



## Supplementary Materials

The following are the seven supplementary figures. Note that the diamond represents the overall combined pooled proportion and the square represents the original studies proportion

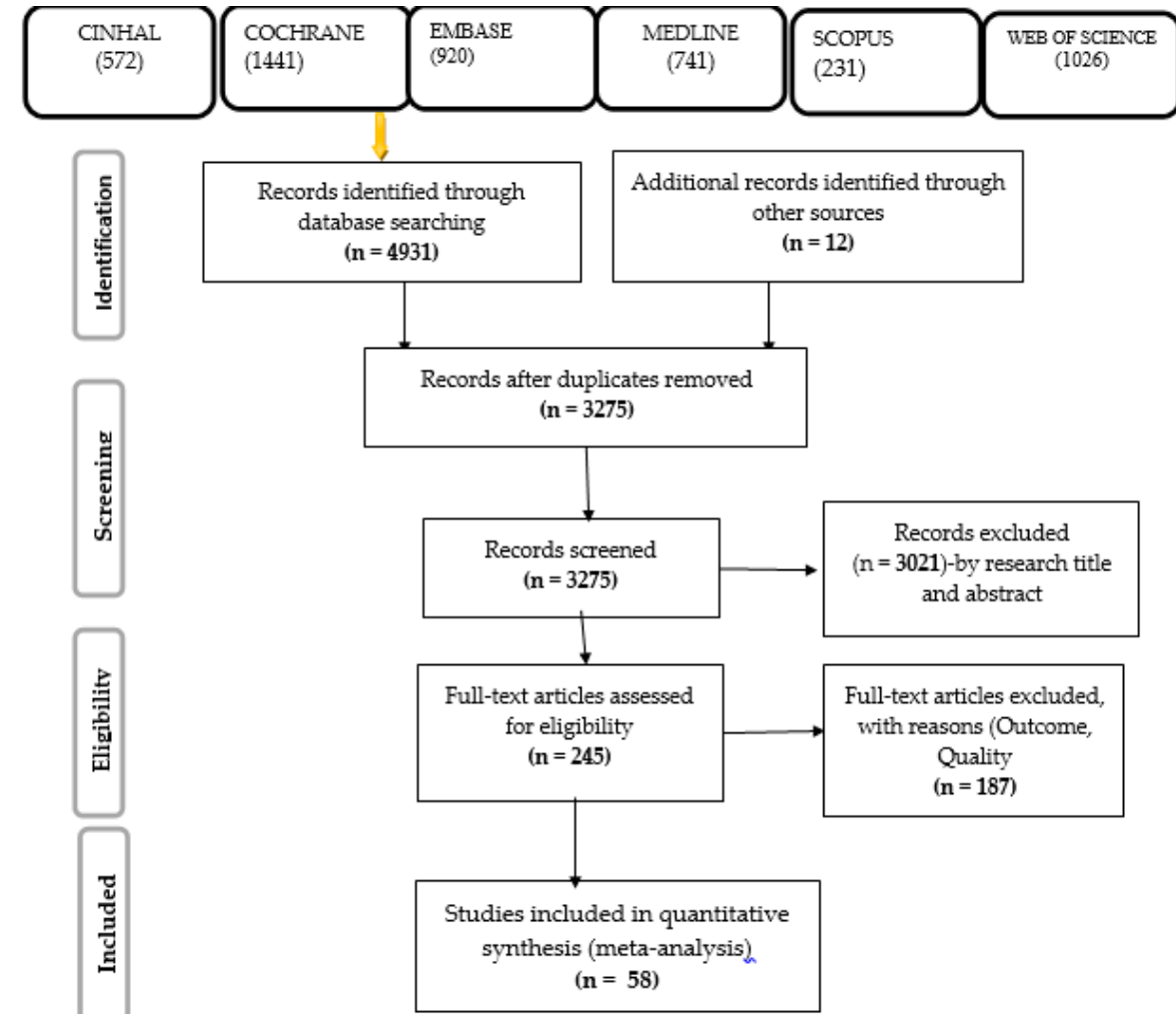


Figure S1: PRISMA flow chart for selection of studies on prevalence of GBV

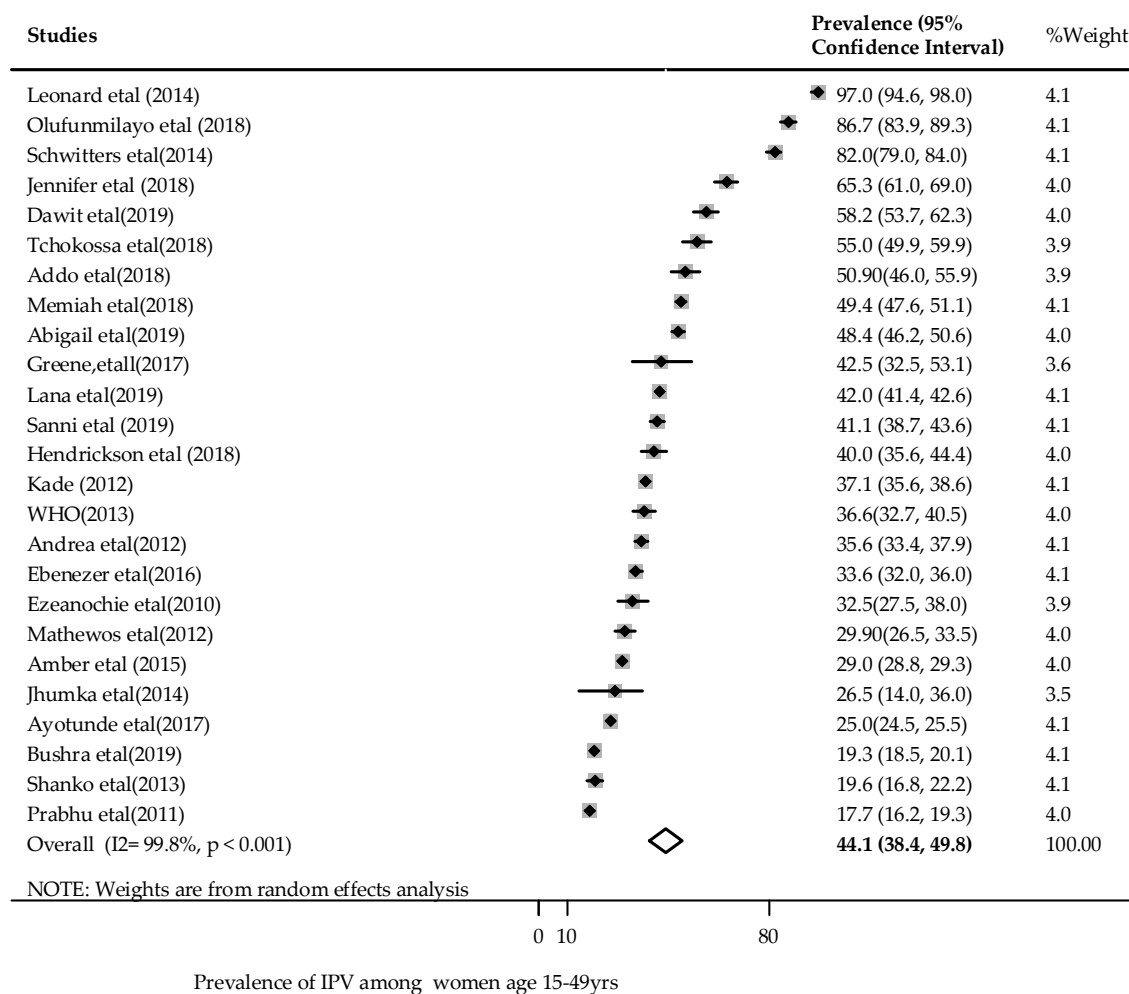


Figure S2. Overall pooled prevalence of IPV among women age 15-49 years old in SSA.

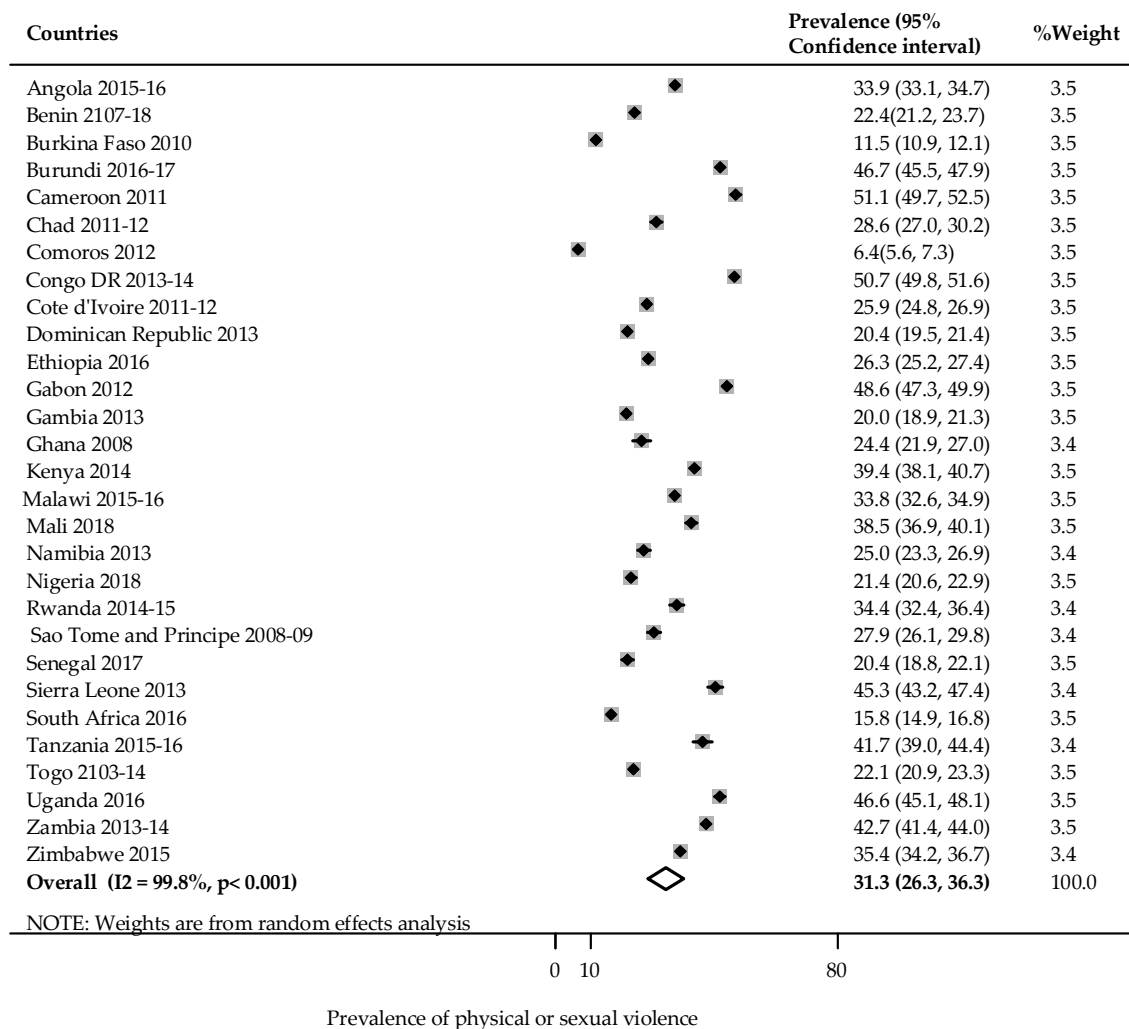


Figure S3: Pooled prevalence of physical or sexual IPV among ever-married women age 15-49 years of old in SSA using DHS surveys

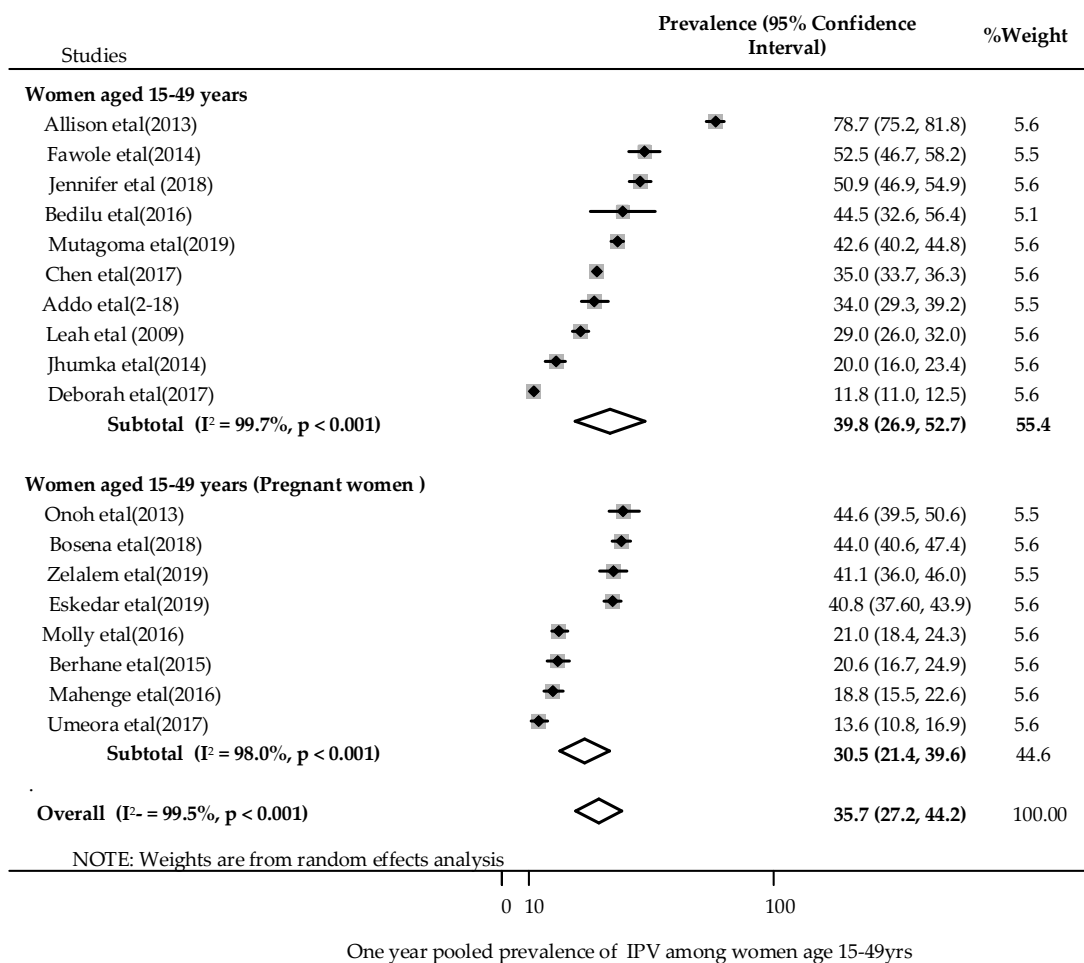
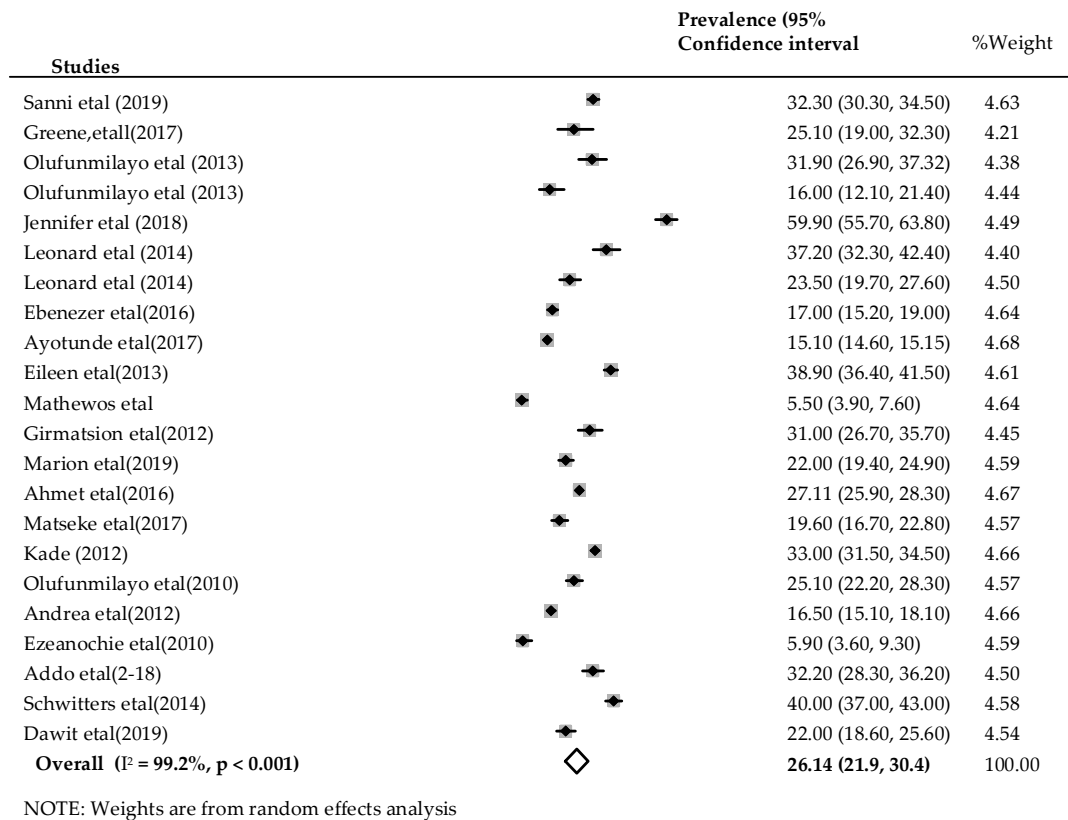
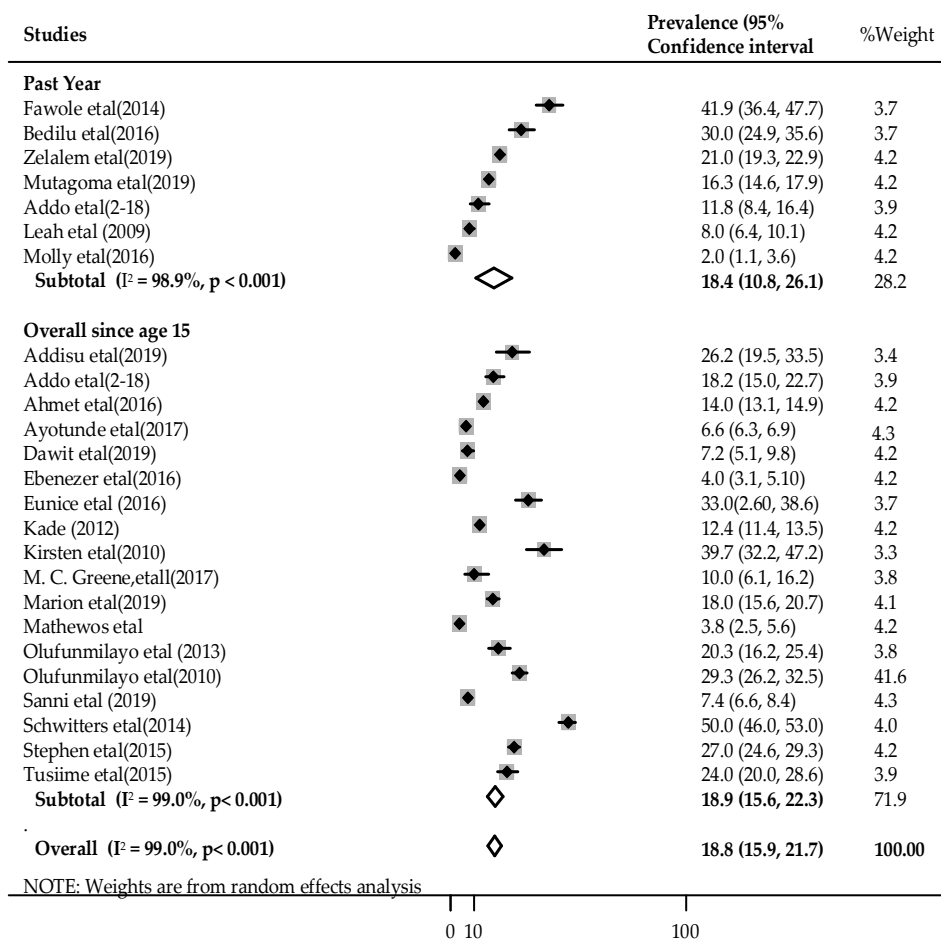


Figure S4: Past one year pooled prevalence of IPV among women age 15-49 years old in SSA



Pooled prevalence of physical IPV among women age 15-49yrs

Figure S5: Pooled prevalence of physical IPV among women age 15-49 years old in SSA



Pooled ssexual IPV Prevalence among women age 15-49yrs

Figure S6: Pooled prevalence of sexual IPV by duration among women age 15-49 years old in SSA

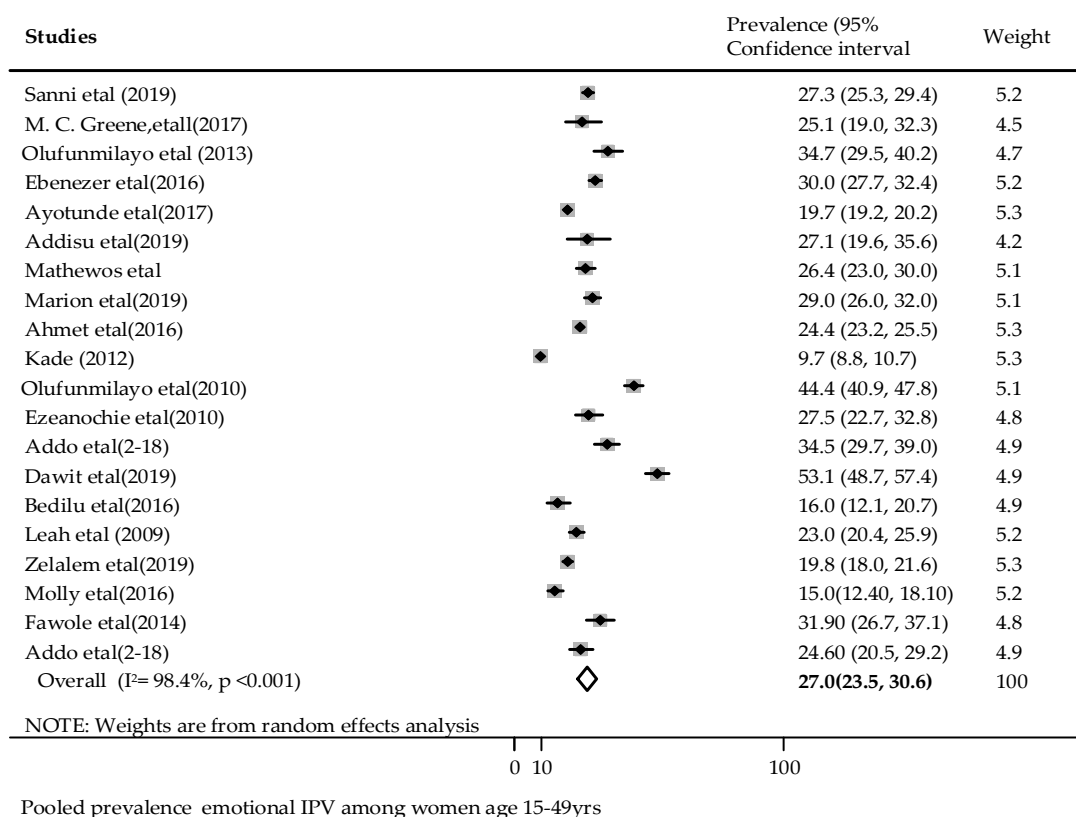


Figure S7: Pooled prevalence of emotional IPV among women age 15-49 years old in SSA

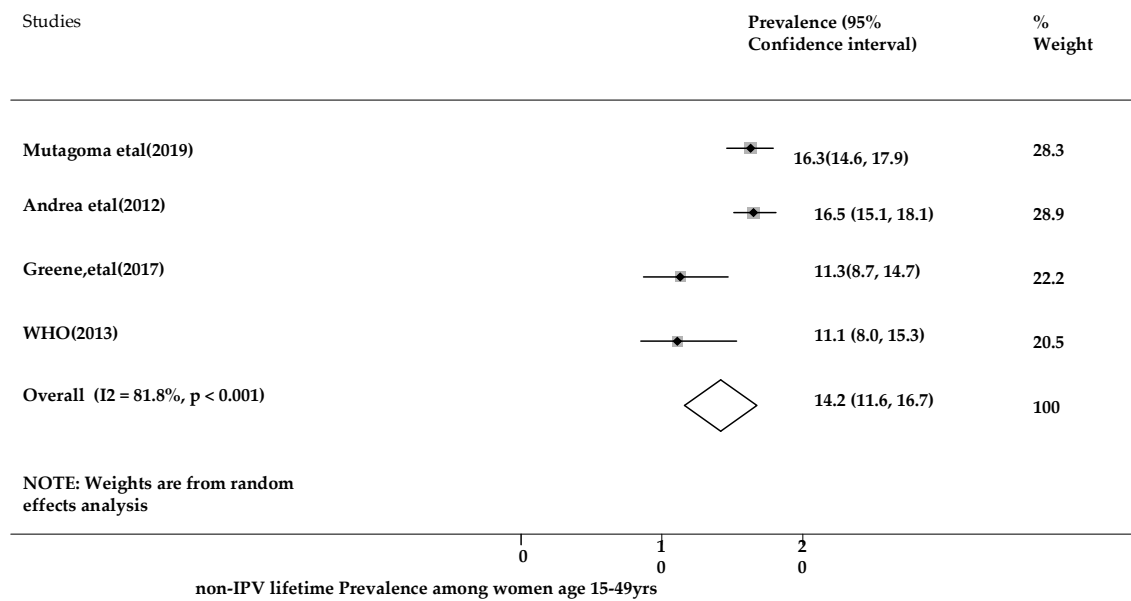


Figure S8: Pooled prevalence of non-IPV among women age 15-49 years old in SSA



**Table S1.** Characteristics of included studies (intimate partner violence (IPV) and non-IPV).

Authors	Country	Population	Sample Size	Study Design	Outcomes of the Results	Forms of GBV
Bleck et al. (2015) [25]	Selected SSA	Women aged 15–49 years	44,487	Cross-sectional	Approximately 29.0% (95% CI 28.8, 29.3) of women reported any physical or sexual IPV in their lifetime	IPV
Yaya et al. (2019) [26]	Angola	Women aged 15–49 years	7669	Cross-sectional	Overall, more than two-fifths of the women reported experiencing any IPV 41.1% (95% CI 38.7, 43.6): physical IPV 32.3% (95% CI 30.3, 34.5) was most prevalent, followed by emotional 27.3% (95% CI 25.3, 29.4) and sexual IPV 7.4% (95% CI 6.6, 8.4)	IPV
Greene et al. (2017) [27]	14 countries in SSA	Women aged 15–49 years	86,024	Cross-sectional	Any form of lifetime IPV 42.5% (95% CI 32.5, 53.1), IPV was the most prevalent 36.5% (95% CI 26.5, 47.7); non-partner family violence 11.3% (95% 8.7,14.7) and non-family violence 3.2% (95% CI 2.3, 4.3); psychological IPV 25.1% (95% CI 19, 32.3) moderate physical violence 25.6% (95% CI 17.4, 36), severe physical IPV 8.9% (95% CI 5.8, 13.4), any sexual IPV 10% (95% CI 6.1,16.2).	IPV and non-IPV
Fawole et al. (2013) [28]	Nigeria	Women (street beggars and traders)	323	Comparative cross-sectional study	The lifetime experience of violence against women (VAW) was 66.3% (95% CI 62.5, 70.1) among the beggars and 54.8% (95% CI 52.2, 57.6) among the homemakers ( $p < 0.05$ ). Psychological violence was experienced by 34.7% and 20.8% ( $p < 0.05$ ); physical violence by 31.9% and 16.7% ( $p < 0.05$ ) and sexual by 20.3% and 0.8% ( $p < 0.01$ ) of the beggars and homemakers respectively.	IPV
Mootz et al. (2018) [29]	Uganda	Women aged 13 to 49	605	Cross-sectional	Both lifetime and previous year's history: prevalence of experiencing IPV was psychological: 65.3% (95% CI 61%, 69) (life time) and 50.9% (95% 46.9, 54.9) (past 12 months); and physical: 59.9% (95% CI 55.7, 63-8) (lifetime) and 43.8% (95% CI 39.5, 47.8) (one year).	IPV
Vinck et al. (2014) [30]	Cote d'Ivoire	Women aged 15 to 49 years	950	Cross-sectional	History of IPV 26.5% (95% CI 14, 36) reported experiencing IPV and 23.4% (95 %CI 16, 41) women reported past-year IPV.	IPV
Kirstenet al. (2010) [31]	DR Congo	Women (18–49)	998	Cross-sectional	Rates of reported sexual violence were 39.7% (95% CI 32.2, 47.2)	IPV
Ajah et al. (2014) [37]	Nigeria	Women aged 15 to 49 years	836	Cross-sectional study	The prevalence of domestic violence among rural women was significantly higher than that amongst urban women 97% (95% CI 94.6, 98) versus 81% (95 % CI 77, 84), ( $p < 0.001$ ). In	IPV

					particular, the prevalence of physical violence was significantly higher among rural women than among urban women 37.2%, (95% CI 32.3, 42.4) versus 23.5 % (95 % CI 19.7, 27.6); ( $p < 0.05$ ).	
Adjah et al. (2016) [38]	Ghana	Women aged 15 to 49 years	1524	Cross-sectional	The proportion who ever had experienced domestic violence: 33.6% (95% CI 32, 36) emotional 30% (95% CI 27.7, 32.4); physical violence; 17% (95% CI 15.2, 19) and 4% (95% CI 3.1, 5.1) sexual violence	IPV
Admasu et al. (2016) [39]	Ethiopia	Women aged 15–49 years	300	Cross-sectional	IPV during recent pregnancy was 44.5% (95 % CI, 32.6, 56.4). About 55.5% (95% CI 157, 55.5) of women experienced all the three forms of intimate partner violence during recent pregnancy. Physical 29% (95 % CI, 24, 34.5), sexual 30% (95 % CI, 24.9, 35.6), and psychological 16% (95 % CI, 12, 20.7)	IPV
Shanko et al. (2013) [40]	Ethiopian	Women aged 15–49 years	858	Cross-sectional	Any experience of violence by an intimate partner was reported by 19.6% (95% CI 16.79, 22.2) and 70.3% of the perpetrators were husbands.	IPV
Fawole et al. (2018) [89]	Nigeria	Youth-students	640	Cross-sectional	At least one form of GBV was experienced: 86.7% (95% CI 83.9, 89.3) (89.1% of public and 84.8% private schools students ( $p = 0.32$ )). Psychological violence was the common type of GBV experienced (public—72.5% vs. private—69.2%; $p = 0.37$ ), while sexual violence was least (public—41.4% vs. private—37.4%; $p = 0.3$ ) prevalent.	IPV
Okenwa et al. (2009) [41]	Nigeria	Women aged 15–49 years	934	Cross-sectional	One-year prevalence of IPV was 29% (95% CI 26, 32), with significant proportions reporting psychological 23% (95% CI 20.4, 25.9), physical 9% (95% CI 7.3, 11), and sexual 8% (95% CI 6.4, 10.1) abuse.	IPV
Berhane et al. (2015) [90]	Ethiopia	Pregnant women	422	Cross-sectional	The prevalence of intimate partner physical violence in pregnancy was 20.6% (95% CI 16.70, 24.90).	IPV
Gust et al. (2017) [43]	Kenya	Women age greater than 18-49 years	7,421	Cross-sectional	Found that 11.8% (95% CI 11, 12.5) reported physical violence by a sexual partner in the last 12 months.	IPV
Kimani et al. (2016) [44]	Kenya	Women aged 15–19 years	301	Cross-sectional	Among the respondents, 33% (95% CI 27.6, 38.6) were victims of sexual violence.	IPV
Titilayo et al. (2017) [45]	Nigeria	Women aged 15–19 years	26,997	Cross-sectional	One-quarter (25%) (95% CI 24.5, 25.5) of the ever married women reported ever experiencing one form of domestic violence or the other (sexual 6.6% (95% CI 6.3, 6.9), physical 15.1% (95% CI 14.6, 15.5) and	IPV

					psychological/emotional 19.7% (95% CI 19.2, 20.2)	
Pitipitan et al. 2013) [46]	South Africa	Women	1388	Cross-sectional	A total of 38.9% (95% CI 36.4, 41.5) reported a lifetime history of violence (i.e., ever being hit by a sexual partner). For recent violence, a total of 1140 (82.1%) reported not having been hit and a total of 17.9% (95% CI 15.9, 20.1) women did report having been hit by a sexual partner in the last four months.	IPV
Fute et al. (2015) [47]	Ethiopia	Nurses	660	Cross-sectional	Prevalence of workplace violence was 29.9% (95% CI 26.5, 33.5) of which physical violence accounted for 5.5% (95% CI 3.9, 7.6), verbal abuse for 26.4% (95% CI 23, 30) and sexual harassment for 3.8% (95% CI 2.5, 5.6).	IPV
Fesehan et al. (2012) [48]	Ethiopia	Women	422	Cross-sectional	The prevalence of physical violence in the last 12 months and lifetime was 25.5% (95% CI 21.3, 29.8) and 31.0% (95% CI 26.7, 35.7) respectively. The most common forms of physical violence reported included slapping 101 (61.6%) and throwing objects 32 (19.5%).	IPV
Fiorentino et al. (2019) [49]	Cameroon	Women (HIV positive women)	894	Cross-sectional	The prevalence of IPV was 29% (95% CI 26, 32) (emotional), 22% (95% CI 19.4, 24.9) (physical), 13% (extreme physical) and 18% (95% CI 15.6, 20.7) (sexual).	IPV
Bui et al. (2016) [91]	Zimbabwe		5280	Cross-sectional	Reporting physical violence: 27.11% (95% CI 25.9, 28), sexual 14% (95% CI 13.1, 14.97) and emotional 24.35% (95% CI 23.2, 25.5)	IPV
Pack et al. (2013) [92]	Kenya	Sex worker	619	Cross-sectional	About 78.7 % (95% CI 75.2, 81.8) of women reporting any IPV in the last 30 days.	IPV
Matsekeet al. (2017) [51]	South Africa	HIV positive women	673	Cross-sectional	Overall, 56.3% (95% CI 1 52.5, 60) reported having experienced either psychological or physical IPV, and 19.6% (95% CI 16.7, 22.8) reported physical IPV.	IPV
Azene et al. (2019) [52]	Ethiopia	Pregnant women	409	Cross-sectional	The prevalence of IPV during current pregnancy was found to be 41.1% (95% CI 36, 46). Of this, the prevalence of psychological, physical, and sexual violence was 29.1% (95% CI 27.1, 31.1), 21 % (95% CI 19.26, 22.9) and 19.8% (95% CI 18.0, 21.6) respectively.	IPV
Deyessa et al. (2009) [53]	Ethiopia	Women aged 15–49 years	1994	Cross-sectional	The lifetime prevalence of any form of IPV was 72% (95% CI 70.0, 73.9).	IPV
Gashaw et al. (2018) [54]	Ethiopia	Pregnant women	720	Cross-sectional	More than three quarters (80.6%) (95% CI 77.6, 80.5) reported to have a lifetime risk of emotional or physical abuse by their partner or someone	IPV

					important. The proportion of partner violence during the current pregnancy among ever exposed to IPV was 44% (95% CI 40.6, 47.4).	
Berhanie [90]	Ethiopia	Pregnant women	954	Cross-sectional	About 40.8% (95% CI 37.6, 43.9) had experienced IPV during their pregnancy period. More than two thirds (68.6%) of cases had been exposed to IPV.	IPV
Berestein et al. (2016) [93]	South Africa	Pregnant women	632	Cross-sectional	Found that 21% (95% CI 18.4, 24.3) of women reported experiencing $\geq 1$ act of IPV in the past 12 months, including emotional 15% (95% CI (12.4, 18.1), physical 15% (95% CI 12.4, 18.1) and sexual violence 2% (95% CI 1.1, 3.6). Of those reporting any IPV ( $n = 132$ ), 48% reported experiencing two or more types. Emotional and physical violence was most prevalent among women aged 18–24 years, while sexual violence was most commonly reported among women aged 25–29 years	IPV
Pengpid et al. (2016) [55]	22 Countries (7-Africa)	Women aged 15–49 years	16,979	Cross-sectional	Cameroon 51.5%, Ivory Coast 30.2%, Madagascar 15.9%, Mauritius 6.7%, Namibia 21.5%, Nigeria 15.1%, South Africa 18.5%, Tunisia 6.4%	IPV
Finnoff et al. (2012)[56]	Rwanda	Women aged 15–49 years	4066	Cross-sectional	IPV: 37.1% (95% CI 35.6, 38.6), physical 33% (95% CI 31.5, 34.5), emotional 9.7% (95% CI 8.8, 10.7) and sexual 12.4% (95% CI 11.4, 13.5).	IPV
Sabri et al. (2019)[57]	Uganda	Women aged 15–49 years	7933	Cross-sectional	Recent IPV victimization was reported by 21.2% (95% CI 18.5, 20.1) of women.	IPV
Fawole et al. (2010)[58]	Nigeria	Ever married women	820	Cross-sectional	Lifetime prevalence of perpetration of physical abuse was 25.1% (95% CI 22.2, 28.3), while psychological violence was 44.4% (95% CI 40.9, 47.8). Two hundred and forty 29.3% (95% CI, 26.2, 32.5) had ever perpetrated sexual violence.	IPV
Agrdah et al. (2012) [59]	Uganda	Students	980	Cross-sectional	Overall: 10% (95% CI 8.2, 12.0) exposure to actual physical violence over the previous 12 months.	IPV
Perrin et al. (2012) [60]	Somalia	Women aged 15–49 years	2376	Cross-sectional	Among women, 35.6% (95% CI 33.4, 37.9) reported adult lifetime experiences of physical or sexual IPV and 16.5% (95% CI 15.1, 18.1) reported adult lifetime experience of physical or sexual non-partner violence.	IPV and Non-IPV
Chikhungu et al. (2019) [94]	Malawi	Women aged 15–49 years	24,562	Cross-sectional	Found that 42% (95% CI 41.4, 42.6) of ever-married women have experienced some form of violence perpetrated by their current or most recent spouse.	IPV

Wandera et al. (2015) [61]	Uganda	Women aged 15–49 years	1307	Cross-sectional	More than a quarter (27%) (95% CI 24.6, 29.3) of women who were in a union in Uganda reported sexual IPV.	IPV
Hatcher et al. (2019) [62]	South Africa	Women aged 15–49 years	2006	Cross-sectional	Currently partnered men, nearly half (48.4%) (95% CI 46.2, 50.6) perpetrated IPV.	IPV
Oumeora (2017) [63]	Nigeria	Women aged 15–49 years	500	Cross-sectional	Found that 13.6% (95% CI 10.8, 16.9) of the women had experienced domestic violence in the current pregnancy.	IPV
Schneider et al. (2010) [86]	South Africa	Women aged 15–49 years	425	Cohort	Found that 13.9% (95% CI 10.8, 17.6) reported IPV at baseline, with physical IPV being the most frequently reported (69.5%).	IPV
Tchokossa et al. (2018) [95]	Nigeria	Women aged 15–49 years	400	Cross-sectional	Findings showed that 55% (95% CI 49.9, 59.9) of the women have experienced at least one form of violence in their relationship but only 28% of the women who experienced IPV reported the act while 63.7% of those who did not report kept silent because they hoped their partner would change.	IPV
Stockl et al. (2010) [96]	Tanzania	Women aged 15–49 years	1503	Cross-sectional	Overall physical PV was 9.3% (95% CI 8.3, 10.6) during pregnancy. Seven ( $n = 88$ ) and twelve per cent ( $n = 147$ ) of ever-partnered, ever-pregnant women in Dares Salaam ( $n = 1298$ ) and Mbeya ( $n = 1205$ ), respectively, reported being physically assaulted during pregnancy by their partner.	IPV
Mahenge et al. (2016) [65]	Tanzania	Pregnant women	500	Cross-sectional	Overall 18.8% (95% CI 15.5, 22.6) experienced some physical and/or sexual violence during pregnancy. Forty-one women (9%) reported having experienced some physical and/or sexual violence at one to nine months postpartum.	IPV
Selin et al. (2019) [87]	South Africa	Adolescent girls and young women	2533	Cohort	The prevalence of IPV was nearly one quarter (19.5%) (95% CI 18.0, 21.2) of adolescent girls and young girls (AGYW) experienced any IPV ever (physical or sexual) by a partner. The prevalence of any IPV ever among AGYW aged 13 years to 14 years, 15 years to 16 years, and 17 years to 20 years was 10.8%, 17.7%, and 32.1%, respectively.	IPV
Ezeanochie, et al. (2010) [66]	Nigeria	HIV-seropositive pregnant women	305	Cross-sectional	The prevalence of IPV among the women was 32.5% (95% CI 27.5, 38.0), with psychological violence being the most common form of violence reported 27.5% (95% CI 22.7, 32.8) and physical violence the least reported 5.9% (95% CI 3.6, 9.3).	IPV

Prabhu, et al. (2011) [97]	Tanzania	women attending VCT	2436	Cross-sectional	Overall 17.7% (95% CI 16.2, 19.3) reported IPV during their lifetime.	IPV
Fawole et al. (2014) [71]	Nigeria	Female sex worker	305	Cross-sectional	The prevalence of VAW preceding the survey was 52.5% (95% CI 46.7, 58.2). Sexual violence was the most common type (41.9%) (95% CI 36.4, 47.7) of violence experienced, followed by physical violence (35.7%) (95% CI 30.4, 41.3) and psychological (31.9%) (95% CI 26.7, 37.1).	IPV
Addo et al. (2017) [98]	Ghana	Women aged 15–49 years	2000	Cross-sectional	About 34% (95% CI 29.3, 39.2) of respondents had experienced IPV in the past year, with 11.8% (95% CI 8.4, 16.4), 15.5% (95% CI 12.7, 18.7), and 24.6% (95% CI 0.5, 29.2) reported sexual, physical and emotional respectively. Past year experience of emotional and economic IPV were 24.6% and 7.4% respectively. Where lifetime experience was 50.9% (95% CI 46.0, 55.9), physical 32.2% (95% CI 28.3, 36.2), sexual 18.2 (95% CI 15.3, 22.7) and emotional IPV 34.5% (95% CI 29.7, 39.0).	IPV
Chen et al. (2017) [72]	Tanzania	Women aged 15–49 years	5371	Cross-sectional	In the past 12 months, there was 35% (95% CI 33.7, 36.3) that reported victimization among the study respondents.	IPV
Memiah et al. (2018) [99]	Kenya	Women aged 15–49 years	3028	Cross-sectional	Lifetime prevalence was 49.4% (95% CI 47.6, 51.1), ( $p < 0.001$ ).	IPV
Schwitzer et al. (2014) [73]	Uganda	Female sex workers	1467	Cross-sectional	Found that 82% (95% CI 79, 84) experienced client-initiated GBV and 49% (95% CI 47, 53) had been raped at least once in their lifetime. Physical violence 40% (95% CI 37, 43), verbal 45% (95% CI 42, 49), and sexual 50% (95% CI 46, 53).	IPV
Tusiime, et al. (2015) [74]	Uganda	Young pregnant women	416	Cross-sectional	Prevalence of sexual coercion was 24% (95% CI 20.0, 28.6) and was higher among those who had non-consensual sexual first time experiences (29.0%) compared with those who had consensual sexual first time experiences (22.6%).	IPV
Onoh, et al. (2013) [75]	Nigeria	Pregnant women	321	Cross-sectional	Found that, 44.6% (95% CI 39.5, 50.6) reported having been abused in pregnancy.	IPV
Falb, et al. (2014) [88]	Côte d'Ivoire	Women aged 15–49 years	981	Cohort	Half (49.8%) (95% CI 46.6, 53.1) of all women reported lifetime physical or sexual IPV, and nearly 1 in 5 (18.6%) reported experiencing reproductive coercion.	IPV

Mutagom et al. (2019) [80]	Rwanda	Female sex workers	1978	Cross-sectional	A high proportion of female sex workers (FSW's) were physically abused multiple times 42.6% (95% CI 40.2, 44.8). During sex work, 35.6% faced physical violence, and 14.8% faced this physical violence many times. Physical violence happened in the last month preceding the survey in 25.4% FSW's; it occurred in the last 12 months in 49.7% FSWs. When asked about the last time FSWs faced physical violence, most (63.1%) of the perpetrators were clients; however, in 12.5% of (95% CI 11, 14) cases, the perpetrator was a member of law enforcement. A large proportion 18.3% (95% CI 14.6, 17.9) had been sexually abused outside of the family circle.	IPV and non-IPV
Bamiwoy et al. (2014) [81]	Multicounty	Women aged 15–49 years	38,426	Cross-sectional	The overall prevalence of any form of violence (physical, sexual or emotional) ranged from 30.5% in Nigeria to 43.4% in Zimbabwe; 45.3% in Kenya; 45.5% in Mozambique; 53.9% in Zambia and 57.6% in Cameroon	IPV
Yenealem et al. (2019) [100]	Ethiopia	Healthcare workers	531	Cross-sectional	The prevalence of workplace violence was found to be 58.2% (95% CI, 53.7, 62.3) in which verbal abuse 53.1% (95% CI 48.7, 57.4) followed by physical attacks 22.0% (95% CI 18.6, 25.6) and 7.2% (95% CI 5.1, 9.8) sexual harassment. Females are most exposed in all forms of workplace violence: verbal abuse 161 (57.1%), physical attack 69 (59.0%) and sexual harassment 38 (100%) when compared with men.	IPV
Hendricks et al. (2018) [85]	Tanzania	Female sex workers	496	Cross-sectional	Overall 40% (95% CI 35.6, 44.4) of participants experienced recent physical or sexual violence, and 30% recently experienced severe physical or sexual violence.	IPV
Garcia- et al. (2013) [4]	Global (56 countries)	Women aged 15–49 years	11,594	Cross-sectional	Lifetime prevalence of physical and/or sexual IPV among ever-partnered women by WHO region (African region)—36.6(95% CI 32.7, 40.5); lifetime prevalence of non-partner sexual violence by WHO region—8.5% (95% CI 15.3%, 45.6) proportion of women reporting IPV and/or non-partner sexual violence.	IPV and non-IPV

**Table S2. Appraisal of Quantitative Studies**

Authors	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6	Question 7	Question 8
Bleck et al. (2015)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Y
Yaya et al. (2019)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Y
Greene, et al. (2017)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Y
Fawole et al. (2013)	Yes	Yes	Yes	NO	Yes	Yes	Yes	Y
Mootz et al. (2018)	Yes	Yes	Yes	Yes	Yes	Unclear	Yes	
Vinck et al. (2014)	Yes	Yes	Yes	Yes	Yes	NO	Yes	N
Kirstenet al. (2010)	Yes	Yes	NO	Yes	Yes	Yes	Yes	Y
Ajah et al. (2014)	Yes	NO	Yes	NO	Yes	Yes	Yes	N
Adjah et al. (2016)	Yes	NO	Yes	Yes	Yes	Yes	Yes	Y
Admasu et al. (2016)	Yes	Unclear	Yes	NO	Yes	Yes	Yes	Y
Shanko (2013)	Yes	NO	Yes	Yes	Yes	Yes	Yes	Y
Fawole et al. (2018)	Yes	Unclear	Yes	NO	NO	Yes	Yes	N
Okenwa et al. (2009)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Y
Berhane et al. (2015)	Yes	Yes	Yes	Yes	Unclear	Yes	Yes	Y
Gust et al. (2017)	Yes	Unclear	Yes	Yes	Yes	Yes	Yes	Y
Kimani et al. (2016)	Yes	Yes	Yes	NO	Yes	Yes	Yes	Y
Titilayo et al. (2017)	Yes	Unclear	Yes	Yes	Unclear	Yes	Yes	Y
Pitipitan et al. (2013)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Y
Fute et al. (2015)	Yes	Unclear	Yes	Yes	Unclear	Yes	Yes	Y
Fesehan et al. (2012)	Yes	Unclear	Yes	Yes	Yes	Yes	Yes	Y
Fiorentino et al. (2019)	Yes	No	Yes	Yes	NO	Yes	Yes	Y
Bui et al. (2016)	Yes	No	Unclear	Yes	Yes	Yes	Yes	Y
Pack et al. (2013)	Yes	No	Unclear	Yes	NO	Yes	Yes	N
Matsekeet al. (2017)	Yes	No	Unclear	Yes	Yes	Yes	Yes	Y
Azene et al. (2019)	Yes	No	Yes	Unclear	Yes	Yes	Yes	Y
Deyessa et al. (2009)	Yes	Unclear	Yes	Yes	Yes	Yes	Yes	Y
Gashaw et al. (2018)	Yes	Unclear	A	Yes	Yes	Yes	Yes	Y
Berhanie et al. (2019)	Yes	NO	Yes	Yes	Yes	Yes	Yes	Y
Berestein et al. (2016)	Yes	Unclear	Yes	Yes	NO	Yes	Yes	Y
Pengpid et al. (2016)	Yes	Unclear	Yes	Yes	NO	Yes	Yes	Y



Finnoff et al. (2012)	Yes	Unclear	Yes	Yes	Yes	Yes	Yes	Y
Sabri et al. (2019)	Yes	Yes	Yes	Yes	NO	Yes	Yes	Y
Fawole et al. (2010)	Yes	Yes	NO	Yes	Yes	Yes	Yes	Y
Agrdah et al. (2012)	Yes	Unclear	Yes	Yes	NO	Yes	Yes	Y
Perrin et al. (2012)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Y
Chikhungu et al. (2019)	Yes	Unclear	Yes	Yes	Yes	Yes	Yes	Y
Wandera et al. (2015)	Yes	Unclear	Yes	Yes	Yes	Yes	Yes	Y
Hatcher et al.(2019)	Yes	Yes	Unclear	Yes	Yes	Yes	Yes	Y
Oumeora (2017)	Yes	NO	Yes	NO	Yes	Yes	Yes	Y
Schneider et al. r(2010)	Yes	NO	No	Yes	Yes	Yes	Yes	Y
Tchokossa et al. (2018)	Yes	Yes	Yes	NO	Yes	Yes	Yes	Y
Stockl et al. (2010)	Yes	Yes	NO	Yes	NO	Yes	Yes	N
Mahenge et al. (2016)	Yes	Unclear	Yes	Yes	NO	Yes	Yes	Y
Selin et al. (2019)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Y
Ezeanochie, et al. (2010)	Yes	NO	Yes	NO	Yes	Yes	Yes	N
Prabhu, et al. (2011)	Yes	NO	Yes	Yes	Yes	Yes	Yes	Y
Fawole et al. (2014)	Yes	Yes	Yes	NO	Yes	Yes	Yes	Y
Addo et al(2017)	Yes	Unclear	Yes	Yes	Yes	Yes	Yes	Y
Chen et al. (2017)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Y
Memiah et al. (2018)	Yes	NO	Yes	Yes	Yes	Yes	Yes	
Schwitter et al. (2014)	Yes	NO	Yes	Yes	NO	Yes	Yes	N
Tusiime, et al. (2015)	Yes	NO	Yes	Yes	NO	Yes	Yes	N
Onoh, et al. (2013)	Yes	unclear	Yes	NO	Yes	Yes	Yes	Y
Falb, et al. (2014)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Y
Mutagom et al. (2019)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Y
Bamiwoy et al. (2014)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Y
Yenealem et al. (2019)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Y
Hendricks et al. (2018)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Y
Garcia- et al. (2013)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Y

### CASP Key Questions

1. Did the study address a clearly focused issue?
2. Was the participants of the study recruited in an acceptable way?
3. Was the outcome accurately measured to minimise bias?
4. Was the sampling appropriate for the study?
5. What are the results of the study?
6. How precise the tools used to measure the results?
7. Do you believe the results?
8. Can the results be applied to the local population?
9. Do the results of the study fit with other available evidence?
10. What are the implications of this study for practice?

