

Supplementary File 2: Quality Appraisal of Included Studies

A. RCT Critical Appraisal

Table Key:

Initial critical appraisal screening:

1. Does this study address a clearly focused question?
2. Did the study use valid methods to address this question?
3. Are the valid results of this study important?
4. Are these valid, important results applicable to my patient or population?

The RCT Critical Appraisal Checklist screening questions:

5. Was the assignment of patients to treatments randomized?
6. Were the groups similar at the start of the trial?
7. Aside from the allocated treatment, were groups treated equally?
8. Were all patients who entered the trial accounted for? And were they analysed in the groups to which they were randomised?
9. Were measures objective or were the patients and clinicians kept "blind" to which treatment was being received?
10. Are there suitable measures used to report results and are the estimates of the treatment effect precise?

No.	First author (Year)	Type of Study	1	2	3	4	5	6	7	8	9	10	Score
1	Ali, B. S (2003)	RCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
2	Khan, M. N. (2017)	Cluster RCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
3	Rahman, A (2019)	Cluster RCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
5	Sikander, S. (2019)	Cluster RCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
6	Rahman, A (2008).	RCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
8	Sikander, S. (2015)	RCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
9	Jokhio, A. H (2005)	Cluster RCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
10	Omer, K. (2008)	Cluster RCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
12	Hirani, S. (2018)	RCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
13	Maselko, J (2020)	RCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
17	Midhet, F (2010)	RCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
18	Qureshi, R. N (2020)	RCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High

Scoring Key: Each assessment criterion was scored (Yes, No, Unclear)

B. MMAT appraisal

Checklist for included studies which fit the criterion, as described in MMAT appraisal as: Quantitative non-randomized studies (Non-randomized studies are defined as any quantitative studies estimating the effectiveness of an intervention or studying other exposures that do not use randomization to allocate units)

Screening Questions

1. Are there clear research questions?
2. Do the collected data allow to address the research questions?

Methodological quality criteria

3. Are the participant's representative of the target population?
4. Are measurements appropriate regarding both the outcome and intervention (or exposure)?
5. Are there complete outcome data?
6. Are the confounders accounted for in the design and analysis?
7. During the study period, is the intervention administered (or exposure occurred) as intended?

No.	First author (Year)	Type of Study								Score	Comments
			1	2	3	4	5	6	7		
1	Ali, N. S (2010)	Non-randomized quasi-experiment	Yes	Yes	Yes	Yes	Yes	No	No	Medium	This was a non-randomized sample from an action research program.
2	Hameed, W (2016)	Non-randomized study non-inferiority trial	Yes	Yes	Yes	Yes	Yes	Yes	No	Medium	Union council areas were sampled randomly. Participants & could not be randomized, (due to the low proportion of LARC users with access to phones)
3	Kumar, R. (2020)	Non-randomized quasi-experiment	Yes	Yes	Yes	Yes	Yes	Yes	No	Medium	Union council areas were sampled randomly. However, women were sampled in a non-randomized manner (as many pregnant women did not consent to participate due to cultural or health issues).
4	Azmat, S. K. (2013)	Non-randomized quasi-experiment	Yes	Yes	Yes	Yes	Yes	Yes	No	Medium	The control sample could not be randomly selected.
5	Azmat, S. K. (2016)	Non-randomized quasi-experiment	Yes	Yes	Yes	Yes	Yes	Yes	No	Medium	Non-randomized sample (as two intervention models were being compared- community midwife model vs. voucher scheme)
6	Ali, M (2020)	Non-randomized quasi-experiment	Yes	Yes	Yes	Yes	Yes	Yes	No	Medium	Union council areas were sampled randomly. Participants were not sampled randomly, but passed on willingness to participate.

Scoring Key: Each assessment criterion was scored (Yes, No, Unclear)