

### Online Appendix 5: Results for medication adherence and health-related quality of life from studies that assessed these outcomes

Authors Year	Medication adherence		Health-related quality of life	
	Change from baseline to final follow-up	Difference in change between groups <sup>a</sup>	Change from baseline to final follow-up	Difference in change between groups <sup>a</sup>
Adams et al. 2015 (20)	Medication adherence rating scale IG: 24.0 to 24.0) <sup>b</sup> CG: 24.0 to 24.0) <sup>b</sup>	0.0 <sup>b</sup>	EQ-5D score IG: NR to 0.768) <sup>b</sup> CG: NR to 0.736) <sup>b</sup>	0.052 (P=0.103)
Adepu and Ari 2010 (21)	Brief medication questionnaire score IG: 0.73 to 0.88 (P<0.001) CG: 1.11 to 0.67 (P=0.021)	0.59 <sup>b</sup>	-	-
Adibe et al. 2013 (22)	-	-	HUI3 total score IG: 0.61 to 0.86) <sup>b</sup> CG: 0.63 to 0.64) <sup>b</sup>	0.22 <sup>b</sup>
Aguiar et al. 2016 (23)	Morisky medication adherence scale score IG: 3.0 to 3.9 (P<0.001) CG: 3.0 to 3.1 (P=0.383)	0.8 (P=0.008)	-	-
Al Mazroui et al. 2009 (24)	Proportion of non-adherent patients <sup>c</sup> IG: 48.3% to 21.4% CG: 49.1% to 32.5%	-10.3% <sup>b,d</sup>	Improvement in all SF-36 domains in IG, for example: General health score IG: 67.8 to 77.6) <sup>b</sup> CG: 66.6 to 69.2) <sup>b</sup>	7.2 <sup>b</sup>
Butt et al. 2016 (25)	Modified Morisky medication adherence scale score IG: 5.83 to 6.77 (P=0.02) CG: 5.95 to 5.98 (P=0.85)	0.91 (P=0.03)	EQ-5D score IG: 75.06 to 82.45 (P=0.007) CG: 70.60 to 77.12 (P=0.04)	0.87 (P=0.05)
Cani et al. 2015 (26)	Morisky medication adherence scale <sup>e</sup> IG: 17.6% to 70.6% (P<0.001) CG: 27.8% to 25.0% (P>0.999) Adherence to medicines questionnaire <sup>e</sup> IG: 47.1% to 52.9% (P=0.039) CG: 30.6% to 25.0% (P=0.5)	55.8% <sup>b</sup>  11.4% <sup>b</sup>	DQoL total score IG: 157.21 to 152.06 (P<0.001) CG: 162.53 to 166.36 (P<0.001)	-8.98 <sup>b,f</sup>
Chan et al. 2012 (27)	Proportion of doses taken IG: 73.6% to 96.1% CG: 82.1% to 84.1%	20.5% (P<0.001)	-	-
Chung et al. 2014 (30)	Malaysian medication adherence scale <sup>e</sup> IG: 70.0% to 75.0%) <sup>b</sup> CG: 64.5% to 58.7%) <sup>b</sup>	10.8% <sup>b</sup>	-	-
Cohen et al. 2011 (31)	-	-	SF-36 score No significant changes in either Physical health Mental health domains in IG	3.6 <sup>b</sup> -0.3 <sup>b</sup>
Goruntla et al. 2019 (35)	pill count method	IG: 83.4 to 96.6 ) <sup>b</sup> CG: 82.35to 82.2) <sup>b</sup>	-	-
	VAS method	IG: 7.2 to 11.8 CG: 0.83to 0.5		
Grant et al. 2003 (36)	No. of adherent days out of the past 7 days IG: 6.7 to 6.8) <sup>b</sup> CG: 6.9 to 7.0) <sup>b</sup>	0.0 (P=0.8)	-	-
Jaber et al. 1996 (37)	-	-	Health status questionnaire score No significant changes in any domain within or between IG and CG	-
Jarab et al. 2012 (39)	Morisky medication adherence scale <sup>g</sup> IG: 74.1% to 28.6%) <sup>b</sup> CG: 70.9% to 64.6%) <sup>b</sup>	-39.2% <sup>b,d</sup>	-	-



Korcegez et al. 2017 (41)	Morisky medication adherence scale <sup>e</sup> IG: 46.7% to 68.0% (P=0.013) CG: 57.1% to 59.7% (P=0.744)	18.7% <sup>b</sup>	-	-
Lim et al. 2016 (42)	Modified Morisky medication adherence scale score IG: 6.31 to 10.62 (P<0.001) CG: NR	-	-	-
Mahwi and Obied 2013 (43)	Pill count and Morisky medication adherence scale <sup>e,h</sup> IG: 77.4% to 19.0% (P<0.05) CG: NR	-	-	-
Maidana et al. 2016 (44)	-	-	SF-36 score IG: 56.3 to 71.3 (P<0.001) CG: 57.4 to 46.1 (P<0.001)	26.3 <sup>b</sup>
Nascimento et al. 2016 (46)	Average level of adherence IG: 93.3% to 98.7% (P<0.05) CG: 85.7% to 95.6% <sup>b</sup>	-4.5% <sup>b</sup>	-	-
Odegard et al. 2005 (47)	Self-reported adherence (2-question recall technique) <sup>i</sup> IG: 56% to NR CG: 35% to NR The intervention had no effect on improving adherence during the study period. CG reported better adherence throughout the study.	-	-	-
Ramanath and Santhosh 2011 (49)	Morisky medication adherence scale IG: significant improvement CG: non-significant improvement	-	WHOQOL-BREF total score IG: 39.58 to 43.57 (P<0.05) CG: 40.78 to 37.38 <sup>b</sup>	7.39 <sup>b</sup>
Scott et al. 2006 (50)	-	-	DQoL total score IG: 262.0 to 286.4) <sup>b</sup> CG: 232.5 to 247.3) <sup>b</sup>	9.6 <sup>b</sup>
Shao et al. 2017 (51)	Morisky medication adherence scale score IG: 0.70 to 0.65 (P<0.001) CG: 0.11 to 0.68 (P=0.770)	-0.62 <sup>b,d</sup>		
Simpson et al. 2011 (53)	Medication possession ratio IG: 93.4% to 96.9% CG: 95.1% to 91%	7.6% (P=0.21)		
Sriram et al. 2011 (54)	-	-	ADDQoL total score IG: -2.156 to -1.410 (P<0.01) CG: -1.899 to -1.974 (P>0.05)	0.821 <sup>b</sup>
Wishah et al. 2014 (56)	Morisky medication adherence scale score IG: 12.7 to 15.8 CG: 13.6 to 12.9	3.8 <sup>b</sup>	-	-
Withidpanyawong et al. 2019 (57)	Pill count <sup>e</sup> IG: 95.01% to 98.53% (P<0.001) CG: 95.21% to 94.89% (P=0.811)	3.83% (P=0.018)		
	Modified Morisky medication adherence scale score IG: 6.48 to 7.45 (P<0.001) CG: 6.09 to 6.77 (P<0.001)	0.28 (P=0.261)	-	-
Wu et al. 2018 (58)	-	-	SF-36 score No significant changes in either Physical health Mental health domains in IG	-

<sup>a</sup>Positive values indicate IG had greater increase; negative values indicate CG had greater increase.

<sup>b</sup>P-value not reported.

<sup>c</sup>Patients who reported forgetting doses, intentionally missing or taking extra doses were classified as non-adherent.

<sup>d</sup>Negative values indicate IG had greater increase in medication adherence; positive values indicate CG had greater increase in medication adherence.

<sup>e</sup>Proportion of adherent patients.

<sup>f</sup>Negative values indicate IG had greater increase in health-related quality of life; positive values indicate CG had greater increase in health-related quality of life.



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<sup>g</sup>Proportion of non-adherent patients.

<sup>h</sup>Data regarding Morisky medication adherence scale only.

<sup>i</sup>Proportion of patients having difficulty in remembering to take medications as prescribed.

ADDQoL = audit of diabetes-dependent quality of life; CG = control group; DQoL = diabetes quality of life; EQ-5D = EuroQoL-5 dimension; HUI3 = health utilities index mark 3; IG = intervention group; NR = not reported; SF-36 = short form 36; WHOQOL-BREF = World Health Organization quality of life – BREF.



