

Supplementary Material S3. The Results of Mixed Methods Appraisal Tool (MMAT, 2018 version)

Study	Screening Questions		Qualitative Studies				
	S1	S2	Q1	Q2	Q3	Q4	Q5
Zhang & Wang (2023)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Liu et al. (2025)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Li et al. (2025)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pflaumer et al. (2021)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wohlfart et al. (2021)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
O. Habimana et al. (2025)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
J. Castaño-Muñoz et al. (2025)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Zhou(2022)	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Q1: Is the qualitative approach appropriate to answer the research question?

Q2: Are the qualitative data collection methods adequate to address the research question?

Q3: Are the findings adequately derived from the data?

Q4: Is the interpretation of results sufficiently substantiated by data?

Q5: Is there coherence between qualitative data sources, collection, analysis and interpretation?

Study	Screening Questions		RCTs				
	S1	S2	Q1	Q2	Q3	Q4	Q5
C. Ruffini et al. (2025)	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Q1: Is randomization appropriately performed?

Q2: Are the groups comparable at baseline?

Q3: Are there complete outcome data?

Q4: Are outcome assessors blinded to the intervention provided?

Q5: Did the participants adhere to the assigned intervention?

Study	Screening Questions		Non-Randomized Studies				
	S1	S2	Q1	Q2	Q3	Q4	Q5
A. Riedmann et al. (2022)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Zhang (2025)	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Q1: Are the participants representative of the target population?

Q2: Are measurements appropriate regarding both the outcome and intervention (or exposure)?

Q3: Are there complete outcome data?

Q4: Are the confounders accounted for in the design and analysis?

Q5: During the study period, is the intervention administered (or exposure occurred) as intended?

Study	Screening Questions		Quantitative Descriptive Studies				
	S1	S2	Q1	Q2	Q3	Q4	Q5
Zhang et al. (2013)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tian et al. (2020)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wang et al. (2020)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Xiao et al. (2023)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ye & Wang(2023)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hao & Bao (2020)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wei et al. (2024)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dong et al. (2025)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Zhang & Lian (2024)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Liang et al. (2025)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wang et al. (2025)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pu & Cao (2025)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
A. Varzaru & C. Ghita (2025)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fernández-Soriano et al. (2019)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Zhu et al. (2025)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
W. Diteeyont et al. (2024)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ivanishchenko et al. (2024)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
I. Berkovich & T. Hassan (2025)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wu et al. (2019)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lin et al. (2023)	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Q1: Is the sampling strategy relevant to address the research question?

Q2: Is the sample representative of the target population?

Q3: Are the measurements appropriate?

Q4: Is the risk of nonresponse bias low?

Q5: Is the statistical analysis appropriate to answer the research question?

Study	Screening Questions		Mixed Methods Studies				
	S1	S2	Q1	Q2	Q3	Q4	Q5
Huang et al. (2016)	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes
Tian et al. (2024)	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes
Hou (2024)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Qi et al. (2025)	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Q1: Is there an adequate rationale for using a mixed methods design to address the research question?

Q2: Are the different components of the study effectively integrated to answer the research question?

Q3: Are the outputs of the integration of qualitative and quantitative components adequately interpreted?

Q4: Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?

Q5: Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?

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