

Supplemental Digital Table 1

Quality Reporting of the 22 Quantitative Studies According to the Medical Education Research Study Quality Instrument (MERSQI)^a

First author, study year	Study design	Sampling: No. of institutions	Sampling: Response rate	Type of data	Validity: Internal structure	Validity: Content	Validity: Relationship to variables	Data analysis: Appropriateness	Data analysis: Complexity	Outcomes	Score
Bergl, 2015 ¹¹	single group, cross-sectional (1)	1 institution (0.5)	64.2% (1)	assessment by study participant (1)	reported (1)	reported (1)	not reported (0)	appropriate (1)	descriptive analysis only (1)	behaviors (2)	9.5
Ben-Yakov, 2015 ³⁰	single group (1)	1 institution (0.5)	49.1% (0.5)	assessment by study participant (1)	reported (1)	reported (1)	not reported (0)	appropriate (1)	beyond descriptive (2)	behaviors (2)	10
Bensalem-Owen, 2011 ¹²	single group, pre/post (1.5)	1 institution (0.5)	100% (1.5)	objective (3)	reported (1)	reported (1)	reported (1)	appropriate (1)	descriptive analysis only (1)	knowledge, skills (1.5)	13
Bogoch, 2012 ¹³	single group, cross-sectional (1)	2 institutions (1)	58% (1)	assessment by study participant (1)	reported (1)	reported (1)	not reported (0)	appropriate (1)	descriptive analysis only (1)	behaviors (2)	10
Cook, 2013 ³¹	single group, cross-sectional (1)	1 institution (0.5)	61% (1)	assessment by study participant (1)	reported (1)	reported (1)	not reported (0)	appropriate (1)	descriptive analysis only (1)	attitude/perceptions (1)	8.5
Deloney, 2012 ²⁴	single group, cross-sectional (1)	1 institution (0.5)	47% (0.5)	assessment by study participant (1)	reported (1)	reported (1)	not reported (0)	appropriate (1)	descriptive analysis only (1)	attitude/perceptions (1)	8
Desai, 2014 ¹⁴	single group, cross-sectional (1)	1 institution (0.5)	100% (1.5)	objective (3)	reported (1)	reported (1)	reported (1)	appropriate (1)	beyond descriptive (2)	behaviors (2)	14

Fischer, 2013 ¹⁵	single group, cross-sectional (1)	> 2 institutions (1.5)	N/A	objective (3)	reported (1)	reported (1)	not reported (0)	appropriate (1)	beyond descriptive (2)	knowledge, skills (1.5)	12
George, 2014 ²⁵	single group, cross-sectional (1)	> 2 institutions (1.5)	30% (0.5)	assessment by study participant (1)	reported (1)	reported (1)	not reported (0)	appropriate (1)	descriptive analysis only (1)	attitude/perceptions (1)	9
Ginory, 2012 ³²	single group, cross-sectional (1)	> 2 institutions (1.5)	< 50% (0.5)	assessment by study participant (1)	reported (1)	reported (1)	not reported (0)	appropriate (1)	descriptive analysis only (1)	attitude/perceptions (1)	9
Go, 2012 ²⁶	single group, cross-sectional (1)	> 2 institutions (1.5)	39% (0.5)	assessment by study participant (1)	reported (1)	reported (1)	not reported (0)	appropriate (1)	descriptive analysis only (1)	attitude/perceptions (1)	9
Go, 2012 ²⁷	non-randomized 2 group (2)	2 institutions (1)	46.3% PDs (0.5)	assessment by study participant (1)	reported (1)	not reported (0)	not reported (0)	inappropriate (0)	descriptive analysis only (1)	attitude/perceptions (1)	7.5
Golden, 2012 ²⁸	single group (1)	1 institution (0.5)	N/A	objective (3)	reported (1)	not reported (0)	not reported (0)	appropriate (1)	descriptive analysis only (1)	attitude/perceptions (1)	8.5
Jent, 2011 ³³	single group (1)	1 institution (0.5)	85% (1.5)	assessment by study participant (1)	reported (1)	not reported (0)	not reported (0)	appropriate (1)	descriptive analysis only (1)	attitude/perceptions (1)	8
Karimkhani, 2015 ¹⁷	single group, pre/post (1.5)	1 institution (0.5)	100% (1.5)	assessment by study participant (1)	reported (1)	not reported (0)	not reported (0)	inappropriate (0)	descriptive analysis only (1)	attitude/perceptions (1)	7.5
Kohli, 2011 ¹⁸	single group (1)	1 institution (0.5)	85% (1.5)	assessment by study participant (1)	reported (1)	not reported (0)	not reported (0)	appropriate (1)	descriptive analysis only (1)	attitude/perceptions (1)	8
Langenau, 2014 ¹⁹	single group, cross-	> 2 institutions (1.5)	< 50% (0.5)	assessment by study participant	reported (1)	reported (1)	not reported (0)	appropriate (1)	descriptive analysis only (1)	attitude/perceptions (1)	9

	sectional (1)		(1)								
Matava, 2013 ²⁰	single group, cross-sectional (1)	> 2 institutions (1.5)	24% (0.5)	assessment by study participant (1)	reported (1)	reported (1)	not reported (0)	appropriate (1)	descriptive analysis only (1)	attitude/perceptions (1)	9
Moubarak, 2011 ³⁶	single group, cross-sectional (1)	1 institution (0.5)	50% (1)	assessment by study participant (1)	reported (1)	reported (1)	not reported (0)	appropriate (1)	descriptive analysis only (1)	attitude/perceptions (1)	8.5
Schulman, 2013 ³⁸	single group (1)	> 2 institution (1.5)	11.9% (0.5)	assessment by study participant (1)	reported (1)	not reported (0)	not reported (0)	appropriate (1)	descriptive analysis (1)	attitude/perceptions (1)	8
Schweitzer, 2012 ²⁹	single group, cross-sectional (1)	> 2 institution (1.5)	10.0% (0.5)	objective (3)	not reported (0)	not reported (0)	not reported (0)	appropriate (1)	descriptive analysis only (1)	behaviors (2)	10
Vasilopoulos, 2015 ²³	single group, pre/post test (1.5)	1 institution (0.5)	N/A 33 participants but authors do not mention how many were initially asked to participate	assessment by participant (1) AND objective (3)	reported (1)	reported (1)	reported (1)	appropriate (1)	beyond descriptive analysis (3)	attitude/perceptions AND knowledge (2.5)	14.5

Abbreviation: PD indicates program directors and N/A indicates not applicable.

^a Points obtained are in the parentheses in each cell. The mean MERSQI score for all 22 quantitative studies was 9.6.

Supplemental Digital Table 2

Quality Reporting of the 7 Qualitative Studies According to Consolidated Criteria for Reporting Qualitative Research (COREQ) Criteria^a

Criteria	No. of studies that reported criterion (%)	Jalali ¹⁶	Shaughnessy ²¹	Sherbino ²²	Landman ³⁴	Langenfeld ³⁵	Ponce ³⁷	Thompson ³⁹
Personal Characteristics								
Interviewer or facilitator identified	100	x	x	x	x	x	x	x
Credentials	100	x	x	x	x	x	x	x
Occupation	100	x	x	x	x	x	x	x
Sex	100	x	x	x	x	x	x	x
Experience and training	100	x	x	x	x	x	x	x
Relationship with participants								
Relationship established before study	57.1	-	x	x	x	-	x	-
Participant knowledge of the interviewer	57.1	-	x	x	x	-	x	-
Interviewer characteristics	85.7	-	x	x	x	x	x	x
Theoretical Framework (i.e., methodological orientation and theory identified)								
Participant selection								
Sampling	100	x	x	x	x	x	x	x
Method of approach	100	x	x	x	x	x	x	x
Sample Size	100	x	x	x	x	x	x	x
Nonparticipation (number or justification)	28.6	-	-	-	x	-	x	-
Setting								
Setting of data collection	100	x	x	x	x	x	x	x
Presence of nonparticipants	42.9	-	x	-	x	x	-	-

Description of sample	100	x	x	x	x	x	x	x
Data Collection								
Interview guide	100	x	x	x	x	x	x	x
Repeat interviews	0	-	-	-	-	-	-	-
Audio or visual recording	28.6	-	x	x	-	-	-	-
Field Notes	28.6	-	x	x	-	-	-	-
Duration	14.3	-	x	-	-	-	-	-
Data Saturation	100	x	x	x	x	x	x	x
Transcripts returned to participants	14.3	-	-	x	-	-	-	-
Data Analysis								
Number of data coders	100	x	x	x	x	x	x	x
Description of the coding tree	100	x	x	x	x	x	x	x
Derivation of themes	100	x	x	x	x	x	x	x
Use of software	100	x	x	x	x	x	x	x
Participant checking (did the participants provide feedback on the findings)	85.7	-	x	x	x	x	x	x
Reporting								
Quotations presented	42.9	x	x	x	-	-	-	-
Data and findings consistent	100	x	x	x	x	x	x	x
Clarity of major themes	100	x	x	x	x	x	x	x
Clarity of minor themes	100	x	x	x	x	x	x	x
Total score for all 7 studies		21	29	28	26	23	25	22

^a Here x indicates the study satisfied the criteria, and - indicates they study did not satisfied the criteria. The average score across all 7 studies was 24.9, and the range was 21 – 29.