**Supplementary Table S1. Comparison of 2010 and 2019 violence-related questions, Kenya Violence Against Children and Youth Surveys**

|  |  |  |
| --- | --- | --- |
|  | **2010 VACS** | **2019 VACS** |
|  | **Sexual Violence** | |
| Unwanted sexual touching | These questions ask you about a time when anyone, male or female, touched you in a sexual way without your consent, but the person did not try and force you to have sex. Touching without consent includes being fondled, pinched, grabbed, or touched against your will.  How many times in your life has anyone touched you in a sexual way without your consent, but did not try and force you to have sex? | Girls/boys and women/men may experience unwanted sexual contact by people they know well, such as a boyfriend/girlfriend/romantic partner, family member or friend, or by strangers. Your answers are confidential, and you can skip any questions that you don’t feel comfortable answering.  Has anyone ever touched you in a sexual way without your permission, but did not try and force you to have sex? Touching in a sexual way without permission includes fondling, pinching, grabbing, or touching you on or around your sexual body parts. |
| Attempted sex | The next questions ask about a time when anyone, male or female, tried to make you have sex against your will, but sex did not happen. In other words, they did not succeed in making you have sex. In this case, “sex” or “sexual intercourse” would include someone attempting to penetrate your vagina or anus with their penis, hands, fingers, or other objects, or attempting to penetrate your mouth with their penis without your consent. Your answers are confidential, and you can skip questions you prefer not to answer.  How many times in your life has anyone tried to make you have sex against your will, but did not succeed? | A. Has a boyfriend/girlfriend/romantic partner, ex-boyfriend/ex-girlfriend/romantic partner, husband/wife, or ex-husband/ex-wife ever tried to make you have sex against your will but did not succeed? They might have tried to physically force you to have sex or they might have tried to pressure you to have sex through harassment or threats.  B. Has anyone [else] ever tried to make you have sex against your will but did not succeed? They might have tried to physically force you to have sex or they might have tried to pressure you to have sex through harassment or threats. |
| Pressured sex | The next questions ask about a time when anyone, male or female, pressured you to have sex against your will and you did have sex. When someone pressures you into sex, it could involve things like threats, harassment, luring you, or tricking you into having sex. “Sex” or “sexual intercourse” includes someone penetrating your vagina or anus with their penis, hands, fingers, mouth or other objects, or penetrating your mouth with their penis. [For males only - Sex can also include someone forcing your penis into their mouth, vagina, or anus.]  How many times in your life has someone pressured you to have sex when you did not want to, and sex happened? | A. Has a girlfriend/boyfriend/romantic partner, ex-girlfriend/ex-girlfriend/romantic partner, wife, or ex-wife ever pressured you to have sex, through harassment or threats and did succeed?  B. Has anyone [else] ever pressured you to have sex, through harassment or threats and did succeed? |
| Physically forced sex | The next questions ask about a time when anyone, male or female, physically forced you to have sex with them without your consent. “Sex” or “sexual intercourse” would include someone penetrating your vagina or anus with their penis, hands, fingers, mouth, or other objects, or penetrating your mouth with their penis. [For males only - Sex can also include someone forcing your penis into their mouth, vagina, or anus.]  How many times in your life have you been physically forced to have sex against your will and sexual intercourse was completed? | A. Has a boyfriend/girlfriend/romantic partner, ex-boyfriend/ex-girlfriend/romantic partner, husband/wife, or ex-husband/ex-wife ever physically forced you to have sex and did succeed? B. Has anyone [else] ever physically forced you to have sex against your will and did succeed? |
|  | **Emotional Violence** | |
| Emotional Violence | Adults sometimes say things to children that are hurtful. I am going to ask you a few questions about things that may have happened during secondary school, primary school, or earlier.  When you were growing up, did any adult ever say or do something on purpose to humiliate you in front of others? When you were growing up, did any adult ever make you feel unwanted? | The next questions ask about what a parent, adult caregiver or other adult relative may have said to you. Has a parent, adult caregiver or other adult relative ever: A. told you that you were not loved, or did not deserve to be loved? B. said they wished you had never been born or were dead? C. ever ridiculed you or put you down, for example said that you were stupid or useless? |
|  | **Physical violence** | |
| Intimate partner physical violence | Girls or women may experience physical violence by strangers or people they know well, such as a romantic partner, teacher, or family members. The next questions are personal, and may be uncomfortable to answer, but will help us to understand people’s experiences with physical violence. Your answers are confidential, and you can skip any questions that you prefer not to answer. PV1: The following questions are about things that can happen to girls and women who date, have a romantic partner, or are married. This section is about your current romantic partner or husband, or any previous romantic partner. Have you ever had a partner? By partner I mean a boyfriend, romantic partner, fiancé, live-in partner, or husband. Has your current or previous partner/husband ever slapped or pushed you?  Has your current or previous partner/husband ever hit you with a fist, kicked you, or beat you with an object? Has your current or previous partner/husband ever used or threatened to use a knife or other weapon against you? | The next questions are about things that can happen to girls and women who date, have a romantic partner, boyfriend, or who are married. Remember, you can ask to skip any question that you do not want to answer. Has a boyfriend/romantic partner, ex-boyfriend/romantic partner or husband ever:  A. slapped, pushed, shoved, shook, or intentionally threw something at you to hurt you? C. choked, smothered, tried to drown you, or burned you intentionally? D. used or threatened you with a knife, gun or other weapon? punched, kicked, whipped, or beat you with an object? |
| Parents, adults’ caregivers, and other adult relative | Now let us discuss parents and adult relatives.  Has a parent or any adult relative ever punched you, kicked you, whipped you, or beat you with an object?  Has a parent or any adult relative ever used or threatened to use a knife or other weapon against you? | The next questions are about parents, adult caregivers, or other adult relatives. Remember, you can ask to skip any question that you do not want to answer. Has a parent, adult caregiver, or other adult relative ever:  A. slapped, pushed, shoved, shook, or intentionally threw something at you to hurt you? B. punched, kicked, whipped, or beat you with an object? C. choked, smothered, tried to drown you, or burned you intentionally? D. used or threatened you with a knife, gun or other weapon? |
| Adults in the community/  neighborhood | Now let us discuss persons of authority, such as teachers, police and military. Has an authority figure ever punched you, kicked you, whipped you, or beat you with an object?  Has an authority figure ever used or threatened to use a knife or other weapon against you? | The next questions are about adults who are in your community/neighborhood. This includes adults such as teachers, police, employers, religious or community leaders, neighbors, or other adults you don’t know. Remember, you can ask to skip any question that you do not want to answer. Has one of these people ever: A. slapped, pushed, shoved, shook, or intentionally threw something at you to hurt you? B. punched, kicked, whipped, or beat you with an object? C. choked, smothered, tried to drown you, or burned you intentionally? D. used or threatened you with a knife, gun or other weapon? |

**Supplementary Table S2. Sample size, households, individual level eligibility, and individual level survey completion., 2010 and 2019 Kenya Violence Against Children and Youth Surveys.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Females | | Males | | |
|  | **2010** | **2019** | **2010** | **2019** |
| Estimated sample size | 1121 | 1103 | 1234 | 715 |
| Total Households | 1663 | 2259 | 2106 | 1232 |
| Households excluded/ineligible | 316 | 544 | 448 | 105 |
| Households refused | 41 | 61 | 36 | 44 |
| Household included a female or male age 13-24 | 1306 | 1654 | 1622 | 1083 |
| Individual excluded/not eligible | 65 | 273 | 147 | 227 |
| Individual refused | 14 | 39 | 19 | 68 |
| Completed | 1227 | 1344 | 1456 | 788 |

Household excluded – this includes households which were unoccupied households, demolished, or no one at home

Individual excluded/not eligible – this includes non-available, language issues, or incapacitated etc.

**Supplementary Table S3. Unadjusted and adjusted models using logistic regression to test changes in different forms of violence among 13-24-year-old between 2010 and 2019, Kenya Violence Against Children and Youth Surveys.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Unadjusted models** | | | **Adjusted models1** | | | |
|  | **2010** | **2019** | **p-value** | **2010** | **2019** |  | **p-value** |
| **β coefficient** | |  | **β coefficient** | |  |  |
| **Females** | | | | | | |
| Any lifetime sexual violence | 0 | -0.566 | **<0.0001** | 0 | -0·489 |  | **0·00020** |
| Any lifetime physical violence | 0 | -1.257 | **<0.0001** | 0 | -1·196 |  | **<0·0001** |
| Any lifetime emotional violence | 0 | -0.676 | **<0.0001** | 0 | -0·658 |  | **<0·0001** |
| Any lifetime violence | 0 | -1.216 | **<0.0001** | 0 | -1·176 |  | **<0·0001** |
| Only one form of violence | 0 | -0.251 | **0.011** | 0 | -0·267 |  | **0·0080** |
| Only two forms of violence | 0 | -0.535 | **0.0013** | 0 | -0·513 |  | **0·0026** |
| All three forms of violence | 0 | -1.051 | **<0.0001** | 0 | -0·969 |  | **<0·0001** |
| Experienced no violence | 0 | 1.216 | **<0.0001** | 0 | 1·176 |  | **<0·0001** |
|  |  |  |  |  |  |  |  |
| Unwanted sexual touching | 0 | -0.996 | **<0.0001** | 0 | -1·052 |  | **<0·0001** |
| Unwanted attempted sex | 0 | -0.060 | 0.69 | 0 | 0·037 |  | 0·81 |
| Pressured sex | 0 | -0.506 | **0.045** | 0 | -0·411 |  | **0·024** |
| Physically forced sex | 0 | -0.572 | **<0.011** | 0 | -0·472 |  | **0·031** |
|  | **Males** | | | | | | |
| Any lifetime sexual violence | 0 | -0.646 | **<0.0001** | 0 | -0·628 |  | **0·00030** |
| Any lifetime physical violence | 0 | -1.197 | **<0.0001** | 0 | -1·115 |  | **<0·0001** |
| Any lifetime emotional violence | 0 | -1.182 | **<0.0001** | 0 | -1·217 |  | **<0·0001** |
| Any lifetime violence | 0 | -1.321 | **<0.0001** | 0 | -1·247 |  | **<0·0001** |
| Only one form of violence | 0 | -0.230 | 0.14 | 0 | -0·156 |  | 0·33 |
| Only two forms of violence | 0 | -1.056 | **<0.0001** | 0 | -1·144 |  | **<0·0001** |
| All three forms of violence | 0 | -0.920 | **0.010** | 0 | -0·793 |  | **0·047** |
| Experienced no violence | 0 | 1.321 | **<0.0001** | 0 | 1·247 |  | **<0·0001** |
|  |  |  |  |  |  |  |  |
| Unwanted sexual touching | 0 | -1.116 | **<0.0001** | 0 | -1·101 |  | **<0·0001** |
| Unwanted attempted sex | 0 | -0.353 | 0.17 | 0 | -0·299 |  | 0·32 |
| Pressured sex | 0 | -0.473 | 0.16 | 0 | -0·575 |  | 0·077 |
| Physically forced sex | 0 | -0.027 | 0.95 | 0 | -0·022 |  | 0·96 |

1 Adjusted model for females controlled for age, educational attainment, marital status, orphan status, rural/urban status, and ever been pregnant using logistic regression. Adjusted model for males controlled for age, educational attainment, marital status, orphan status, and rural/urban status using logistic regression. The logistic regression was used to assess if changes in the prevalence were significant after controlling for the important covariates.

β coefficient were generated using logistic regression, taking into account the complex survey design of the Kenya VACS.

Sensitivity Analyses:

**Table S4. Comparing the prevalence of lifetime physical violence between 2010 and 2019 surveys with peer physical violence included in 2019 physical violence definition.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Unadjusted | | | | | Adjusted | |
| Females | 2010 | | 2019 | | p | Beta (2010 as reference | p-value |
|  | 1224 | 74.9 (68.7-81.0) | 1444 | 51.2 (47.6-54.8) | <0.0001 | -0.972 | <0.0001 |
| Males |  |  |  |  |  |  |  |
|  | 1447 | 78.7 (75.5-81-8) | 788 | 63.9 (57.9-69.9) | <0.0001 | -0.652 | <0.0001 |

Sensitivity analyses were conducted for lifetime physical violence by including peer physical violence perpetration in the 2019 definition. Although the prevalence increased after the inclusion (females from 45.9% to 51.2% and males from 52.7% to 63.9%), the prevalence of physical violence remained significantly lower in 2019 compared to 2010.

**Table S5. Comparing adjusted models for main violence indicators between 2010 and 2019 surveys with and without gender attitude variables**, **Kenya Violence Against Children and Youth Surveys.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Type of violence | Controlling for demographic covariates only | | Controlling for demographic covariates + gender attitude variables | |
| Females |  | β coefficient | p-value | β coefficient | p-value |
|  | Any lifetime Sexual violence | -0·489 | <0·00020 | -0.540 | <0.0020 |
|  | Any lifetime Physical violence | -1·196 | <0·0001 | -1.103 | <00001 |
|  | Any lifetime Emotional violence | -0·658 | <0·0001 | -0.988 | <0.0001 |
|  | Any lifetime violence | -1·176 | <0·0001 | -0.982 | <0.0001 |
|  | Only one form of violence | -0·267 | 0·0080 | 0.328 | 0.027 |
|  | Two forms of violence | -0·513 | 0·0026 | -0.507 | 0.022 |
|  | All three forms of violence | -0·969 | <0·0001 | -1.150 | <0.0001 |
|  | Experienced no violence | 1·176 | <0·0001 | 0.982 | <0.0001 |
| Males |  |  |  |  |  |
|  | Any lifetime Sexual violence | -0·628 | <0·00030 | -0.562 | 0.0020 |
|  | Any lifetime Physical violence | -1·115 | <0·0001 | -1.153 | <0.0001 |
|  | Any lifetime Emotional violence | -1·217 | <0·0001 | -1.212 | <0.0001 |
|  | Any lifetime violence | -1·247 | <0·0001 | -1.295 | <0.0001 |
|  | Only one form of violence | -0·156 | 0·33 | -0.185 | 0.25 |
|  | Two forms of violence | -1·144 | <0·0001 | -1.132 | <0.0001 |
|  | All three forms of violence | -0·793 | 0·047 | -0.749 | 0.050 |
|  | Experienced no violence | 1·247 | <0·0001 | 1.295 | <0.0001 |