

Quality of Sleep Data Validation from the Xiaomi Mi Band 5 Compared With Polysomnography

Appendix 1

Table S1. Summary of main findings of Xiaomi and other devices.

Comparison sleep measures. Biases (SD)							
	Xiaomi			Fitbit			Jabwone UP3 [38]
	Mi Band 5	Mi Band 3 [9]	Mi Band 2 [30]	Alta HR [34,36]	Charge HR [35]	Charge 2 [37]	
TST (minutes)	-29.54 (72.54)	61 (-)	69.64 (67.43)	53.33 (-) -59.78 (99.62)	-8 (21)	-9(24)	59.1 (-)
WASO (minutes)	31.44 (61.92)	-	-33.57 (42.84)	-48.37 (-) 36.14 (48.60)	5.6 (14.3)	5 (19)	-
SOL (minutes)	-8.62 (53.76)	-	-	-1.99 (-) 23.22 (24.47)	2.5 (11.4)	4 (9)	-
SE (%)	-5.82 (17.67)	-	13.25 (-)	11.78 (-) -	-1.8 (4.5)	-	14.9 (-)
Time in N1+N2 ("light sleep") (minutes)	-29.81 (67.98)	-	-	138.30 (-) -68.82 (76.77)	-	-34 (34)	-
Time in N3 ("deep sleep") (minutes)	-14.64 (59.97)	-	-	-59.40 (-) 74.24 (46)	-	24 (28)	-
Time in REM (minutes)	19.49 (36.40)	-	-	18.50 (-) -2.78 (33.32)	-	1 (27)	-
Awake (minutes)	28.36 (72.69)	-	-	-96.97 (-) 41.93 (55.92)	-	-	-

Outcomes Epoch by Epoch analysis					
	Mi Band 5	Alta HR [36]	Charge 2 [37]	Ōura Ring [39]	Actigraphy [60]
Accuracy	0.78 (0.13)	-	-	-	-
Sensitivity	0.89 (0.16)	0.87 (-)	0.96 (-)	0.95 (4.5)	0.96 (-)
Specificity	0.35 (0.11)	0.44 (-)	0.61 (-)	0.48 (19.1)	0.37 (-)
Cohen's kappa	0.22 (0.23)	-	0.52 (0.14)	-	0.79 (-)