

Attachment 1: Supplementary tables

Supplementary table 1: Assessment tools used for the quality appraisal of the included studies, based on STROBE checklist (8 quality assessment criteria)

| Sample size | Sampling methodology (Representativeness) | Responses rate | Outcome measure | Statistical analysis | Control of confounding | Study limitations | Ethical considerations |
|---|--|---|--|---|---|---|---|
| [1 point] Study reported sample size calculation | [1 point] Random selection from representative list of the target population | [1 point] High response rate (>70%) | [1 point] Valid acceptable scale of measure empathy | [1 point] Statistical techniques and reasons for choosing techniques are fully explained | [1 point] Well adjusted (Individual, household and community level factors). Adjusted and unadjusted Odd Ratio (OR) or Relative Ratio (RR), confidence interval and <i>p</i> -values were well presented | [1 point] Stated study limitations | [1 point] Studies with ethical consideration |
| [0 points] No sample size calculation | [0 points] Nonrandom selection but from sampling frame that represent the community | [0 points] Moderate/low response rate (<70%) | [0 points] No valid scale of measure empathy | [0 points] Statistical techniques are not explained | [0 points] Minimal adjusted for some or none of the confounders | [0 points] No stated study limitations | [0 points] Studies with no ethical consideration |

Supplementary table 2: Quality assessment of included studies

| Author, Year Country | Sample size | Sampling methodology (Representativeness) | Responses rate | Outcome measure | Statistical analysis | Confounding | Study limitations | Ethical considerations | Quality assesement |
|--------------------------|-------------|---|----------------|-----------------|----------------------|-------------|-------------------|------------------------|--------------------|
| Hamed et al. 2015 | 1 | 0 | - | 1 | 1 | 0 | 1 | 1 | 5 |
| Hasan et al. 2013 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 4 |
| Iqbal et al. 2022 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 5 |
| Ayuob et al. 2016 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 4 |
| ARAIN et al. 2019 | 0 | 0 | - | 0 | 1 | 0 | 1 | 1 | 3 |
| Jaafari et al. 2018 | 0 | 0 | - | 1 | 1 | 0 | 0 | 1 | 3 |
| Raof. Yassin et al. 2016 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 5 |
| Zgheib et al. 2020 | 0 | 0 | - | 1 | 1 | 0 | 1 | 1 | 4 |
| Hashim et al. 2013 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 5 |
| Affi 2018 | 0 | 0 | - | 1 | 1 | 1 | 1 | 1 | 5 |