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Prevalence and risk factors of cosmetic-induced adverse events: A systematic review and metaanalysis

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Supplementary Material

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Supplementary Table 1. Search strategy used for each database

Database	Search query	N
PubMed	(((((("adverse event"[Title/Abstract]) OR ("adverse reaction"[Title/Abstract])) OR ("adverse	76
	$effect"[Title/Abstract])) \ OR \ ("side \ effect"[Title/Abstract])) \ OR \ ("undesirable \ effect"[Title/Abstract])) \ AND$	
	((((("Cosmetics"[MeSH]) OR ("Cosmetics"[Title/Abstract])) OR ("cosmetic product"[Title/Abstract])) OR	
	$("Cosmeceuticals"[MeSH])) \ OR \ (cosmetovigilance[Title/Abstract]))) \ AND \ (((prevalence) \ OR \ (epidemiology)))) \ AND \ (((prevalence) \ OR \ (epidemiology))))) \ AND \ (((prevalence) \ OR \ (epidemiology)))))) \ AND \ (((prevalence) \ OR \ (epidemiology)))))))))))))))))))))))))))))))))))$	
	$OR\ (incidence))$	
Embase	('adverse event':ti,ab,kw OR 'adverse reaction':ti,ab,kw OR 'adverse effect':ti,ab,kw OR 'side effect':ti,ab,kw OR	125
	'undesirable effect':ti,ab,kw) AND (cosmetic:ti,ab,kw OR 'cosmetic product':ti,ab,kw OR cosmeceutical:ti,ab,kw	

	OR cosmetovigilance:ti,ab,kw) AND (prevalence OR epidemiology OR incidence)						
Scopus	(TITLE-ABS-KEY(adverse event) OR TITLE-ABS-KEY(adverse effect) OR TITLE-ABS-KEY(adverse reaction)						
	OR TITLE-ABS-KEY(side effect) AND TITLE-ABS-KEY(cosmetic) OR TITLE-ABS-KEY(cosmetic product) OR						
	TITLE-ABS-KEY(cosmeceutical) OR TITLE-ABS-KEY(cosmetovigilance) AND TITLE-ABS-KEY(prevalence)						
	OR TITLE-ABS-KEY(epidemiology) OR TITLE-ABS-KEY(incidence))						
Google	('adverse event' OR 'adverse reaction' OR 'adverse effect' OR 'side effect' OR 'undesirable effect') AND	200					
Scholar	(cosmetics OR 'cosmetic products' OR cosmeceuticals OR cosmetovigilance) AND (prevalence OR						
	epidemiology OR incidence)						

^{*}N number of studies

Supplementary Table 2. Quality assessment of included studies using JBI Critical Appraisal Checklist

Study ID	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Total score
Addis et al., 2023	Yes	Yes	Yes	Yes	Yes	U	Yes	Yes	Yes	8
Sniepiene et al., 2019	Yes	No	Yes	Yes	Yes	U	Yes	Yes	U	6
Bilal et al., 2017	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9
Hadi et al., 2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9
Di Giovanni et al., 2006	Yes	Yes	Yes	Yes	Yes	U	Yes	Yes	Yes	8
El Emam et al., 2022	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9
Lucca et al., 2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9
Shaaban et al., 2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9
Getachew et al., 2018	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9
Dibaba et al., 2013	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9
Meharie et al., 2015	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9

de Groot et al., 1987	Yes	Yes	Yes	Yes	Yes	U	Yes	Yes	Yes	8
de Groot et al., 1988	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	7
Shrestha et al., 2016	Yes	Yes	No	Yes	Yes	U	Yes	Yes	Yes	7
Al-Ghamdi et al., 2020	Yes	Yes	Yes	Yes	Yes	U	Yes	U	Yes	7
Girish et al., 2022	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8
Kureh et al., 2020	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8
Kumari et al., 2023	Yes	9								
Nayak et al., 2023a	Yes	9								
Nayak et al., 2023b	Yes	9								
Huf et al., 2013	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8
Shiraz et al., 2019	Yes	Yes	No	Yes	Yes	No	Yes	No	Yes	6
Binega et al., 2014	Yes	No	Yes	8						

^{*}U unclear

JBI critical appraisal questions

- Q1 Was the sample frame appropriate to address the target population?
- Q2 Were study participants sampled in an appropriate way?
- Q3 Was the sample size adequate?
- Q4 Were the study subjects and the setting described in detail?
- Q5 Was the data analysis conducted with sufficient coverage of the identified sample?
- Q6 Were valid methods used for the identification of the condition?
- Q7 Was the condition measured in a standard, reliable way for all participants?
- Q8 Was there appropriate statistical analysis?
- Q9 Was the response rate adequate, and if not, was the low response rate managed appropriately?