



Aim

To review the literatures concerning the effect of the single-implant mandibular overdenture (SIMO) on patient-reported outcome measures (PROMs) and masticatory function in the fully edentulous patients.



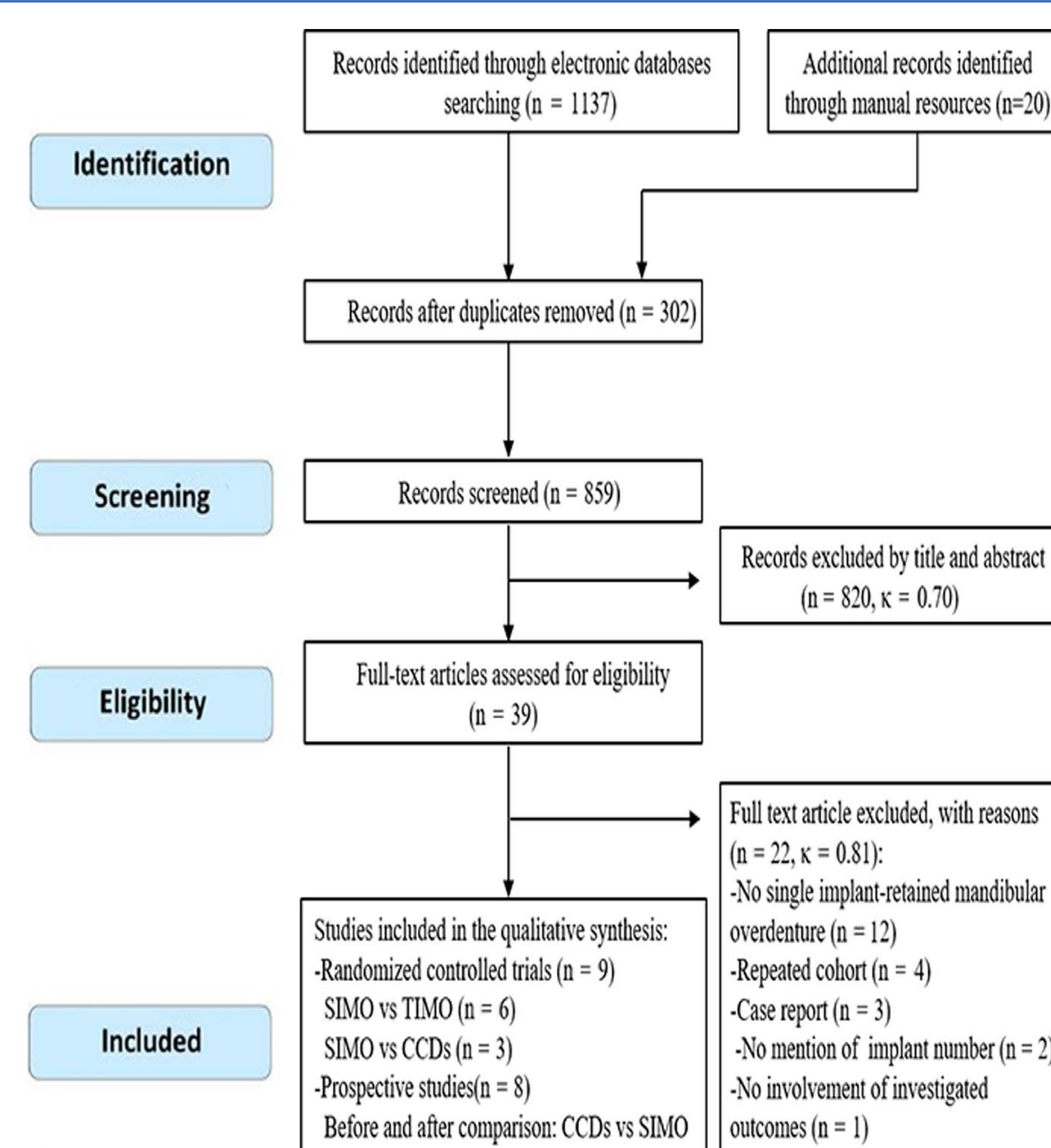
SIMO

Materials and Methods

Electronic databases (PubMed, Cochrane Library, EMBASE and Web of Science) were searched, complemented with manual resources. Prospective studies published in English up to February 2020 reporting the effect of SIMO on PROMs and masticatory function in the edentulous patients were included. This review focused on oral health-related quality of life (OHRQoL), satisfaction and masticatory function outcomes.

Results

Of 1157 initially screened articles, 9 randomised controlled trials (RCTs) and 8 prospective studies involving 551 subjects fulfilled the inclusion criteria. Two RCTs were graded as high risk of bias or some concern, while others were low risk. All prospective studies had adequate representativeness and assessment, but only one study had a controlled cohort.



	R	D	Mi	Me	S
Lam 2019	+	+	+	+	+
Nogueira 2018a	+	+	+	+	+
Nogueira 2018b	+	+	+	?	+
Paleari 2018	+	?	?	+	+
Alqutaibi 2017	+	+	+	+	+
Kronstrom 2017	+	?	-	?	+
Tavakolizadeh 2015	+	+	+	?	+
Bryant 2015	+	+	+	?	+
Policastro 2018	+	?	?	?	+

In general, the edentulous patients restored with SIMOs had improved OHRQoL and general satisfaction compared to those with conventional complete dentures (CCDs), but the outcome of masticatory function was controversial.

Compared with two-implant mandibular overdenture (TIMO), SIMO showed no significant differences regarding general satisfaction and satisfaction with speech, comfort, chewing ability, aesthetics and social life. Conflicting results were observed in OHRQoL and satisfaction with retention and stability. Better masticatory performance was observed in TIMO group than SIMO group.

Conclusion

Within the limitation of this review, SIMO is featured with better OHRQoL and satisfaction than CCD. SIMO and TIMO rendered similar patient satisfaction, but TIMO had better masticatory performance.