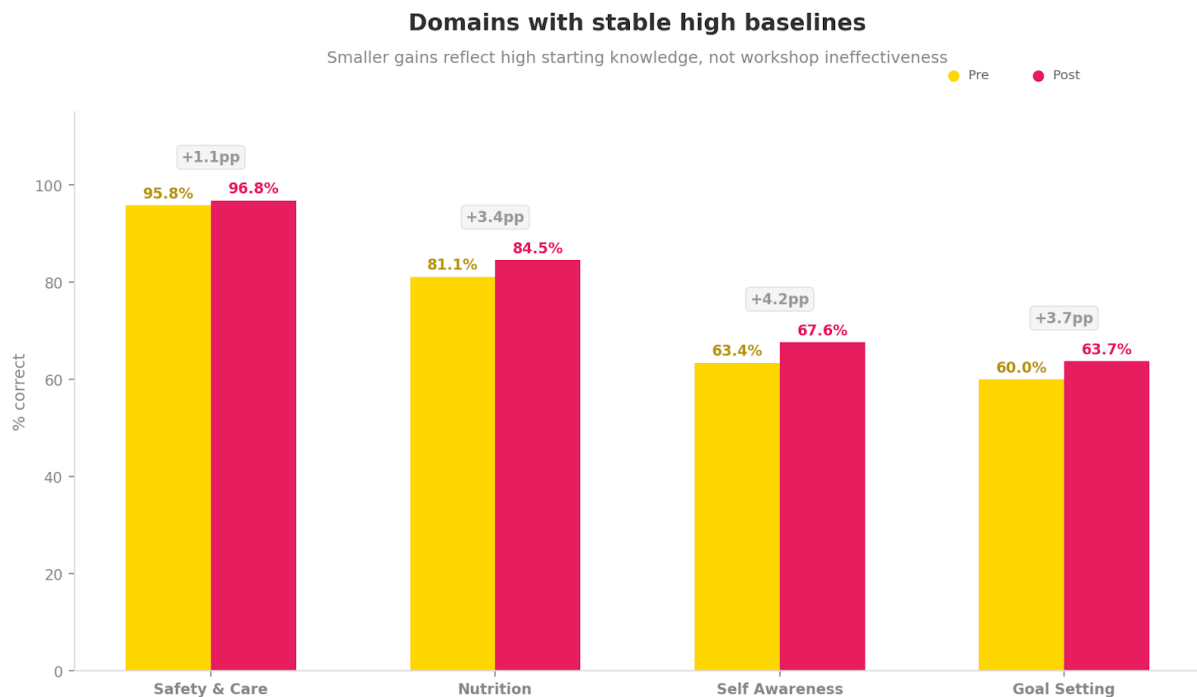


## One in three girls still held the reproductive anatomy misconception after the workshop

The 16-point gain is real. But 33% post-workshop is still a large share of girls carrying a foundational misunderstanding about their own bodies. This finding, more than any other, makes the case for the workbook's menstrual health chapter and for sustained educational exposure rather than single-session delivery.

### 7.3 Domains with Stable High Baselines

Three domains showed smaller gains. Girls already knew most of this, probably from daily life. There wasn't much room to improve.



- Safety and Care (95.8% → 96.8%): Near-ceiling. Nearly all girls already knew to stop and tell a trusted adult when in pain. No room to improve.
- Nutrition (81.1% → 84.5%): Most already understood balanced meals and hydration. The nutrition gap this project identified is about access and affordability, not knowledge.
- Self-Awareness (63.4% → 67.6%) and Goal Setting (60.0% → 63.7%): Attitudinal shifts that are harder to move in a single session. These are the domains the workbook's self-awareness chapters and SMART goal-setting tracker are designed to deepen over time.

### 7.4 What Girls Said They Learned

Of the 190 participants, 142 (75%) provided open-ended written feedback on what they had learned. The responses were categorized into four themes.

Theme	% of responses	What girls said
Menstrual health and reproductive anatomy	54%	Periods, body openings, the uterus are often their first structured exposure
Exercise and fitness	32%	Squats, push-ups, the difference between exercise and daily activity
Nutrition and hydration	37%	Food, water intake, balanced eating
Self-awareness and identity	8%	Strengths, emotions, resilience

*Open-ended feedback themes from 142 participants (75% response rate). Percentages exceed 100% because many girls mentioned multiple themes in a single response.*

Menstrual health and reproductive anatomy dominated the open-ended responses, cited by 54% of all girls who provided feedback. Many specifically mentioned periods, body openings, and the uterus. For a significant number of these girls, the workshop session was their first experience of being taught about their own reproductive anatomy in a structured, non-judgmental setting. The quantitative gains in that domain confirm the open-ended picture: this was where the workshop delivered the most novel, personally relevant information.

***"Earlier I didn't know why periods occur; now I know after the session."  
— Girl participant, Hasanpur Khevli***

## 7.6 What This Tells Us About the Workshop, and What Comes Next

The workshop shifted knowledge by 8.3 percentage points across all six domains, which is meaningful for a single session but not for behavior change. The pattern is instructive: largest where misconceptions were deepest and smallest where knowledge was already established.

- The workshop works best as a misconception corrector, highly effective at shifting specific factual errors about exercise, fitness, reproductive anatomy, and menstrual activity safety.
- Attitudinal change requires more time; self-awareness, goal setting, and the nutritional access gap are problems the workbook is designed to address across its four sections, not problems a single session can solve.
- The open-ended feedback confirms the target is right: 43% of girls' most memorable learning was about reproductive anatomy, content most had never received before.

These findings are from a same-day measurement. Whether knowledge gains persist, whether beliefs change over time, and whether workbook engagement translates into sustained behaviour change will require follow-up assessment in Phase 3.

### Impact assessment – Key numbers

<b>190</b>	<b>+8.3pp</b>	<b>+14.9pp</b>	<b>+13.4pp</b>	<b>75%</b>	<b>43%</b>
Matched participants	Overall knowledge gain	Physical literacy	Menstrual health	Gave open-ended feedback	Cited menstrual health as #1 learning



# Challenges & Learnings - Limitations

# Challenges & Learnings - Limitations

What three months in the field taught us, and what it would take to do this better

A pilot is a first attempt. This section lists what we learned and what we'd do differently.

## 8.1 Methodological Limitations

What happened	What it means for the data	Implication for next phase
No India-validated physical literacy tool exists. We adapted CAPL-2 (Canada), PLAY (Australia), and Australian FMS rubrics.	Data is directionally sound but not comparable to a standardized national benchmark, because none exists.	Contributes to the case for developing an India-specific PL assessment tool.
FMS scoring involves subjective judgment. All facilitators were trained together; inter-rater reliability was not formally tested.	Score variance between schools may partly reflect facilitator differences. The age-flat FMS finding is too consistent to be a rater drift.	Future phases should include formal inter-rater reliability testing.
Self-report surveys overestimated readiness. 84% said they could throw; 57% scored $\leq 50\%$ . FGDs contradicted written responses.	Self-report alone cannot measure physical literacy. The confidence-competence gap is both a finding and a methodological lesson.	Retain objective assessment. Supplement surveys with guided conversations or small-group interviews.
MUAC flagged 75% as at moderate malnutrition risk. BIA showed 87% have healthy body fat. MUAC tracked adiposity, not muscle.	MUAC is unreliable for this demographic. Programs using it as a primary indicator of risk are misdirecting interventions.	Use BIA or alternative body composition measures for adolescent populations.
Pre/post measures same-day knowledge shift only. Does not measure behavior change or sustained retention.	The 8.3 percentage point gain is real for what it measures. It is not evidence of sustained change.	Phase 3 follow-up measurement is essential.

What happened	What it means for the data	Implication for next phase
<p>The WHO activity proxy is an upper bound. The questionnaire's highest duration category was '&gt;45 minutes' rather than capturing exact session length. Girls in this category may be active for 46–59 minutes rather than the full 60 recommended.</p>	<p>The 26% figure likely overestimates the proportion genuinely meeting WHO guidelines. It should be read as an upper bound, not a precise compliance rate.</p>	<p>Future instruments should capture duration in finer intervals (e.g., 45–60 min, 60+ min) to allow direct WHO comparison.</p>
<p>Pre-menarche belief data is cross-sectional. The majority of the 8–12 cohort has not started menstruating.</p>	<p>The 38% figure captures pre-formed beliefs about periods, not actual behavior during menstruation. We cannot confirm these beliefs translate into actual withdrawal without longitudinal follow-up.</p>	<p>Phase 3 should track the same cohort through menarche to measure belief-to-behavior translation.</p>
<p>The BIA sub-sample (n=118) was convenience sampled from workshop attendees, not randomly selected from the full cohort (n=243).</p>	<p>Body composition findings may not be fully representative of the broader sample. However, key demographics (age, district) were comparable.</p>	<p>Future phases should use stratified random sampling for BIA to ensure representativeness.</p>
<p>The FMS assessment covered 7 of the broader movement skill framework. Only core skills (run, jump, leap, throw, catch, kick, and balance) were assessed. The full FMS framework includes additional skills such as hop, gallop, slide, dodge, strike, dribble, and roll, which were not measured.</p>	<p>The baseline provides a strong diagnostic of the assessed skills but does not capture the complete movement skill profile. Girls may have strengths or gaps in skills not tested.</p>	<p>Future phases should expand the FMS assessment to cover the broader skill framework, particularly striking and dribbling, which are relevant to sports like cricket and hockey already played in these schools and also for overall athletic development .</p>

## 8.2 Operational Constraints

What happened	What it means	Implication for next phase
The severe cold season in Kanpur Dehat triggered district-wide school closure. Fieldwork extended by two days.	Kanpur Dehat data collected under compressed conditions.	Build buffer days into field schedules. Monitor district announcements.
Harvest activities pulled girls home. Attendance reduced at several sites.	Participation data reflects who attended, not the full cohort. Confirms the time poverty barrier.	Schedule around agricultural calendars where possible.
Four facilitators for 45–50 girls per class. Limited individual attention.	FMS coaching was partial at several schools. Throwing and jumping are prioritized.	Increase to six facilitators. Enable breakout groups.
All deliveries within school hours. Four modules in one day was too compressed.	The identity module, requiring the most reflection, was the hardest to deliver well.	Split workshops across two days (2.5–3 hours each).
Only 4 FGDs and 2 KIIs were conducted. Rich data but insufficient coverage.	Qualitative insights are illustrative, not representative across all contexts.	Double or triple FGD count in future phases.

### 8.3 Design Trade-Offs

What happened	What it means	Implication for next phase
Workbook built in one month. More text, fewer illustrations than intended. Stickers are added as a visual layer.	Girls found it more engaging than textbooks. But design quality affects engagement and outcomes.	Allow 2–3 months for workbook production. Add comics, tactile elements, audio.
Nutrition baseline already high (81%). But 29% are underweight and 75% MUAC-flagged. Knowledge ≠ access.	Telling girls what to eat when they can't access it addresses the wrong problem.	Engage in the school meal program and family food environment.
A visually impaired student participated via improvised tactile props and peer buddy.	Improvisation worked, but it was not designed. Accessibility is a baseline requirement.	Build inclusive design from the outset: audio, tactile markers, contrasting visuals.
Self-awareness showed the smallest gain (+4.2pp). Identity module engaged but pre/post couldn't capture the shift.	Attitudinal shifts are not well-measured by knowledge questions.	Phase 3 needs qualitative measurement tools for identity and attitudinal change.
Paper-based data collection. Manual entry. Re-analysis was needed when Kanpur data was added.	Time-consuming and error-prone.	Use tablets, OCR, or voice-recording apps for data capture.
Full 7-skill FMS station circuits could not be delivered at every school due to time and space constraints.	Throw and jump received priority based on baseline findings. FMS coaching during workshops was partial at several sites.	A two-day workshop format would allow a complete FMS circuit. Priority skills should always be covered first.
The nutrition module could not address the economics of food access, only knowledge.	Girls largely know what a balanced diet is (81% baseline). What they lack is consistent access to one.	Couple PA programming with RKSK nutritional screening and POSHAN 2.0 supplementation.
The goal-setting section assumed a level of self-monitoring habit not every girl had built by workshop end.	The workbook's tracker system requires sustained engagement that a single session cannot establish.	Activity Leaders should check workbook progress at weekly intervals, not assume independent use.

## 8.4 What Worked, and Why It Worked

Six design and delivery choices produced results consistently across all eight school sites. The mechanisms behind what worked are as important as the fact that they did. These are the non-negotiables for replication.

What worked	Why it worked	The lesson for scale
Girls-only spaces	Removed social inhibition. Sensitive topics required safety to surface.	Non-negotiable for replication. Not a preference, but a condition for honest participation.
Physical experience before explanation	The skeleton, pelvic model, and measuring containers—touching preceded understanding. Props produced questions; lectures produced glazed eyes.	The equipment list is not overhead. It is the pedagogy. Don't cut the skeleton to save on transport costs.
Movement as icebreaker	Asking girls to show a favorite movement revealed more about self-concept than any survey. Shy girls performed with confidence once moving.	Module 1 design, movement first, words second, is the entry point for trust-building.
TRP Fellows as trust bridges	The visiting team was unknown. TRP Fellows had existing relationships with girls, teachers, and authorities.	School-based programs need an embedded, trusted local presence. External teams alone cannot replicate this.
Play before performance	Noncompetitive, nonjudgmental framing. Girls who never played together did so within minutes.	Competitive framing loses the girls who most need the program. Joy is the method and the outcome.
Workbook ownership	Girls treated it differently from textbooks. Personalized, reflective, theirs.	The take-home resource is not supplementary. It is the primary program vehicle between visits.

## 8.5 What the Field Showed That the Data Did Not

Some of the most important observations did not fit into a survey or a pre/post score. They came from what the team saw and heard across three districts over three months.

- Incidental movement without scaffolding. Girls walking up to two kilometers to school, completing household work before and after, still reporting high enjoyment of activity, but with movement that was entirely incidental, never structured. The activity is there. The scaffolding is not.
- Nutritional reality. Breakfast is described as chai and a bun. One or two meals a day. Midday school meals are available but variable. The energy these girls brought to assessments and workshops was not reliably fuelled.

### ***"Sometimes we come having eaten paratha and tea."***

#### ***Girl participant, FGD, Barabanki***

- The aspiration gap. Future aspirations pointing overwhelmingly toward police / IPS and teaching. Limited exposure to alternatives produces limited imagination of what is possible. The aspiration gap is as real as the movement gap.

### ***"They dream of becoming IPS/IAS officers, doctors, or teachers.", FGD theme, Mohanlalganj***

- Paucity of PE teachers. The absence of dedicated physical education teachers in most schools, combined with the administrative burden on class teachers, election duty, census work, DISE data entry, and midday meal accounting, means there is currently no one in the school system whose job it is to teach girls to move. This is not a training gap. It is a role gap.

### ***"No one is there to teach football.", Girl participant, FGD, Nawabganj***

- Safety beyond school. Girls described barriers to playing near their homes beyond social norms; dogs, traffic, and lack of open space were cited as physical safety concerns that force girls to seek supervised school settings as their only viable movement space.
- Meena Manch as primary health source. The UNICEF Meena Manch program was consistently cited across sites as girls' main source of health information, reinforcing the recommendation to use this existing platform for pre-menarche menstrual health literacy rather than building parallel infrastructure.
- Accessibility as a design requirement. One visually impaired student participated through improvised tactile learning and kept up. Her presence was a reminder that accessibility is not a special case. It is a design requirement.

# Recommen- dations

# Recommendations

What this project's data demands, for physical activity, physical literacy, and the systems that can sustain both

This section draws on baseline data from 243 girls across eight schools, pre/post knowledge results from 190 workshop participants, field observations across three districts, and a global evidence review of school-based PA programs. The recommendations are organized in four tiers, from zero-cost actions a headmaster can take tomorrow to government system integration that makes everything permanent.

*These recommendations reference several government systems, Samagra Shiksha, DIET, BRC/CRC, Eeksha, Meena Manch, RKSK, and NEP 2020 / Khelo Bharat Niti 2025, that form the existing delivery infrastructure. A glossary explaining each is provided in the [Appendix](#).*

## 9.1 Why Physical Literacy, Not Just Physical Activity

Physical activity is what you do. Physical literacy is what makes you keep doing it.

A program that mandates extra PT periods without teaching movement skills or addressing menstrual myths produces short-term compliance and long-term dropout. A program that builds physical literacy, the skills, the knowledge, the confidence, and the supported environment creates the conditions for physical activity to become self-sustaining.

The goal is not activity for a term or a year. It is activity for life. Every recommendation that follows targets physical literacy as the mechanism and physical activity as the outcome.

## 9.2 What the Data Shows

The problem is not motivation: 87% of girls said they enjoy physical activity. The problem is everything else.

- Movement skills are not developing. Girls aged 13+ scored no better than girls aged 8–12 on any of the seven FMS assessed.
- Menstrual beliefs are forming before menarche. 77% of girls aged 8–12 already believe activity during periods is unsafe, before most have had a single period. Among menstruating girls, 43% say painful periods stop them being active.
- The nutrition picture constrains what is possible. 29% are underweight, 34% are stunted, and underweight girls operate on resting metabolic rates 100 kcal/day lower than healthy-weight peers.
- Confidence does not match competence. 84% said they could throw, but 57% of those scored at or below half marks. Conversely, 41% of self-described non-confident girls scored above 70% on FMS.

The response must address capability, opportunity, and motivation simultaneously. No single actor can do this alone. That is why no single actor is asked to.

### 9.3 What Global Evidence and Indian Policy Demand

Two decades of evaluated school-based programs converge on five lessons that apply directly to UP. Timetabled activity is the highest-leverage structural change; Finland proved it at a national scale, and it is now law<sup>31</sup>. Well-trained generalist teachers can deliver 82% of specialist PE outcomes; the SPARK trial showed this, which matters in a state where specialist PE teachers barely exist in government schools<sup>32</sup>. Training quality degrades sharply through verbal cascade, Action Schools! BC documented 52% quality loss, countered only by video-based materials and monthly mentoring<sup>33</sup>. Multi-component programs addressing skills, environment, and norms together consistently outperform single-strand approaches<sup>34</sup>. And nutrition and activity must be coupled; the KaziAfya trial showed that neither produces full benefits alone, which is critical when 34% of girls are stunted<sup>35</sup>. On the policy side, both NEP 2020 and Khelo Bharat Niti 2025 now name physical literacy and girls' inclusion as objectives<sup>36 37</sup>. The policy architecture exists. What is missing is the evidence-based program model that can translate it into school-level action. That is what these recommendations provide.

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<sup>31</sup> Haapala, H.L., Hirvensalo, M.H., Laine, K., Laakso, L., Hakonen, H., Kankaanpää, A., Lintunen, T., & Tammelin, T.H. (2017). Adolescents' physical activity at recess and actions to promote a physically active school day in four Finnish schools. *Health Education Research*, 32(5), 443–456.

<sup>32</sup> Sallis, J.F., McKenzie, T.L., Alcaraz, J.E., Kolody, B., Faucette, N., & Hovell, M.F. (1997). The effects of a 2-year physical education program (SPARK) on physical activity and fitness in elementary school students. *American Journal of Public Health*, 87(8), 1328–1334.

<sup>33</sup> Nettlefold, L., McKay, H.A., Warburton, D.E.R., McGuire, K.A., Bredin, S.S.D., & Naylor, P.J. (2021). The challenge of low physical activity during the school day: at recess, lunch and in physical education. *British Journal of Sports Medicine*, 45(10), 813–819.

<sup>34</sup> Luepker, R.V., Perry, C.L., McKinlay, S.M., et al. (1996). Outcomes of a field trial to improve children's dietary patterns and physical activity: the Child and Adolescent Trial for Cardiovascular Health (CATCH). *JAMA*, 275(10), 768–776.

<sup>35</sup> Müller, I., et al. (2019). Effect of a multidimensional physical activity intervention on body mass index, skinfolds and fitness in South African children: results from a cluster-randomised controlled trial. *International Journal of Environmental Research and Public Health*, 16(2), 232.

<sup>36</sup> National Education Policy 2020. Government of India, Ministry of Education.

<sup>37</sup> Ministry of Youth Affairs and Sports. (2025). *Khelo Bharat Niti 2025: National Sports Policy*. Government of India. National

### 9.4 The Recommendations: Four Tiers

Structured from simplest to most complex, starting where permission is cheapest and impact is fastest, then building toward the changes that make everything sustainable. Each tier is independently valuable. Each builds on the one before it.

#### Tier 1: Zero Cost, Single Decision, Immediate Impact

*Requires a headmaster's decision. No funding. No external support.*

Change	Evidence from this baseline	Action
Timetable a daily 30-minute movement slot	65% of girls sit 6+ hours with one recess break. Timetabled activity is the single highest-leverage structural change; if it is not protected, it does not happen reliably.	The headmaster allocates a 30-minute daily slot. Made a condition of programme participation.
Allow appropriate clothing during movement sessions	58% said school clothes are not comfortable for playing. The dupatta was independently cited in focus groups across two districts as a physical obstacle to running.	The headmaster permits salwar kameez, trackpants, or dupatta removal for the movement slot, not a uniform change, a 30-minute permission.
Designate Peer Activity Leaders (3–5 per class)	19% cited 'no girls to play with' as their primary barrier. Peer absence is a binding social constraint that individual motivation cannot overcome.	Peer-nominated girls in Classes 7–8 lead warm-ups and games. Norm-setters, not instructors. Oriented in a 1-day session by Activity Leaders with termly refreshers.

**The two minimum-cost, maximum-impact actions: timetable the slot and allow movement-appropriate clothing. Everything else builds on these two decisions.**

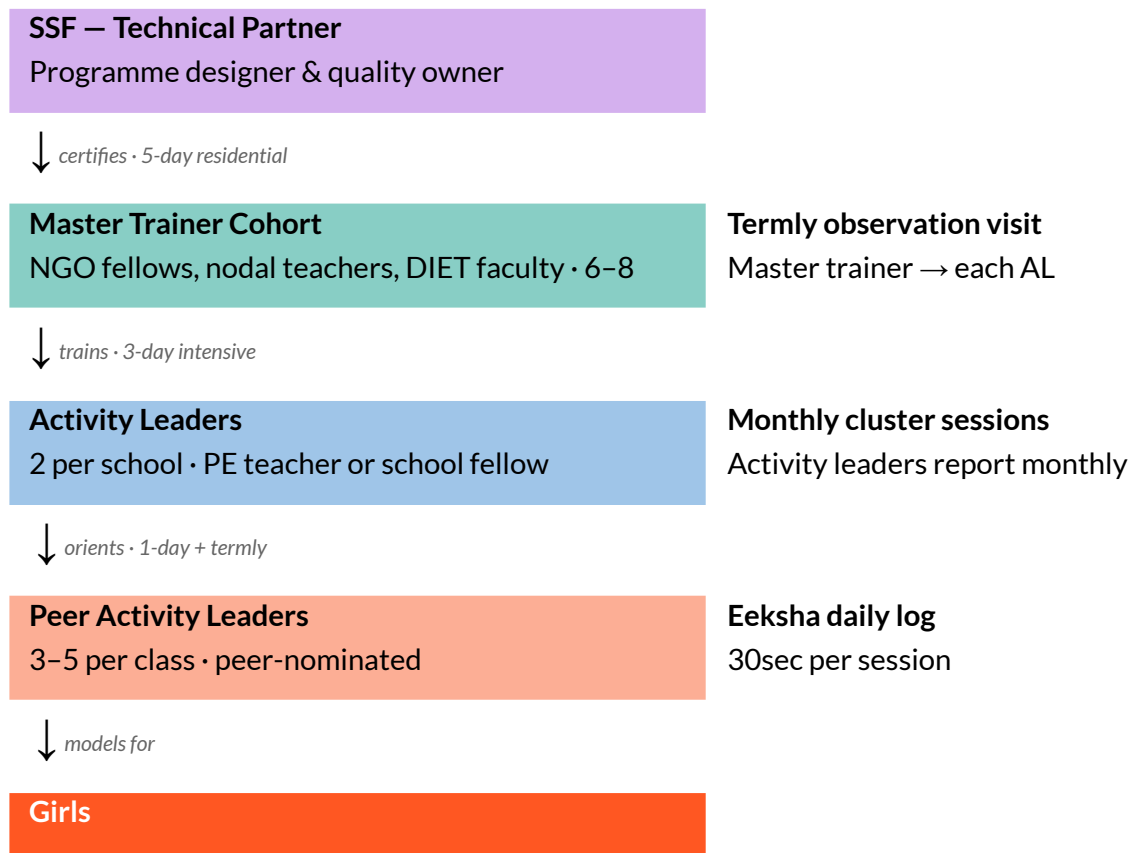
## Tier 2: Training, Materials, and Menstrual Health Literacy

*Requires: training investment, coordination with existing school structures. Cost: moderate, CSR-fundable.*

*Timeline: 6–18 months.*

### The training architecture

The structure below is not an administrative design; it is the quality-preservation mechanism. Training flows downward. Accountability flows upward through the same chain. The diagram shows it visually.



*Max 2 training levels between programme designer and school delivery · Action Schools! BC (Nettlefold et al., 2021) Quality sustained through regular assessment cycles, not training alone · Adapted from Pratham TaRL model*

▼ Training flows down · ▲ Accountability flows up · ✓ Quality checkpoint

Action Schools! BC documented 52% median quality loss per additional cascade level. The architecture here keeps it to two levels maximum: SSF certifies Master Trainers → Master Trainers train activity. Leaders → Activity Leaders work with girls. A third level is a third halving of quality.<sup>38</sup>

Pratham's TaRL model reinforces this: quality is preserved through regular short assessment cycles, not training alone. Monthly cluster sessions are data-driven check-ins. Activity leaders bring session observations, troubleshoot barriers, and are coached in turn.<sup>39</sup>

Role	Who is eligible	Training	Accountability
Master Trainers (6-8)	NGO school fellows; nodal teachers (post-activity leader); health/PA NGO staff; DIET faculty (PE or health). Criteria: regular school access, facilitation experience, institutional stability over 3 years.	5-day residential: FMS assessment, facilitation methodology, menstrual health literacy. Run by SSF.	Report to SSF. Conduct termly observation visits to each activity leader.
Activity Leaders (2 per school)	School PE teacher (where one exists), nodal teacher, or embedded civil society fellow.	3-day intensive: full FMS framework (throw, kick, jump prioritised), mixed-ability session planning, basic assessment.	Monthly cluster sessions with Master Trainers. Daily Eeksha log: single checkbox, 30 seconds.
Peer Activity Leaders (3-5 per class)	Peer-nominated girls in Classes 7-8.	1-day orientation by Activity Leader + termly refresher.	Weekly workbook check-in with Activity Leader.

***On teacher workload: the embedded school fellow carries the primary operational load, not the class teacher. Session logging is a single checkbox on Eeksha. Monthly group sessions count toward existing CPD requirements. Election duty and census absences are built into the programme calendar as expected interruptions, not failures.***

<sup>38</sup> Pratham (2001-ongoing). Teaching at the Right Level (TaRL). Pratham Education Foundation, India. Available at: [pratham.org/about/teaching-at-the-right-level/](http://pratham.org/about/teaching-at-the-right-level/)

<sup>39</sup> Nettlefold, L., McKay, H.A., Warburton, D.E.R., McGuire, K.A., Bredin, S.S.D., & Naylor, P.J. (2021). The challenge of low physical activity during the school day: at recess, lunch and in physical education. *British Journal of Sports Medicine*, 45(10), 813-819.

**Materials:**

Deliverable	What it does	Priority
Hindi FMS video library: full skill framework with scoring rubrics	A teacher in Kanpur Dehat applies the same criteria as a teacher in Lucknow. Video standardisation is the primary countermeasure against quality degradation at scale. Eliminates the quality loss documented through verbal cascade. <sup>40</sup>	Phase 1   2026
Meri Udaan Meri Pehchaan—Version 2	Version 1 was well received by girls and served as an effective take-home resource. Version 2 should be shaped by structured feedback from Version 1 users—which sections they used, skipped, or wanted more of. Expand comics, personalized trackers, and audio companions. The workbook is the primary program vehicle between school visits.	Phase 2   2026–2027
Pre-menarche menstrual health module	77% of girls aged 8–12 already believe activity during periods is unsafe – before most have menstruated. One structured session per term in Classes 5–6 via Meena Manch (35,000+ peer groups in UP). Master trainers orient facilitators; activity leaders address movement. First Phase 1 deliverable from SSF, ahead of full Activity Leader training. <sup>41</sup>	Phase 1   2026  Most time-sensitive

<sup>40</sup> Action Schools! BC documented 52% median quality loss via verbal cascade training. Video-based materials are the primary countermeasure (Nettlefold et al., 2021). Ministry

<sup>41</sup> Finnish Schools on the Move: timetabled slots + school ownership drove PA compliance from 18% to 29% of girls; now statutory in Finland (Haapala et al., 2017).

### Tier 3: Nutrition Coupling and Health System Linkage

Requires: BIA unit per field team; RKSK district engagement; midday meal coordination.

Timeline: 12–24 months.

Action	What the data shows	Practical position
Embed BIA screening in programme school visits	29% underweight, 34% stunted. Underweight girls run on 841 kcal/day RMR, 100 kcal below peers. Increasing activity demand without addressing this; it is a health risk, not a design gap.	RKSK covers adolescents aged 10 to 19 but operates through facility-based clinics, not schools. The only existing school touchpoint is WIFS (Weekly Iron and Folic Acid Supplementation), a universal weekly tablet delivered by teachers and ANMs provide WIFS supplements; they do not screen. The policy exists. The person responsible for acting on it at the school level does not. Body composition screening through a BIA device, therefore, sits within the program's termly Master Trainer school observation visits, conducted by Master Trainers who are trained on BIA assessment protocols as part of their 5 -day residential certification. During these visits, they operate the device, record outputs, and flag girls who fall below a threshold agreed upon in advance with the district RKSK Medical Officer. They flag; they do not interpret. Flagged girls are referred to the school's RKSK counselor, who initiates support through the POSHAN 2.0 framework. This program fills the gap and gives RKSK counselors school-level data they currently have no way to generate.
Engage the school midday meal scheme	Nutrition knowledge scored 81% at baseline; knowledge is not the constraint. Access is. Girls described breakfast as chai and a bun.	Ensure minimum protein and iron thresholds in participating schools' meals. Coordination with an existing program / Block Education Officer, not a new one.
Parent micro-modules (nutrition and physical literacy)	Parents shape beliefs and morning routines.	Home nutrition and beliefs shape outcomes as much as the school program. Brief modules at parent-teacher meetings by Activity Leaders. Three asks: pack an iron-rich breakfast, encourage movement, and know that activity during periods is safe. No new structure needed.

## Tier 4: Policy Alignment and Government System Integration

Requires Engagement with Samagra Shiksha, DIET, and MYAS. Cost: primarily institutional time.

Timeline: 18–48 months.

Tiers 1–3 build a program that works. Tier 4 ensures it continues when any single funder steps back. Six government delivery systems already present in UP schools can absorb physical literacy without building parallel infrastructure.

System	What it already does	How it connects
Samagra Shiksha	Sports equipment grants Rs.5K–25K/school/yr. School sports committees.	Equipment funding, timetabling mandate, BRC/CRC monitoring.
DIET	District pre-service and in-service teacher training.	Long-term integration point for PL in teacher preparation. DIET observers should attend all Phase 2 trainings; government systems adopt what they helped build.
BRC/CRC	Field-level monitoring; regular school visits.	Add an Active School check to an existing visit; no new structure is needed.
Meena Manch	35,000+ peer-education groups in UP; cultural trust built over 30 years.	Pre-menarche menstrual health literacy, structured session plan only.
RKSK	Adolescent health programme; counsellors in schools. Facility-based; does not currently conduct school-level nutritional screening for adolescent girls. <sup>42</sup>	Referral pathway for girls identified through program-led BIA screening.
Eksha	Digital school monitoring app; daily teacher session logging.	PA session: single checkbox, 30 seconds/day; accountability floor.

<sup>42</sup> MUAC is unreliable for this demographic (75% flagged but 87% healthy body fat by BIA). KaziAfya trial showed PA + supplementation produces benefits neither achieves alone.

## 9.5 Scale-Up Roadmap

The critical transition is Phase 2 → Phase 3: the shift from NGO-facilitated to government-managed. DIET engagement, Eeksha integration, and district-level training calendar inclusion must start during Phase 2, not after it. Government systems adopt what they helped build.

Phase	Timeline	What happens	Success criteria
Phase 1	2026	Publish findings. Evidence brief to Samagra Shiksha UP and MYAS. Certify Master Trainer cohort. Produce an FMS video library. Develop a standalone pre-menarche module. Begin DIET engagement.	DEO briefed. 6–8 Master Trainers certified. MOU signed between SSF and school-based delivery partner. Pre-menarche module developed.
Phase 2	2026–2027	Expand to 30 schools across 3 districts. Train 60 Activity Leaders. Meena Manch pre-menarche orientation. BIA screening embedded; RSKK referral pathway established. 6-month PA follow-up. DIET observers at all training events.	PA sustained at the 6-month follow-up. 60 Activity Leaders certified. Pre-menarche component in all Class 5–6 cohorts. RSKK referral pathway confirmed.
Phase 3	2027–2028	500+ schools across 2–3 full districts. DIET incorporates PL in annual calendar. Eeksha Active School checkbox operational. School Fitness Index piloted. 2-year impact report.	The government training calendar includes PL. FMS trajectory shows cohort improvement. Eeksha data operational.
Phase 4	2028–2030	State government adoption. DIET trains all new teachers in PL as part of induction. SFI integrated with Khelo Bharat Niti monitoring. SSF transitions to quality assurance role.	Programme self-sustaining without any single NGO. PL assessment standardised. Model cited in state or national policy.

The shift from Phase 2 to Phase 3 is where most programmes quietly fail, not because the model stops working, but because the funding stops and nothing has been built to replace it.

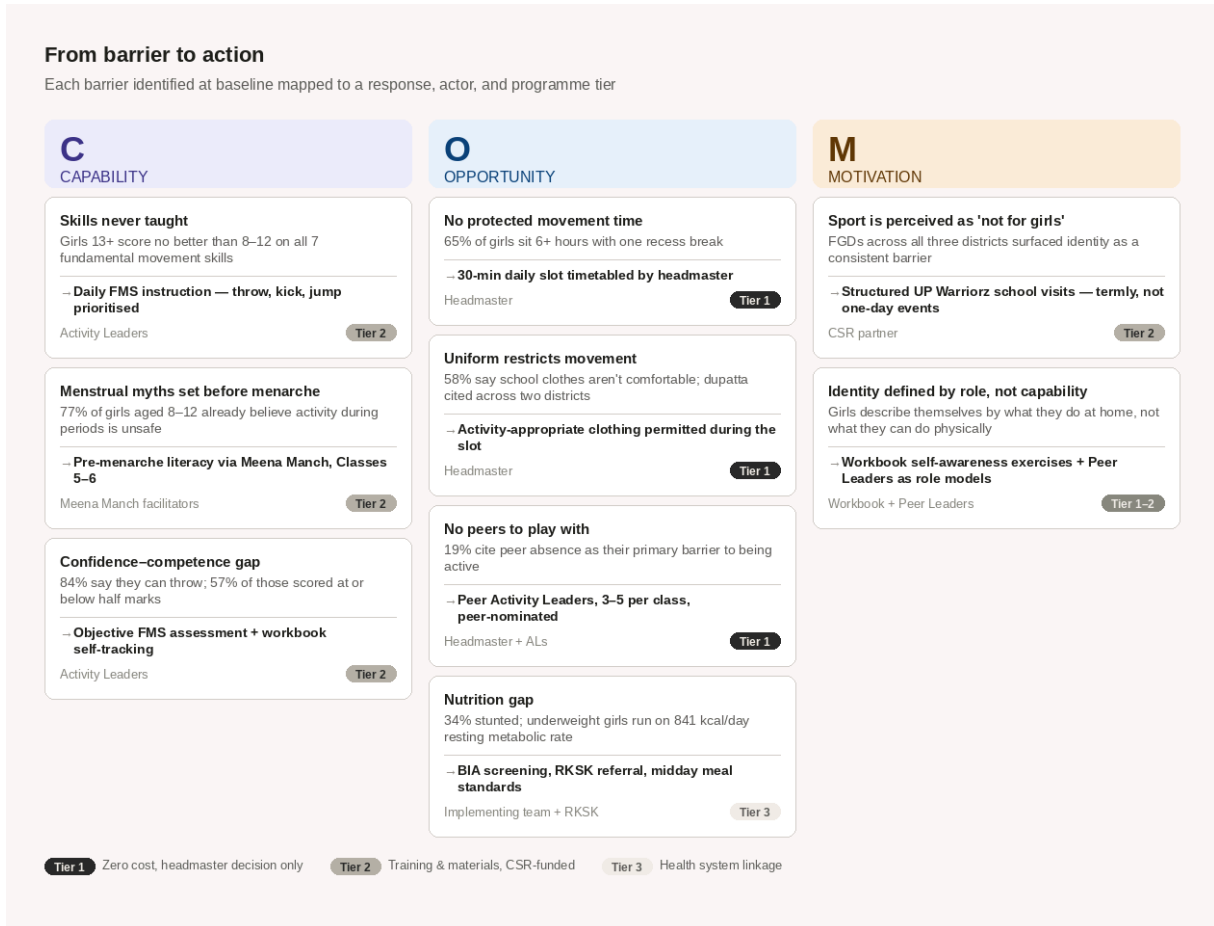
The design here is deliberate:

- Master Trainer certification is a one-time CSR investment; once made, the capacity lives inside the district system permanently.
- The DIET annual training calendar, Eeksha session logging, and BRC/CRC monitoring are all recurrent government functions that the programme slots into, not parallel infrastructure it has to maintain.
- UP Warriorz school visits are the one ongoing CSR commitment the programme cannot replicate through government channels. Everything else should be government by Phase 3.

The test is simple: when Capri Sports steps back, does the programme continue? If yes — the investment built capacity. If no — it built dependency.

## 9.6 Barrier to Action Summary

The barriers these girls face are not random, they cluster clearly across capability, opportunity, and motivation. No single intervention addresses all three, which is why no single actor is asked to. The table below maps each barrier identified at baseline to the response, the actor, and the tier at which it sits.



# Appendix

## Appendix A

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The following definitions establish a shared vocabulary for this report. Each term is used consistently throughout.

- **Physical Activity (PA):** Any bodily movement produced by skeletal muscles that results in energy expenditure. Includes sport, play, active travel, household tasks, and structured exercise. The WHO recommends children and adolescents aged 5–17 accumulate at least 60 minutes of moderate-to-vigorous PA per day (Bull et al., 2020).
- **Physical Literacy (PL):** The motivation, confidence, physical competence, knowledge, and understanding to value and take responsibility for engagement in physical activities for life (Whitehead, 2010; IPLA, 2017). Physical literacy is not a fixed trait, it is developed through experience and can be cultivated through quality education and programming (Rudd et al., 2020).
- **Fundamental Movement Skills (FMS):** The foundational motor skills that underpin participation in all physical activity and sport: locomotor skills (running, jumping, and hopping); object-control skills (throwing, catching, kicking), and stability skills (balancing, twisting, rolling). FMS must be taught and practised; they do not emerge automatically through growth (Stodden et al., 2008).
- **Proficiency Barrier:** The threshold of FMS competence below which a child lacks the prerequisite abilities to participate successfully or enjoyably in sport and recreational PA. Children below this threshold tend to disengage in a self-reinforcing negative spiral (Stodden et al., 2008; Barnett et al., 2009).
- **MVPA:** Moderate-to-Vigorous Physical Activity. Activity at an intensity that noticeably increases heart rate and breathing. The WHO’s 60-minute daily guideline for children refers specifically to MVPA.
- **COM-B Model:** A behavior change framework: Behavior (B) occurs when Capability (C), Opportunity (O), and Motivation (M) are all sufficiently present. Used throughout this report to diagnose barriers and target interventions (Michie, van Stralen & West, 2011).
- **Menstrual Hygiene Management (MHM):** The practice by which women and girls use clean menstrual materials, have access to sanitation, and are free from stigma to manage menstruation with dignity. Poor MHM is associated with school absenteeism and PA avoidance (Van Eijk et al., 2016; Harvey et al., 2025).
- **LTAD Model:** Long-Term Athlete Development: a staged framework mapping age-appropriate physical literacy and sport skill development across the lifespan. PL foundations are built in early stages (Active Start, FUNdamentals) before sport specialization (Balyi, Way & Higgs, 2013).

- **SAPA / SoSAPA Report:** State of Sports and Physical Activity in India—the first national baseline study of its kind in India, developed by the Sports and Society Accelerator (SSA) and Dalberg Advisors and launched in September 2024. SAPA is also the report's own term for its subject matter, Sports and Physical Activity, used to describe the full spectrum from structured sport to everyday movement. .
- **BIA:** Bioelectrical Impedance Analysis. A body composition measurement method that passes a low-level electrical current through the body to estimate fat mass, lean mass, and hydration. Used in this project via Omron Karada Scan HBF-375.
- **MUAC:** Mid-Upper Arm Circumference. A field-based nutritional screening measure. Designed for acute malnutrition in young children. This project found it unreliable for adolescents, tracking subcutaneous fat rather than lean mass.
- **Stunting:** Height-for-age below -2 standard deviations of the WHO Growth Reference (de Onis et al., 2007). Reflects cumulative nutritional deprivation from early childhood, not acute undernutrition.

## Appendix B

The recommendations in Section 12 reference several government institutions, platforms, and tools central to how schools in Uttar Pradesh function. Understanding what these structures are and what they already do is essential context, because the recommendations are designed to work through these systems, not around them.

Name	What it is	How it connects to this project
Samagra Shiksha	Integrated school education program (GoI). Annual sports grant ₹5,000–25,000 per school. School Sports Committees.	Funds equipment; mandates PT timetabling, monitoring via BRC/CRC visits, and the Eeksha app.
DIET	District Institute of Education and Training. Trains teachers pre-service and in-service. Every UP district has one.	Long-term integration point for physical literacy in teacher preparation curricula.
BRC / CRC	Block Resource Centre / Cluster Resource Centre. Government supervisory structures conducting regular school visits.	The existing visit structure can include active school monitoring without creating a new system.
Eeksha App	Digital monitoring platform operational in ~1.6 lakh UP government schools. Teachers log attendance and lesson delivery.	Add PA session as one checkbox in the existing daily log. Must take <30 seconds.
Meena Manch	UNICEF girls' group program. 35,000+ active groups in UP schools. Cultural legitimacy built over 30 years. Anjali's character in this project's workbook is inspired by Meena.	Recommended for pre-menarche menstrual health literacy only. Not for PA delivery Facilitators lack movement training, and sessions happen in classrooms.
RKSK	Rashtriya Kishor Swasthya Karyakram. National adolescent health program under the Ministry of Health and Family Welfare. It covers adolescents aged 10 to 19 across six thematic areas, including nutrition, reproductive health, and mental health. Operates primarily through facility-based Adolescent Friendly Health Clinics (AFHCs) at district hospitals, CHCs, and PHCs. School-level reach in UP government schools is limited in practice—the most consistent touchpoint is WIFS delivery through teachers and ANMs.	Identified in this project as the appropriate referral and supplementation pathway for undernourished girls. From Phase 2, the program will engage district RKSK medical officers to establish a referral protocol, enabling girls flagged through body composition screening to access POSHAN 2.0 support.
WIFS	Weekly Iron and Folic Acid Supplementation. A universal school-based program delivering weekly iron and folic acid tablets to	Already operating in most UP government schools. Provides a baseline nutrition floor but does not identify or respond to

Name	What it is	How it connects to this project
	adolescent girls in government schools. Delivered by teachers and ANMs. Not triggered by screening—every girl receives the tablet regardless of nutritional status.	individual undernutrition. The body composition screening in this program does what WIFS cannot—it finds the girls who need more than a weekly tablet and routes them toward targeted support.
POSHAN 2.0	Poshan Abhiyaan 2.0. India's convergent nutrition mission launched in 2021 under the Ministry of Women and Child Development. Brings together supplementary nutrition, anemia management, growth monitoring, and behavior change communication under one framework. Implemented through ICDS at the district level with the District Programme Officer as the nodal officer and Anganwadi Workers as primary frontline agents. For adolescent girls, RKSK counselors are the intended referral bridge. Unlike WIFS, support is needs-based and activated by a referral, not delivered universally.	The targeted response pathway for girls flagged through program-led body composition screening. Once a Master Trainer flags a girl below the agreed threshold, the referral goes to the school's RKSK counselor, who initiates POSHAN 2.0 support. This program generates the school-level trigger that activates a mandate RKSK already holds.
NEP 2020	National Education Policy 2020. States' sports and PE should be taught with the same rigor as academic subjects.	Policy basis for mandatory daily PT slot and physical literacy as a school outcome.
Khelo Bharat Niti 2025	National sports policy. Includes safe/inclusive spaces for girls, School Fitness Index, and physical literacy as a national objective.	Policy mandate for district-level advocacy. The School Fitness Index creates demand for PL assessment tools.

## Appendix C

Detailed analysis of body composition, stunting prevalence, and the MUAC-FMS relationship. Main findings are summarised in Section 5.6 of the report.

### C.1 Sub-Sample Description

During the February 2026 workshop field visits, approximately 14–15 girls from each of the 8 school sites were assessed using an Omron Karada Scan Body Composition Monitor (HBF-375), which measures body fat percentage, skeletal muscle mass, subcutaneous fat distribution, visceral fat, and resting metabolic rate through bioelectrical impedance analysis.

The sub-sample comprised 118 girls with valid data, with a mean age of 12.9 years. The sub-sample was drawn from all three districts (Lucknow, Barabanki, and Kanpur Dehat) and all 8 participating schools. Selection was based on availability and consent during the workshop sessions rather than random sampling.

### C.2 BIA Summary Statistics

Measure	Value	Note
Mean body fat %	21.3%	SD = 3.4
Mean skeletal muscle mass %	27.5%	SD = 2.1
Mean subcutaneous fat %	17.8%	SD = 3.8
Mean visceral fat level	0.0	Negligible
Mean resting metabolic rate	924 kcal/day	SD = 88
Body fat in healthy range (15–25%)	87%	n = 103

87% of girls had body fat levels within the healthy range for adolescent females (15–25%). Mean skeletal muscle mass was 27.5% and visceral fat was negligible, both healthy and expected for this age group. These figures contrast sharply with the anthropometric picture: by CDC BMI cutoffs, 23% of the same sub-sample is classified as underweight.

***The gap between “23% underweight by BMI” and “87% healthy body fat by BIA” reflects a population of small-framed girls, largely due to stunting, rather than acutely malnourished girls.***

### C.3 Stunting Prevalence by Age

When heights were compared against the WHO Growth Reference for School-Aged Children and Adolescents (de Onis et al., 2007), a significant pattern of linear growth faltering emerged. Across every age group from 11 to 15, mean height fell 8–13 cm below the WHO median.

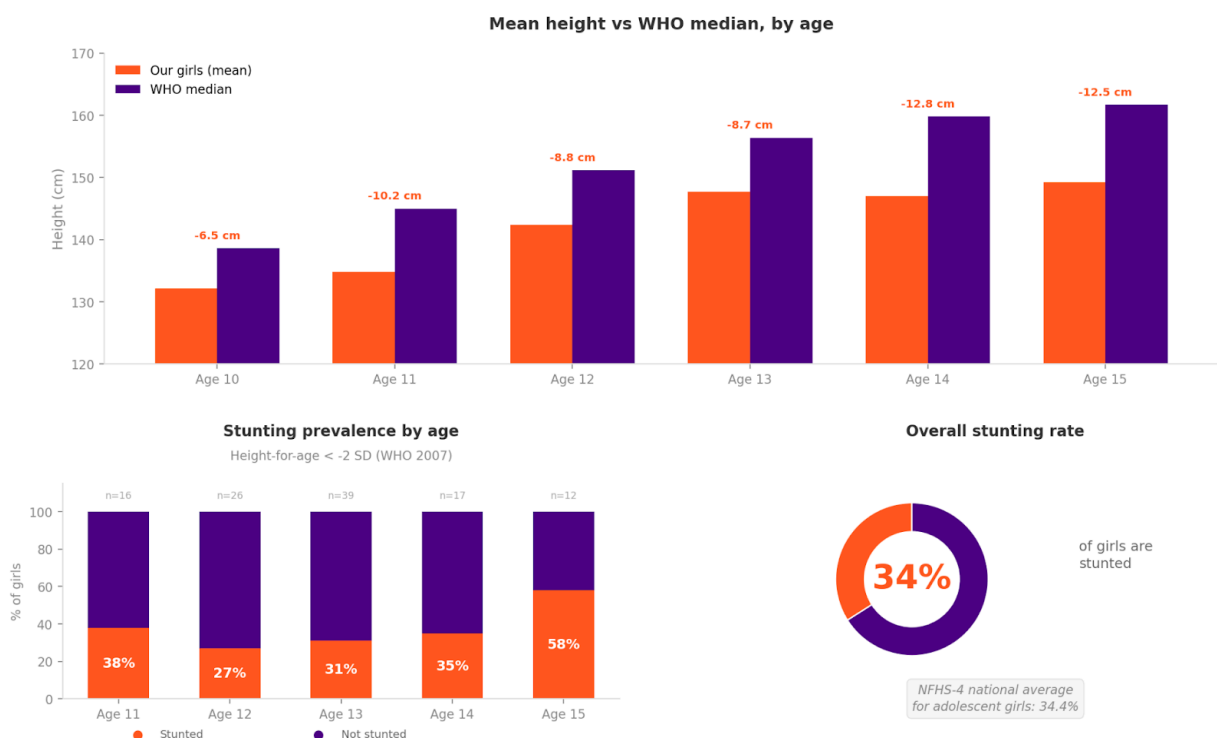
Age	Our girls mean height	WHO median(50th %ile)	Gap	WHO -2 SD (stunting)
11	134.8 cm	145.0 cm	-10.2 cm	133.0 cm
12	141.3 cm	151.2 cm	-9.9 cm	139.0 cm
13	147.3 cm	156.4 cm	-9.1 cm	144.4 cm
14	150.5 cm	159.8 cm	-9.3 cm	148.0 cm
15	152.8 cm	161.7 cm	-8.9 cm	150.0 cm

Using the standard definition of stunting (height-for-age below -2 SD of the WHO reference), 34% of the sub-sample was classified as stunted. This is consistent with national-level data: a reanalysis of NFHS-4 using the WHO 2007 Growth Reference found stunting prevalence of 34.4% among Indian adolescent girls aged 15–19 (Srihari et al., 2020).

**The girls in this project are not outliers. They reflect a widespread pattern of chronic undernutrition affecting roughly one in three adolescent girls in India.**

#### BIA deep-dive: 1 in 3 girls shows evidence of stunted growth

BIA sub-sample (n=118) · Heights compared to WHO Growth Reference for Girls 5–19 (de Onis et al., 2007)



## C.4 Underweight vs Healthy-Weight Body Composition

Comparing the 27 underweight girls (by CDC BMI) to the 86 healthy-weight girls in the BIA sub-sample reveals a nuanced nutritional picture:

Metric	Underweight (n=27)	Healthy Weight (n=86)
Mean weight	30.7 kg	37.6 kg
Body fat %	17.9%	21.9%
Skeletal muscle mass (relative)	28.4%	27.3%
Skeletal muscle mass (absolute)	8.8 kg	10.3 kg
Subcutaneous fat	14.8%	19.3%
Visceral fat level	0.0	0.0
Resting metabolic rate	841 kcal/day	946 kcal/day

- **Key insight 1:** Underweight girls have higher relative muscle percentage (28.4% vs 27.3%) but lower absolute muscle mass (8.8 vs 10.3 kg). They are proportionally more muscular but have less total tissue, consistent with stunting rather than wasting.
- **Key insight 2:** Underweight girls have significantly lower resting metabolic rates (841 vs 946 kcal/day), meaning they operate on a narrower energy margin. This is a 100 kcal/day difference, the equivalent of one roti or one banana. Any programme increasing physical activity demand must account for this.
- **Key insight 3:** Visceral fat was negligible in both groups (0.0). This is expected for adolescent girls and confirms that the health risk in this population is chronic undernutrition, not metabolic overload.

## C.5 The MUAC-FMS Relationship Explained

The baseline anthropometry showed a counterintuitive finding: MUAC correlated negatively with FMS performance. Girls with higher MUAC, ostensibly better-nourished, scored lower on movement skills. The BIA data explains why.

Relationship	Correlation	Direction
BMI vs FMS total	$r = -0.06$	No relationship
BMI vs subcutaneous fat	$r = 0.96$	Near-perfect
MUAC vs FMS total	$r = -0.24^{***}$	Inverse
MUAC vs running	$r = -0.29^{***}$	Inverse
MUAC vs throwing	$r = -0.26^{***}$	Inverse

MUAC measures total arm circumference, fat and muscle combined. In a lean adolescent population where 87% have healthy body fat, a larger arm reflects more subcutaneous fat, not more muscle. BMI and subcutaneous fat were near-perfectly correlated ( $r = 0.96$ ), confirming that the compositional variation in this sample is almost entirely in fat distribution, not lean mass.

The inverse MUAC–FMS relationship therefore reflects the fact that girls with slightly more subcutaneous fat (still within healthy range) performed slightly worse on movement skills. This is consistent with recent research noting that mid-arm circumference in children may reflect fatness rather than muscular fitness (Behan et al., 2022).

***MUAC is unreliable as a nutritional screening tool for this demographic. It was designed for acute malnutrition in young children. In adolescent girls with high stunting prevalence and healthy body fat, it generates false positives at scale. Future screening must use BIA or equivalent body composition measures.***

## Appendix D

Below is a summary of the sample across various surveys at a district and school level.

### Baseline Assessment Sample

District	School	Baseline Assessment
<b>Lucknow</b> (4 schools, n=113)	Upper Primary School Hasanpur Khevli	50
	PM Shree Composite School, Paharnagar	39
	Upper Primary School Saraiyaa, Sarojini Nagar	18
	UPS 35 PAC	6
<b>Barabanki</b> (2 schools, n=80)	PM Shree Composite School Mainahar	43
	Composite UPS, Sandauli Umapur	37
<b>Kanpur Dehat</b> (2 schools, n=50)	Sanvilian UPS Alamchandrapur	25
	Composite UPS, Bhuganiyapur, Akbarpur	25
<b>TOTAL</b>	8 schools · 3 districts	243

### BIA Sub-Sample

District	School	Baseline Assessment
<b>Lucknow</b> (4 schools, n=60)	Upper Primary School Hasanpur Khevli	15
	PM Shree Composite School, Paharnagar	15
	Upper Primary School Saraiyaa, Sarojini Nagar	15
	UPS 35 PAC	15
<b>Barabanki</b> (2 schools, n=32)	PM Shree Composite School Mainahar	17
	Composite UPS, Sandauli Umapur	15

District	School	Baseline Assessment
<b>Kanpur Dehat</b> (2 schools, n=27)	Sanvilian UPS Alamchandrapur	13
	Composite UPS, Bhuganiyapur, Akbarpur	14
<b>TOTAL</b>	8 schools · 3 districts	119

### Workshop Attendance

District	School	Baseline Assessment
<b>Lucknow</b> (4 schools, n=155)	Upper Primary School Hasanpur Khevli	56
	PM Shree Composite School, Paharnagar	40
	Upper Primary School Saraiyaa, Sarojini Nagar	19
	UPS 35 PAC	40
<b>Barabanki</b> (2 schools, n=83)	PM Shree Composite School Mainahar	48
	Composite UPS, Sandauli Umapur	35
<b>Kanpur Dehat</b> (2 schools, n=68)	Sanvilian UPS Alamchandrapur	39
	Composite UPS, Bhuganiyapur, Akbarpur	29
<b>TOTAL</b>	8 schools · 3 districts	306

**Impact Assessment (Pre-Post Workshop Survey)**

District	School	Baseline Assessment
<b>Lucknow</b> (4 schools, n=96)	Upper Primary School Hasanpur Khevli	33
	PM Shree Composite School Paharnagar	19
	Upper Primary School Saraiyaa, Sarojini Nagar	17
	UPS 35 PAC	27
<b>Barabanki</b> (2 schools, n=45)	PM Shree Composite School Mainahar	26
	Composite UPS, Sandauli Umapur	19
<b>Kanpur Dehat</b> (2 schools, n=49)	Sanvilian UPS Alamchandrapur	26
	Composite UPS, Bhuganiyapur, Akbarpur	23
<b>TOTAL</b>	8 schools · 3 districts	190

## Appendix E

### 1. Key Informant Interview (KII) Guide

Overview: This qualitative tool captures teachers' insights on factors influencing girls' physical activity, including participation, school environment, and systemic barriers.

Dimensions	Key Questions / Indicators
Participation	<ul style="list-style-type: none"> <li>&gt; "How do girls participate in PT sessions and games compared to boys?"</li> <li>&gt; "Do motivation, interest, or confidence levels affect their participation?"</li> </ul>
Teacher Engagement	<ul style="list-style-type: none"> <li>&gt; "What role do teachers play during PT and sports sessions?" &gt; "Do teachers face challenges in being actively involved (e.g., workload, resources, training)?"</li> <li>&gt; "How do teachers encourage and motivate girls to participate?"</li> </ul>
Infrastructure & Safety	<ul style="list-style-type: none"> <li>&gt; "Are safe spaces, playgrounds, uniforms, and equipment sufficient for girls?"</li> <li>&gt; "Are changing rooms or private spaces available for girls, especially during menstruation?"</li> </ul>
Menstrual Health	<ul style="list-style-type: none"> <li>&gt; "How does the school support girls in participating in PT sessions or games during their periods?"</li> <li>&gt; "Are sanitary pads or other menstrual products available in school?"</li> <li>&gt; "How are issues like pain, fatigue, or fear of stains managed?"</li> </ul>
Nutrition & Health	<ul style="list-style-type: none"> <li>&gt; "Does nutrition and diet affect girls' activity levels and energy?"</li> <li>&gt; "Do health issues (e.g., knee/back pain, headaches, weight concerns) affect participation?"</li> </ul>
Social, Cultural & Family Factors	<ul style="list-style-type: none"> <li>&gt; "How do cultural or social norms, or family expectations, affect girls' participation in physical activity?"</li> <li>&gt; "Do families and peers provide encouragement for girls to be active?"</li> </ul>
Skills, Confidence & Enjoyment	<ul style="list-style-type: none"> <li>&gt; "In which activities do girls feel most confident?"</li> <li>&gt; "How do praise, discouragement, or peer support influence their motivation?"</li> </ul>
Suggestions	<ul style="list-style-type: none"> <li>&gt; "How can teachers better support girls to feel more active, comfortable, and safe?"</li> <li>&gt; "What improvements in infrastructure, training, awareness, or policy would help?"</li> </ul>

## 2. Physical Activity & Physical Literacy Baseline Questionnaire

Overview: This is a comprehensive dual-method tool that combines self-reported behavioral data with objective physical skill assessments. It establishes a baseline for both how much girls move and their actual motor competence (physical literacy).

Dimensions	Key Questions / Indicators
Behavioral Recall	<ul style="list-style-type: none"> <li>&gt; "In the last 7 days, how many days did you play or do physical activity at school?"</li> <li>&gt; "In the last 7 days, how many days were you active after school?"</li> <li>&gt; "On weekends, how much time were you active?"</li> </ul>
Confidence and Motivation	<ul style="list-style-type: none"> <li>&gt; "Do you feel confident doing physical activity?"</li> <li>&gt; "Do you enjoy being physically active?"</li> <li>&gt; "Do you feel you can learn new games or new ways of playing?"</li> </ul>
Knowledge and Awareness	<ul style="list-style-type: none"> <li>&gt; "Do you know how playing, running, and moving your body helps keep you healthy?"</li> <li>&gt; "Do you know that food, sleep, and activity affect your energy levels?"</li> <li>&gt; "Do you know that physical activity can improve your mood and help with studies?"</li> </ul>
Social & Environmental Support	<ul style="list-style-type: none"> <li>&gt; "Does your family support you to be active?"</li> <li>&gt; "Do you feel safe playing near your home?"</li> <li>&gt; "Does your school encourage girls to play?"</li> </ul>
Sedentary Habits	<ul style="list-style-type: none"> <li>&gt; "On a normal day, how many hours do you spend sitting (for class, study, TV, or mobile)?"</li> <li>&gt; "Do you remind yourself to get up and move after sitting for a long time?"</li> </ul>
Barriers & Body Image	<ul style="list-style-type: none"> <li>&gt; "Do you feel shy playing because of your body?"</li> <li>&gt; "Are your school clothes comfortable for playing?"</li> <li>&gt; "Is it safe for girls to play during periods (mahavari)?"</li> </ul>

Dimensions	Key Questions / Indicators
Menstrual Health Management (Lived Experience)	<ul style="list-style-type: none"> <li>&gt; "Do you ever have to take a holiday from school because of your periods?"</li> <li>&gt; "Do you ever have to skip PT (Physical Training) sessions because of your periods?"</li> <li>&gt; "Is there a private and safe space at your school to change during your periods?"</li> </ul>
Physical Skill (Observed)	<ul style="list-style-type: none"> <li>&gt; Balance: "Can the girl maintain balance for at least 5 seconds with minimal wobbling?"</li> <li>&gt; Running: "Does she land on her heel-toe or the ball of her foot rather than flat-footed?"</li> <li>&gt; Jumping: "Does she use a two-foot takeoff and land with a controlled knee bend?"</li> </ul>

### 3. Focus Group Discussion (FGD) Guide

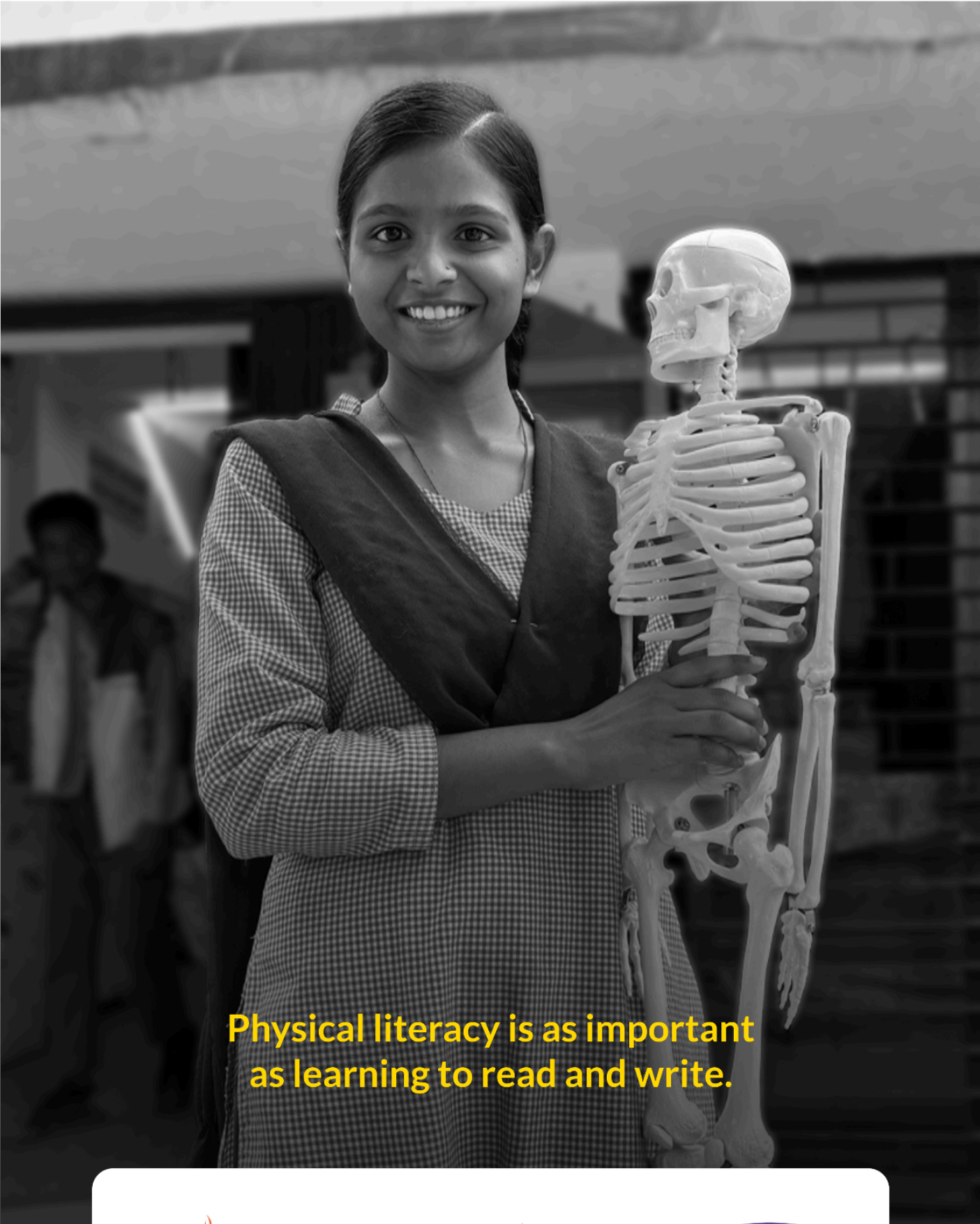
Overview: The FGD guide uses peer-group dynamics to surface lived experiences and social barriers that individual surveys might miss. It provides a platform for girls to discuss playground politics, safety, and their aspirations for freedom.

Dimensions	Key Questions / Indicators
Social Dynamics	<ul style="list-style-type: none"> <li>&gt; "In school games, who participates more—boys or girls? Why?"</li> <li>&gt; "Do boys dominate the playground? How does that make you feel?"</li> </ul>
Personal Agency & Confidence	<ul style="list-style-type: none"> <li>&gt; "In which activities do you feel most confident?"</li> <li>&gt; "Is there any activity you avoid? Why do you avoid it?"</li> <li>&gt; "What activities make you feel the most motivated?"</li> </ul>
Environmental Barriers	<ul style="list-style-type: none"> <li>&gt; "Are there specific places where you feel unsafe or uncomfortable playing?"</li> <li>&gt; "Does your school uniform or your shoes make it easy or hard for you to run and play?"</li> </ul>
Health & Menstrual Realities	<ul style="list-style-type: none"> <li>&gt; "Do periods, pain (like cramps), or the fear of stains stop you from playing?"</li> <li>&gt; "Do regular health issues like headaches or back pain frequently stop your activity?"</li> <li>&gt; "What kind of support (like pads or better facilities) do you actually need during these times?"</li> </ul>
Nutrition and Energy Perception	<ul style="list-style-type: none"> <li>&gt; "Do you feel you have enough energy to play after your school day?"</li> <li>&gt; "When do you feel most weak or tired during the day?"</li> <li>&gt; "What do you usually eat before school, and does it help you feel strong?"</li> </ul>
Future Aspirations	<ul style="list-style-type: none"> <li>&gt; "If you had full freedom and safety, what is one activity or sport you have always wanted to try?"</li> <li>&gt; "What is needed to make play easier for girls in your community?"</li> </ul>

#### 4. Pre/Post Knowledge Check Form

Overview: This form measures the shift in mindset and health literacy resulting from the Meri Udaan Meri Pehchaan workshop. It tracks how girls' understanding of strength, nutrition, and self-identity evolves after the intervention.

Dimensions	Key Questions / Indicators
Identity & Strength	<ul style="list-style-type: none"> <li>&gt; "Which is a real strength: (a) Always winning or (b) Trying again after a mistake?"</li> <li>&gt; "True or False: A person is made of many things: thinking, learning, trying, and feeling."</li> </ul>
Menstrual & Body Literacy	<ul style="list-style-type: none"> <li>&gt; "Is it safe to be physically active during menstruation?"</li> <li>&gt; "True or False: Physical activity helps improve our mood and makes us feel better."</li> </ul>
Health & Nutrition	<ul style="list-style-type: none"> <li>&gt; "Why is drinking water important: (a) Only to stop thirst or (b) To help digestion and keep the body cool during activity?"</li> <li>&gt; "What does it mean to eat 'well' for energy and health?"</li> </ul>
Safety & Injury Management	<ul style="list-style-type: none"> <li>&gt; "If there is swelling and pain while playing, what should you do?"</li> <li>&gt; "Should you stop and tell a trusted adult if you are hurt?"</li> </ul>
Goal Setting & Healthy Habits	<ul style="list-style-type: none"> <li>&gt; "Which is a better health goal: (a) Exercise 2 hours every day no matter what or (b) Try to move or play for 20-30 minutes most days?"</li> <li>&gt; "Is it better to exercise only when someone forces you, or to set your own goals?"</li> </ul>



Physical literacy is as important as learning to read and write.

