THE MOMBASA YOUTH STUDY

REPORT OF FINDINGS: 2025

MEDECINS SANS FRONTIERES
MADAKTARI WASIO NA MIPAKA

MOMBASA YOUTH STUDY

DEPARTMENT OF HEALTH SERVICES · MOMBASA COUNTY ·

Citation and acknowledgements

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Acronyms

aOR:	Adjusted odds ratio
CI:	Confidence interval
HIV:	Human Immunodeficiency Virus
IQR:	Interquartile range
KES:	Kenyan Shillings
WHO:	World Health Organization
OR:	Odds ratio
PrEP:	Pre-exposure prophylaxis
SD:	Standard deviation
STI:	Sexually transmitted infection

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Executive summary

Study background

Globally, adolescents and young people face numerous challenges to their health and well-being. In 2024, the *Mombasa County Adolescent and Young People Strategy on Health* was launched to support adolescents and young people across the county, with an overarching aim of improving their health. Since 2023, the *Mombasa Youth Study* has collected diverse sources of data with which to guide implementation of the strategy and evaluate its progress towards successful implementation.

Methods

The *Mombasa Youth Study* is a prospective longitudinal mixed methods study. The first component was a repeated community health survey, which collected anonymous data from adolescents and young people aged 10-24 years. The survey was conducted mid-2023 (n=1,405) and again in early-2025 (n=2,457). The second component was a qualitative cohort of 10 young people aged 18-24 years who participated in quarterly individual and group interviews on a range of topics related to holistic health and well-being. The third component was a repeated digital survey of attitudes among 534 healthcare workers at six public facilities in Mombasa, comprising five waves of data (n=1,155 data points). This report includes the first two years of data from 15 June 2023 to 14 June 2025, with a focus on changes over time.

Results

As of 2025, the majority of adolescents and young people in Mombasa reported their physical health as 'good' or 'excellent' (80.1%), while only one quarter reported 'good' access to healthcare (26.4%). Over time, barriers to care appear to have reduced among adolescents and young people with fewer saying they were unable to access necessary care (51.7% in 2023 to 44.2% in 2025).

At the same time, health insurance coverage under the new 'Social Health Insurance Fund' scheme increased from 22.3% to 28.9% among those aged 18-24 years, although still covering only a minority of young adults in Mombasa.

Regarding mental health, around half of adolescents and young people reported positive mental well-being in 2025 (52.3%), while 11.2% had indications of depression. Promisingly, 41.0% had ever received mental health support, with most engaging mental and other healthcare professionals. Over time, the mental health of adolescents and young people appears to have improved in Mombasa, with indications of depression decreased slightly from 15.3% in 2023 to 11.2% 2025. Social media and substance use were both negatively associated with the mental health of adolescents and young people.

Beyond these general indicators of population health, the *Mombasa County Adolescent and Young People Strategy on Health* outlines several specific objectives. Some analyses of the study results focused on tracking progress towards these objectives, namely:

Objective	Status	Summary
Improve HIV outcomes	No improvement	As of 2025, among adolescents and young people uptake of HIV testing (29.4% unknown status), pre-exposure prophylaxis (9.8% current use), and treatment (78.1% current use) remained below global targets. There were no changes from 2023-2025. As the global HIV funding landscape continues to change dramatically, the risk of regression for this metric is high.
Improve sexual & reproductive health outcomes	No improvement	Many adolescents and young people were sexually active as of 2025 (60.8%), but reproductive health outcomes remain sub-optimal with no changes over time. There were high rates of early pregnancy (53.1% in 2023, 52.6% in 2025), one quarter said their first pregnancy was unplanned (26.8% in 2025), and one in five had previously terminated (21.7% in 2025). Condom use remained low (22.4% 'always' used a condom for penetrative sex in 2023, and 25.3% in 2025). New forms of digital sexuality were very commonly reported in 2025 (16.3% reported sending and 41.3% receiving sexual content online).

Objective	Status	Summary
Improve mental health outcomes	Some improvement	Over time, positive mental well-being among adolescents and young people increased (40.5% in 2023 to 51.2% in 2025) while indications of depression decreased (15.3% to 11.2%). Many had received some form of mental health support (41.0% in 2025), including 11.4% from a mental health professional.
Improve menstrual hygiene	No improvement	One third of adolescent girls and young women struggle to access menstrual products (32.2% in 2025), with no improvements over time (37.0% in 2023). Access to menstrual products was strongly associated with socioeconomic status, with those facing economic precarity 2.2 times more likely to report poor access than those with greater economic stability.
Improve prevention & management of gender-based violence	No improvement	Rates of sexual and gender-based violence remain stable over time (14.5% in 2023 and 15.0% in 2025) while rates of help-seeking remain sub-optimal and unchanging (44.4% and 47.0%). In 2025, adolescents and young people reported exposure to many other forms of violence, including physical assault (22.8% lifetime experience) and cyberbullying (22.0% lifetime exposure).
Improve alcohol and drug abuse prevention & management	No improvement	Use of substances was prevalent among adolescents and young people, with recent use of alcohol and/or drugs reported by 20.5% in 2023 and 18.8% in 2025; as of 2025, 6.8% had indications of abuse. In 2025, the most commonly used substances were alcohol (14.7% reported recent use), cigarettes (7.6%), marijuana (7.1%), and muguka (6.7%). This was the same patterns as found in 2023.
Improve social status	Some improvement	From 2023 to 2025, there was an increase in adolescents and young people saying they had access to affirming social spaces (64.4% to 74.3%) and support of friends (90.8% to 97.1%). There were improvements reported in familial relationships, with 6.6% reporting negative treatment in 2025 (down from 9.3% in 2023).
Improve economic status	No improvement	As of 2025, sizeable proportions of adolescents and young people were facing housing insecurity (24.5%), food insecurity (34.8%), and – among young adults – most were living below the national standard for poverty (82.0%). There has been no change to these metrics over time, with results showing that economic status was strongly linked to mental health and access to healthcare.

Conclusions

There has been observable progress towards achieving some objectives of the *Mombasa County Adolescent and Young People Strategy on Health*, especially regarding mental health and social status. Investments in these domains appear to be working and should be sustained for continued success, especially as mental health is frequently positioned as the most significant health need for these populations.

At the same time, there has been limited progress towards other strategic objectives, including those related to HIV, sexual health, reproductive health, substance abuse, and economic status. Analyses from the *Mombasa Youth Study* demonstrate that these areas of health and well-being are all tightly entwined, suggesting the need for interventions that are comprehensive, holistic, multisectoral, and collaborative. Adolescents and young people have shown strong engagement in supporting themselves and their communities and should be continually positioned as leaders in strategic design and implementation.

Study background

Globally, adolescents and young people face unique and pressing challenges to their health and well-being along with a diverse range of health disparities. Notably, adolescents and young people face disproportionately high rates of HIV and other sexually transmitted infections (STIs), sexual and gender-based violence, unplanned pregnancies, and mental health issues including substance abuse [1-5]. There is also emerging evidence globally that such challenges facing adolescents and young people are growing worse over time [6].

In 2024, the Mombasa County Department of Health launched its second strategy towards improving the health and well-being of adolescents and young people [7]. This strategy reflects global efforts, as indicated by the World Health Organization (WHO) and others, to embrace a holistic and community-centred approach to adolescent and youth health [8]. As the strategy enters into its second year of implementation, many public, private, and community partners collaborate to achieve its objectives. Specifically, there has been considerable investment in 'youth friendly health services' efforts to promote health knowledge and awareness via online and offline promotional activities, and numerous other activities with multisectoral partnerships. Given this investment, understanding progress towards improving population health is key.

In 2023, the Mombasa Youth Study was launched to provide baseline data of population health and to monitor progress towards the strategy's implementation over time [9]. Additionally, the study aims to generate practical and useful insights with which to guide service delivery, public policy, funding, and intervention. This report details findings from the first two years of our study, with a focus on challenges, opportunities, and progress towards improving the health and well-being of adolescents and young people across Mombasa.

Study methods

Launched in 2023, the *Mombasa Youth Study* is a prospective mixed methods research study comprising: (i) a health survey of adolescents and young people, (ii) qualitative cohort of young people, and (iii) repeated survey of healthcare workers' attitudes and practices. The study is a parallel design (i.e., data collection between stages takes place simultaneously) with iterative exchange forming the basis of its mixed methods (i.e., inferences from stages inform collection, analysis, and interpretation of others).

This report summarises data collected for the study's first two years, from 15 June 2023 to 14 June 2025. Oversight for all aspects of this study was provided by the ethics boards of Médecins Sans Frontières, the Kenya Medical Research Institute, and the Mombasa County Department of Health.

Adolescent and youth health survey

Two waves of survey data were collected: the first in 2023 (15 June to 23 September 2023) and the second in 2025 (15 February to 14 April 2025). Data were collected via a de-identified digital survey, which participants could self-administer or have interviewer administered if requested. In English or Swahili, the survey collected data on topics including healthcare access, general health, social life, mental health, substance abuse, and sexual and reproductive health.

The survey instrument included fixed and open-ended questions, including several previously validated measures [9]. Routing logics were used to ensure a responsive survey, with a shorter version delivered to the youngest participants aged 10-14-years-old. A very short version of the survey was also developed for interviewer-administration to participants with challenges that may have limited their capacity to complete the full survey instrument (e.g., those with low literacy levels). The accompanying appendices note which variables were available in the 'full' or 'short' surveys.

In both years, participants were recruited to the survey via active and passive methods. Active recruitment activities included events hosted with local universities, community groups and other partners, empowering 'peer mobilisers' to identify prospective participants and collect data, and setting up recruitment stands at local youth friendly health services and events. Passive recruitment activities included distributing study advertisements through existing online and offline networks. Following completion of the survey, participants could enter an optional raffle to win small prizes including shopping vouchers, phone data, backpacks, and movie passes.

Fixed responses were analysed descriptively, reporting frequencies and proportions for all outcomes. For the cross-sectional results, primary outcome variables have been stratified by binary gender (boys/men and girls/women) and age group. For the open-ended items, content analyses were used to organise responses into descriptive thematic categories and then apply frequency and proportion analyses with relevant strata [10].

For the longitudinal results, key outcomes were compared between 2023 and 2025. Logistic regression with year fitted as an independent variable was used, with age and gender included as covariates and with a clustering effect per sub-county. Changes over time are expressed as adjusted odds ratios (aOR) and should be interpreted with consideration for the 95% confidence intervals (CIs). As the 2023 survey primarily recruited participants from a selection of three sub-counties (Mvita, Nyali, Kisauni), longitudinal analyses have been limited to these areas for the purposes of comparison over time. This focus reflects collaborative efforts between the Mombasa County Department of Health and Médecins Sans Frontières to implement a multifaceted intervention in these sub-counties. In the 2025 survey, efforts were made to expand recruitment into Changamwe, Jomvu, and Likoni; unless otherwise stated, non-comparative results reported are inclusive of all six sub-counties in Mombasa.

Figure: A recruitment message shared on social media to advertise the adolescent and youth health survey

Figure: A recruitment poster displayed in sample clinics to advertise the healthcare worker survey

Qualitative cohort of adolescents and young people

The quantitative component was complemented by a qualitative cohort of young people aged 18-24 years (n=10). Every effort was made to maximise diversity in terms of gender, age, sociodemographic status, family composition, and lived experience. Over the two-year study period, 20 individual interviews, 1 small group interview, and 5 focus group discussions were conducted. For each interview, participants were provided compensation for their travel (1,000 KES) and phone credit to facilitate digital engagement (500 KES). Interviews were primarily topical in nature, following a semi-structured funnel-and-probe technique to facilitate a conversation-like experience [11]. The topics of discussion were informed by insights from the other stages, inferences from individual interviews, current events, and specific health topics.

All interviews were audio recorded, transcribed, and translated from Swahili into English. Transcripts were cleaned of any identifying details. Thematic analyses focused on descriptive semantic themes are presented in this report [12]. Coding and thematic development were carried out by multiple qualitative researchers with discrepancies explored through ongoing discussion and revision of coding frameworks.

Healthcare worker survey

The study's third stage comprised a repeated survey of healthcare workers at six public health facilities in Mombasa County. Three sites were chosen as the locations for a health intervention to create 'youth friendly' services (a partnership between the Mombasa County Department of Health and Médecins Sans Frontières) and three others were chosen as matched sites given their delivery of integrated and stand-alone youth friendly healthcare. Clinical and non-clinical healthcare workers aged 18-years and older were eligible to take part.

Over two years, five waves of data collection were completed. Participants were provided with breakfast or lunch and a small amount of phone credit (250 KES). The survey could be completed in English or Swahili and used previously validated measures to assess stigma towards potentially sensitive health topics (e.g., substance use, early pregnancy) [9]. Data were analysed cross-sectionally overall and by study wave, with changes over time investigated using ordinal logistic regression while controlling for key characteristics (age, gender, level of education, and clinical/non-clinical work).

Participant demographics

APPENDIX A

Adolescent and youth health survey

In 2025, the final sample consisted of 2,457 participants including 1,042 boys and young men (42.4%), 1,380 girls and young women (56.2%), and 35 adolescents and young adults who reported their gender as 'other' (e.g., intersex; 1.4%). The mean age was 19.0 years (SD: 4.2) and the median was 20 (interquartile range: 16-23). By category, 805 participants were adolescents aged 10-17 years (32.8%) and 1,652 were young adults aged 18-24 years (67.2%). While 2023 focused recruitment primarily in Kisauni, Nyali, and Mvita (92.9% of participants), in 2025 recruitment expanded to all sub-counties: 978 from Kisauni (39.8%), 341 Nyali (14.1%), 335 Jomvu (13.6%), 312 Mvita (12.7%), 293 Likoni (11.9%), and 192 Changamwe (7.8%).

Aside from the changing geographic profile, there were some differences in the sociodemographic characteristics of adolescents and young people recruited between waves. Notably, the sample in 2025 was slightly younger than in 2023 (M=18.9 vs 19.6 years) and there was a higher proportion of male participants (43.0% vs 33.8%). The proportion in some form of schooling was essentially the same between waves (64.8% in 2025 and 64.8% in 2023). Thus, all longitudinal analyses differences controlled for the sample's gender and age characteristics and comparisons over time were restricted to those living in Kisauni, Nyali, or Mvita. County-wide assessments of change will be possible in future surveys. Within these three sub-counties, 10.5% of participants said they had completed the survey both in 2023 and 2025.

Qualitative cohort of adolescents and young people

By design, the qualitative cohort was diverse in several important ways. Participants ranged in age from 18-24 years with a median of 22.5 years (IQR:21-24). From the sample of 20 baseline interviews, five women and five men were selected to participate in the primary cohort. Eight had completed or were enrolled in some tertiary education, while one had completed high school and one had completed primary school. Reflecting the study's geographic focus within Mombasa County, four lived in Kisauni, four in Nyali, and two in Mvita. Seven were unemployed and three were self-employed. Two reported a disability (one cognitive, one physical) and two were parents. Over the study's first two years, 100% of participants were retained in this cohort.

Healthcare worker survey

A total of 534 individual healthcare workers completed the survey over five waves, which equated to 1,155 data points over two years. Retention between waves was high and increased over time, from 56.7% in Wave 2 (November 2023) to 71.4% in Wave 5 (March 2025; OR=2.1, 95%CI: 1.9-2.3). Overall, 431 participants were involved with direct patient care (80.7%) and 454 had some form of tertiary education (85.0%). By gender, 370 participants were women (69.3%), 161 men (30.2%), and three were non-binary (0.6%). By age, 210 participants were 18-24 years (39.3%), 164 were 25-29 years (30.7%), 109 were 30-39 years (20.4%), and 51 were 40 years or older (9.6%). Key sociodemographic characteristics generally remained stable among the cohort over time, with no changes to type of work, gender, age, or level of education.

Full details of participant demographics for each stage of the research can be found in Appendix A.

Physical health

APPENDIX B

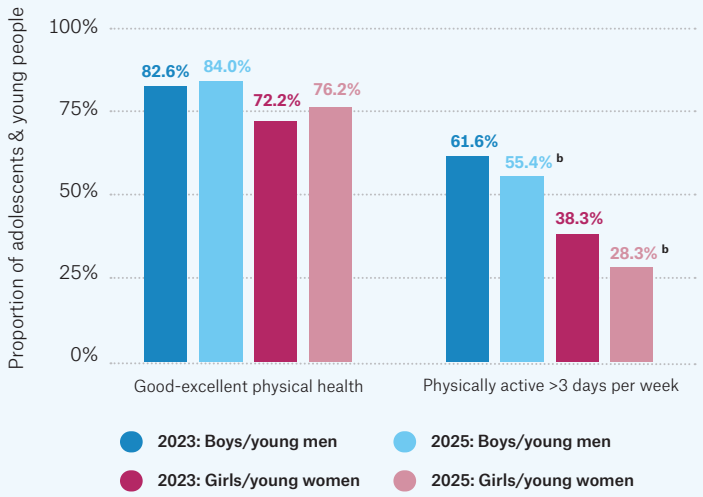
In 2025, four in five adolescents and young in Mombasa reported their physical health as 'good' or 'excellent' (80.1%) [27]. Good physical health was more common among boys and young men than girls and young women (84.4% vs 76.2%) and more common among adolescents than young adults (85.2% vs 77.7%). There was no change to the physical health of adolescents and young people from 2023 to 2025.

Only 17.2% of adolescents and young people in 2025 met the World Health Organization targets for physical activity (i.e., at least 60 minutes every day) [13]. The proportion reporting at least three days of physical activity per week decreased over time, from 46.0% in 2023 to 39.6% in 2025 (aOR=0.7, 95%CI: 0.6-0.7). Three in ten adolescents and young people in 2025 reported absolutely no physical activity (30.7%). Highlighting the benefits of physical activity, those with three or more days exercise in a week were two times more likely to report good physical health than those reporting less or no exercise (aOR=2.1, 95%CI: 1.6-2.7).

In 2025, knowledge of key health concepts was assessed among participants aged 15-years and older. Adolescents and young people were presented with five true-false items, with correct responses scored and summed. Very few answered no items correctly (0.5%) while one third answered all items correctly (34.6%), and most (50.4%) missed only one item. The most commonly missed items were about HIV pre-exposure prophylaxis (PrEP; answered incorrectly by 33.9% of participants) and mental health (answered incorrectly by 21.7%). There were no differences in health knowledge by gender, although younger participants tended to score poorer than older ones.

More details on physical health and health knowledge can be found in Appendix B.

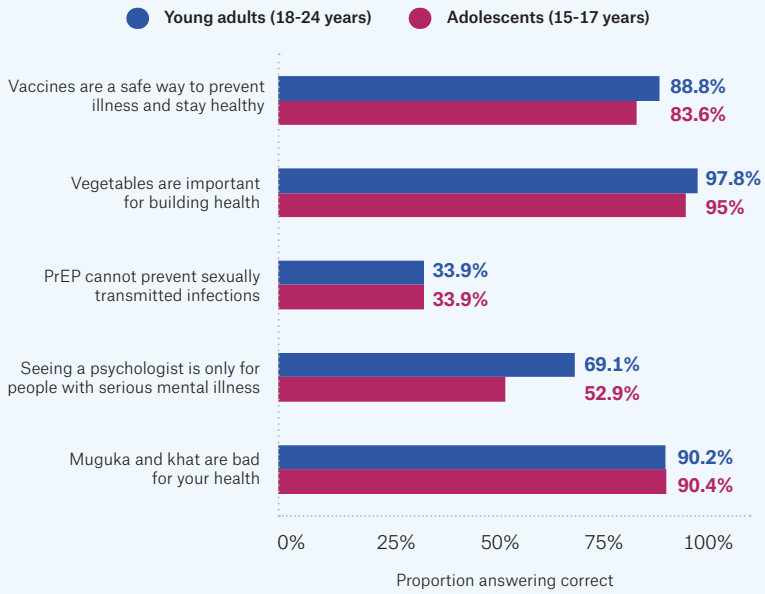
Figure: Self-rated physical health and physical activity among adolscents and young people in Mombasa (2023-2025), by year, gender and age (n=3,862) [a]



a. For comparative purposes, all longitudinal analyses are restricted to participants living in Kisauni, Mvita, and Nyali

b. Represents a statistically observable change when controlling for age, gender, and sub-county

Figure: Knowledge of key health concepts among adolescents and young people in Mombasa (2025), by age (n=1,881)[a]



a. Only asked of participants aged 15-24 years

Healthcare

APPENDIX B

In 2025, around one in four of adolescents and young people in Mombasa reported 'good' or 'excellent' access to healthcare (26.4%). In the six months prior to participation, slightly less than half (43.4%) of adolescents and young people reported being unable to access necessary healthcare. Cost was, by far, the most common explanation for why care was not received (89.3%). Among adolescents and young people, 33.6% said they 'sometimes' and 7.2% 'often' experience negative treatment from healthcare workers.

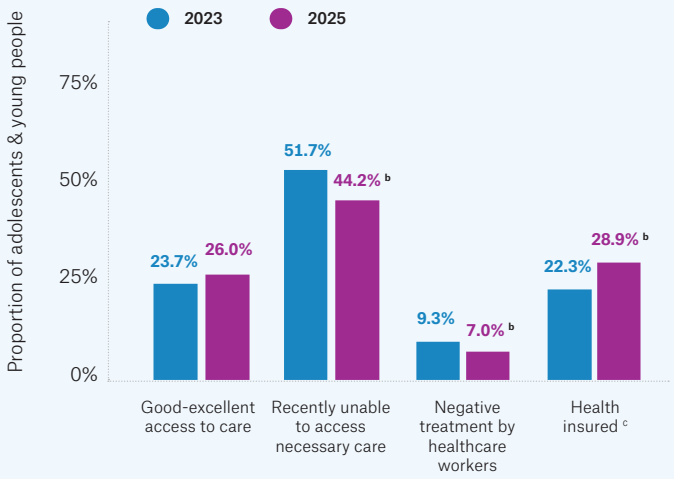
There were several changes related to healthcare observed over time. From 2023 to 2025, the proportion of adolescents and young people who said they had been unable to access some necessary care decreased (51.7% to 44.2%; aOR=0.7, 95%CI: 0.6-0.9). Also, the proportion who reported 'often' experiencing negative treatment from healthcare workers decreased from 9.3% to 7.0% (aOR=0.8, 95%CI: 0.6-0.9). From 2023 to 2025, the proportion of young adults reporting access to health insurance increased (22.3% to 28.9%; aOR=1.4, 95%CI: 1.2-1.6).

The change to insurance coverage is promising given the federal switch to a new public insurance scheme in mid-2024. The majority of young adults in Mombasa, however, remained uninsured. Health insurance was discussed with qualitative cohort: some reported registering via school or as a condition of their employment. Almost all cohort participants reported trouble with registration, with the process characterised as "confusing", "complicated", and "long". One described receiving a text that they were automatically switched to the new scheme, but then later discovering the registration was incomplete. Among unregistered young people in the cohort, most were not aware of the new scheme.

In 2025, one quarter of adolescents and young people (25.0%) said they had visited a youth friendly health service within the six months prior to participation. The survey, however, actively recruited participants who attended such services, making the prevalence of uptake difficult to interpret. Those attending youth friendly services in 2025 were more likely than others to report good-excellent access to care (29.8% vs 24.4%; aOR=1.4, 95%CI: 1.1-1.7).

More details on experiences of healthcare can be found in Appendix B.

Figure: Healthcare access among adolescents and young people in Mombasa (2023-2025), by year (n=1,881) [a]



a. Only asked of participants aged 15-24 years old and, for comparative purposes, all longitudinal analyses are restricted to participants living in Kisauni, Mvita, and Nyali

b. Represents a statistically observable change when controlling for age, gender, and sub-county

c. Only asked of participants aged 18-24 years old

Health Insurance

- In 2024, the Kenyan government introduced a new public health insurance scheme known as the **'Social Health Insurance Fund' or SHIF**.
- Following SHIF's introduction, insurance coverage among young adults (18-years and older) increased from **22.3% to 28.9%**.
- Some young people described the process of registration as **"long" and "confusing"**.
- Many uninsured young people **did not know about SHIF**, which was identified as a major barrier to registration.
- As of 2025, the vast majority of young adults in Mombasa were **without health insurance**.

"Personally I was used to NHIF. So concerning SHIF, I was not interested in it as such, until my dad told me that it covers your medical needs, so I went and registered with a community health volunteer but it took so, so long."

- Woman, 23-years-old

Mental health & well-being

APPENDIX C

In 2025, one in two adolescents and young people in Mombasa had positive mental well-being (52.3%) as measured using the WHO Well-Being Index [14]. Adolescents were more likely than young adults to have positive well-being (67.8% vs 44.8%), and boys/men were more likely than girls/women (57.9% vs 48.6%). Overall, positive well-being was most common adolescent boys (73.4%) and least common about young women (43.0%).

Using the Patient Health Questionnaire [15], 11.2% of adolescents and young people had symptoms of moderate-severe depression, which was much more common among female than male participants (14.1% vs 7.3%). Indications of depression were also much higher among young adults than adolescents (15.0% vs 3.5%). In 2025, 10.4% of participants indicated they had recent thoughts of suicide.

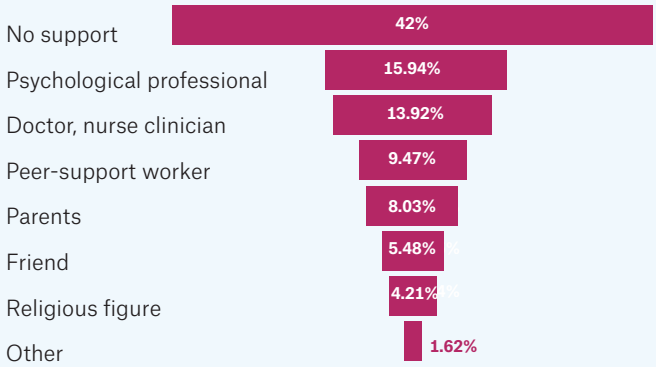
In Mombasa, 41.0% of adolescents and young people in 2025 reported some previous form of mental health support including 22.0% 'recently' in the six months prior to participation. Among those who had received support, it was primarily provided by a mental health professional (27.4%), doctors or nurses (23.9%), or peer-support workers. In the qualitative cohort, participant described a number of strategies used to regulate mental health including spending time in nature, socialising, resting, physical activity, and time on social media.

From 2023 to 2025, adolescents and young people reported improvements to their mental health. Notably, the proportion with positive mental well-being increased overall including when accounting for differences by age and gender (39.9% in 2023 to 52.3% in 2025; aOR=1.5, 95%CI: 1.4-1.6). At the same time, indications of depression declined from 15.3% to 11.2% (aOR=0.7, 95%CI: 0.6-0.9). In the qualitative data, many adolescents and young people described feelings of "empowerment" and "connection" via the large protests and social movements that swept Kenya in 2024, which could explain at least part of this increase. At the same time, across the county there was considerable investment in engaging these populations in diverse forms of mental health support. It is notable, however, that the proportion of adolescents and young people who reported lifetime or recent access to mental health support was stable over time.

Although clinicians were popular sources of mental health support for adolescents and young people, results from the healthcare worker survey found many have high and persistent levels of stigma [16]. As of March 2025, one third of healthcare workers (35.5%) had medium-high stigma towards people with mental health challenges, which was similar between clinicians and non-clinicians (35.9% and 33.3%, respectively). Over time, there was no change observed in mental health stigma among healthcare workers in Mombasa.

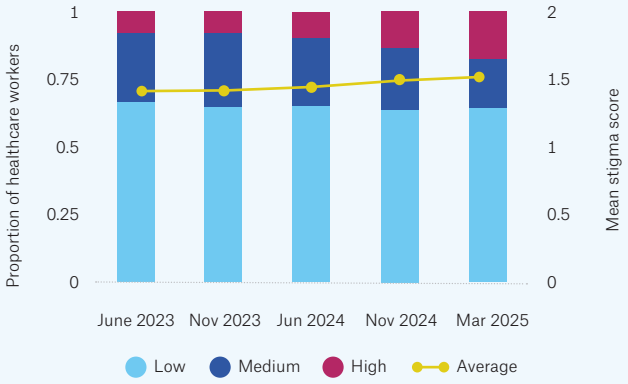
More details on experiences of mental health can be found in Appendix C.

Figure: Sources of mental health support a among adolescents and young people in Mombasa (2025), overall (n=3,862)



a. Participants could select multiple options

Figure: Stigma towards mental health among healthcare workers in Mombasa, by wave of data



Qualitative Insight

Adolescents and young people shared several strategies for managing their mental health:

Physical activity:

"When I'm down, I'll go swimming."

– Man, 19-years-old

Spend time in nature:

"That day you wake up feeling everything is out of place or you find you are having a bad day, then I usually take evening walks."

– Man, 22-years-old

Socialize:

"For sure those days happen and for me, I will go and tell stories with my friends until the stress is over I just get someone at least we can talk."

– Woman, 24-years-old

Rest & sleep:

"When I am angry or I feel like things are not going well, I can even sleep for like 3 hours and when I wake up, I'll be okay now, and I don't have those thoughts or they have gone away."

– Woman, 24-years-old

Time on social media:

"If I have stress, social media is where I go to relieve my stress. I usually check those funny videos that make me laugh."

– Woman, 23-years-old

Social health

APPENDIX D

Social connection is increasingly understood as a pivotal factor in health and well-being [17-19]. In 2025, nearly all adolescents and young people reported at least one friend (97.3%) and most reported access to affirming social spaces (75.6%). Adolescents were less likely than young adults – regardless of gender – to report access to affirming social spaces (64.7% vs 80.9%), which were defined as public places where they could "freely express themselves without fear of negative treatment". Both friendships and access to affirming spaces increased among adolescents and young people from 2023 to 2025, noting that study recruitment in 2025 focused more strongly on engagement via existing community and other social groups.

Use of social media was very prominent among adolescents and young people in 2025, with 55.6% reporting at least one hour of use per day. While 53.3% of adolescents reported never using social media, this was the case for only 8.1% of young adults. Conversely, while 52.1% of young adults reported using social media three or more hours per day, this was the case for only 9.2% of adolescents. There were no differences in social media use by gender, and levels of use remained high and stable from 2023 to 2025.

Only a minority of adolescents and young people (6.4%) were estranged from their families in 2025. For those in contact, most reported generally positive relationships (70.7%). Young adults were more likely than adolescents to report poor treatment by their families (9.4% vs 6.3%) and negative treatment was slightly more common among girls/young women than boys/young men (9.5% vs 7.7%). Overall, the proportion of adolescents and young people reporting negative treatment by their families decreased from 9.3% in 2023 to 6.7% in 2025, with this change primarily evident among girls/young women (9.7% to 6.7%).

More details on the social health of participants can be found in Appendix D.

> *"I have a best friend ...what I love about him is that we are open and we don't hide anything and the fact that we have been together and know each other better, we understand each other better, he is understanding and I am also an understanding person, so yeah we share a lot."*
>
> **– Man, 19-years-old**

Social health among adolescents and young people in 2025

97.3% had one or more friends.

75.6% had access to affirming social spaces.

89.5% viewed religion as important to their lives.

93.7% were in contact with family.

70.7% felt well-treated by family.

Social media and mental health in 2025

38.0% of adolescents and young people used social media 3+ hours per day.

Compared with those who used social media less, highly frequent users had:

1.5 times poorer mental well-being (OR=1.5, 95%CI: 1.3-1.8).

2.0 times greater likelihood of depression (OR=2.0, 95%C: 1.6-2.4).

APPENDIX D

Economic health

Economic factors are among the most important determinants of health, regardless of population or context [20]. Regarding economic health in 2025, three in ten adolescents and young people were facing housing insecurity (29.4%) and one in three were facing food insecurity (34.8%). While food insecurity was generally higher among girls and young women (36.6% vs 32.3%), housing insecurity was higher among boys and young men (31.7% vs 27.5%). Food insecurity was much higher among young adults than adolescents (41.0% vs 21.9%).

Among young adults aged 18-24 years, the prevalence of poverty in 2025 was very high: 73.9% of young men and 86.2% of young women said they received less than 5,000 KES per month, which is below the national standard of 7,193 KES monthly as defined by the Kenyan National Bureau of Statistics [21]. Although levels of poverty and housing insecurity remained stable over time, food insecurity decreased (50.5% in 2023 to 33.8% in 2025).

> *"The project I was working in got affected with funding cuts from USAID so I had to go back to square one. There is nothing as difficult as trying to collect yourself after experiencing life under employment and now, all over sudden, no employment."*
>
> **- Man, 24-years-old**

The economics of health

45.8%
of adolescents and young people face food or housing insecurity

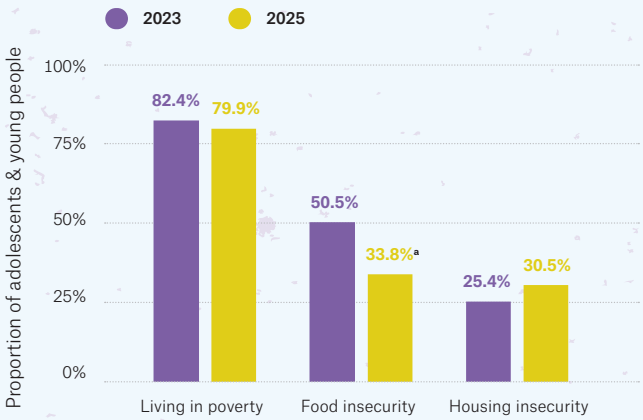
Among those with poor economic health:

2.9
times higher rates of depression (OR=2.9, 95%CI: 2.1-4.1)

2.5
times more likely to struggle accessing healthcare (OR=2.4, 95%CI: 1.9-3.2)

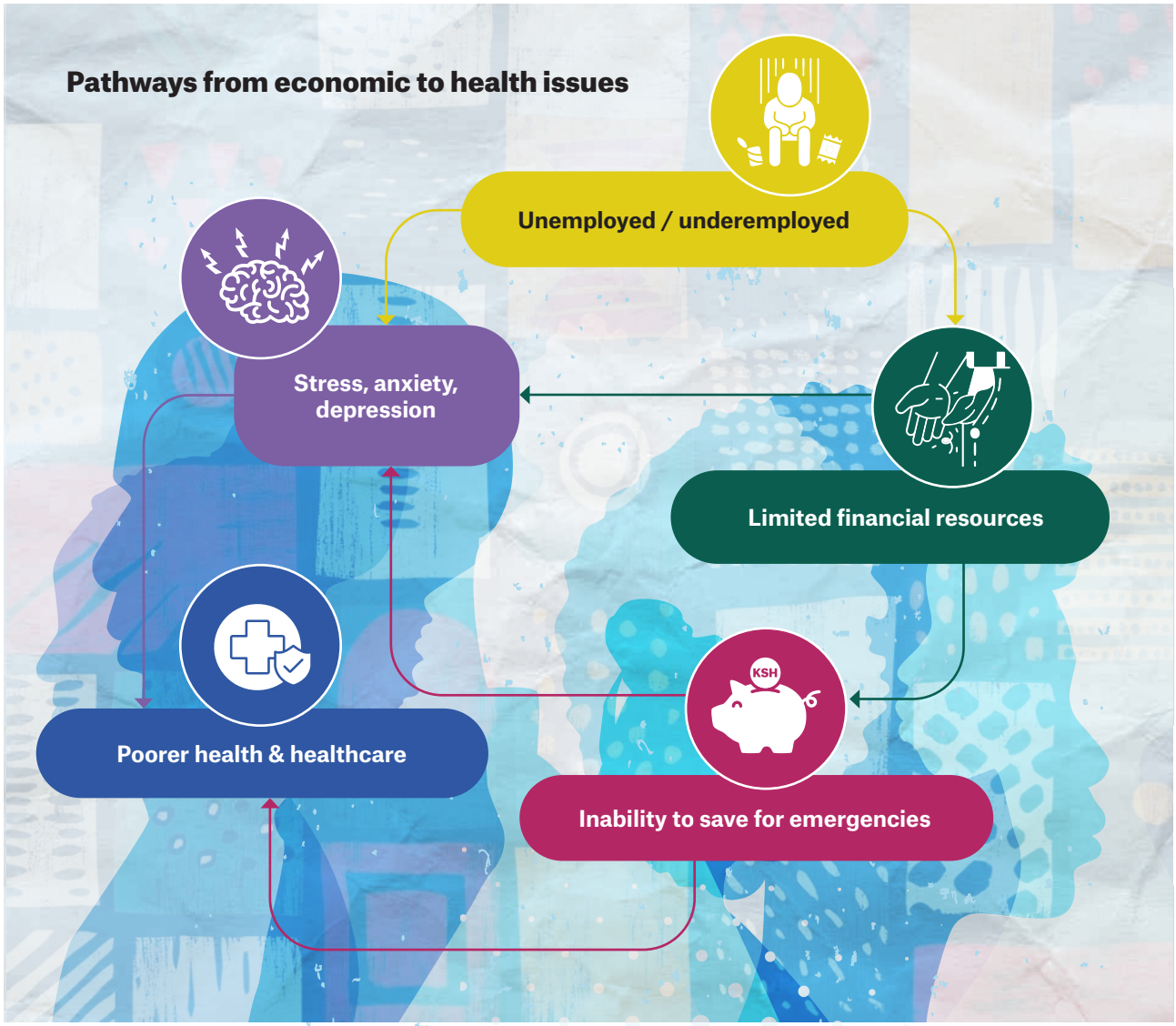
1.8
times more likely to frequently miss school (OR=1.8, 95%CI: 1.1-3.2)

Figure: Economic health among adolescents and young people in Mombasa, by year (n=2,490) [b]



a. Represents a statistically observable change from 2023 to 2025 when controlling for age, gender, and sub-county

b. For comparative purposes, all longitudinal analyses are restricted to participants living in Kisauni, Mvita, and Nyali



In the qualitative cohort, participants shared the ways in which economic issues adversely impact their physical and mental health. Unemployment and underemployment were found to negatively impact mental health directly but also indirectly, especially through limiting financial resources and the ability to save for emergencies. These results highlight the serious negative effects of economic precarity, articulating their direct and indirect paths of influence.

More details on economic health can be found in Appendix D.

> *"If I have some emergency, it's likely I'll die with it alone. I do not even have Ksh 20,000 to spend if there is an emergency."*
>
> **- Woman, 21-years-old**

Disability and accessibility

APPENDIX E

In 2025, 4.0% of adolescents and young people reported living with a disability, including 0.3% who said they had multiple disabilities. Physical disabilities were the most commonly reported (1.5%), followed by hearing disabilities (0.6%), and chronic mental illness (0.6%). Although good-excellent access to healthcare was similar between those with and without disabilities (29.9% vs 26.2%), adolescents and young people with a disability were much more likely to report recently being unable to access necessary care (61.9% vs 43.2%; aOR=2.3, 95%CI: 1.5-3.4).

Questions about accessibility and stigma towards people with disabilities were asked of healthcare workers in Mombasa [22]. Stigma towards people with disabilities was generally very low, with 1.7% of healthcare workers indicating 'high' stigma and no changes over time. Interestingly, from 2023 to 2025 a growing proportion of healthcare workers rated their clinic as highly accessible to people with disabilities (22.9% in 2023 to 46.2% in 2025). This change likely reflects efforts from the Mombasa County Department of Health and Médecins Sans Frontières to introduce more accessibility features at some study sites (e.g., ramps).

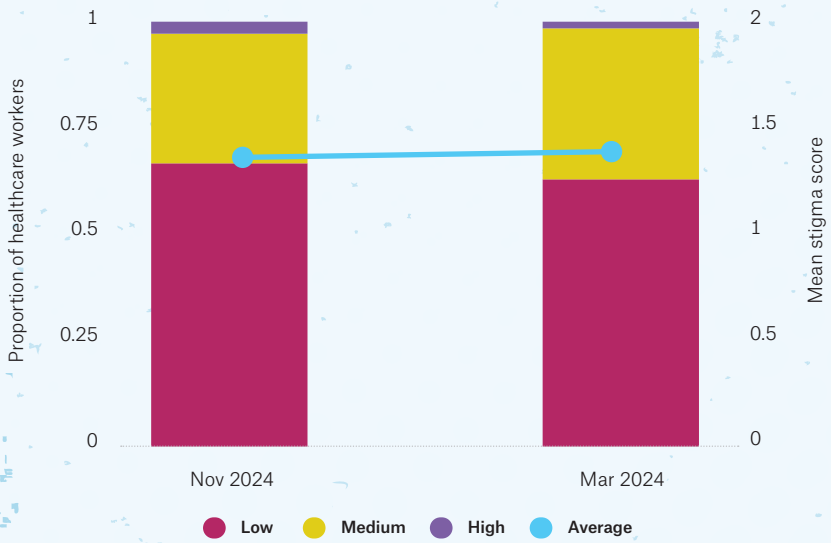
Despite the perceptions of healthcare workers, access to healthcare did not appear to change over time among adolescents and young people with disabilities. From 2023 to 2025, the proportion reporting 'no or poor' access to care was stable (32.8% and 27.1%; aOR=1.3, 95%CI: 0.9-1.8) as was the proportion reporting recent difficulties accessing necessary care (aOR=0.8, 95%CI: 0.6-1.2).

More details on people with disabilities can be found in Appendix E.

1 in 5 **adolescents and young people in Mombasa (20.0%) said they needed but did not currently have access to glasses.**

Freepik.com

Figure: Stigma towards people with disabilities among healthcare workers in Mombasa, 2024-2025, by wave of data collection (n=482)[a]



Drugs and alcohol

APPENDIX F

In 2025, 22.9% of adolescents and young people had ever consumed alcohol, including 14.7% who had done so in the six months prior to participation. As found in 2023, recent alcohol consumption was slightly higher among boys and young men than girls and young women (15.7% vs 12.8%) and much higher among young adults than adolescents (20.9% vs 1.9%). More than one in ten adolescents and young people in Mombasa had ever smoked cigarettes (13.3%), including 7.6% who had done so recently. In total, 12.0% reported ever using a 'vape' (i.e., e-cigarettes), including 6.4% who had done so recently. These are first estimates of vaping among adolescents and young people in Mombasa, which are important given the unique health risks posed by this practice [23, 24].

A total of 17.3% of survey participants reported ever using drugs other than alcohol, including 11.5% who had done so recently. Injecting drug use was very uncommon among adolescents and young people, with 1.7% in 2025 reporting ever having used and 0.8% saying they had done so recently. Among those who had recently used injecting drugs, 86.7% said they had shared equipment. The most commonly used illicit drugs were marijuana (reported by 7.1% of all adolescents and young people) and muguka (6.7%), the use of which exceeded more than all other drugs combined. The next most reported substances were tumbaku (i.e., chewing tobacco; 0.8%) and glue (0.6%).

Most adolescents and young people reported never or very rarely using alcohol and other drugs (87.6%), although 6.8% reported using three or more days in a standard week. For illicit drugs specifically, most of those who used reported only a single substance type (58.5%). There were, however, 21.5% who reported using two substance types in the six months prior to participation, and 20.1% who reported three or more. Compared to those consuming only a single substance type, adolescents and young people with poly-substance use were 2.6 times more likely to have symptoms of depression (OR=2.6, 95%CI: 1.6-5.1).

Over time, use of alcohol and other drugs remained stable among adolescents and young people in Mombasa. Use of injecting drugs also remained low and did not change, but sharing of injecting equipment did increase from 53.9% in 2023 to 83.3% in 2025; aOR=4.1, 95%CI: 2.9-5.9). Recent use of cigarettes also increased from 6.0% in 2023 to 10.0% in 2025 (aOR=1.6, 95%CI: 1.3-2.0).

More details on the use of alcohol and other drugs can be found in Appendix F.

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Among adolescents & young people in Mombasa, 2025:

14.7% used alcohol

13.1% smoked cigarettes

11.9% vaped (e-cigarettes)

11.5% used illicit drugs

0.8% used injecting drugs

Figure: Ever (lifetime) and recent use of alcohol and other substances among adolecents and young people in Mombasa, 2025 (n=2,457)

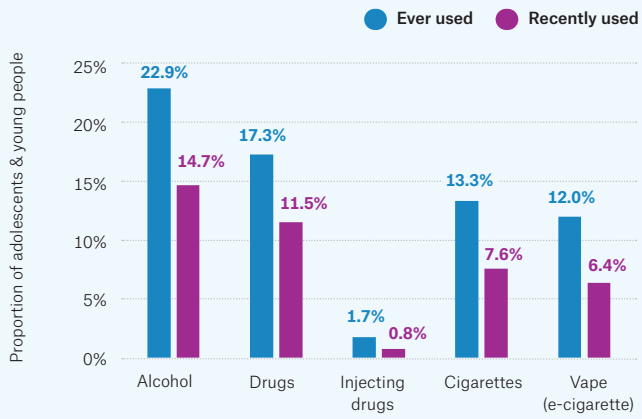
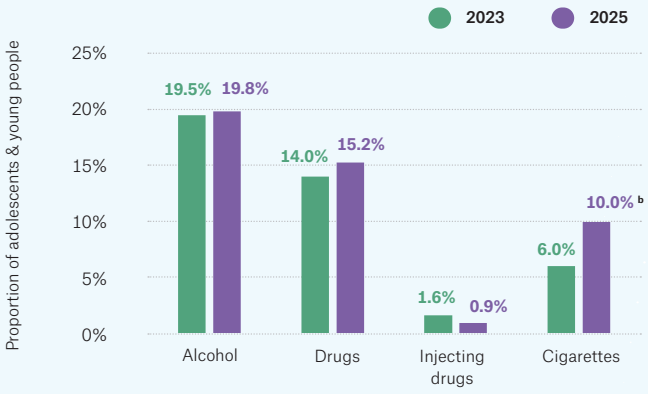


Figure: Recent use of alcohol and other substances among adolescents and young people aged in Mombasa, by year (n=2,445) [a,c]



a. Only asked of participants aged 15-24 years

b. Represents a statistically observable change when controlling for age, gender, and sub-county

c. For comparative purposes, all longitudinal analyses are restricted to participants living in Kisauni, Mvita, and Nyali

Neil Palmer (CIAT), DoubleBlind.com

Focus on Muguka

Muguka is one of the most popular drugs used by adolescents and young people. In 2025, 12.0% of young men and 6.8% of young women In Mombasa reported its use within past six months. Half of adolescents and young people (53.2%) said that at least some of their friends use muguka.

In 2024, the sale and consumption of muguka in Mombasa was made illegal for a short period, with the ban eventually overturned by the federal government [25]. This temporary ban did not impact upon muguka use among adolescents and young people: 7.9% in 2023 and 7.7% in 2025 reported recent consumption.

Overall, 90.2% of adolescents and young people believe muguka is harmful to their health, although this was lower among those who reported recent use (71.2%).

Reproductive health

APPENDIX G

Among the 1,380 girls and young women who participated in the 2025 survey, one quarter reported a previous pregnancy (24.1%) including 2.3% of girls aged 10-17 years and 33.1% of young women aged 18-24 years. Among the 5.9% who had been pregnant in the year prior to participation, 40.5% said they had participated in some form of 'new mother' support program.

In 2025, more than half of previously pregnant girls and women (55.0%) reported they were 19-years or younger at their first pregnancy, which is how the WHO defines 'early pregnancy' [26]. Further, 68.2% said their first pregnancy was unplanned.

In 2025, most sexually active adolescent girls and young women reported using contraception (63.1%). Around one in five reported any previous termination of pregnancy (21.7%), of which 35.3% reported some form of complication. One in three girls and young women reported they had recently been unable to access menstrual products (31.6%). Access to menstrual products was also associated with economic issues: 40% of girls and young women facing economic precarity struggled with access, compared to 23.6% of those with greater economic stability (aOR=2.2, 95%CI: 1.7-2.8).

From 2023 to 2025, there was no change in key reproductive health outcomes among girls and young women in Mombasa. The proportion reporting early pregnancy, participation in support programs, use of contraception, and termination remained stable. There was, however, a decline in the proportion who reported complications following termination of pregnancy (45.0% to 29.3%; aOR=0.51, 95%CI: 0.39-0.67), noting the small number of participants with this experience (n=21). Access to menstrual products also remained unchanged over time.

Stigma towards early pregnancy and termination of pregnancy were assessed among healthcare workers in Mombasa. In 2025, 7.8% of healthcare workers had high stigma towards young mothers, 14.3% medium, and 78.0% low stigma. There was no change in early pregnancy stigma from 2023 to 2025, although clinicians were more likely to have high stigma than non-clinicians (8.2% vs 2.1%, OR=4.3, 95%CI: 1.3-13.7). Male healthcare workers also had higher rates of stigma than their female peers (10.6% vs 6.0%, OR=1.9, 95%CI: 1.1-3.1).

Regarding termination of pregnancy, in 2025 15.2% of healthcare workers had high stigma, 25.5% medium, and 59.3% low. There were no differences in stigma towards termination between clinicians and non-clinicians. As with early pregnancy, however, men tended to have higher stigma towards termination of pregnancy than women: 18.5% men had high stigma compared with 10.9% women (OR=1.9, 95%CI: 1.3-2.6).

More details reproductive health can be found in Appendix G.

Figure: Stigma towards termination of pregnancy among healthcare workers in Mombasa, 2023-2025, by wave of data collection (n=1,155)

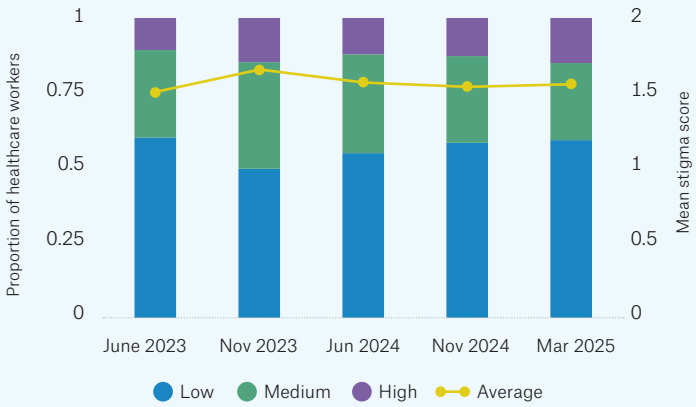
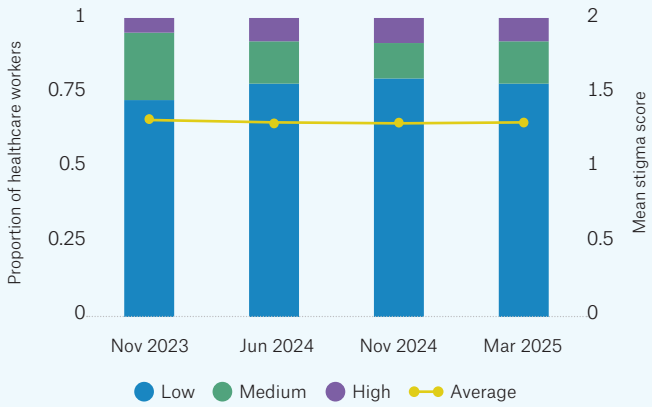


Figure: Stigma towards early pregnancy / young mothers among healthcare workers in Mombasa, 2024-2025, by wave of data collection (n=924) [a]



a. Items on early pregnancy stigma introduced in Wave 2 (November 2023)

Sexual health

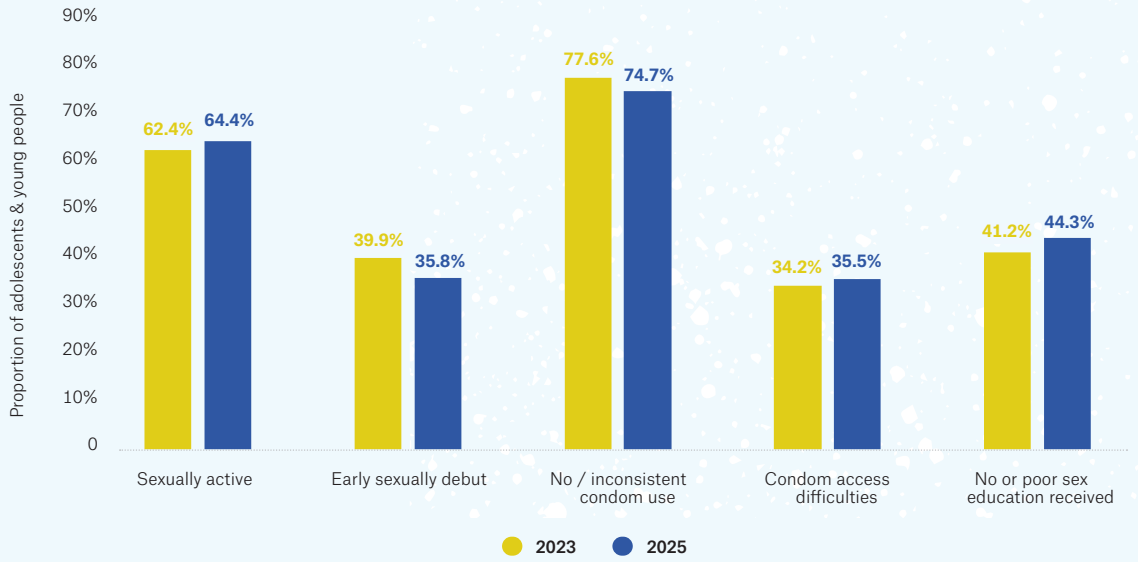
APPENDIX H

In 2025, 60.8% of adolescents and young people in Mombasa were sexually active including 63.2% of boys/young men and 58.7% of girls/young women. There were major differences by age group, with 9.8% of adolescents and 70.6% of young adults sexually active. Among sexually active young adults, the majority (85.5%) were unmarried. Around one third of survey participants said their sexual debut was before the age of 18-years (35.8%), with no significant differences by gender (38.8% boys/men and 33.6% girls/women). From 2023 to 2025, there was no change in sexual activity or early sexual debut.

Condom use was very low among adolescents and young people. Among those who were sexually active, 41.1% reported sometimes using condoms and 34.1% never using them for penetrative sex in the six months prior to participation. This equated to consistent condom use among only one quarter of sexually active adolescents and young people (24.8%), with consistent use higher among boys/young men than girls/young women (30.1% vs 20.8%). Regarding access, 29.7% of adolescents and young people said they had some difficulty accessing condoms in the six months prior to participation, while 50.5% said they had easy access, and 19.8% said they did not try to access. From 2023 to 2025, there was no change in condom use or access.

Given the poor use of condoms among adolescents and young people in Mombasa, a special focus group was held with the qualitative cohort to better understand facilitators and barriers. While many knew where to access condoms – citing local clinics, chiefs' offices, and other public facilities – others outlined scenarios where use was inconsistent. Young people offered a set of related reasons for not using condoms, which included relationship status (i.e., only having sex with one steady partner), the desire to build or express trust for their partner, a general dislike of how condoms feel, or in response to a partner's request. While no participant expressed an outright dismissal of condoms, it was clear many experienced a fluid negotiation of their use that changed from partner-to-partner and encounter-to-encounter.

Figure: Sexual experiences and sexual health behaviours among adolescents and young people in Mombasa (2023-2025), by year (n=3,200) [a,b]



a. Only asked of participants aged 15-years and older
b. For comparative purposes, all longitudinal analyses are restricted to participants living in Kisauni, Mvita, and Nyali
c. Only asked among sexually active participants reporting penetrative sex

Regarding HIV, in the 2025 survey 2.2% of adolescents and young people self-reported as HIV positive and 68.4% as HIV negative; 29.4% were of unknown status. Recent HIV testing (i.e., testing within six months of participation) was reported by 44.7% of participants. The proportion of adolescents and young people who did not know their HIV status remained stable from 2023 to 2025.

For HIV negative people, 9.8% were using pre-exposure prophylaxis (PrEP) at the time of participation, while a further 5.8% said they had used it previously. For people living with HIV, 78.1% were accessing antiretroviral treatment. There were no changes to the use of PrEP or treatment over time.

In 2025, the survey included new items to investigate online and digital sexual experiences. Among adolescents and young people, around half (49.3%) said they had ever seen pornography online; 21.5% had viewed it multiple times. Repeated viewing of pornography online was much more common among young adults than adolescents (24.2% vs 5.9%), and slightly higher among males than females (26.0% vs 17.5%).

Regarding digital sexual content – often referred to as 'sexting' [27] – 41.3% of adolescents and young people in Mombasa said they had ever received such materials, while 16.3% said they had ever sent them. During the qualitative focus groups, participants (especially young women) discussed experiences receiving unsolicited sexual content predominantly from older men online. As one 24-year-old woman shared, "Someone comes on WhatsApp, texts me and before even I know the motive of this person they start sending me pornography videos".

More details on sexual health can be found in Appendix H.

"She was not on and contraceptive and she did not to get pregnant, so we had to use a condom. Now that day I came with a condom as usual and we used it, but then the second time she was the one who said that we shouldn't use because she was 'safe' at that time. So, I decided if she says she is safe, who am I to dismiss her?"

– Man, 22-years-old

21.5%
of adolescents and young people regularly view pornography online

41.3%
of adolescents and young people have received 'sexts'

16.3%
of adolescents and young people have sent 'sexts'

12.2%
of adolescents and young people have sold their digital sexual content for money or gifts

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Violence

APPENDIX I

As of 2025, adolescents and young people in Mombasa reported a diverse array of violent experiences. Notably, 14.0% had previously experienced sexual violence or coercion, including 10.0% of boys/young men and 16.2% of girls/young women. Of those who experienced sexual violence, 48.4% told someone or sought help. The prevalences of sexual violence and related help-seeking remained stable from 2023 to 2025.

Stigma towards sexual violence was assessed among healthcare workers in Mombasa [28]. In 2025, 66.7% of healthcare workers had low stigma towards sexual violence, 22.1% had medium stigma, and 11.3% high stigma. There was no change from 2023 to 2025, and no differences observed between clinicians and non-clinicians.

Among adolescents and young people, the 2025 survey also assessed other experiences of violence. Nearly one quarter (24.8%) had experienced intimate partner violence. Further, 22.8% had ever experienced physical assault, including 10.2% in the six months prior to participation. And 29.2% had ever experienced verbal assault, including 13.8% in the six months prior to participation. There were no differences in the prevalence of physical or verbal violence by gender. From 2023 to 2025, the prevalences of physical or verbal violence were stable.

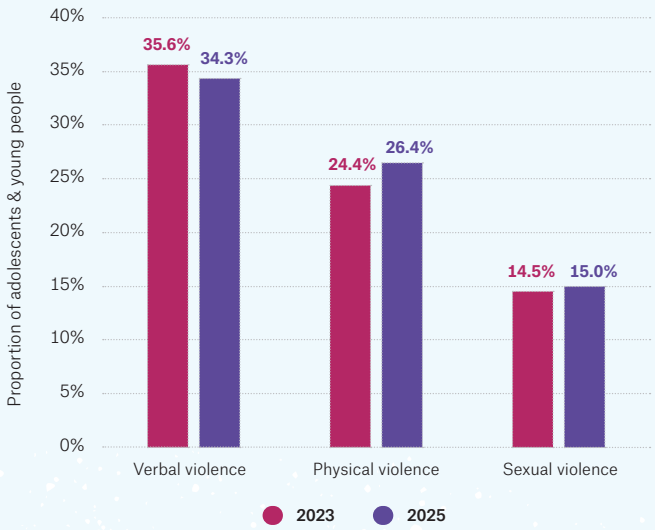
Regarding online abuse – also known as 'cyberbullying' – 22.0% of adolescents and young people in Mombasa reported this experience, including 11.4% in the six months prior to participation. Cyberbullying was much more common among young adults than adolescents (25.8% vs 7.5%) with no differences observed by gender.

While cyberbullying has attracted considerable attention in the global literature, it is a topic of only emerging study in Kenya: in-line with our findings, other research suggests it is a reasonably common experience among adolescents and young people [29, 30]. Importantly, indications of depression were 20.1% among participants with recent experiences of cyberbullying, compared to 12.5% among those without (aOR=1.5, 95%CI: 1.1-2.2).

Similarly, good mental well-being was negatively associated with recent experiences of cyberbullying (49.6% vs 39.2%, aOR=0.5, 95%CI: 0.5-0.9). These results indicate the need for further research to understand and respond to experiences of cyberbullying among these populations.

More details on experiences of violence can be found in Appendix I

Figure: Experience of violence (lifetime) among adolescents and young people aged in Mombasa, by year (n=2,313) [a]



a. To enable comparisons over time, all longitudinal analyses restricted to Kisauni, Nyali, and Mvita

22%

of adolescents and young people have experienced abuse online

Conclusions and recommendations

After two years of data collection, results from the *Mombasa Youth Study* highlight the dynamic lives of adolescents and young people across the county. The insights derived from this study are directly aimed at supporting implementation of the *Mombasa County Adolescent and Young People Strategy on Health* [7]. While health is the strategy's primary focus, our study's results make clear that supporting adolescents and young people in Mombasa requires a holistic, multifaceted, and multisectoral approach.

The results presented in this report were shared during a series of workshops with researchers, government officials, community stakeholders, healthcare workers, and young people themselves. As the study now represents multiple years of data, our discussions focussed predominantly on change, especially to identify barriers and facilitators. Drawing upon the specific objectives outlined in the county's strategy of adolescent and youth health, this section provides an assessment of progress so far and makes recommendations for the future.

SPECIFIC OBJECTIVE 1.1:
IMPROVE HIV/AIDS OUTCOMES

The strategy's first specific objective is to improve the prevention and management of HIV including to reach global targets of 95% coverage of diagnoses, 95% uptake of treatment, and 95% sustaining viral suppression [7]. Unfortunately, there is limited evidence of progress towards these goals. Nearly 30% of adolescents and young people in Mombasa remained unaware of their HIV status in 2025, and only three of quarters of those with confirmed diagnosis reported being on treatment. Study results show that neither marker has changed over time, while uptake of PrEP hovers below 10%, condom use is low, and sharing of equipment for injecting drugs is high.

These results suggest efforts to improve HIV outcomes among adolescents and young people in Mombasa have largely stagnated. This means that while current strategies may be 'holding ground', they are not making any significant gains. Further, as 2025 saw dramatic restructuring and elimination of HIV-related funding globally, it is likely the coming years will see reduced access to key commodities of HIV testing, prevention, and treatment across Kenya. Such interruptions pose a real risk to HIV outcomes among adolescents and young people; and to avoid increases to HIV infections and mortalities, it is vital that diverse partners move quickly to ensure continuity of testing, prevention, and treatment [31].

Conclusion: There has been no advancement towards improving HIV outcomes for adolescents and young people in Mombasa, alongside early indications of an imminent decline in outcomes if action is not taken.

SPECIFIC OBJECTIVE 1.2:
IMPROVE SEXUAL AND REPRODUCTIVE HEALTH OUTCOMES

Study findings make clear that many adolescents and young people in Mombasa are sexually active, including a majority of young adults, and that most sexual activity for these populations takes place outside of marriage. Further, more than one third of people in Mombasa become sexually active before the age of 18 years. Supporting the sexual and reproductive health of this population is, therefore, essential.

Unfortunately, study data show that rates of early, unplanned, and termination of pregnancy remain consistently high among adolescent girls and young women. At the same time, condom use during penetrative sex remains remarkably low, with only one quarter of adolescents and young people reporting consistent use in 2025 and no change over time. Indeed, from 2023 to 2025 there were no improvements observed for any of these key markers of sexual and reproductive health and healthcare.

This study also highlights another important issue facing the sexual health of adolescents and young people. We found many were experimenting with digital forms of sexuality, including online dating, viewing pornography, and exchanging digital sexual content ('sexting'). At the same time, however, we found that some such experiences were non-consensual. These results highlight the popularity of such activities, and they raise questions about how to best support adolescents and young people navigating their sexualities online.

Taken together, study results suggest sexual and reproductive health have generally not improved for adolescents and young people in Mombasa. To meet this strategic objective, new and reimagined programs and policies are sorely needed. Sexual education in particular may be failing adolescents and young people, with only one quarter saying that what they were taught on these issues was 'helpful'. The current curriculum for sexual education in Mombasa schools is very narrow in its focus, providing no information on safer sex, family planning, or digital sexualities [32]. To meet ongoing challenges to sexual and reproductive health for these populations, access to and uptake of condoms and contraception must bolstered, and a more comprehensive and realistic curriculum is needed.

Conclusion: These have been little observable advancement towards improving the sexual and reproductive health of adolescents and young people in Mombasa.

SPECIFIC OBJECTIVE 1.3:
IMPROVE MENTAL HEALTH OUTCOMES

In Mombasa, recent years have seen significant investment in the mental health of adolescents and young people. Free mental health care is now offered at young friendly health services across the county, screening for mental health issues in primary care has increased, and group therapy and support programs have been rolled out. Promisingly, in 2025 more than 40% reported some previous mental health support, including a large proportion from mental and other healthcare professionals. Further, from 2023 to 2025, the mental well-being of adolescents and young people in Mombasa increased, while suicidality and symptoms of depression decreased.

These improvements to the mental health outcomes of adolescents and young people in Mombasa are promising, and they suggest investments to-date are starting to yield results. To continue on this path, however, sustained investment is required. Most notably, we find that mental health stigma among healthcare workers remains a pressing issue, which is likely preventing many from seeking or returning for support. And as less than half of adolescents and young people have ever received mental health support, there remains significant opportunity for expanded and enhanced programming.

Improving mental health outcomes, however, is about more than just ensuring access to support. For example, study results show positive associations between physical activity and mental health, echoing findings from 2023 [9]. Other research documents the positive effects physical activity can have not only on physical health but mental health as well [e.g., 33, 34, 35]. It is promising to see investment in physical activity, including through interventions like MindSKILLZ, which uses group sports in Mombasa to provide "support and skills for improved mental health through adolescence and into adulthood" [36]. Despite such interventions, however, uptake of physical activity has declined over time. Further, although MindSKILLZ is only an example its reliance on funding from the United States means steps must be taken to ensure sustainability in an uncertain climate for international development.

Social media was another key element in the mental health of adolescents and young people, with high frequency use indicating poorer outcomes. This finding supports what has been shown in numerous other studies globally [e.g., 37, 38, 39]. Previous studies, however, have often found social media has mixed effects on mental health, highlighting a need to balance 'problematic' use again potential benefits like social connection, information sharing, and community formation [40]. Regardless, it seems evident that social media must be understood as an important space for adolescents and young people in Mombasa; while it grows more popular, physical activity grows less. Thus, creative interventions to promote online and offline socialisation are needed.

Conclusions: Efforts to improve mental health outcomes among adolescents and young people have started to yield positive results. Further investment is needed to ensure ongoing success, especially active engagement around physical activity and social media.

SPECIFIC OBJECTIVE 1.4: IMPROVE MENSTRUAL HYGIENE AND MANAGEMENT

Study results show that access to menstrual products remains an enduring issue for one third of girls and young women in Mombasa. Further, we found that rates of access have not changed over time. While there are many markers of menstrual hygiene and management to consider, at least regarding access there have not been improvements over time. Study results also show that access is strongly associated with economics, meaning that poorer girls and young women faced greater challenges accessing menstrual products. What is often known as 'period poverty' is recognised as a prominent issue across Kenya [41, 42].

Since 2024, the Kenyan federal government has been considering a bill that would, among other conditions, "provide free, sufficient and quality sanitary towels to every woman employed by or studying in a public institution" [43]. If passed and implemented this bill would represent a significant step forward in menstrual justice but notably does not include provisions for those outside public institutions. Indeed, our study findings suggest it is women outside of such institutions that often struggle the most with access. Thus, to achieve any improvement in menstrual hygiene outcomes, it is essential that government and non-government partners in Mombasa County and beyond commit to a comprehensive and equitable approach to ensuring all girls and women can access what products they need without cost.

Conclusion: There has been no observed progress towards improving menstrual hygiene and management among adolescent girls and young women in Mombasa.

SPECIFIC OBJECTIVE 1.5: IMPROVE GENDER-BASED VIOLENCE PREVENTION AND MANAGEMENT

As of 2025 a large proportion of adolescents and young people in Mombasa were victims of violence, including around 14% who experienced sexual violence. As was reported in 2023, the majority who experienced sexual violence never told anyone or sought help. Indeed, the prevalence of sexual violence and rates of help-seeking have remained unchanged over time, suggesting little progress towards this important strategic objective. Although recent years have seen growing attention to these issues in Mombasa, it is clear that more and different forms of investment are needed to reduce rates and improve help-seeking. Further, policymakers, program officers, funders, and others must not ignore the many other kinds of violence facing these populations – including intimate partner violence, cyberbullying, verbal assault, physical assault – and think more holistically how to improve violence prevention overall.

Conclusion: There has been no observed improvement in the prevention and management of sexual and gender-based violence among adolescents and young people in Mombasa.

SPECIFIC OBJECTIVE 1.6: IMPROVE ALCOHOL AND DRUG ABUSE PREVENTION AND MANAGEMENT

Use of alcohol and other substances is very common among adolescents and young people in Mombasa, including around 7% who had indications of abuse. Further, our analyses show strong associations between substance use and mental health outcomes, underscoring the importance and complexity of these issues. As rates of use and problematic use remain stable over time, new and renewed strategies are needed to support how adolescents and young people in Mombasa navigate the world of drugs and alcohol. Underscoring this need, other research finds that substance use is one of the most prominent factors in the mental well-being of young people in Kenya [4].

Adolescents and young people in Mombasa are primarily consuming 'lighter' substances like marijuana and muguka. Building on best practices for supporting young people who use substances, interventions are needed to minimize the specific harms of these drugs while interrupting progression to 'harder' drugs and polysubstance use [44, 45]. Further, it is vital that adolescents and young people who use drugs are involved with intervention design and implementation. Helping parents in Mombasa find supportive, open, and non-judgemental ways to discuss substance use with their children should be part of any program of intervention.

While there is no evidence of improvements to the prevention and management of substance abuse among adolescents and young people in Mombasa, there remain many opportunities. It is certainly important to support those with the most dangerous and difficult patterns of substance use and abuse, but our results suggest these represent a very small proportion of the overall population. Indeed, while Mombasa is home to several substance use programs, these are exclusively focused on high-level use (notably use of injecting drugs), are often over-capacity, and may not be well tailored to the needs of a younger cohort. Overall, it is actually promising that very few adolescents and young people in Mombasa demonstrate problematic use. Thus, it is important that we build on this success by meeting these populations 'where they are' to ensure the messaging and approach is responsive to their specific practices and needs.

Conclusion: There has been no improvement towards improving alcohol and drug abuse prevention and management among adolescents and young people in Mombasa.

SPECIFIC OBJECTIVE 2.1:

IMPROVE SOCIAL AND ECONOMIC STATUS

Over time, the social status of adolescents and young people in Mombasa appears to have improved. From 2023 to 2025, more participants reported access to social support and affirming social spaces. Mombasa is home to numerous youth groups in every sub-county, and recent years has seen investment in 'safe spaces' for these populations including youth friendly health services. Overall, it seems these strategies are working and should be continued to further the social well-being of adolescents and young people.

Regarding economic status, study results show a very large proportion of adolescents and young adults in Mombasa are living in poverty, including over one third who face food and housing insecurity. Largely, we find the economic status of these populations has remained consistently poor over time, with results highlighting how economic stress can directly and indirectly impact health and well-being. Further, we found that the withdrawal of USAID has had an economic impact on young people receiving employment via development-funded programs.

National data suggest young adults face much higher rates of unemployment than any other age group in Kenya [46]. Further, recent years have given rise to major political movements in Mombasa and nationally, which are organised around, among other issues, the economic disenfranchisement of 'Gen Z' [47]. Our study results reinforce the reality of this disenfranchisement, as we find many adolescents and young people have high capabilities and motivation, but lack the opportunities and investments needed to succeed economically.

To improve the health of adolescents and young people, our results suggest it is also necessary to improve their economic status as well. Clearly this issue extends beyond health and healthcare and, as such, will require major reformation spanning multiple disciplines and domains. In Mombasa, those committed to health equity must, therefore, also centre economic justice in their work.

Conclusion: There has been some improvement towards the social status of adolescents and young people in Mombasa. At the same time, there has been no observed improvement towards the economic status of these populations.

Conclusions

This report is published at a challenging time for adolescents and young people in Mombasa. Aside from the standard struggles inherent in growing up and coming-of-age, there are larger systemic issues in play. Often these issues manifest as barriers to health, healthcare, and well-being. Economic issues are especially prominent, but they intersect reflexively with sexual and reproductive health, the changing HIV sector globally, drug and alcohol use, the online world, mental health, and overall well-being. Unfortunately, our results do not pinpoint any single solution to these challenges. Indeed, it seems system-level changes are required if any meaningful improvements are to be realised towards and beyond the *Mombasa County Adolescent and Young People Strategy on Health*.

The strategy includes other objectives not discussed in this report, primarily because this study did not collect data on such issues. Improving nutritional outcomes and enhancing the prevention and management of tuberculosis remain pressing and important issues that should be evaluated using other modes of population health research. While we see very little progress towards meeting most of the strategy's other specific objectives, it is worth celebrating improvements to the mental and social health of adolescents and young people. As change takes time, ongoing research is needed to track the strategy's progress towards its laudable objectives.

Although not covered in the county's youth strategy objectives, our study highlighted access to health insurance as a prominent issue facing young adults in Mombasa. The new SHIF public insurance scheme was designed to address Kenya's goals of universal health coverage, including to improve access for those of the greatest economic disadvantage [48]. While an important ideal, numerous reports find that uptake has been challenged by public confusion and poor communication about the scheme, how to register, and how it works [48, 49]. These barriers are documented in our study also. While it is promising that a growing proportion of young adults in Mombasa report access to insurance, suggesting the roll-out of SHIF has helped improve coverage at least for some, the vast majority – around two thirds – remain uninsured. Thus, strategies to improve communication and simplify the registration process are needed to ensure young people can access this important public program.

Aside from the difficult messages shared in this report, study findings also highlight many reasons for optimism. Adolescent and young people are generally healthy physically and remain highly invested in supporting their communities; as noted, our results show they are motivated, capable, and are primarily seeking opportunities to live healthy and meaningful lives. The existence of youth groups across the county – including many involved with making this study – represent an incredible resource for the social, economic, mental, and physical betterment of adolescents and young people in Mombasa. Now is the time to invest in and support these vibrant communities.

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To download the full reference library, please visit www.mombasayouthstudy.com/references2025

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Appendices

Appendix A: Participant demographics

Table A.1 Sociodemographic characteristics of participants in the 2025 adolescent and youth health survey, by gender and age (n=2,457)

			Boys / Men						Girls / Women					
	Total		10-17 years		18-24 years		All ages		10-17 years		18-24 years		All ages	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Gender														
Boy / man	1042	42.41												
Girl / woman	1380	56.17												
Other [a]	35	1.42												
Age at time of participation														
10-17 yrs old	805	32.76	402	38.58			402	38.58	400	28.99			400	28.99
18-24 yrs old	1652	67.24			640	61.42	640	61.42			980	71.01	980	71.01
Sub-county of residence [b]														
Changamwe	192	7.81	7	1.74	51	7.97	58	5.57	46	11.50	87	8.88	133	9.64
Jomvu	335	13.63	116	28.86	72	11.25	188	18.04	23	5.75	123	12.55	146	10.58
Kisauni	978	39.80	145	36.07	208	32.50	353	33.88	188	47.00	418	42.65	606	43.91
Likoni	293	11.93	40	9.95	83	12.97	123	11.80	66	16.50	101	10.31	167	12.10
Mvita	312	12.70	79	19.65	68	10.62	147	14.11	63	15.75	101	10.31	164	11.88
Nyali	347	14.12	15	3.73	158	24.69	173	16.60	14	3.50	150	15.31	164	11.88
Enrolled in education (any level)														
No	865	35.21	23	5.72	271	42.34	294	28.21	37	9.25	513	52.35	550	39.86
Yes	1592	64.79	379	94.28	369	57.66	748	71.79	363	90.75	467	47.65	830	60.14
Highest level of education (enrolled/achieved) [c]														
None	14	0.58	0	0	2	0.31	2	0.20	1	0.26	11	1.14	12	0.89
Primary	668	27.81	273	71.47	50	7.85	323	31.70	200	52.63	136	14.05	336	24.93
High	901	37.51	109	28.53	244	37.99	351	34.45	179	47.11	364	37.60	543	40.28
College	688	28.64	0	0	284	44.58	284	27.87	0	0	393	40.60	393	29.15
University (undergraduate or postgraduate)	131	5.45	0	0	59	9.26	59	5.79	0	0	64	6.61	64	4.75

a. Those participants who described their gender as 'other' (e.g., intersex) are included in totals but not included in stratification by gender

b. Although residents from all sub-counties were eligible to participate, recruitment activities focused primarily on Mvita, Nyali, and Kisauni

c. Data on education level missing for 55 participants

Table A.2 Sociodemographic characteristics of participants in the qualitative cohort of young people (n=10)

Participant #	Gender	Age	Highest education	Sub-county	Employment status	Disability status	Parent
1	F	24	High School	Kisauni	Unemployed	None	Yes
2	M	19	College	Nyali	Unemployed	None	No
3	M	22	University	Nyali	Unemployed	None	No
4	M	22	College	Mvita	Unemployed	None	No
5	M	24	University	Nyali	Unemployed	None	No
6	F	24	College	Kisauni	Unemployed	None	No
7	F	21	College	Kisauni	Unemployed	None	Yes
8	F	18	Primary School	Mvita	Self-Employed	None	No
9	M	24	College	Kisauni	Self-Employed	Cognitive	No
10	F	23	College	Nyali	Self-Employed	Physical	No

Table A.3 Sociodemographic characteristics of participants in the healthcare workers survey, by wave (n=534 individuals, n=1,155 data points)

	June 2023		November 2023		June 2024		November 2024		March 2025		Changes over time
	(n=216)		(n=222)		(n=233)		(n=253)		(n=231)		
	n	%	n	%	n	%	n	%	n	%	OR (95%CI)
Participant type											
New	216	100	96	43.24	88	37.77	68	26.88	66	26.88	2.06 (1.86-2.27)
Repeat (retention)	0	0	126	56.76	145	62.23	185	73.12	165	71.43	
Type of work											
Non-clinical care	44	20.37	36	16.22	39	16.74	38	15.02	33	14.29	1.10 (0.98-1.23)
Clinical care	172	79.63	186	83.78	194	83.26	215	84.98	198	85.71	
Gender											
Man	65	30.09	55	24.77	83	35.62	64	25.30	63	27.27	1.03 (0.94-1.13
Woman	150	69.44	166	74.77	149	63.95	189	76.52	167	72.29	
Non-binary	1	0.46	1	0.45	1	0.43	3	1.19	1	0.43	
Age											
18-24 years old	78	36.11	74	33.33	74	31.76	69	27.27	76	32.90	1.06 (0.98-1.14)
25-29 years old	69	31.94	78	35.14	92.	39.48	93	36.76	75	32.47	
30-39 years old	49	22.69	46	20.72	44	18.88	58	22.92	52	22.51	
≥40 years old	20	9.26	24	10.81	23	9.87	33	13.04	28	12.12	
Highest level of education											
Primary	7	3.24	12	5.41	8	3.43	16	6.32	11	4.76	0.89 (0.83-1.07)
High	23	10.65	20	9.01	35	15.02	38	15.02	37	16.02	
College	108	50.00	120	54.05	112	48.07	121	47.83	123	53.25	
University	78	36.11	70	31.53	78	33.48	78	30.83	60	25.97	
Length of time in current position											
<1 year	56	25.93	53	23.87	40	17.17	28	11.07	43	18.61	1.14 (1.06-1.23)
1-3 years	58	26.85	59	26.58	80	34.33	76	30.04	50	21.62	
3-5 years	28	12.96	28	12.61	32	13.73	47	18.58	40	17.32	
>5 years	74	34.26	82	36.94	81	34.76	102	40.32	98	42.42	

Appendix B: Physical health

Table B.1. Physical health among adolescents and young people in Mombasa (2025), by gender and age (n=2,457)

			Boys / Men						Girls / Women					
	Total		10-17 years		18-24 years		All ages		10-17 years		18-24 years		All ages	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Self-reported physical health														
Poor-terrible	25	1.02	1	0.25	5	0.78	6	0.58	3	0.75	15	1.53	18	1.30
Average	463	18.84	43	10.70	103	16.09	146	14.01	71	17.75	240	24.49	311	22.54
Excellent-good	1969	80.14	358	89.05	532	83.12	890	85.41	326	81.50	725	73.98	1051	76.16
Physical activity (average days per week)														
None	755	30.73	83	20.65	108	16.88	191	18.33	153	38.25	393	40.10	546	39.57
1-2	698	28.41	102	25.37	166	25.94	268	25.72	108	27.00	312	31.84	420	30.43
3-5	580	23.61	89	22.14	226	35.31	315	30.23	84	21.00	175	17.86	259	18.77
6-7	424	17.26	128	31.84	140	21.88	268	25.72	55	13.75	100	10.20	155	11.23

Table B.2 Access to physical health care among adolescents and young people in Mombasa (2025), by gender and age (n=2,457)

	Total		Boys / Men						Girls / Women					
			10-17 years		18-24 years		All ages		10-17 years		18-24 years		All ages	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
General access to healthcare [a]														
Poor-terrible	515	27.38	18	16.98	183	29.14	201	27.38	39	22.67	270	28.69	309	27.76
Average	869	46.20	50	47.17	282	44.90	332	45.23	69	40.12	450	47.82	519	46.63
Excellent-good	497	26.42	38	35.85	163	25.96	201	27.38	64	37.21	221	23.49	285	25.61
Recently unable to access necessary healthcare [a]														
No	1114	56.55	79	68.10	372	58.13	451	59.66	114	57.00	534	54.49	648	54.92
Yes	856	43.45	37	31.90	268	41.88	305	40.34	86	43.00	446	45.51	532	45.08
Reason for not receiving healthcare [a, b]														
Cost	259	89.31												
Distance (too far)	5	1.72												
Stigma	13	4.48												
No time	7	2.41												
Receive negative treatment by healthcare workers [a]														
Never	1,166	59.19	85	73.28	372	58.13	457	60.45	147	73.50	557	56.84	704	59.66
Sometimes	662	33.60	29	25.00	223	34.84	252	33.33	38	19.00	348	35.51	386	32.71
Often	142	7.21	2	1.72	45	7.03	47	6.22	15	7.50	75	7.62	90	7.63
Health insurance [c]														
No	1080	67.46			414	65.92					645	68.54		
Yes	441	27.55			182	28.98					251	26.67		
Unsure	80	5.00			32	5.10					45	4.78		
Recently attended youth friendly health service														
No	1638	66.67	309	76.87	409	63.91	718	68.91	310	77.50	595	60.71	905	65.58
Yes	819	33.33	93	23.13	231	36.09	324	31.09	90	22.50	385	39.29	475	34.42

a. Only asked of participants aged 15 years and older participating in the full survey

b. This was an optional qualitative item (n=290 completed) and because of low numbers not reported for strata by age of gender

c. Only asked of participants aged 18 years and older

Table B.3 Physical health and healthcare among adolescents and young people in Mombasa (2023-2025), by year [a] and gender (n=2,940) [b]

	Total			Boys / Men			Girls / Women		
	2023 n (%)	**2025 n (%)**	**aOR (95%CI)**	**2023 n (%)**	**2025 n (%)**	**aOR (95%CI)**	**2023 n (%)**	**2025 n (%)**	**aOR (95%CI)**
Excellent-good physical health	986 (75.56)	1301 (79.47)	1.17 (0.99-1.36)	350 (82.55)	565 (83.95)	1.06 (0.79-1.41)	631 (72.11)	712 (76.23)	1.25 (0.99-1.37)
Physically active (≥3 days per wk)	600 (45.98)	595 (39.56)	**↓ 0.68 (0.65-0.71)**	261 (61.56)	350 (55.38)	**↓ 0.79 (0.68-0.92)**	335 (38.29)	238 (28.27)	**↓ 0.64 (0.58-0.71)**
Overall excellent-good access to care	270 (23.71)	316 (25.97)	1.16 (0.98-1.38)	82 (21.03)	130 (27.14)	1.41 (0.83-2.38)	187 (25.13)	178 (25.11)	178 (25.11)
Recently unable to access necessary care	589 (51.71)	577 (44.18)	**↓ 0.73 (0.58-0.93)**	182 (46.67)	209 (41.72)	0.82 (0.50-1.32)	406 (54.57)	352 (45.36)	**↓ 0.69 (0.61-0.77)**
Negative treatment by healthcare workers	106 (9.31)	92 (7.04)	**↓0.83 (0.59-0.90)**	36 (9.23)	35 (6.99)	0.74 (0.45-1.20)	70 (9.41)	54 (6.96)	**↓ 0.72 (0.65-0.81)**
Health insured	240 (22.28)	297 (28.92)	**↑ 1.40 (1.22-1.60)**	84 (22.89)	121 (30.10)	**↑ 1.42 (1.04-1.94)**	155 (21.95)	169 (28.21)	**↑ 1.38 (1.13-1.69)**

BOLD represents a statistically observable change

a. All analyses of change over time account for potential differences by gender, age, and location

b. To enable comparisons over time, all longitudinal analyses are restricted to Kisauni, Nyali, and Mvita

Table B.4 Knowledge of key health concepts among adolescents and young people in Mombasa (2025), by gender and age (n=1881) [a]

	Total		Boys / Men						Girls / Women					
			15-17 years [a]		18-24 years		All ages		15-17 years [a]		18-24 years		All ages	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
"Muguka and khat are bad for your health."														
True [b]	1697	90.22	95	89.62	571	90.92	666	90.74	156	90.70	848	90.12	1004	90.21
False	89	4.73	10	9.43	18	2.87	28	3.81	10	5.81	48	5.10	58	5.21
Unsure	95	5.05	1	0.94	39	6.21	40	5.45	6	3.49	45	4.78	51	4.58
"Seeing a psychologist is only for people with serious mental illness."														
True	409	21.74	37	34.91	134	21.34	171	23.30	39	22.67	189	20.09	228	20.49
False [b]	1255	66.72	55	51.89	425	67.68	480	65.40	93	54.07	662	70.35	755	67.83
Unsure	217	11.54	14	13.21	69	10.99	83	11.31	40	23.26	90	9.56	130	11.68
"PrEP cannot prevent sexually transmitted infections."														
True [b]	795	42.26	38	35.85	267	42.52	305	41.55	44	25.58	424	45.06	468	42.05
False	638	33.92	27	25.47	204	32.48	231	31.47	68	39.53	332	35.28	400	35.94
Unsure	448	23.82	41	38.68	157	25.00	198	26.98	60	34.88	185	19.66	245	22.01
"Vegetables are important for building health."														
True [b]	1831	97.34	99	93.40	609	96.97	708	96.46	165	95.93	925	98.30	1090	97.93
False	27	1.44	4	3.77	8	1.27	12	1.63	4	2.33	11	1.17	15	1.35
Unsure	23	1.22	3	2.83	11	1.75	14	1.91	3	1.74	5	0.53	8	0.72
"Vaccines are a safe way to prevent illness and stay healthy."														
True [b]	1655	87.99	89	83.96	560	89.17	649	88.42	144	83.72	835	88.74	979	87.96
False	102	5.42	9	8.49	30	4.78	39	5.31	11	6.40	49	5.21	60	5.39
Unsure	124	6.59	8	7.55	38	6.05	46	6.27	17	9.88	57	6.06	74	6.65
Summary score: all correct [c]	427	34.60	16	29.09	139	34.32	155	33.70	22	23.40	241	36.63	263	34.97

a. Only asked of participants aged 15 years and older who participated in the full survey

b. Indicates best response

c. Summary score of correct responses across all five items with 'unsure' scored as incorrect

Appendix C: Mental health and well-being

Table C.1 Indications of mental health, well-being, and support among adolescents and young people in Mombasa (2025), by gender and age (n=2,457)

			Boys / Men						Girls / Women					
	Total		10-17 years		18-24 years		All ages		10-17 years		18-24 years		All ages	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Overall well-being [a]														
Poor-terrible	287	11.68	21	5.22	73	11.41	94	9.02	26	6.50	159	16.22	185	13.41
Average	884	35.98	86	21.39	259	40.47	345	33.11	124	31.00	400	40.82	524	37.97
Good-excellent	1,286	52.34	295	73.38	308	48.12	603	57.87	250	62.50	421	42.96	671	48.62
Indications of depression [b]														
None	2,110	85.88	379	94.28	556	86.88	935	89.73	370	92.50	778	79.39	1148	83.19
Mild	71	2.89	13	3.23	18	2.81	31	2.98	13	3.25	25	2.55	38	2.75
Moderate	113	4.6	9	2.24	27	4.22	36	3.45	12	3.00	64	6.53	76	5.51
Moderately severe	84	3.42	1	0.25	26	4.06	27	2.59	3	0.75	51	5.20	54	3.91
Severe	79	3.22	0	0	13	2.03	13	1.25	2	0.50	62	6.33	64	4.64
Indications of suicidality [c]														
No	1765	89.59	113	97.41	592	92.50	705	93.25	187	93.50	845	86.22	1032	87.46
Yes	205	10.41	3	2.59	48	7.50	51	6.75	13	6.50	135	13.78	148	12.54
Ever received mental health support [d]														
No	1449	58.97	281	69.90	349	54.53	630	60.46	289	72.25	519	52.96	808	58.55
Yes	1008	41.03	121	30.10	291	45.47	412	39.54	111	27.75	461	47.04	572	41.45
Recently received mental health support [e]														
No	1537	78.02	97	83.62	499	77.97	596	78.84	180	90.00	742	75.71	922	78.14
Yes	433	21.98	19	16.38	141	22.03	160	21.16	20	10.00	238	24.29	258	21.86
Mental health support provided by [c,f]														
Psychologist, psychiatrist, counsellor	276	27.38	6	4.96	97	3.33	103	25.00	11	9.91	149	32.32	160	27.97
Doctor, nurse, clinician	241	23.91	12	9.92	85	29.21	97	23.54	18	16.22	121	26.25	139	24.30
Religious figure	73	7.24	4	3.31	37	12.71	41	9.95	2	1.80	29	6.29	31	5.42
Parents	139	13.79	4	3.31	57	19.59	61	14.81	7	6.31	66	14.32	73	12.76
Friend	95	9.42	1	0.83	37	12.71	38	9.22	3	2.70	46	9.98	49	8.57
Peer-support worker	164	16.27	8	6.61	53	18.21	61	14.81	7	6.31	93	20.17	100	17.48
Other	28	2.78	2	1.65	11	3.78	13	3.16	0	0	14	3.04	14	2.45

a. As measured by World Health Organization Well-Being Index (WHO-5)
b. As measured by the nine-item Patient Health Questionnaire (PHQ-9)
c. Only asked of participants aged 15 years or older participating in the full survey
d. 'Support' in this context could refer to formal care (e.g., from a psychologist) or informal support (e.g., talking with friends or family)
e. Recently defined as within the six months prior to participation
f. Participants could select multiple options (i.e., non-exclusive categories)

Table C.2 Mental health and support among adolescents and young people in Mombasa (2023-2025), by year [a] (n=2,940) [b]

	Total			Boys / Men			Girls / Women		
	2023 n (%)	2025 n (%)	aOR (95%CI)	2023 n (%)	2025 n (%)	aOR (95%CI)	2023 n (%)	2025 n (%)	aOR (95%CI)
Excellent-good (positive) well-being	529 (40.54)	838 (51.19)	**↑ 1.48 (1.33-1.64)**	167 (39.39)	374 (55.57)	**↑ 1.68 (1.42-1.98)**	361 (41.26)	455 (48.72)	**↑ 1.37 (1.20-1.55)**
Indications of depression	200 (15.33)	185 (11.30)	**↓ 0.73 (0.56-0.95)**	55 (12.97)	54 (8.02)	0.68 (0.34-1.36)	145 (16.57)	125 (13.38)	**↓ 0.76 (0.71-0.81)**
Indications of suicidality	155 (13.61)	130 (9.95)	**↓ 0.67 (0.50-0.89)**	45 (11.54)	31 (6.19)	0.50 (0.22-1.16)	110 (14.78)	193 (11.98)	**↓ 0.75 (0.75-0.76)**
Ever received mental health support	559 (42.84)	693 (42.33)	0.97 (0.93-1.03)	187 (44.10)	286 (42.50)	1.00 (0.66-1.52	371 (42.40)	386 (41.33)	0.96 (0.77-1.18)
Recently received mental health support	284 (24.93)	296 (22.66)	0.83 (0.7-1.01)	97 (24.87)	120 (23.95)	0.94 (0.82-1.08)	187 (25.13)	164 (21.13)	**↓ 0.78 (0.65-0.92)**

BOLD represents a statistically observable change

a. All analyses of change over time account for potential differences by gender, age, and location

b. To enable comparisons over time, all longitudinal analyses restricted to Kisauni, Nyali, and Mvita

Table C.3 Stigmatizing attitudes towards mental health [a] among healthcare workers in Mombasa, by wave of data collection (n=1,155)

	June 2023 (n=216)		November 2023 (n=222)		June 2024 (n=233)		November 2024 (n=253)		March 2025 (n=231)		Changes over time
	n	%	n	%	n	%	n	%	n	%	OR (95%CI)
Mental health stigma – all healthcare workers (n=1,155)											
Low stigma	144	66.67	144	64.86	152	65.24	162	64.03	149	64.50	1.01 (0.97-1.06)
Medium stigma	56	25.93	61	27.48	58	24.89	57	22.53	42	18.18	
High stigma	16	7.41	17	7.66	23	9.87	34	13.44	40	17.32	
Mental health stigma – clinicians (n=965)											
Low stigma	111	64.53	114	61.29	120	61.86	133	61.86	127	64.14	1.01 (0.95-1.07)
Medium stigma	47	27.33	57	30.65	51	26.29	50	23.26	33	16.67	
High stigma	14	8.14	15	8.06	23	11.86	32	14.88	38	19.19	
Mental health stigma – non-clinicians (n=190)											
Low stigma	33	75.00	30	83.33	32	82.05	29	76.32	22	66.67	1.03 (0.77-1.38)
Medium stigma	9	20.45	4	11.11	7	17.95	7	18.42	9	27.27	
High stigma	2	4.55	2	5.56	0	0	2	5.26	2	6.06	

BOLD represents a statistically observable change

a. As measured by the Opening Minds Stigma Scale for Health Care Providers

b. analyses of change over time account for potential differences between clinics and by age, gender, and level of education

Appendix D: Social and economic health

Table D.1 Social relationships and spaces among adolescents and young people in Mombasa (2025), by gender and age (n=2,457)

			Boys / Men						Girls / Women					
	Total		10-17 years		18-24 years		All ages		10-17 years		18-24 years		All ages	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Friendships														
None	66	2.69	11	2.74	8	1.25	19	1.82	15	3.75	30	3.06	45	3.26
One	830	33.78	81	20.15	178	27.81	259	24.86	144	36.00	412	42.04	556	40.29
Several (2 or more)	1561	63.53	310	77.11	454	70.94	764	73.32	241	60.25	538	54.90	779	56.45
Access to safe and affirming social spaces														
No	599	24.38	142	35.32	110	17.19	252	24.18	141	35.25	197	20.10	338	24.49
Yes	1858	75.62	260	64.68	530	82.81	790	75.82	259	64.75	783	79.90	1042	75.51
Average time on social media (per day)														
None	562	22.87	225	55.97	26	4.06	251	24.09	204	51.00	107	10.92	311	22.54
Very little, almost none	186	7.57	33	8.21	29	4.53	62	5.95	54	13.50	70	7.14	124	8.99
<1 hour	344	14.00	65	16.17	72	11.25	137	13.15	61	15.25	139	14.18	200	14.49
1-2 hours	431	17.54	47	11.69	139	21.72	186	17.85	41	10.25	198	20.20	239	17.32
≥3 hours	934	38.01	32	7.96	374	58.44	406	38.96	40	10.00	466	47.55	506	36.67
Importance of religion in daily life [a]														
Unimportant	23	0.99	5	1.34	4	0.64	9	0.90	6	1.73	6	0.64	12	0.93
Mixed	222	9.55	19	5.09	57	9.08	76	7.59	44	12.68	90	9.56	134	10.40
Important	2079	89.46	349	93.57	567	90.29	916	91.51	297	85.59	845	89.80	1142	88.66

a. Only asked of those participating in the full survey

Table D.2 Social relationships and spaces among adolescents and young people in Mombasa (2023-2025), by age, gender, and year [a] (n=2,940) [b]

	Total			Boys / Men			Girls / Women		
	2023 n (%)	2025 n (%)	aOR (95%CI)	2023 n (%)	2025 n (%)	aOR (95%CI)	2023 n (%)	2025 n (%)	aOR (95%CI)
One or more friends	1185 (90.80)	1590 (97.13)	↑ **3.27 (1.88-5.67)**	401 (94.58)	660 (98.07)	↑ **3.16 (1.91-5.24)**	779 (89.03)	901 (96.47)	↑ **3.37 (1.86-6.11)**
Access to safe & affirming spaces	733 (64.35)	1216 (74.28)	↑ **1.84 (1.53-2.22)**	256 (65.64)	501 (74.44)	↑ **1.96 (1.67-2.29)**	475 (63.84)	693 (74.20)	↑ **1.79 (1.53-2.10)**
≥3 hours per day on social media	525 (40.23)	669 (40.87)	1.10 (0.97-1.24)	182 (42.92)	278 (41.31)	1.25 (0.99-1.59)	337 (38.51)	370 (39.61)	↑1.04 (1.01-1.07)
Religion important	1101 (84.37)	1348 (82.35)	0.89 (0.37-2.15)	346 (81.60)	582 (86.48)	1.43 (0.48-4.31)	753 (86.06)	748 (80.09)	0.65 (0.34-1.25)

BOLD represents a statistically observable change

a. All analyses of change over time account for potential differences by gender, age, and location

b. To enable comparisons over time, all longitudinal analyses are restricted to Kisauni, Nyali, and Mvita

Table D.3 Familial relationships [a] among adolescents and young people in Mombasa (2025), by gender and age (n=2,457)

	Total		Boys / Men						Girls / Women					
			10-17 years		18-24 years		All ages		10-17 years		18-24 years		All ages	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Romantic relationship [a]														
Never	443	23.55	73	68.87	99	15.76	172	23.43	116	67.44	149	15.83	265	23.81
Currently	804	42.74	10	9.43	276	43.95	286	38.96	23	15.12	477	50.69	503	45.19
In the past	634	33.71	23	21.70	253	40.29	276	37.60	30	17.44	315	33.48	345	31.00
Marriage [a]														
Never	1698	90.27	105	99.06	594	94.59	699	95.23	169	98.26	800	85.02	969	87.06
Currently	132	7.02	0	0	26	4.14	26	3.54	1	0.58	101	10.73	102	9.16
In the past	51	2.71	1	0.94	8	1.27	9	1.23	2	1.16	40	4.25	42	3.77
Currently in contact with family														
No	156	6.35	24	5.97	39	6.09	63	6.05	24	6.00	63	6.43	87	6.30
Yes	2301	93.65	378	94.03	601	93.91	979	93.95	376	94.00	917	93.57	1293	93.70
Negative treatment by family [b]														
Never/rarely	1239	70.72	76	77.55	420	71.19	496	72.09	125	80.13	607	68.98	732	70.66
Sometimes	357	20.38	17	17.35	122	20.68	139	20.20	21	13.46	185	21.02	206	19.88
Often	156	8.90	5	5.10	48	8.14	53	7.70	10	6.41	88	10.00	98	9.46

a. Only asked of participants who completed the full survey

b. Only asked of participants reporting some contact with their family

Table D.4 Familial relationships among adolescents and young people in Mombasa (2023-2025), by age, gender, and year [a] (n=2,940) [b]

	Total			Boys / Men			Girls / Women		
	2023 n (%)	2025 n (%)	aOR (95%CI)	2023 n (%)	2025 n (%)	aOR (95%CI)	2023 n (%)	2025 n (%)	aOR (95%CI)
In a relationship (married/other)	450 (34.48)	550 (33.60)	1.05 (0.74-1.48)	156 (36.78)	197 (29.27)	0.89 (0.59-1.33)	291 (33.26)	341 (36.51)	1.15 (0.83-1.60)
Current contact with family	1524 (93.10)	185 (11.30)	1.02 (0.79-1.32)	395 (93.16)	627 (93.16)	0.97 (0.58-1.64)	814 (93.03)	872 (93.36)	1.06 (0.92-1.21)
Negative treatment from family	113 (9.31)	100 (6.56)	**↓ 0.70 (0.63-0.78)**	34 (8.61)	37 (5.90)	0.78 (0.44-1.38)	79 (9.71)	58 (6.65)	**↓ 0.65 (0.51-0.93)**

BOLD represents a statistically observable change

a. All analyses of change over time account for potential differences by gender, age, and location

b. To enable comparisons over time, all longitudinal analyses are restricted to Kisauni, Nyali, and Mvita

Table D.5 Economic health among adolescents and young people in Mombasa (2025), by gender and age (n=2,457)

	Total		Boys / Men						Girls / Women					
			10-17 years		18-24 years		All ages		10-17 years		18-24 years		All ages	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Monthly income [a]														
None	511	61.05	16	88.89	141	52.61	157	54.90	23	79.31	326	65.07	349	65.85
1-4,999 KES	175	20.91	0	0	57	21.27	57	19.93	4	13.79	106	21.16	110	20.75
5,000-19,999 KES	128	15.29	2	11.11	55	20.52	57	19.93	1	3.45	63	12.57	64	12.08
>20,000 KES	23	2.75	0	0	15	5.60	15	5.24	1	3.45	6	1.20	7	1.32
School truancy (days missed in two weeks) [b]														
None	427	64.60	155	63.52	62	65.96	217	64.20	122	64.21	88	66.67	210	65.22
1-2 days	137	20.73	57	23.36	16	17.02	73	21.60	39	20.53	24	18.18	63	19.57
3-4 days	58	8.77	22	9.02	10	10.64	32	9.47	18	9.47	8	6.06	26	8.07
5 or more days	39	5.90	10	4.10	6	6.38	16	4.73	11	5.79	12	9.06	23	7.14
Food insecurity [c]														
No	1603	65.24	332	82.59	373	58.28	705	67.66	296	74.00	579	59.08	875	63.41
Yes	854	34.76	70	17.41	267	41.72	337	32.34	104	26.00	401	40.92	505	36.59
Housing insecurity														
No	1735	70.61	253	62.94	459	71.72	712	68.33	249	62.25	751	76.63	1000	72.46
Yes	722	29.39	149	37.06	181	28.28	330	31.67	151	37.75	229	23.37	380	27.54

a. Only asked of participants aged 15 years and older not enrolled in school
b. Only asked of participants enrolled in school not reporting holidays at the time of participation
c. Defined as two or more days going hungry in the week prior to participation

Table D.6 Economic health among adolescents and young people in Mombasa (2023-2025), by age, gender, and year [a] (n=2,490) [b]

	Total			Boys / Men			Girls / Women		
	2023 n (%)	2025 n (%)	aOR (95%CI)	2023 n (%)	2025 n (%)	aOR (95%CI)	2023 n (%)	2025 n (%)	aOR (95%CI)
Living in poverty (<5,000 KES)	375 (82.42)	462 (79.93)	0.96 (0.78-1.19)	99 (76.15)	153 (75.00)	0.89 (0.59-1.33)	276 (85.45)	297 (83.90)	0.94 (0.59-1.50)
Food insecurity	659 (50.50)	554 (33.84)	**↓ 0.52 (0.48-0.56)**	205 (48.35)	218 (32.39)	**↓ 0.97 (0.58-1.64)**	450 (51.43)	325 (34.80)	**↓ 0.50 (0.43-0.57)**
Housing insecurity	331 (25.36)	499 (30.48)	1.23 (0.81-1.88)	122 (28.77)	210 (31.20)	1.08 (0.68-1.73)	207 (23.66)	279 (29.87)	1.38 (0.95-1.99)

BOLD represents a statistically observable change
a. All analyses of change over time account for potential differences by gender, age, and location
b. To enable comparisons over time, all longitudinal analyses are restricted to Kisauni, Nyali, and Mvita

Appendix E: Disability and accessibility

Table E.1 Self-reported disability among adolescents and young people in Mombasa (2025), by gender and age (n=2,324) [a]

	Total		Boys / Men						Girls / Women					
			10-17 years		18-24 years		All ages		10-17 years		18-24 years		All ages	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Optical correction (eyeglasses)														
None needed	1612	69.36	312	83.65	463	73.73	775	77.42	237	68.30	582	61.85	819	63.59
Currently wear eyeglasses	247	10.63	21	5.63	41	6.53	62	6.19	29	8.36	149	15.83	178	13.82
Trouble seeing, no eyeglasses [b]	465	20.01	40	10.72	124	19.75	164	16.38	81	23.34	210	22.32	291	22.59
Self-reported disability status [c]														
None reported	2231	96.00	363	97.32	596	94.90	959	95.80	331	95.39	907	96.39	1238	96.12
One disability	87	3.74	9	2.41	30	4.78	39	3.90	16	4.61	31	3.29	47	3.65
Multiple disabilities	6	0.26	1	0.27	2	0.32	3	0.30	0	0	3	0.32	3	0.23
Disabilities [d]														
Blind/serious seeing impairment[e]	5	0.22	1	0.27	1	0.16	2	0.20	0	0	3	0.32	3	0.23
Deaf/serious hearing impairment	14	0.60	1	0.27	3	0.48	4	0.40	3	0.86	6	0.64	9	0.70
Physical disability	34	1.46	5	1.34	13	2.07	18	1.80	4	1.15	12	1.28	16	1.24
Intellectual or cognitive disability	3	0.13	0	0	0	0	0	0	2	0.58	1	0.11	3	0.23
Neurodivergence (e.g., autism)	2	0.09	0	0	0	0	0	0	1	0.29	1	0.11	2	0.16
Chronic mental illness	13	0.56	2	0.54	6	0.96	8	0.80	1	0.29	4	0.43	5	0.39
Chronic physical illness	9	0.39	1	0.27	2	0.32	3	0.30	0	0	6	0.64	6	0.47
Other	20	0.86	1	0.27	9	1.43	10	1.00	5	1.44	5	0.53	10	0.78

a. Only asked of participants in the full survey

b. In 2023, the proportion of participants who needed eyeglasses but did not have them was 25.73%, which decreased slightly to 20.01% in 2025 (aOR=0.75, 95%CI: 0.0.60-0.94)

c. Some participants (n=40) were unsure of their disability status

d. Participants could select multiple options (i.e., non-exclusive categories)

e. Defined as a serious optical condition beyond the need for corrective eyeglasses)

Table E.2 Perceptions of disability [a] and accessibility among healthcare workers in Mombasa, by wave [b] of data collection (n=917)

	November 2023 (n=222)		June 2024 (n=233)		November 2024 (n=253)		March 2025 (n=231)		Changes over time
	n	%	n	%	n	%	n	%	OR (95%CI)
Disability stigma – all healthcare workers (n=482) [b]									
Low stigma					167	66.53	145	62.77	1.03 (0.59-1.80)
Medium stigma					77	30.68	82	35.50	
High stigma					7	2.79	4	1.73	
Disability stigma – clinicians (n=412) [b]									
Low stigma					137	64.02	121	61.11	1.09 (0.65-1.83)
Medium stigma					71	33.18	73	36.87	
High stigma					6	2.80	4	2.02	
Disability stigma – non-clinicians (n=70) [b]									
Low stigma					30	81.08	24	72.73	0.63 (0.17-2.35)
Medium stigma					6	16.22	9	27.27	
High stigma					1	2.70	0	0	
"How easy is for people with physical and other disabilities to access your health service?" [b,c]									
Very difficult	20	9.35	12	5.41	15	6.25	2	0.90	1.38 (1.27-1.51)
Somewhat difficult	67	31.31	46	20.72	39	16.25	42	19.00	
Somewhat easy	78	36.45	90	40.54	79	32.92	75	33.94	
Very easy	49	22.90	74	33.33	107	44.58	102	46.15	

BOLD represents a statistically observable change

a. As measured by the Disability Attitudes in Health Care Scale

b. Items of accessibility were added in Wave 2 (November 2023) while items on disability stigma were added in Wave 4 (November 2024)

c. Excludes participants who were unsure (n=32)

Appendix F: : Drugs and alcohol

Table F.1 Use of alcohol and other drugs among adolescents and young people in Mombasa (2025), by gender and age (n=2,457)

			Boys / Men						Girls / Women					
	Total		10-17 years		18-24 years		All ages		10-17 years		18-24 years		All ages	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Ever used														
Alcohol	563	22.91	16	3.98	238	37.19	254	24.38	11	2.75	276	28.16	287	20.80
Drugs	424	17.26	15	3.73	199	31.09	214	20.54	9	2.25	182	18.57	191	13.84
Injecting drugs [a]	34	1.73	0	0	11	1.72	11	1.46	1	0.50	20	2.05	21	1.78
Cigarettes	327	13.31	10	2.49	165	25.78	175	16.79	9	2.25	130	13.27	139	10.07
Vape (e-cigarette)	294	11.97	13	3.23	130	20.31	143	13.72	11	2.75	128	13.06	139	10.07
Recently used [b]														
Alcohol	360	14.65	7	1.74	157	24.53	164	15.74	7	1.75	170	17.35	177	12.83
Drugs	282	11.48	10	2.49	136	21.25	146	14.01	7	1.75	114	11.63	121	8.77
Injecting drugs [a]	15	0.76	0	0	4	0.63	4	0.53	1	0.50	10	1.02	11	0.93
Cigarettes	186	7.57	5	1.24	89	13.91	94	9.02	6	1.50	78	7.96	84	6.09
Vape (e-cigarette)	156	6.35	4	1.00	58	9.06	62	5.95	7	1.75	79	8.06	86	6.23
Recently used drugs [b,c]														
Marijuana	174	7.08	5	1.24	88	13.75	93	8.93	6	1.50	71	7.24	77	5.58
Muguka/jabba/ khat	164	6.67	3	0.75	77	12.03	80	7.68	5	1.25	67	6.84	72	5.22
Tumbaku	20	0.81	2	0.50	10	1.56	12	1.15	0	0	6	0.61	6	0.43
Glue	14	0.57	5	1.24	3	0.47	8	0.77	3	0.75	3	0.31	6	0.43
Kuber	7	0.28	2	0.50	3	0.47	5	0.48	0	0	2	0.20	2	0.14
Cocaine	9	0.37	1	0.25	0	0	1	0.10	2	0.50	6	0.61	8	0.58
Heroin	4	0.16	0	0	2	0.31	2	0.19	0	0	2	0.20	2	0.14
Diazepam (e.g., Valium)	1	0.04	0	0	1	0.16	1	0.10	0	0	0	0	0	0
Methaqualone (e.g., Mandrax)	1	0.04	0	0	1	0.16	1	0.10	0	0	0	0	0	0
Others [d]	11	0.45	2	0.50	2	0.31	4	0.38	0	0	7	0.72	7	0.51

a. Some participants chose not to answer questions about injecting drug use (n=16)
b. Recently defined as the six months prior to participation
c. Participants could select multiple options (i.e., non-exclusive categories)
d. Other drugs included 'party' substances like MDMA and LSD

Table F.2 Indications of substance use risks among adolescents and young people in Mombasa (2025), by gender and age (n=2,457) [a]

	Total		Boys / Men						Girls / Women					
			15-17 years		18-24 years		All ages		15-17 years		18-24 years		All ages	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Typical substance use (per week)														
Rarely / never	2151	87.55	391	97.26	499	77.97	890	85.41	392	98.00	852	86.94	1244	90.14
1-2 days per week	138	5.62	4	1.00	65	10.16	69	6.62	3	0.75	62	6.33	65	4.71
3-4 days per week	88	3.58	1	0.25	38	5.94	39	3.74	2	0.50	39	3.98	41	2.97
5-6 days per week	42	1.71	0	0	19	2.97	19	1.82	2	0.50	19	1.94	21	1.52
Every day / almost every day	38	1.55	6	1.49	19	2.97	25	2.40	1	0.25	8	0.82	9	0.65
Recent poly-drug use [a,b]														
The internet	160	58.39	3	33.33	81	60.90	84	59.15	2	28.57	66	59.46	68	57.63
Parents	59	21.53	2	22.22	30	22.56	32	22.54	1	14.29	21	18.92	22	18.64
Friends	55	20.07	4	44.44	22	16.54	26	18.31	4	57.14	24	21.62	28	23.73
Perceive muguka/khat/jabba as harmful														
No	184	9.78	11	10.38	57	9.08	68	9.26	16	9.30	93	9.88	109	9.79
Yes	1697	90.22	95	89.62	571	90.92	666	90.74	156	90.70	848	90.12	1004	90.21
Friends who use muguka/khat/jabba														
None	1213	49.37	302	75.12	164	25.62	466	44.72	297	74.25	443	45.20	740	53.62
Some	877	35.69	78	19.40	361	56.41	439	42.13	51	12.75	369	37.65	420	30.43
Most or all	186	7.57	5	1.24	74	11.56	79	7.58	10	2.50	88	8.98	98	7.10
Not sure	181	7.37	17	4.23	41	6.41	58	5.57	42	10.50	80	8.16	122	8.84
Recent sharing of injecting equipment [c]														
No	2	13.33	0	0	1	25.00	1	25.00	0	0	1	10.00	1	9.09
Yes	13	86.67	0	0	3	75.00	3	75.00	1	100	9	90.00	10	90.91

a. Only asked of participants reporting recent drug use
b. Not reported for 8 participants
c. Only asked of participants reporting recent injecting drug use

Table F.3 Use of alcohol and other drugs among adolescents and young people in Mombasa (2023-2025), by age, gender, and year [a] (n=2,945) [b]

	Total			Boys / Men			Girls / Women		
	2023 n (%)	**2025 n (%)**	**aOR (95%CI)**	**2023 n (%)**	**2025 n (%)**	**aOR (95%CI)**	**2023 n (%)**	**2025 n (%)**	**aOR (95%CI)**
Recent alcohol use	222 (19.49)	259 (19.83)	0.91 (0.67-1.23)	98 (25.13)	122 (24.35)	0.93 (0.57-1.54)	122 (16.40)	120 (15.46)	0.89 (0.74-1.07)
Recent drug use	159 (13.96)	199 (15.24)	0.98 (0.72-1.33)	80 (20.51)	102 (20.36)	0.97 (0.65-1.47)	76 (10.22)	83 (10.70)	1.02 (0.80-1.30)
Recent injecting drugs	18 (1.59)	12 (0.92)	0.57 (0.12-2.77)	8 (2.06)	3 (0.60)	0.29 (0.03-2.85)	10 (1.35)	9 (1.16)	0.83 (0.29-2.40)
Recent sharing injecting equipment	7 (53.85)	10 (83.33)	**↑ 4.13 (2.90-5.90)**	4 (66.67)	2 (66.67)	0.70 (0.06-7.81)	3 (42.86)	8 (88.89)	**↑ 173.99 (20.0-66.3)**
Recent cigarette use [c]	68 (5.97)	130 (9.95)	**↑ 1.61 (1.30-2.01)**	32 (8.21)	67 (13.37)	1.72 (0.94-3.13)	36 (4.84)	56 (7.22)	**↑ 1.48 (1.03-2.13)**

BOLD represents a statistically observable change

a. All analyses of change over time account for potential differences by gender, age, and location

b. This table only includes participants aged 15 years and older as in 2023 recent substance use was asked only of older participants

c. Items about vaping were added in 2025, precluding comparisons over time

Appendix G: Reproductive health

Table G.1 Pregnancy and children among adolescent girls and young women in Mombasa (2025), by age (n=1,380)

	Girls / Women					
	10-17 years		18-24 years		All ages	
Experiences of pregnancy						
Never pregnant	391	97.75	656	66.94	1047	75.87
Pregnant within past year [a]	2	0.50	79	8.06	81	5.87
Pregnant previously, not within past year	7	1.75	245	25.00	252	18.26
Age of first pregnancy [b,c]						
<16 years old	2	22.22	16	4.97	18	5.44
16-17 years old	7	77.78	52	16.15	59	17.82
18-19 years old			105	32.61	105	31.72
≥20 years old			149	46.27	149	45.02
First pregnancy planned [b,c]						
No	7	77.78	220	67.90	227	68.17
Yes	2	22.22	86	26.54	88	26.43
Unsure	0	0	18	5.56	18	5.41
Number of children [b]						
None	3	33.33	80	24.69	83	24.92
1	5	55.56	178	54.94	183	54.95
2	0	0	55	16.98	55	16.52
3	1	11.11	11	3.40	12	3.60
Participated in new mother support programs [f]						
No	0	0	47	60.26	47	59.49
Yes	1	100	31	39.74	32	40.51
Currently using contraception [e]						
None or minimal	7	50.00	172	36.52	179	36.91
Some	7	50.00	299	63.48	306	63.09
Ever had termination of pregnancy [b]						
No	6	75.00	251	78.44	257	78.35
Yes	2	25.00	69	21.56	71	21.65
Any complications from termination of pregnancy [f]						
No	0	0	44	66.67	44	64.71
Yes	2	100	22	33.33	24	35.29
Recently struggled to access menstrual products [c,g]						
No	109	66.87	598	68.74	707	68.44
Yes	54	33.13	272	31.26	326	31.56

a. This included 23 pregnant at the time of participation
b. Only asked of participants reporting previous pregnancy
c. Only asked of participants completing full survey
d. Only asked of participants 15 years and older reporting giving birth in the 12 months prior to participation
e. Only asked of sexually active participants
f. Only asked of participants reporting termination of pregnancy (n=3 not reported)
g. Not asked of participants not yet menstruating (n=46)

Table G.2 Experiences of pregnancy and reproductive health among adolescent girls and young women in Mombasa, by year (n=1,809)

	Girls / Women		
	2023 n (%)	**2025 n (%)**	**aOR (95%CI)**
First pregnancy 'early' [c]	99 (53.51)	120 (52.63)	1.04 (0.70-1.53)
Participated in new mother support program	30.59	17 (39.53)	1.09 (0.58-2.03)
Currently using contraception	37.22	388 (58.43)	0.90 (0.72-1.11)
Any previous termination of pregnancy	433 (60.31)	44 (19.73)	1.01 0.93-1.10)
Any complications from termination of pregnancy	9 (45.00)	12 (29.27)	**↓ 0.51 (0.39-0.67)**
Recently struggled to access menstrual products	262 (36.95)	208 (32.15)	0.80 (0.60-1.07)

BOLD represents a statistically observable change

a. All analyses of change over time account for potential differences by gender, age, and location
b. To enable comparisons over time, all longitudinal analyses restricted to Kisauni, Nyali, and Mvita
c. Defined as giving birth before the age of 20 years

Table G.3 Attitudes towards early pregnancy [a] and termination of pregnancy [b] among healthcare workers in Mombasa, by wave [c] of data collection (n=1,155)

	June 2023		November 2023		June 2024		November 2024		March 2025		Changes over time
	(n=216)		(n=222)		(n=233)		(n=253)		(n=231)		
	n	%	n	%	n	%	n	%	n	%	OR (95%CI)
Stigma towards young mothers – all (n=939)											
Low stigma	[c]		161	72.52	182	78.11	202	79.84	180	77.92	0.90 (0.78-1.04)
Medium stigma			50	22.52	33	14.16	30	11.86	33	14.29	
High stigma			11	4.95	18	7.73	21	8.30	18	7.79	
Stigma towards young mothers – clinicians (n=793)											
Low stigma			135	72.58	146	75.26	169	78.60	154	77.78	0.90 (0.82-1.00)
Medium stigma			41	22.04	31	15.98	25	11.63	27	13.64	
High stigma			10	5.38	17	8.76	21	9.77	17	8.59	
Stigma towards young mothers – non-clinicians (n=146)											
Low stigma			26	72.22	36	92.31	33	86.84	26	78.79	0.80 (0.47-1.34)
Medium stigma			9	25.00	2	5.13	5	13.16	6	18.18	
High stigma			1	2.78	1	2.56	0	0	1	3.03	
Stigma towards termination of pregnancy – all (n=1,155)											
Low stigma	130	60.19	110	49.55	128	54.94	148	58.50	137	59.31	0.94 (0.86-1.03)
Medium stigma	63	29.17	79	35.59	77	33.05	73	28.85	59	25.54	
High stigma	23	10.65	33	14.86	28	12.02	32	12.65	35	15.15	
Stigma towards termination of pregnancy – clinicians (n=965)											
Low stigma	104	60.47	86	46.24	103	53.09	123	57.21	118	59.60	0.95 (0.86-1.04)
Medium stigma	51	29.65	69	37.10	66	34.02	62	28.84	49	24.75	
High stigma	17	9.88	31	16.67	25	12.89	30	13.95	31	15.66	
Stigma towards termination of pregnancy – non-clinicians (n=190)											
Low stigma	26	59.09	24	66.67	25	64.10	25	65.79	19	57.58	0.83 (0.63-1.08)
Medium stigma	12	27.27	10	27.78	11	28.21	11	28.95	10	30.30	
High stigma	6	13.64	2	5.56	3	7.69	2	5.26	4	12.12	

BOLD represents a statistically observable change

a. As measured by the Adolescent Sexual and Reproductive Health Stigma Scale

b. As measured by the Contraceptive and Abortion Stigma Scale

c. Items on early pregnancy stigma added in Wave 2 (November 2023)

d. All analyses of change over time account for potential differences by gender, age, education, and clinical site

Appendix H: Sexual Health

Table H.1 Sexual experiences and condom use a among adolescents and young people in Mombasa (2025), by gender and age (n=1,970)

			Boys / Men						Girls / Women					
	Total		15-17 years		18-24 years		All ages		15-17 years		18-24 years		All ages	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Sexually active														
No	772	39.19	108	93.10	170	26.56	278	36.77	178	89.00	309	31.53	487	41.27
Yes	1198	60.81	8	6.90	470	73.44	478	63.23	22	11.00	671	68.47	693	58.73
Age of sexual debut [a]														
<16 years old	191	16.34	5	83.33	89	19.31	94	20.13	15	68.18	78	11.94	93	13.78
16-17 years old	228	19.50	1	16.67	86	18.66	87	18.63	7	31.82	127	19.45	134	19.85
18-19 years old	427	36.53			173	37.53	173	37.04			243	37.21	243	36.00
≥20 years old	323	27.63			113	24.51	113	24.20			205	31.39	205	30.37
Recent condom use for penetrative sex [a-c]														
Never	295	34.14	1	33.33	78	24.68	79	24.76	8	53.33	203	40.20	211	40.58
Sometimes	355	41.09	2	66.67	142	44.94	144	45.14	5	33.33	196	38.81	201	38.65
Always	214	24.77	0	0	96	30.38	96	30.09	2	13.33	106	20.99	108	20.77
Recent difficulty accessing condoms [a-c]														
No	426	50.47	1	50.00	189	60.38	190	60.32	4	26.67	221	44.65	225	44.12
Yes	251	29.74	0	0	92	29.39	92	29.21	2	13.33	150	30.30	152	29.80
Did not try	167	19.79	1	50.00	32	10.22	33	10.48	9	60.00	124	25.05	133	26.08
Perception of sexual health education received while in school [d]														
Poor	80	5.00			15	3.25					45	6.89		
Mixed	609	38.04			186	40.35					265	40.58		
Good	436	27.23			139	30.15					159	24.35		
Did not receive	476	29.73			121	26.25					184	28.18		

a. Only asked of participants aged 15 years or older reporting sex within the past 6 months
b. Excluded participants not reporting penetrative (vaginal and/or anal sex)
c. Recent defined as six months prior to participation
d. Only asked of participants 18 years and older reporting some previous primary or high school

Table H.2 Sexual experiences and condom use among adolescents and young people in Mombasa (2023-2025), by age, gender, and year a (n=2,445) [b,c]

	Total			Boys / Men			Girls / Women		
	2023 n (%)	2025 n (%)	aOR (95%CI)	2023 n (%)	2025 n (%)	aOR (95%CI)	2023 n (%)	2025 n (%)	aOR (95%CI)
Sexually active	711 (62.42)	841 (64.40)	0.99 (0.66-1.51)	269 (68.97)	320 (63.87)	0.77 (0.59-1.01)	437 (58.74)	496 (63.92)	1.15 (0.62-2.16)
Early sexual debut (<18 years)	196 (39.92)	292 (35.78)	**↓ 0.86 (0.77-0.95)**	82 (44.57)	121 (38.78)	**↓ 0.81 (0.75-0.86)**	113 (37.17)	160 (33.40)	0.89 (0.78-1.01)
Inconsistent condom use for penetrative sex	443 (77.58)	467 (74.72)	0.88 (0.66-1.17)	139 (65.57)	158 (70.54)	1.23 (0.66-2.28)	302 (84.83)	296 (78.31)	**↓ 0.65 (0.56-0.76)**
Difficult accessing condoms	160 (34.19)	172 (35.46)	1.07 (0.95-1.21)	65 (32.83)	56 (28.28)	0.84 (0.47-1.50)	95 (35.45)	107 (40.23)	1.23 (0.97-1.56)
No or poor-quality sex education received at school [d]	400 (41.15)	478 (44.26)	1.11 (0.93-1.32)	150 (42.61)	186 (44.08)	1.05 (0.85-1.30)	249 (40.49)	274 (43.49)	1.13 (0.94-1.36)

BOLD represents a statistically observable change

a. All analyses of change over time account for potential differences by gender, age, and location
b. Only asked of participants aged 15 years and older
c. To enable comparisons over time, all longitudinal analyses restricted to Kisauni, Nyali, and Mvita
d. Only asked of participants 18 years and older reporting some previous primary or high school 49)

Table H.3 Online and digital sexual experiences among adolescents and young people in Mombasa (2025), by gender and age (n=1,881) [a,e]

			Boys / Men						Girls / Women					
	Total		15-17 years		18-24 years		All ages		15-17 years		18-24 years		All ages	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Ever viewed online pornography [b]														
Never	921	50.69	83	80.58	220	36.07	303	42.50	137	82.53	473	52.15	610	56.85
Once or twice	506	27.85	13	12.62	212	34.75	225	31.56	21	12.65	254	28.00	275	25.63
Multiple times	390	21.46	7	6.80	178	29.18	185	25.95	8	4.82	180	19.85	188	17.52
Received digital sexual content ('sext') [c]														
No	1083	58.73	90	87.38	316	51.55	406	56.70	157	91.81	512	55.35	669	61.04
Yes	761	41.27	13	12.62	297	48.45	310	43.30	14	8.19	413	44.65	427	38.96
Sent digital sexual content ('sext') [d]														
No	1549	83.73	103	97.17	493	80.29	596	82.78	169	98.26	768	83.03	937	85.41
Yes	301	16.27	3	2.83	121	19.71	124	17.22	3	1.74	157	16.97	160	14.59
Exchanged digital sexual content for money or gifts														
No	1652	87.83	105	99.06	539	85.83	664	87.74	170	98.84	821	87.25	991	89.04
Yes	229	12.17	1	0.94	89	14.17	90	12.26	2	1.16	120	12.75	122	10.96

a. Only asked of participants aged 15 years or older in the full survey
b. Not reported for 64 participants
c. Not reported for 37 participants
d. Not reported for 31 participants
e. Comparisons over time are not possible as these items were newly introduced in 2025

Table H.4 HIV and hepatitis C among adolescents and young people in Mombasa (2025), by gender and age (n=1,970) [a]

	Total		Boys / Men						Girls / Women					
			15-17 years		18-24 years		All ages		15-17 years		18-24 years		All ages	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Ever tested for HIV														
No, never	534	27.11	93	80.17	182	28.44	275	36.38	108	54.00	151	15.41	259	21.95
Yes, within past 6 months	880	44.67	10	8.62	278	43.44	288	38.10	55	27.50	519	52.96	574	48.64
Yes, longer than 6 months ago	492	24.97	5	4.31	162	25.31	167	22.09	30	15.00	285	29.08	315	26.69
Unsure / prefer not to say	64	3.25	8	6.90	18	2.81	26	3.44	7	3.50	25	2.55	32	2.71
HIV status [b]														
Negative	1282	65.08	13	12.15	408	66.89	421	58.72	80	41.88	762	80.89	842	74.32
Positive	41	2.08	0	0	14	2.30	14	1.95	1	0.52	21	2.23	22	1.94
Unknown	552	32.84	94	87.85	188	30.82	282	39.33	110	57.59	159	16.88	269	23.74
Uptake of HIV PrEP [c,d]														
Never	1010	84.45	11	100	325	84.86	336	85.28	60	96.77	605	83.80	665	84.82
Currently	117	9.78	0	0	36	9.40	36	9.14	2	3.23	74	10.25	76	9.69
Previously	69	5.77	0	0	22	5.74	22	5.58	0	0	43	5.96	43	5.48
Uptake of HIV treatment [e]														
Never	7	17.07	0	0	2	14.29	2	14.29	1	100	3	14.29	4	18.18
Currently	32	78.05	0	0	11	78.57	11	78.57	0	0	17	80.95	17	77.27
Previously	2	4.88	0	0	1	7.14	1	7.14	0	0	1	4.76	1	4.55

a. Only asked of participants aged 15 years or older
b. Not reported for 95 participants
c. PrEP=pre-exposure prophylaxis
d. Only asked of participants of negative HIV status participating in the full survey
e. Only asked of participants reported as living with HIV

Table H.5 HIV testing, prevention, and treatment among adolescents and young people in Mombasa (2023-2025), by year a and population (n=2,332) [b]

	Total			Boys / Men			Girls / Women		
	2023 n (%)	2025 n (%)	aOR (95%CI)	2023 n (%)	2025 n (%)	aOR (95%CI)	2023 n (%)	2025 n (%)	aOR (95%CI)
Recently tested for HIV [c]	528 (70.03)	597 (66.04)	0.83 (0.57-1.20)	143 (64.41)	201 (66.34)	1.08 (0.44-2.64)	382 (72.35)	381 (65.80)	**↓ 0.72 (0.55-0.95)**
Unknown HIV status	331 (30.45)	351 (28.42)	0.93 (0.79-1.08)	145 (39.30)	182 (38.32)	0.92 (0.84-1.00)	185 (25.95)	168 (22.73)	0.91 (0.66-1.25)
Using PrEP [c]	68 (9.58)	79 (9.15)	0.88 (0.59-1.31)	21 (10.40)	25 (8.74)	0.77 (0.37-1.61)	46 (9.13)	49 (8.73)	0.89 (0.39-2.02)
Accessing HIV treatment [d]	30 (65.22)	17 (80.95)	1.27 (0.90-1.79)	16 (72.73)	5 (71.43)	0.63 (0.31-1.28)	14 (58.33)	8 (80.00)	2.20 (0.69-6.95)

BOLD represents a statistically observable change
a. All analyses of change over time account for potential differences by gender, age, and location
b. To enable comparisons over time, all longitudinal analyses restricted to Kisauni, Nyali, and Mvita
c. Excluding participants known to be living with HIV
d. Only asked of participants living with HIV

Appendix I: Sexual and other forms of violence

Table I.1 Experiences of sexual and intimate violence among adolescents and young people in Mombasa (2025), by gender and age (n=2,457)

			Boys / Men						Girls / Women					
	Total		10-17 years		18-24 years		All ages		10-17 years		18-24 years		All ages	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Experienced sexual violence														
No	2042	83.11	369	91.79	545	85.16	914	87.72	356	89.00	755	77.04	1111	80.51
Yes	343	13.96	25	6.22	79	12.34	104	9.98	35	8.75	189	19.29	224	16.23
Unsure	72	2.93	8	1.99	16	2.50	24	2.30	9	2.25	36	3.67	45	3.26
Told someone or sought help														
No	155	45.19	8	32.00	36	45.57	44	42.31	7	20.00	99	52.38	106	47.32
Yes	166	48.40	16	64.00	37	46.84	53	50.96	27	77.14	77	40.74	104	46.43
Prefer not to say	22	6.41	1	4.00	6	7.59	7	6.73	1	2.86	13	6.88	14	6.25
Sought help from														
Parents	55	33.13	1	6.25	9	24.32	10	18.87	14	51.85	29	37.66	43	41.35
Other family	18	10.84	0	0	4	10.81	4	7.55	3	11.11	11	14.29	14	13.46
Friends	56	33.73	0	0	23	62.16	23	43.40	4	14.81	24	31.17	28	26.92
Police	11	6.63	0	0	3	8.11	3	5.66	0	0	6	7.79	6	5.77
Teacher	9	5.42	0	0	5	13.51	5	9.43	1	3.70	3	3.90	4	3.85
Health professional	37	22.29	0	0	11	29.73	11	20.75	0	0	21	27.27	21	20.19
Religious figure	4	2.41	0	0	3	8.11	3	5.66	0	0	0	0	0	0
Someone else	8	4.82	0	0	2	5.41	2	3.77	0	0	6	7.79	6	5.77
Experienced intimate partner violence [a,b]														
No	1050	74.68	30	90.91	404	77.69	434	78.48	41	74.55	558	72.47	599	72.61
Yes	356	25.32	3	9.09	116	21.31	119	21.52	14	25.45	212	27.53	226	27.39

a. Only asked of participants aged 15 years and older who reported relationship experience. Some participants (n=32) chose not to answer this question

Table I.2 Experiences of physical and verbal violence among adolescents and young people in Mombasa (2025), by gender and age (n=1,970) [a]

	Total		Boys / Men						Girls / Women					
			15-17 years		18-24 years		All ages		15-17 years		18-24 years		All ages	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Experienced physical assault														
No, never	1351	68.58	93	80.17	418	65.31	511	67.59	161	80.50	663	67.65	824	69.83
Yes, within past 6 months	201	10.20	11	9.48	64	10.00	75	9.92	11	5.50	106	10.82	117	9.92
Yes, longer than 6 months ago	248	12.59	1	0.86	100	15.62	101	13.36	12	6.00	128	13.06	140	11.86
Prefer not to say	170	8.63	11	9.48	58	9.06	69	9.13	16	8.00	83	8.47	99	8.39
Experienced verbal assault														
No, never	1144	58.07	83	71.55	358	55.94	441	58.33	153	76.50	541	55.20	694	58.81
Yes, within past 6 months	272	13.81	8	6.90	86	13.44	94	12.43	9	4.50	158	16.12	167	14.15
Yes, longer than 6 months ago	303	15.38	6	5.17	109	17.03	115	15.21	11	5.50	168	17.14	179	15.17
Prefer not to say	251	12.74	19	16.38	87	13.59	106	14.02	27	13.50	113	11.53	140	11.86
Experienced online abuse ('cyberbullying')														
No, never	1391	76.05	137	86.71	433	71.57	570	74.71	168	94.38	641	75.15	809	78.47
Yes, within past 6 months	209	11.43	5	3.16	77	12.73	82	10.75	3	1.69	112	13.13	115	11.15
Yes, longer than 6 months ago	193	10.55	11	6.96	87	14.38	98	12.84	5	2.81	82	9.61	87	8.44
Prefer not to say	36	1.97	5	3.16	8	1.32	13	1.70	2	1.12	18	2.11	20	1.94

a. Only asked of participants aged 15 years and older

Table I.3 Experiences of violence among adolescents and young people in Mombasa (2023-2025), by year a and population (n=2,313) [b, c]

	Total			Boys / Men			Girls / Women		
	2023 n (%)	2025 n (%)	aOR (95%CI)	2023 n (%)	2025 n (%)	aOR (95%CI)	2023 n (%)	2025 n (%)	aOR (95%CI)
Sexual violence (ever)	107 (14.52)	236 (14.97)	1.07 (0.80-1.42)	24 (10.48)	68 (10.43)	68 (10.43)	1.08 (0.92-1.28)	153 (17.08)	1.07 (0.75-1.52)
Sought help for sexual violence	44 (44.44)	102 (47.00)	1.05 (0.56-1.99)	8 (36.36)	31 (50.00)	**31 (50.00)**	1.54 (0.91-2.61)	62 (43.97)	0.85 (0.28-2.58)
Physical violence (ever) [c]	244 (24.42)	313 (26.44)	1.04 (0.85-1.29)	87 (26.13)	121 (27.13)	121 (27.13)	1.04 (0.67-1.61)	176 (24.82)	1.05 (0.97-1.15)
Verbal violence (ever) [c]	333 (35.58)	392 (34.33)	0.88 (0.82-1.95)	111 (36.27)	144 (33.57)	144 (33.57)	0.87 (0.67-1.13)	228 (33.24)	**↓ 0.88 (0.81-0.96)**

BOLD represents a statistically observable change

a. All analyses of change over time account for potential differences by gender, age, and location

b. To enable comparisons over time, all longitudinal analyses are restricted to Kisauni, Nyali, and Mvita

c. Only asked of participants aged 15 years and older

Table I.4 Attitudes towards sexual and gender based violence among healthcare workers in Mombasa, by wave of data collection (n=1,155)

	June 2023		November 2023		June 2024		November 2024		March 2025		Changes over time [b]
	(n=216)		(n=222)		(n=233)		(n=253)		(n=231)		
	n	%	n	%	n	%	n	%	n	%	OR (95%CI)
Stigma towards sexual & gender-based violence – all healthcare workers											
Low stigma	143	66.20	145	65.32	149	63.95	168	66.40	154	66.67	0.97 (0.88-1.06)
Medium stigma	59	27.31	62	27.93	65	27.90	58	22.92	51	22.08	
High stigma	14	6.48	15	6.76	19	8.15	27	10.67	26	11.26	
Stigma towards sexual & gender-based violence – clinicians (n=965)											
Low stigma	108	62.79	116	62.37	119	61.34	139	64.65	132	66.67	0.94 (0.86-1.04)
Medium stigma	52	30.23	57	30.65	57	29.38	50	23.26	42	21.21	
High stigma	12	6.98	13	6.99	18	9.28	26	12.09	24	12.12	
Stigma towards sexual & gender-based violence – non-clinicians (n=190)											
Low stigma	35	79.55	29	80.56	30	76.92	29	76.32	22	66.67	1.09 (0.81-1.45)
Medium stigma	7	15.91	5	13.89	8	20.51	8	21.05	9	27.27	
High stigma	2	4.55	2	5.56	1	2.56	1	2.63	2	6.06	

BOLD represents a statistically observable change

a. As measured by the Illinois Rape Myth Acceptance Scale

b. All analyses of change over time account for potential differences by gender, age, education, and clinical site

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