

Healthy Life Trajectories Initiative

Who are we?

The Developmental Pathways for Health Research Unit (DPHRU) is a research centre at Chris Hani Baragwanath Academic Hospital in Soweto. We are linked to the South African Medical Research Council and the University of the Witwatersrand. Researchers at DPHRU work on a range of projects with various age groups of people in Soweto, from babies and toddlers, to children, adolescents, young adults, and older adults. Our research looks at a range of topics, including physical and mental health, development, and understanding the Soweto environment.

What is the Healthy Life Trajectories Initiative?

The Healthy Life Trajectories Initiative (HeLTI) is an international project that has been developed with the World Health Organization. It is being conducted in South Africa, Canada, India, and China. The overall purpose of HeLTI is to do research with young women – and if they become pregnant, their child as well – through different stages of life: from before pregnancy, through pregnancy, infancy, and early childhood up to the age of 5 years. The time before pregnancy is called ‘preconception’ (pre = before; conception = start of pregnancy), and research shows that being healthy *before* pregnancy is extremely important for women to have a healthy pregnancy and birth, and for her baby to be healthy. Supporting women and young children from these very stages, including during the critical period of the

‘first 1000 days’ (pregnancy and the first 2 years of life), helps to give all children their best start in life. The HeLTI ‘journey’ is shown in the flow chart below.

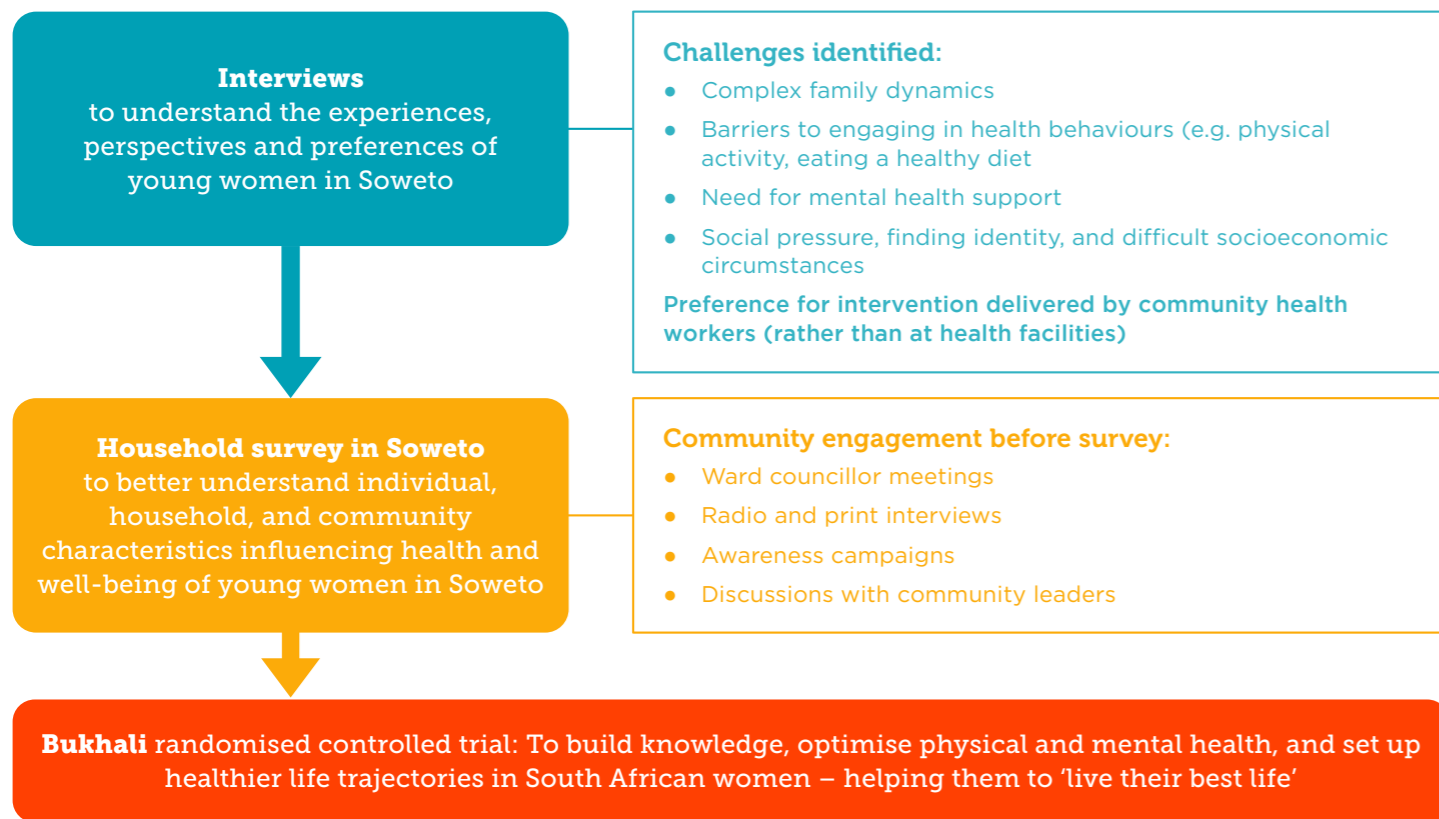
What are we doing?

Young women’s experiences, perspectives and preferences

At the start of HeLTI, a number of interviews (individual and focus groups) were conducted with young women from Soweto. The purpose of these interviews was to understand these young women’s experiences and perspectives relating to their health and family dynamics, as well as their preferences for an intervention to promote their health and well-being.

Household survey in Soweto

The next phase of HeLTI involved a large survey (similar to the census) with just over 6000 households in Soweto, across different communities in 2019. The survey was conducted by HeLTI fieldworkers with an adult from each household, and our key findings are highlighted in the infographic below. There were variations in the findings between the communities, showing that Soweto is diverse and should not be described as one, homogenous population. These findings highlight the importance of understanding the environment in which health behaviour research is conducted, as environmental factors can often influence behaviour more than individual factors.



- Research assessments:**
- Baseline
 - 18 months (exit if not pregnant)
 - Pregnancy
 - Delivery
 - 6, 12, 24, 60 months

- Findings so far:**
- Many women are socially vulnerable and face risks to their mental health
 - Vulnerability increased with number of children and food insecurity
 - Almost a third used tobacco
 - Less than half engaged in physical activity in their free time
 - A third reported poor sleep quality

Process evaluation

Bukhali intervention

- **Bukhali** (preconception): physical and mental health
- **Bukhali Baby** (pregnancy): health topics in relation to pregnancy, pregnancy milestones, importance of breastfeeding
- **Bukhali Nana** (birth-2 years): links to Road to Health book pillars – nutrition; love, play and talk; protection; health care; special care
- **Bukhali Mntwana** (2-5 years): early childhood development, growth, health behaviours, maternal well-being

- What did we learn from the household survey?**
- Households had 4 occupants on average, but household density ranged from <1 person per room to 15 per room (for sleeping).
 - 48% shared a toilet with other households, but 98% had access to piped water in their home or yard.
 - 57% had completed high school or further education.
 - 82% felt safe during the day, but 57% felt unsafe at night.
 - Food insecurity was experienced in 24% of households.
 - Screen time varied between 3 hours on weekends, and 4 hours on week days.
 - Younger individuals, and women were likely to report higher screen time.
 - 58% drank 1-3 sugar-sweetened beverages per day.
 - Individuals from food insecure households, and households with higher socioeconomic status were more likely to report consuming more sugar-sweetened beverages.

The Bukhali trial

Building on the household survey, young women (18-28 years) were recruited to participate in the HeLTI *Bukhali* randomised controlled trial. A randomised controlled trial is a type of study that tests to see whether a new intervention can change specified outcomes.

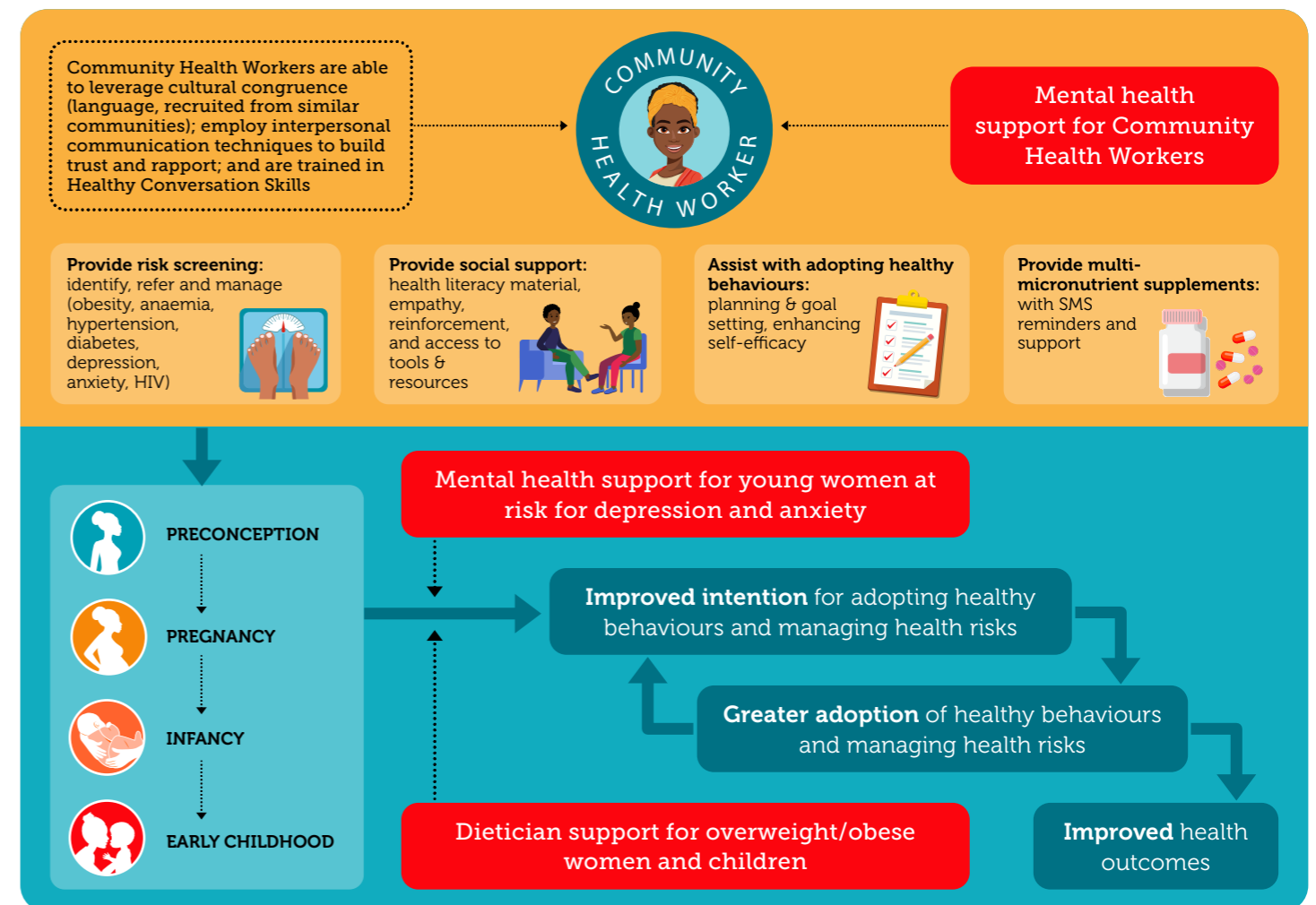
Research assessments

The pilot phase of the *Bukhali* trial began in 2019, and involved just over 1700 young women. Extensive testing was conducted with these young women when they first joined the pilot trial ('baseline'), including assessment of health measures, as well as questionnaires asking about their life circumstances, health behaviours, and mental health. Our findings have helped us to understand the circumstances and health status of young women in Soweto, and to

highlight priority areas for intervention. Between 2020 and 2022, approximately 6000 young women were recruited for the main *Bukhali* trial. Based on statistics, we expect that approximately 1500 of these women will become pregnant, and continue in the trial until their child is 5 years old. The same assessments have been conducted with these women, and we are in the process of analysing these findings.

The Bukhali intervention

The *Bukhali* trial is testing an intervention delivered by community health workers (model shown below), starting from preconception, to see if obesity risk in young children (5 years) can be reduced, through intervening with young women. As shown in the diagram below, the *Bukhali* intervention is divided into 4 phases: preconception, pregnancy, infancy, and early childhood.



Understanding the 'preconception health gap'

'Preconception' is a new term for many people; it refers to the time before pregnancy. Once the trial started, it became evident that many young women in Soweto did not understand what 'preconception' health means (health status before becoming

pregnant), and that for many of them, issues such as poverty and unemployment were much more pressing challenges. And mental health again emerged as more of a priority than physical health for these young women. Based on these insights,

Phila Impilo Yakho Kangcono ('Live your best life') radio serial was designed as media support for the *Bukhali* trial. This weekly radio serial targeted young people and aimed to promote well-being and health. It was aired in isiZulu and English on a Sunday youth show on Ukhozi FM and Jozi FM in 2021. A Facebook page was also created and referred to in the radio episodes.

Intervention process evaluation

As part of the *Bukhali* trial, we are also interested in evaluating how the intervention is being implemented, what is called 'process evaluation'. To do this, we conduct interviews (individual and focus groups) with trial participants as well as with the community health workers delivering the intervention. We are interested in how well the intervention is being delivered as it is intended, how many intervention sessions and resources that participants are receiving, and the changes we have made to the intervention along the way to make sure it works in the Soweto context.

The process evaluation also helps us to better to understand the context of the intervention; this refers to participants' family, community, and social environment, as well as their socioeconomic circumstances. Of particular interest are the life circumstances and lived experiences of the young women participating in the trial, and how this might influence their experience of the trial, their understanding of health and health behaviours, and the extent to which they are able to make changes to their health behaviours and health.

Contextual factors that have been identified thus far include logistical challenges of participating in the trial (e.g. not having a functional cell phone), exposure to past trauma, community influences on perceptions and beliefs (e.g. views about obesity), social support and the role of families and partners

influencing their decision making. More recently, we have conducted interviews with the fathers of the baby, to understand their perceptions of fatherhood and research involvement. Ultimately, we hope to understand how these various factors influence how the intervention is received, implemented, and whether it is effective at changing the outcomes we hope to see change.

What we have done with this information?

Our research findings so far have helped to inform other projects with young women to promote physical and mental health, and have provided insight into conducting research in the context of Soweto. Our learnings have been fed back into the *Bukhali* trial, so that we can work on having a greater impact in the lives of those involved in the trial.

We have shared our findings and learnings to date with national government stakeholders in the project (e.g. Department of Health), as well as with the World Health Organization and UNICEF.

What are our plans going forward?

We are continuing to roll out the *Bukhali* intervention, and evaluating its implementation. The analysis and publication of results from the trial will be ongoing. Given the size of the project, HeLTI is a unique base from which to build other areas of research, and there are a number of other studies that are being conducted in conjunction with the *Bukhali* trial. This ranges from genetics of mental health risk, to using new methods during ultrasound scans, and ethnographic work to capture the lived experiences of young women in the trial.

Getting in touch

If you have any ideas for further engagement or involvement, or if you would like a copy of any of the articles we have published on HeLTI, please contact Associate Professor Catherine Draper:

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