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Excellence with Morality

Data extraction and data analysis

Faizul Hasan

Outline

- Data extraction
- Quality assessment
- Data analysis

Data extraction

- Mengambil informasi yang relefan dari included studies:
  - ✓Publised year and country
  - ✓Sample size
  - ✓Mean age and gender
  - ✓Intervention characteristics
  - ✓Outcome measurements
  - ✓Findings
- Dilakukan minimal oleh 2 orang

Data extraction

- Memperhatikan confounding factor
- Jika variable beragam, maka perlu di recode menjadi variable baru.
- Menkontak original author jika terdapat missing data/value
- Cek dan recek.

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Review article

Assessment of predictive performance of caries risk assessment models based on a systematic review and meta-analysis

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Calibration
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ABSTRACT

Objectives: To assess the predictive performance of caries risk assessment (CRA) models for prediction of caries increment for individuals based on a systematic review and meta-analyses.
Data/Sources: We included external validation studies assessing the predictive performance of CRA models for prediction of caries increment for individuals, using discrimination and calibration as the outcome parameters. PubMed, EMBASE, and CINAHL were searched electronically on 10th September 2020 to identify prediction modeling studies on external validation of CRA models. The risk of bias of the included studies was assessed using the Prediction model Risk Of Bias ASsessment Tool (PROBAST).
Study selection: A total of 22 studies with seven different CRA models were included. As for full Cariogram, the pooled area under the receiver operating characteristic curve (AUC) was 0.78 (95 %CI: 0.68; 0.85) based on eight studies regardless of the risk of bias levels, and 0.82 (95 %CI: 0.58; 0.93) based on four studies with low risk of bias only. The pooled observed: expected ratio (O:E ratio) of full Cariogram was 0.91 (95 %CI: 0.72; 1.14) based on 12 studies regardless of the risk of bias levels, and 0.89 (95 %CI: 0.71; 1.12) based on five studies with low risk of bias only. As for reduced Cariogram, the pooled AUC was 0.72 (95 %CI: 0.67; 0.77) based on six studies regardless of the risk of bias levels, and 0.74 (95 %CI: 0.45; 0.91) based on two studies with low risk of bias only. The pooled O:E ratio of reduced Cariogram was 0.84 (95 %CI: 0.59; 1.18) based on six studies regardless of the risk of bias levels, and 1.05 (95 %CI: 0.43; 2.59) based on two studies with low risk of bias only. Based on an insufficient number of studies for the other CRA models, the pooled AUCs ranged from 0.50 to 0.88, while the pooled O:E ratio ranged from 0.38 to 1.00.
Conclusion: The average predictive performance of both full and reduced Cariogram seems to be acceptable. However, the evidence from research does not allow a firm conclusion on the performance of the other included CRA models, due to the insufficient number of high-quality studies.
Clinical significance: Both full and reduced Cariogram were found to be reliable CRA models for prediction of caries increment in clinical practices for dental patients and communities for general populations. The reduced Cariogram showed better predictive performance and less burden in terms of time and resources to individuals than the full Cariogram. Therefore, the reduced Cariogram could be more recommended than the full Cariogram.

Su, N., Lagerweij, M. D., & van der Heijden, G. J. (2021). Assessment of predictive performance of caries risk assessment models based on a systematic review and meta-analysis. *Journal of Dentistry*, 103664.

Table 1
Characteristics of the included studies.

Studies	Source of date / Study Type	Participants: Participants description (country and settings)	Participants: No. of participants at baseline (F/M)	Participants: No. of participants at follow-up (F/M)	Participants: Age at baseline	Outcomes: Outcome event definition	Outcomes: % of events	Outcomes: Location of caries	Outcomes: Criteria for diagnosis of caries	Outcomes: Radiography used for diagnosis of caries	Outcomes: Follow-up time	Models: Models validated	Outcomes: Discrimination (AUC)	Outcomes: O:E ratio
Gao 2010 [10]	Prospective cohort	Children from Grade-1 government kindergartens in Singapore	1782 (893/889)	1576 (unknown)	3–6 years	Δdmft>0	44 % (689/1576)	Coronal	WHO criteria	No	1 year	Cariogram[c]	0.73 (0.71 0.76)	689:789
Gao 2013 [22]	Prospective cohort	Children in grade-1 in kindergartens in Hong Kong, China	544 (262/282)	485 (224/261)	3 years	Δdmft >0	37 % (178/485)	Coronal	WHO criteria	No	1 year	NUS-CRA[a] NUS-CRA[b] Cariogram[c] Cariogram[d] CAMBRA[e] CAMBRA[f] CAT[g] CAT[h]	0.88 (0.84 0.91) 0.85 (0.81 0.89) 0.78 (0.74 0.82) 0.76 (0.72 0.81) 	178:184 178:178 178:181 178:180 178:263 178:340 178:474 178:467
Petersson 2015 [24]	Prospective cohort	Patients registered in public dental clinics in the Skåne region, Sweden	1295 (676/619)	982 (454/528)	19 years	ΔDFS>0	35 % (344/982)	Coronal	WHO criteria	Yes	3 yeras	Cariogram[c]		344:368
Petersson 2010 [25]	Retrospective cohort	Children from schools in Halmstad, Sweden	438 (208/230)	392 (unknown)	10–11 years	ΔDMFS>0	31 % (122/392)	Coronal	Other	Yes	2 years	Cariogram[c] Cariogram[d] Cariogram[f]	0.75 (0.70 0.80) 0.72 (0.67 0.78) 0.77 (0.70 0.83)	122:107 122:107 70:187
Hayes 2017 [26]	Prospective cohort	The elderly in communities in Cork, Ireland	334 (unknown)	280 (unknown)	≥65 years	ΔDFS>0	25 % (70/280)	Root	ICDAS	Unknown	2 years	Cariogram[d]	0.79 (0.72 0.85)	70:123
Petersson 2003 [27]	Retrospective cohort	The elderly in communities in Sweden	208 (unknown)	148 (unknown)	55, 65, and 75 years	ΔDMFS>0	74 % (109/148)	Root and coronal	WHO criteria	Yes	5 years	Cariogram[c] Cariogram[c]	 0.71 (0.65 0.78)	109:85 76:94
Dou 2018 [28]	Prospective cohort	Patients visiting the Department of Conservative Dentistry and Endodontics, Stomatological Hospital of Chongqing Medical University, China, for caries or pulpitis/pulp necrosis caused by caries	215 (unknown)	192 (unknown)	23.3 ± 3.1 years	ΔDMFS>0	40 % (76/192)	Coronal	WHO criteria	Yes	2 years	Cariogram[d]	0.70 (0.63 0.77)	76:103
Campus 2012 [29]	Prospective cohort	Children from schools in Sardinia, Italy	957 (485/472)	861 (440/421)	7–9 years	ΔDFS>0	36 % (312/861)	Coronal	WHO criteria	No	2 years	Cariogram[c]	0.93 (0.91 0.95)	312:368
Sudhir 2017 [30]	Prospective cohort	Children residing in social welfare schools in principle of Vatsalaya vidhayasharam Nellore, India	36 (unknown)	36 (unknown)	12.9 ± 0.7 years	ΔDFS>0	36% (13/36)	Coronal	ICDAS	Unknown	1.5 years	Cariogram[c]	0.79 (0.63 0.95)	13:15
Garg 2018 [31]	Prospective cohort	Children from schools in Paonta Sahib, District Sirmour, India	520 (unknown)	499 (unknown)	5 ± 0.5 years, 12 ± 0.5 years	ΔDMFT/dmft>0	Children aged 5 years: 37 % (92/250);	Coronal	WHO criteria	Unknown	1 year	Cariogram[c]		161:233

(continued on next page)

Su, N., Lagerweij, M. D., & van der Heijden, G. J. (2021). Assessment of predictive performance of caries risk assessment models based on a systematic review and meta-analysis. *Journal of Dentistry*, 103664.

Quality assessment

- Terdapat banyak rating scale; JBI, ROBINS, RoB, dll.
- Dilakukan oleh minimal 3 orang.
- Memahami methodology research sesuai guideline.
- Menggunakan pairwise meta-analysis, contoh:
- Cochrane handbook 5.1.0 recommends a domain-based evaluasion
- ROB 2.0 and training

Quality assessment

Table 8.4.a: A common classification scheme for bias

Type of bias	Description	Relevant domains in the Collaboration's 'Risk of bias' tool
Selection bias.	Systematic differences between baseline characteristics of the groups that are compared.	• Sequence generation. • Allocation concealment.
Performance bias.	Systematic differences between groups in the care that is provided, or in exposure to factors other than the interventions of interest.	• Blinding of participants and personnel. • Other potential threats to validity.
Detection bias.	Systematic differences between groups in how outcomes are determined.	• Blinding of outcome assessment. • Other potential threats to validity.
Attrition bias.	Systematic differences between groups in withdrawals from a study.	• Incomplete outcome data
Reporting bias.	Systematic differences between reported and unreported findings.	• Selective outcome reporting (see also Chapter 10).

Higgins JPT, Green S (editors). Cochrane Handbook for Systematic Reviews of Interventions Version 5.1.0 [updated March 2011]. The Cochrane Collaboration, 2011. Available from www.cochrane-handbook.org.

Supplemental Table XIIA. Assessment of methodology quality of cohort studies included

First authors, year	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
Bassetti et al., 1997[15]	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
Bassetti et al., 2001[16]	Y	Y	Y	Y	N	Y	Y	Y	Y	NA	Y
Bassetti et al., 2006[17]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Broadley et al., 2007[19]	Y	Y	Y	Y	Y	Y	Y	Y	NA	NA	Y
Brown et al., 2010[20]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Camilo et al., 2012[24]	Y	Y	Y	Y	Y	Y	Y	NA	NA	NA	Y
Camilo et al., 2016[25]	Y	Y	Y	Y	Y	Y	Y	Y	NA	NA	Y
Chan et al., 2010[26]	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
Cherkassky et al., 2003[28]	Y	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y
Disler et al., 2002[30]	Y	NA	Y	N	N	Y	Y	NA	NA	NA	Y
Dziewas, et al., 2007b[33]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fisse et al., 2017[35]	Y	Y	Y	Y	Y	Y	Y	Y	NA	NA	Y
Good et al., 1995[36]	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
Harbison et al., 2002[37]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Notes: Y = yes, N = no, UC = unclear, NA = not applicable, Q = question
Q1. Were the two groups similar and recruited from the same population?
Q2. Were the exposures measured similarly to assign people to both exposed and unexposed groups?
Q3. Was the exposure measured in a valid and reliable way?
Q4. Were confounding factors identified?
Q5. Were strategies to deal with confounding factors stated?
Q6. Were the groups/participants free of the outcome at the start of the study (or at the moment of exposure)?
Q7. Were the outcomes measured in a valid and reliable way?
Q8. Was the follow up time reported and sufficient to be long enough for outcomes to occur?
Q9. Was follow up complete, and if not, were the reasons to loss to follow up described and explored?
Q10. Were strategies to address incomplete follow up utilized?
Q11. Was appropriate statistical analysis used?

Hasan, F., Gordon, C., Wu, D., Huang, H. C., Yuliana, L. T., Susatia, B., ... & Chiu, H. Y. (2021). Dynamic prevalence of sleep disorders following stroke or transient ischemic attack: systematic review and meta-analysis. *Stroke*, *52*(2), 655-663.

Supplemental Table XIIB. Assessment of methodology quality of case control study included

First authors, year	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Bassetti et al., 1999[13]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bassetti et al., 1996[14]	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
ElKholy et al., 2009[34]	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
Hui et al., 2001[40]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Terzoudi et al., 2009[69]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Wang et al., 2005[72]	Y	Y	Y	Y	Y	Y	Y	Y	UC	Y
Aaronson et al., 2015[97]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Zhang et al., 2017[113]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dyken. et al., 1996[123]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lipford et al., 2015[126]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
McArdle et al., 2003 a[128]	Y	Y	Y	Y	N	Y	Y	Y	NA	Y
Mohsenin, et al., 1995[129]	Y	Y	Y	Y	N	Y	Y	Y	NA	Y
Coelho et al, 2010[134]	Y	Y	Y	Y	Y	Y	NA	Y	NA	Y
Palomäki, Et al, 2003[143]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Li, Et al, 2009[149]	Y	Y	Y	Y	NA	Y	Y	Y	NA	Y
Schreiner, Et al, 2002 a[150]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Da Rocha, Et al., 2013[153]	Y	Y	Y	Y	Y	Y	Y	Y	UC	Y
Benbir et al., 2012 a[168]	Y	Y	Y	Y	Y	N	NA	Y	NA	Y
Schlesinger et al., 2014[174]	Y	Y	Y	Y	Y	Y	Y	Y	NA	Y

Notes: Y = yes, N = no, UC = unclear, NA = not applicable, Q = question

Q1. Were the groups comparable other than the presence of disease in cases or the absence of disease in controls?
Q2. Were cases and controls matched appropriately?
Q3. Were the same criteria used for identification of cases and controls?
Q4. Was exposure measured in a standard, valid and reliable way?
Q5. Was exposure measured in the same way for cases and controls?
Q6. Were confounding factors identified?
Q7. Were strategies to deal with confounding factors stated?
Q8. Were outcomes assessed in a standard, valid and reliable way for cases and controls?
Q9. Was the exposure period of interest long enough to be meaningful?
Q10. Was appropriate statistical analysis used?

Hasan, F., Gordon, C., Wu, D., Huang, H. C., Yuliana, L. T., Susatia, B., ... & Chiu, H. Y. (2021). Dynamic prevalence of sleep disorders following stroke or transient ischemic attack: systematic review and meta-analysis. *Stroke*, *52*(2), 655-663.

Supplemental Table XIIC. Assessment of methodology quality of cross-sectional study included

First authors, year	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Bonnin et al., 2009[18]	Y	Y	Y	Y	Y	Y	Y	Y
Brown et al., 2014a[21]	Y	Y	Y	Y	Y	Y	Y	Y
Brown et al., 2014b[22]	Y	Y	Y	Y	Y	Y	Y	Y
Brown et al., 2015[23]	Y	Y	Y	Y	Y	Y	Y	Y
Chen et al., 2011[27]	Y	Y	Y	Y	Y	Y	Y	Y
Ciccone et al., 2012[29]	Y	Y	Y	Y	Y	Y	Y	Y
Dziewas, et al., 2005[31]	Y	Y	Y	Y	Y	Y	Y	Y
Dziewas, et al., 2007[32]	Y	Y	Y	Y	Y	Y	Y	Y
Kunz et al., 2012[45]	Y	Y	Y	Y	Y	Y	Y	Y
Medeiros et al., 2012[49]	Y	Y	Y	Y	Y	N	Y	Y
NorAdina et al., 2006[51]	Y	Y	Y	Y	Y	Y	Y	Y
Sandberg et al., 2001[56]	Y	Y	Y	Y	Y	Y	Y	Y
Svatikova et al., 2011[66]	Y	Y	Y	Y	Y	N	Y	Y
Wierzbicka et al., 2006[73]	Y	Y	N	Y	N	N	Y	Y

Notes: Y = yes, N = no, UC = unclear, NA = not applicable, Q = question
Q1. Were the criteria for inclusion in the sample clearly defined?
Q2. Were the study subjects and the setting described in detail?
Q3. Was the exposure measured in a valid and reliable way?
Q4. Were objective, standard criteria used for measurement of the condition?
Q5. Were confounding factors identified?
Q6. Were strategies to deal with confounding factors stated?
Q7. Were the outcomes measured in a valid and reliable way?
Q8. Was appropriate statistical analysis used?

Hasan, F., Gordon, C., Wu, D., Huang, H. C., Yuliana, L. T., Susatia, B., ... & Chiu, H. Y. (2021). Dynamic prevalence of sleep disorders following stroke or transient ischemic attack: systematic review and meta-analysis. *Stroke*, *52*(2), 655-663.

Table 2
Summary of risk of bias assessment of included studies based on PROBAST.

Study	RoB				Applicability			Overall	
	Participants	Predictors	Outcome	Analysis	Participants	Predictors	Outcome	RoB	Applicability
Validation studies									
Gao 2010 [10]	+	+	+	+	+	+	+	+	+
Gao 2013 [22]	+	+	+	+	+	+	+	+	+
Petersson 2015 [24]	+	+	+	–	+	+	+	–	+
Petersson 2010 [25]	+	+	+	+	+	+	+	+	+
Hayes 2017 [26]	+	+	+	–	+	+	+	–	+
Petersson 2003 [27]	+	+	+	–	+	+	+	–	+
Dou 2018 [28]	+	+	+	–	+	+	+	–	+
Campus 2012 [29]	+	+	+	+	+	+	+	+	+
Sudhir 2017 [30]	+	+	+	–	+	+	+	–	+
Garg 2018 [31]	+	+	+	+	+	+	+	+	+
Dolic 2020 [32]	+	+	+	–	+	+	+	–	+
Birpou 2019 [33]	+	+	+	–	+	+	+	–	+
Enerbäck 2020 [34]	+	+	+	–	+	+	+	–	+
Sudhir 2016 [35]	+	+	+	–	+	+	+	–	+
Chaffee 2016 [36]	+	+	+	–	+	+	+	–	+
Chaffee 2015 [37]	+	+	+	–	+	+	+	–	+
Christian 2020 [38]	+	+	+	–	+	+	+	–	+
Agouropoulos 2019 [39]	+	+	+	–	+	+	+	–	+
Kuru 2020 [40]	+	+	?	–	+	+	+	–	+
Petersson 2013 [41]	+	+	+	–	+	+	+	–	+
Van Palenstein Helderman 2001 [42]	+	–	–	?	+	+	+	–	+
Brons-Piche 2019 [43]	+	+	+	–	+	+	+	–	+

RoB, risk of bias; +, low risk of bias; -, high risk of bias;?, unclear risk of bias.

Su, N., Lagerweij, M. D., & van der Heijden, G. J. (2021). Assessment of predictive performance of caries risk assessment models based on a systematic review and meta-analysis. *Journal of Dentistry*, 103664.

Data analysis

- Select the software for analysis
- Generating the results (forest plot, etc.)
- Observe the heterogeneity
- Selecting “fix effect” or “random effect”
- Handling factors affecting heterogeneity
- Assessing publication bias

Select the software for analysis

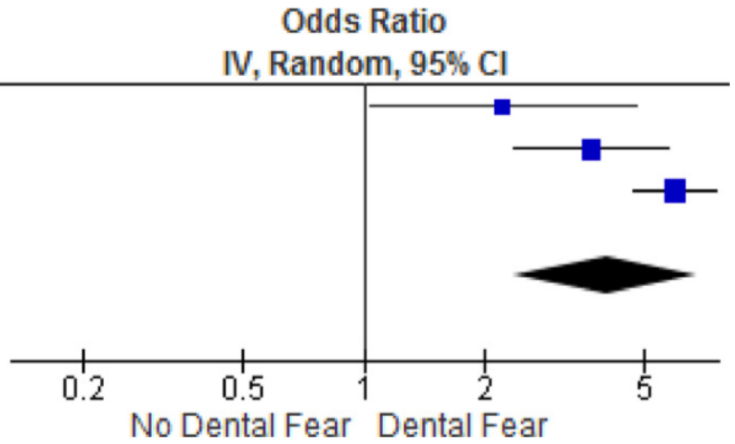
- RevMan (gratis)
- Comprehensive Meta-Analysis (CMA)
- STATA
- SAS
- R
- Others

Generating the results

Figure 2. Forest plot on fainting and dental fear.

Study or Subgroup	Dental Fear Events	Dental Fear Total	No Dental Fear Events	No Dental Fear Total	Weight	Odds Ratio IV, Random, 95% CI
Locker 1997	9	162	30	1160	23.3%	2.22 [1.03, 4.76]
Armfield 2010	41	209	54	870	34.8%	3.69 [2.38, 5.72]
Van Houtem 2014	101	569	371	10644	42.0%	5.98 [4.71, 7.59]
Total (95% CI)		**940**		**12674**	**100.0%**	**4.01 [2.38, 6.77]**
Total events	151		455			

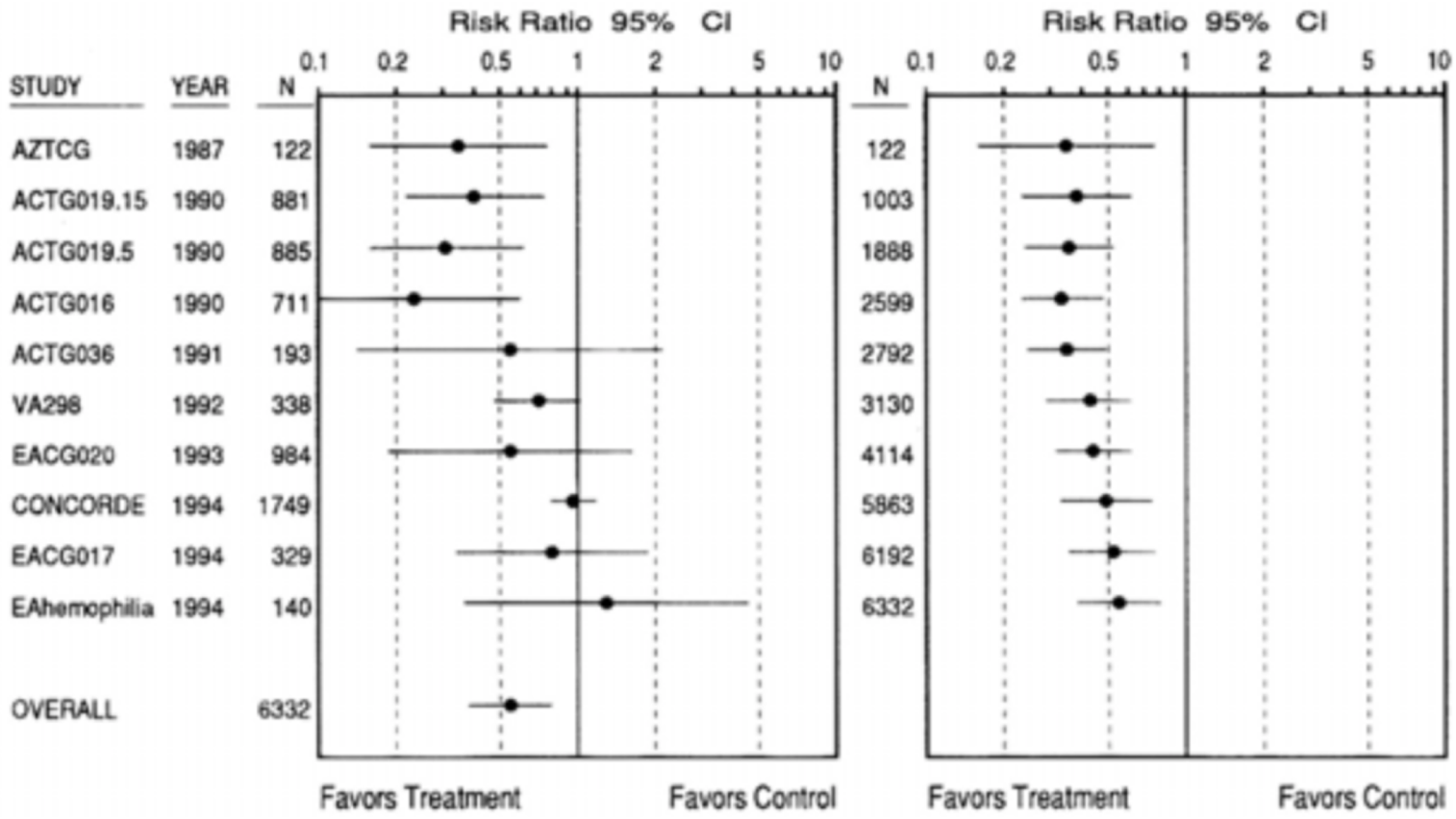
Heterogeneity: $Tau^2 = 0.16$; $Chi^2 = 8.35$, df = 2 (P = 0.02); $I^2 = 76\%$
Test for overall effect: Z = 5.20 (P < 0.00001)



Hutse, I., Coppens, M., Herbelet, S., Seyssens, L., & Marks, L. (2021). Syncope in dental practices: a systematic review on aetiology and management. *Journal of Evidence Based Dental Practice*, 101581.

Observe the heterogeneity (1)

Forest plot: Secara visual



HYC 2019

Observe the heterogeneity (2)

Statistical procedures

- Chi-square test (Q statistic)
  - ✓ *A large chi-square statistic: heterogeneity*
- P value
  - ✓ *A low p value (< 0.10)*
- I^2: degree of heterogeneity
  - ✓ *0-40% not important*
  - ✓ *30-60% moderate*
  - ✓ *50-90% significant*
  - ✓ *75-100% considerable*

Selecting “fix effect” or “random effect”

The fix effect model

- Assumption: the true effect is equal among included studies
- Only within-study variance is represented by the error term.
- Variation between studies is not taken into account.

The random effect model

- The effects estimated in the various studies are not identical, but they do follow a pattern.
- Take into account both within-study and between-study variation.

Calculation of effects

Effects are quantified differently depending on the level at which variables are measured, for example:

- The two group on continuous variable comparison (Cohen d, Hedge g, Standardized Mean Different [SMD]).
- The two group on a dichotomous variable comparison (risk ration and odd ratio).
- Correlation between two continuous variables

Review: Glucosamine therapy for treating osteoarthritis

Comparison: 1 Glucosamine versus placebo

Outcome: 4 WOMAC Pain Subscale

Effect calculation: SMD
Fixed effect model

Study or subgroup	Glucosamine N	Mean(SD)	Placebo N	Mean(SD)	Std. Mean Difference IV,Fixed,95% CI	Weight	Std. Mean Difference IV,Fixed,95% CI
Cibere 2004	71	129.72 (113.23)	66	129.62 (118.02)		6.8 %	0.00 [-0.33, 0.34]
Clegg 2006	317	149.3 (115.9)	313	151 (113.1)		31.3 %	-0.01 [-0.17, 0.14]
Herrero-Beaumont 2007	106	5.1 (3.03)	104	6 (3)		10.3 %	-0.30 [-0.57, -0.03]
Houpt 1999	45	7.14 (4.01)	53	7.65 (4.13)		4.8 %	-0.12 [-0.52, 0.27]
Hughes 2002	39	7.5 (4.81)	39	7.35 (4.38)		3.9 %	0.03 [-0.41, 0.48]
McAlindon 2004	101	6.8 (2.2)	104	6.6 (4.2)		10.2 %	0.05 [-0.22, 0.33]
Pavelka 2002				5.03 (3.13)		10.0 %	-0.13 [-0.40, 0.15]
Reginster 2001				164.2 (104.5)		10.5 %	-0.08 [-0.35, 0.19]
Rozendaal 2008				32.3 (23)		11.0 %	-0.01 [-0.28, 0.25]
Zenk 2002	13	-74.7 (26.3)	10	-76.5 (25.1)		1.1 %	0.07 [-0.76, 0.89]
Total (95% CI)	**1010**		**1007**			**100.0 %**	**-0.06 [-0.14, 0.03]**

Heterogeneity: Chi² = 4.74, df = 9 (P = 0.86); I² =0.0%

Test for overall effect: Z = 1.26 (P = 0.21)

Test for subgroup differences: Not applicable

Q = 4.74, p =0.86, I^2 = 0, reflecting no heterogeneity

P>0.05 indicating that there is no significant difference between groups

SMD= 0.06 and 95%CI = -0.14-0.03 indicating that there is no significant difference between groups

HYC, 2019

Handling factors affecting heterogeneity

Clinical

- Participant characteristics, interventions type, and outcome measurement purpose.

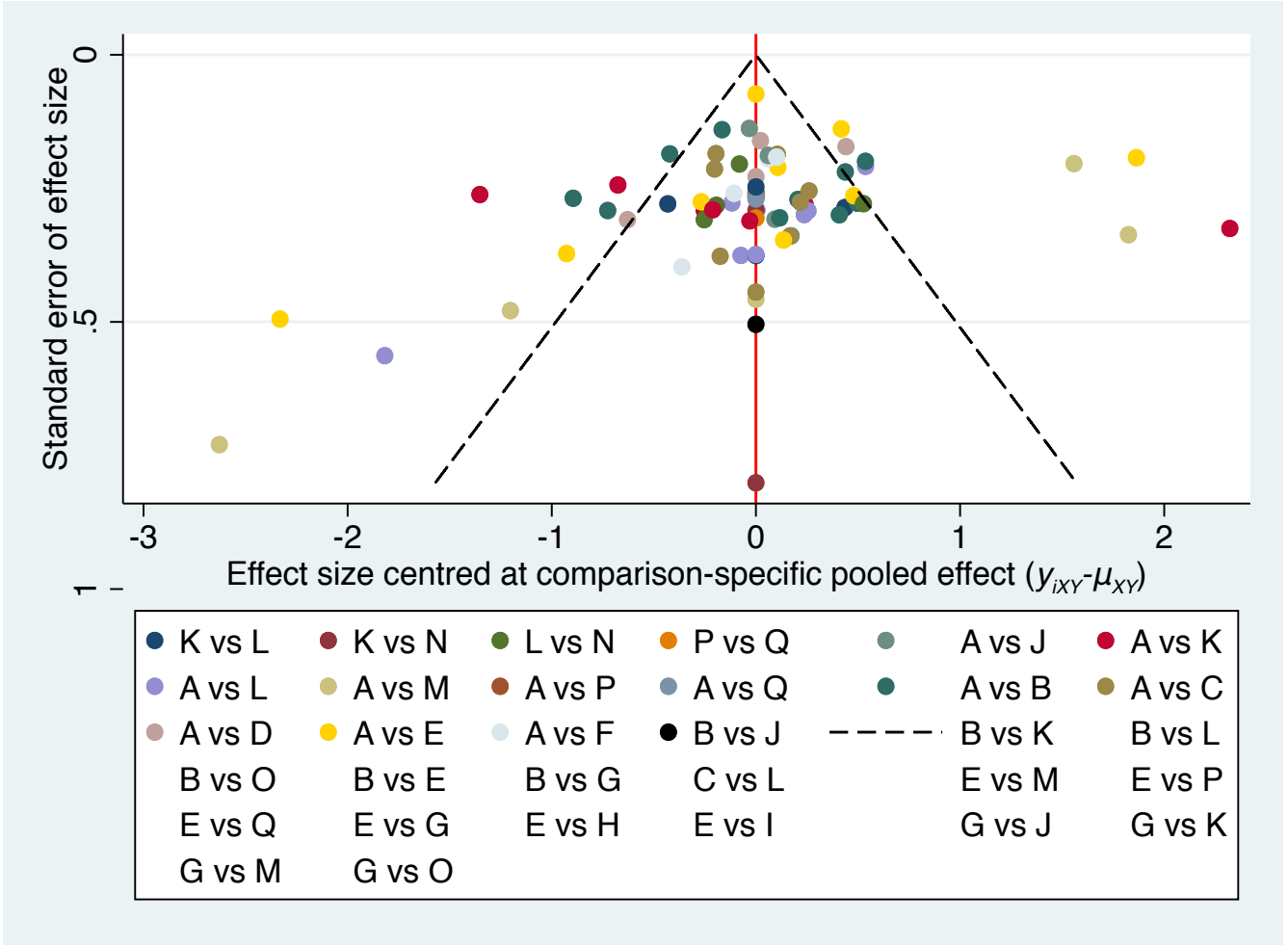
Methodological

- Variability in the design of studies and the risk of bias
- Statistical heterogeneity in the intervention effectiveness evaluated across many studies.

Assessing publication bias

- Visual inspection: funnel plot
- Statistical analysis result
  - Egger's test
  - Beg test
  - Trim and fill method
  - Fail-safe number

Funnel plot


Standard error of effect size
0
.5
1
-3
-2
-1
0
1
2
Effect size centred at comparison-specific pooled effect (y_{iXY}-μ_{XY})
K vs L
K vs N
L vs N
P vs Q
A vs J
A vs K
A vs L
A vs M
A vs P
A vs Q
A vs B
A vs C
A vs D
A vs E
A vs F
B vs J
B vs K
B vs L
B vs O
B vs E
B vs G
C vs L
E vs M
E vs P
E vs Q
E vs G
E vs H
E vs I
G vs J
G vs K
G vs M
G vs O

Terima kasih