## **Supplementary Figures:**

Study	Total	Car Mean	ries−active SD	Total	Ca Mean	ries-free SD	Standardised Mean Difference	SMD	95%-CI	Weight (fixed) (	Weight (random)
Location = North Amer Al-ani 2020 Parisotto 2011 Fixed effect model Random effects model Heterogeneity: I <sup>2</sup> = 95%, 1	28 17 45	0.21 181.97 49, <i>p</i> < 0.	0.1330 34.1800 01	32 23 55	0.24 132.22	0.1390 19.0300		1.84 0.42		5.2% 2.3% 7.5%	3.5% 3.3%  6.7%
Location = Asia Araghi 2018 Babu 2017 Bagherian 2013 Chawda 2011 Chopra 2011 Doifode 2011 Hagh 2013 Hegde 2013 Huang 2006 Kirtaniya 2009 Kuriakose 2013 Nawaz 2019 Pal 2013 Pandey 2018 Primasari 2019 Priya 2013 Ranadheer 2011 Razi 2020 Shamsudeen 2008 Soesilawati 2019 Wu 2002 Yassin 2016 Fixed effect model Random effects model Heterogeneity: $I^2$ = 94%, t	20 88 15 60 45 35 17 58 30 40 34 15 20 10 48 20 10 48 20 30 5715	176.45 774.00 89.80 60.20 1905.10 1195.70 0.38 99.60 32.16 167.64 164.32 0.60 130.70 117.60 85.00 2211.00 295.63 52.44 1091.20	0.0710 30.2400 40.6920 473.0000 15.6000 7.6000 1016.5725 538.2000 8.0561 31.8001 32.0691 31.8001 32.0691 13.2000 18.5000 14.3000 778.6800 18.5701 13.2300 287.8000	10 14 15 20 45 11 17 29 15 20 34 15 20 20 10 12 20	243.60 727.00 107.40 123.20 3155.10 2272.00 0.49 151.50 7.67 215.40 214.80 0.70 119.00 75.85 106.30 2300.00 545.83 75.73	0.0239 19.3700 811.6000 48.7000 409.0000 15.2000 19.9000 489.3000 673.1000 0.1420 22.2000 8.2300 26.7100 27.5600 0.4210 15.8000 24.8000 28.5000 432.0000 90.2980 22.1500 281.0000		0.52 -1.50 0.10 -1.11 -3.75 -1.35 -1.35 -1.75 -0.84 -1.99 -1.55 -1.62 -0.23 0.73 1.87 -0.93 -0.14 -1.45 -1.25 -0.68 -0.51	$ \begin{bmatrix} -1.63, -0.32 \\ 0.10, 0.94 \end{bmatrix} \\ \begin{bmatrix} -2.37, -0.64 \\ -0.46, 0.66 \end{bmatrix} \\ \begin{bmatrix} -1.89, -0.34 \\ -4.82, -2.67 \end{bmatrix} \\ \begin{bmatrix} -1.90, -0.80 \\ -1.90, -0.80 \end{bmatrix} \\ \begin{bmatrix} -2.24, -1.26 \\ -1.54, -0.14 \end{bmatrix} \\ \begin{bmatrix} -2.83, -1.55 \\ -2.26, -0.85 \end{bmatrix} \\ \begin{bmatrix} -2.26, -0.85 \\ -2.24, -1.01 \end{bmatrix} \\ \begin{bmatrix} -0.71, 0.24 \\ -0.02, 1.47 \end{bmatrix} $	2.5% 3.1% 7.6% 4.2% 2.2% 1.2% 4.4% 5.6% 2.7% 3.3% 2.7% 3.3% 2.7% 3.8% 2.4% 3.1% 1.7% 2.8% 2.4% 3.1% 1.7% 2.8% 2.9% 4.9% 73.1%	3.3% 3.4% 3.5% 3.4% 3.3% 3.0% 3.4% 3.3% 3.4% 3.3% 3.4% 3.3% 3.3% 3.3
Location = South Ame Castro 2016 Farias 2003 Letieri 2019 Fixed effect model Random effects model Heterogeneity: J <sup>2</sup> = 96%, t	20 20 23 63	26.80 50.40 32.94 01, <i>p</i> < 0.	2.5000 45.0000 32.1600	20 20 23 63	50.65 32.50 25.40	7.5000 21.0000 15.4400		0.50 0.29 -0.17	[-5.33; -3.03] [-0.13; 1.13] [-0.29; 0.88] [-0.57; 0.23] [-3.27; 1.14]	1.0% 3.4% 4.0% 8.4%	2.9% 3.4% 3.4%  9.7%
Location = Europe Giudice 2019 Hocini 1993 Fixed effect model Random effects model Heterogeneity: $I^2 = 0\%$ , $\tau^2$		218.00 34.20	129.0000 20.9000	20 22 42	167.00 31.40	45.0000 36.1000	<b>■</b> ◆ ◆	0.30	[-0.08; 1.01] [-0.51; 0.69] [-0.11; 0.70] [-0.11; 0.70]	4.5% 3.8% 8.3%	3.4% 3.4%  6.8%
Location = Africa Omar 2012 Fixed effect model Random effects model Heterogeneity: not applica		0.75	0.3946	10 10	0.81	0.3800		-0.15	[-0.85; 0.56] [-0.85; 0.56] [-0.85; 0.56]	2.7% 2.7%	3.3%  3.3%
Fixed effect model Random effects model Heterogeneity: $l^2 = 93\%$ , Residual heterogeneity: $l^2$	<sup>2</sup> = 1.48	24, p < 0. p < 0.01	01	627			-4 -2 0 2 4		[-0.45; -0.22] [-0.94; -0.03]	100.0% 	 100.0%

Figure S1: Subgroup analysis for the differences of salivary s-IgA levels between caries patients and healthy controls in different regions.

- · ·			es-active			ries-free	Standardised Mean			Weight	Weight
Study	Total	Mean	SD '	Total	Mean	SD	Difference	SMD	95%-CI	(fixed)	(random)
Age ≥ 18							81				
Al-ani 2020	28	0.21	0.1330	32	0.24	0.1390		-0.22	[-0.73; 0.28]	5.2%	3.5%
Araghi 2018	30	0.15	0.0710	10	0.09	0.0239		0.83	[ 0.09; 1.57]	2.5%	3.3%
Castro 2016	20	26.80	2.5000	20	50.65	7.5000 -	_ <b>_</b> []		[-5.33; -3.03]	1.0%	2.9%
Chopra 2011	88	774.00	473.0000	14	727.00	409.0000	i l		[-0.46; 0.66]	4.2%	3.4%
Hagh 2013	15	60.20	7.6000	25	123.20	19.9000	_ <b></b>		[-4.82; -2.67]	1.2%	3.0%
Hegde 2013	60	1905.10 1	016.5725	20	3155.10	489.3000	- <b></b>		[-1.90; -0.80]	4.4%	3.4%
Hocini 1993	21	34.20	20.9000	22	31.40	36.1000			[-0.51; 0.69]	3.8%	3.4%
Nawaz 2019	58	32.16	8.0561	29	7.67	8.2300		2.99	[ 2.36; 3.63]	3.3%	3.4%
Fixed effect model	320			172					[-0.35; 0.11]	25.6%	
Random effects mode									[-1.92; 0.64]		26.3%
Heterogeneity: $I^2 = 97\%$ ,		744, p < 0.01	1								
Age < 18							_				
Babu 2017	20	158.55	30.2400	20		19.3700	- <b></b>		[-1.63; -0.32]	3.1%	3.4%
Bagherian 2013		1961.40 1				811.6000			[0.10; 0.94]	7.6%	3.5%
Chawda 2011	20	176.45	40.6920	10	243.60	48.7000	— <b>■</b> —§		[-2.37; -0.64]	1.8%	3.2%
Doifode 2011	15	89.80	15.6000	15	107.40	15.2000			[-1.89; -0.34]	2.2%	3.3%
Farias 2003	20	50.40	45.0000	20	32.50	21.0000	t <del>s</del>		[-0.13; 1.13]	3.4%	3.4%
Giudice 2019	39		129.0000	20	167.00	45.0000			[-0.08; 1.01]	4.5%	3.4%
Huang 2006			538.2000			673.1000			[-2.24; -1.26]	5.6%	3.5%
Kirtaniya 2009	35	0.38	0.1224	11	0.49	0.1420			[-1.54; -0.14]	2.7%	3.3%
Kuriakose 2013	17	99.60	28.3000	17	151.50	22.2000	- <b></b>	-1.99	[-2.83; -1.15]	1.9%	3.2%
Letieri 2019	23	32.94	32.1600	23	25.40	15.4400	}- <mark>}-</mark>	0.29	[-0.29; 0.88]	4.0%	3.4%
Omar 2012	35	0.75	0.3946	10	0.81	0.3800			[-0.85; 0.56]	2.7%	3.3%
Pal 2013	30	167.64	31.8001	15	215.40	26.7100	- <b></b>		[-2.26; -0.85]	2.7%	3.3%
Pandey 2018	40	164.32	32.0691	20	214.80	27.5600	- <b></b>	-1.62	[-2.24; -1.01]	3.6%	3.4%
Parisotto 2011	17	181.97	34.1800	23	132.22	19.0300		1.84	[ 1.08; 2.60]	2.3%	3.3%
Primasari 2019	34	0.60	0.4240	34	0.70	0.4210		-0.23	[-0.71; 0.24]	5.9%	3.5%
Priya 2013	15	130.70	15.5000	15	119.00	15.8000	j <b>⊢</b> ∎−	0.73	[-0.02; 1.47]	2.4%	3.3%
Ranadheer 2011	20	117.60	18.5000	20	75.85	24.8000	i  <b>-</b> ∎-	1.87	[ 1.12; 2.63]	2.4%	3.3%
Razi 2020	20	85.00	14.3000	20	106.30	28.5000	- <b>1</b>	-0.93	[-1.58; -0.27]	3.1%	3.4%
Shamsudeen 2008	10	2211.00	778.6800	10	2300.00	432.0000		-0.14	[-1.01; 0.74]	1.7%	3.2%
Soesilawati 2019	48	295.63	183.5701	12	545.83	90.2980	- <b></b>	-1.45	[-2.14; -0.77]	2.8%	3.3%
Wu 2002	20	52.44	13.2300	20	75.73	22.1500	- <b></b>	-1.25	[-1.94; -0.57]	2.9%	3.3%
Yassin 2016	30	1091.20	287.8000	30	1285.80	281.0000		-0.68	[-1.20; -0.15]	4.9%	3.5%
Fixed effect model	598			455			ě	-0.41	[-0.55; -0.28]	74.4%	
Random effects mode							<b></b>	-0.45	[-0.89; -0.01]		73.7%
Heterogeneity: $I^2 = 90\%$ ,		931, p < 0.01	1								
Fixed effect model	918			627				-0.34	[-0.45; -0.22]	100 0%	
Random effects mode									[-0.94; -0.03]		100.0%
Heterogeneity: $I^2 = 93\%$ ,		$324 n < 0.0^{-1}$	1					0.40	L 010 1, 0100]		1001070
Residual heterogeneity: /							-4 -2 0 2 4				
. testadar neteregeneity. 7	0170,										

Figure S2: Subgroup analysis for the differences of salivary s-IgA levels between caries patients and healthy controls in different ages.

Study	Caries-active Total Mean SD Tot	Caries−free tal Mean SD	Standardised Mean Difference	Weight Weight SMD 95%-Cl (fixed) (random)
Dentition = Permanen Al-ani 2020 Araghi 2018 Castro 2016 Chopra 2011 Hagh 2013 Hegde 2013 Hocini 1993 Nawaz 2019 Razi 2020 Fixed effect model Random effects mode Heterogeneity: $l^2 = 96\%$ ,	28   0.21   0.1330   3     30   0.15   0.0710   2     20   26.80   2.5000   2     88   774.00   473.0000   2     15   60.20   7.6000   2     60   1905.10   1016.5725   2     21   34.20   20.9000   2     58   32.16   8.0561   2     20   85.00   14.3000   2     340   15   16   16	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Dentition = Mixed den Babu 2017 Chawda 2011 Doifode 2011 Giudice 2019 Kirtaniya 2009 Pal 2013 Pandey 2018 Priya 2013 Ranadheer 2011 Soesilawati 2019 Yassin 2016 Fixed effect model Random effects model Heterogeneity: / <sup>2</sup> = 90%,	20   158.55   30.2400   20     20   176.45   40.6920   15     39   218.00   129.0000   23     35   0.38   0.1224   30     30   167.64   31.8001   40     40   164.32   32.0691   2     15   130.70   15.5000   2     20   117.60   18.5000   2     30   1091.20   287.8000   3     312   18   18	20 183.80 19.3700   10 243.60 48.7000   15 107.40 15.2000   20 167.00 45.0000   11 0.49 0.1420   15 215.40 26.7100   20 214.80 27.5600   15 119.00 15.8000   20 75.85 24.8000   12 545.83 90.2980   30 1285.80 281.0000		$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Dentition = Deciduous Bagherian 2013 Farias 2003 Huang 2006 Kuriakose 2013 Letieri 2019 Omar 2012 Parisotto 2011 Primasari 2019 Shamsudeen 2008 Wu 2002 Fixed effect model Random effects mode Heterogeneity: $l^2 = 92\%$ , Fixed effect model	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	45 1484.50 811.6000   20 32.50 21.0000   45 2272.00 673.1000   17 151.50 22.2000   23 25.40 15.4400   10 0.81 0.3800   23 132.22 19.0300   34 0.70 0.4210   10 230.00 432.0000   20 75.73 22.1500   47 7 27		0.52 [0.10; 0.94] 7.6% 3.5%   0.50 [-0.13; 1.13] 3.4% 3.4%   -1.75 [-2.24; -1.26] 5.6% 3.5%   -1.99 [-2.83; -1.15] 1.9% 3.2%   0.29 [-0.29; 0.88] 4.0% 3.4%   -0.15 [-0.85; 0.56] 2.7% 3.3%   1.84 [1.08; 2.60] 2.3% 3.5%   -0.23 [-0.71; 0.24] 5.9% 3.5%   -0.14 [-1.01; 0.74] 1.7% 3.2%   -0.23 [-0.40; -0.03] 38.1%    -0.23 [-0.91; 0.44]  33.6%
Fixed effect model Random effects model Heterogeneity: $l^2 = 93\%$ , Residual heterogeneity: $l'$	τ <sup>2</sup> = 1.4824, <i>ρ</i> < 0.01	21	-4 -2 0 2 4	-0.34 [-0.45; -0.22] 100.0% -0.49 [-0.94; -0.03] 100.0%

## Figure S3: Subgroup analysis for the differences of salivary s-IgA levels between caries patients and healthy controls in different type of dentitions.

Study	Caries−active Total Mean SD	Caries-free Total Mean SD	Standardised Mean Difference	SMD 95%-	Weight Weight -Cl (fixed) (random)
Detection_method = E			3		
Al-ani 2020	28 0.21 0.1330	32 0.24 0.1390		-0.22 [-0.73; 0.2	28] 5.2% 3.5%
Babu 2017	20 158.55 30.2400	20 183.80 19.3700		-0.97 [-1.63; -0.3	32] 3.1% 3.4%
Bagherian 2013	45 1961.40 1000.7000	45 1484.50 811.6000	3 <mark></mark>	0.52 [ 0.10; 0.9	94] 7.6% 3.5%
Castro 2016	20 26.80 2.5000	20 50.65 7.5000	— <b>—</b> []	-4.18 [-5.33; -3.0	03] 1.0% 2.9%
Chopra 2011	88 774.00 473.0000	14 727.00 409.0000		0.10 [-0.46; 0.6	66] 4.2% 3.4%
Giudice 2019	39 218.00 129.0000	20 167.00 45.0000	3 <del>  <mark>12 -</mark></del>	0.46 [-0.08; 1.0	D1] 4.5% 3.4%
Hagh 2013	15 60.20 7.6000	25 123.20 19.9000	<b>_</b>	-3.75 [-4.82; -2.6	67] 1.2% 3.0%
Hocini 1993	21 34.20 20.9000	22 31.40 36.1000	i i i i i i i i i i i i i i i i i i i	0.09 [-0.51; 0.6	<b>39] 3.8% 3.4%</b>
Kirtaniya 2009	35 0.38 0.1224	11 0.49 0.1420		-0.84 [-1.54; -0.1	14] 2.7% 3.3%
Kuriakose 2013	17 99.60 28.3000	17 151.50 22.2000	_ <b></b>	-1.99 [-2.83; -1.1	
Letieri 2019	23 32.94 32.1600			0.29 [-0.29; 0.8	
Nawaz 2019	58 32.16 8.0561		3	2.99 [ 2.36; 3.6	
Omar 2012	35 0.75 0.3946		-: <b>-:</b>	-0.15 [-0.85; 0.5	
Pal 2013	30 167.64 31.8001		_ <b></b>	-1.55 [-2.26; -0.8	•
Pandey 2018	40 164.32 32.0691		B	-1.62 [-2.24; -1.0	-
Parisotto 2011	17 181.97 34.1800			1.84 [ 1.08; 2.6	•
Primasari 2019	34 0.60 0.4240		<u> </u>	-0.23 [-0.71; 0.2	•
Priya 2013	15 130.70 15.5000			0.73 [-0.02; 1.4	•
Ranadheer 2011	20 117.60 18.5000			1.87 [ 1.12; 2.6	
Razi 2020	20 85.00 14.3000			-0.93 [-1.58; -0.2	
Soesilawati 2019	48 295.63 183.5701			-1.45 [-2.14; -0.5	
Fixed effect model	668	447		-	•
		444		-0.13 [-0.27; 0.0	-
Random effects mode			The second se	-0.39 [-0.97; 0.1	19] 70.0%
Heterogeneity: $l^2 = 94\%$ ,	τ <sup>-</sup> = 1.7181, <i>p</i> < 0.01				
Detection_method = I	mmunoturbidimetry				
Araghi 2018	30 0.15 0.0710		i   <b>-</b> ∎-	0.83 [0.09; 1.5	
Chawda 2011	20 176.45 40.6920	10 243.60 48.7000		-1.50 [-2.37; -0.6	64] 1.8% 3.2%
Doifode 2011	15 89.80 15.6000	15 107.40 15.2000		-1.11 [-1.89; -0.3	34] 2.2% 3.3%
Farias 2003	20 50.40 45.0000	20 32.50 21.0000		0.50 [-0.13; 1.1	13] 3.4% 3.4%
Hegde 2013	60 1905.10 1016.5725	20 3155.10 489.3000	- <b></b>	-1.35 [-1.90; -0.8	80] 4.4% 3.4%
Shamsudeen 2008	10 2211.00 778.6800	10 2300.00 432.0000	— <u>i</u>	-0.14 [-1.01; 0.]	74] 1.7% 3.2%
Yassin 2016	30 1091.20 287.8000	30 1285.80 281.0000	- <u></u>	-0.68 [-1.20; -0.1	15 4.9% 3.5%
Fixed effect model	185	115	🔶	-0.53 [-0.78; -0.2	-
Random effects mode	2			-0.49 [-1.16; 0.1	-
Heterogeneity: $I^2 = 85\%$ ,				L /	a
Detection_method = F	RIA				
Huang 2006	45 1195.70 538.2000	45 2272.00 673.1000	<mark></mark> 비	-1.75 [-2.24; -1.2	26] 5.6% 3.5%
Fixed effect model	45	45	$\overline{\bullet}$	-1.75 [-2.24; -1.2	-
Random effects mode			◆ !!	-1.75 [-2.24; -1.2	-
Heterogeneity: not application					1
Detection method = N	ABA				
Wu 2002	20 52.44 13.2300	20 75.73 22.1500		-1.25 [-1.94; -0.5	57] 2.9% 3.3%
Fixed effect model	20	20		-1.25 [-1.94; -0.5	-
Random effects mode				-1.25 [-1.94; -0.8	-
Heterogeneity: not applic				1.20 L 1.04, U.	1 0.070
Fixed effect model	918	627		-0.34 [-0.45; -0.2	-
Random effects mode			<b></b>	-0.49 [-0.94; -0.0	03] 100.0%
Heterogeneity: / <sup>2</sup> = 93%,					
Residual heterogeneity: /	<sup>2</sup> = 93%, <i>p</i> < 0.01		-4 -2 0 2 4		

Figure S4: Subgroup analysis for the differences of salivary s-IgA levels between caries patients and healthy controls in different detection methods.



Section/topic	#	Checklist item	Reported on page #		
TITLE					
Title	1	Identify the report as a systematic review, meta-analysis, or both.	Page 1		
ABSTRACT	_				
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, articipants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and nplications of key findings; systematic review registration number.			
INTRODUCTION	_				
Rationale	3	Describe the rationale for the review in the context of what is already known.	Page 3		
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	Page 4		
METHODS	-				
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	Page 4		
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	Page 5		
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	Page 5		
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	Page 5		
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	Page 5-6		
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	Page 5-6		
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	Page 5-6		
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	Page 5-6		
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	Page 6-7		
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., $I^2$ ) for each meta-analysis.	Page 7		



Section/topic	#	Checklist item	Reported on page #		
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	Page 7		
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.			
RESULTS					
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	Page 8		
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	Page 8		
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	Page 8-11		
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	Page 8-11		
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	Page 8-11		
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	Page 8-11		
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	Page 11-12		
DISCUSSION	<u>+</u>	<u>.</u>			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	Page 12-17		
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	Page 17-18		
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	Page 18		
FUNDING	<u>.</u>				
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	Page 19		

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

For more information, visit: <u>www.prisma-statement.org</u>.

Table S2. Newcastle - Ottawa Quality Assessment Scale for case control studies Website: http://www.ohri.ca/programs/clinical\_epidemiology/oxford.asp

<u>Note</u>: A study can be awarded a maximum of one star for each numbered item within the Selection and Exposure categories. A maximum of two stars can be given for Comparability.

Item	Stars

Selection
-----------

- 1) <u>Is the case definition adequate</u>?
  - a) yes, with independent validation  $\Box$   $\bigstar$
  - b) yes, e.g. record linkage or based on self-reports
  - c) no description
- 2) Representativeness of the cases
  - a) consecutive or obviously representative series of cases  $\Box$
  - b) potential for selection biases or not stated
- 3) Selection of Controls
  - a) community controls  $\Box *$
  - b) hospital controls
  - c) no description
- 4) Definition of Controls
  - a) no history of disease (endpoint)  $\Box$  \*
  - b) no description of source

## Comparability

- 1) Comparability of cases and controls on the basis of the design or analysis
  - a) study controls for \_\_\_\_\_ (Select the most important factor.) □ ₩
  - b) study controls for any additional factor  $\Box *$  (These criteria could be modified to indicate specific control for a second important factor.)

## Exposure

- 1) Ascertainment of exposure
  - a) secure record (e.g. surgical records)  $\Box *$
  - b) structured interview where blind to case/control status  $\Box$  \*
  - c) interview not blinded to case/control status
  - d) written self-report or medical record only
  - e) no description
- 2) Same method of ascertainment for cases and controls

a) yes □ ♣ b) no

- 3) <u>Non-Response rate</u>
  - a) same rate for both groups \*
  - b) non respondents described
  - c) rate different and no designation

Code	Reference information
Couc	Al-ani A, MacDonald D A, Ahmad M. Salivary sIgA and PRAP-1 Protein in Relation to Dental Caries:
1	
1	A Comparative Study[J]. Journal of Advanced Oral Research, 2020, 11(1): 71–76. https://doi.org/10.1177%2F2320206820913746
2	Haeri-Araghi H, Zarabadipour M, Safarzadeh-Khosroshahi S, et al. Evaluating the relationship between
2	dental caries number and salivary level of IgA in adults[J]. Journal of Clinical and Experimental Dentistry,
	2018, 10(1): e66-69. <u>https://dx.doi.org/10.4317%2Fjced.54271</u>
2	B. Jagadesh Babu, N. Venugopal Reddy, B. V. Thimma Reddy, et al. Comparitive evaluation of salivary
3	IgA levels and dental caries in obese and non-obese children[J]. International Journal of Advanced
	Research, 2017, 5(1), 766-772. <u>http://dx.doi.org/10.21474/IJAR01/2812</u>
	Bagherian A, Asadikaram G. Comparison of some salivary characteristics between children with and
4	without early childhood caries[J]. Indian Journal of Dental Research, 2012, 23(5): 628-632.
	https://doi.org/10.4103/0970-9290.107380
	Castro R J, Herrera R, Giacaman R A. Salivary protein characteristics from saliva of carious lesion-free
5	and high caries adults[J]. Acta odontológica Latinoamericana, 2016, 29(2): 178-185.
	http://www.scielo.org.ar/pdf/aol/v29n2/v29n2a11.pdf
6	Chawda J G, Chaduvula N, Patel H R, et al. Salivary SIgA and dental caries activity[J]. Indian pediatrics,
	2011, 48(9): 719-721. <u>https://doi.org/10.1007/s13312-011-0113-y</u>
	Chopra M, Jadhav S, Venugopalan A, et al. Salivary immunoglobulin A in rheumatoid arthritis (RA) with
7	focus on dental caries: a cross-sectional study[J]. Clinical rheumatology, 2012, 31(2): 247-250.
	https://doi.org/10.1007/s10067-011-1796-0
	Doifode D, Damle S G. Comparison of salivary IgA levels in caries free and caries active children[J].
8	International Journal of Clinical Dental Science, 2011, 2(1):10-14.
	https://www.edentj.com/index.php/ijcds/article/view/196.
	de Farias D G, Bezerra A C B. Salivary antibodies, amylase and protein from children with early
9	childhood caries[J]. Clinical oral investigations, 2003, 7(3): 154-157. <u>https://doi.org/10.1007/s00784-</u>
10	Lo Giudice G, Nicita F, Militi A, et al. Correlation of s-IgA and IL-6 Salivary with Caries Disease and
10	Oral Hygiene Parameters in Children[J]. Dentistry Journal, 2020, 8(1): 3.
	https://doi.org/10.3390/dj8010003
11	Golpasand Hagh L, Zakavi F, Ansarifar S, et al. Association of dental caries and salivary sIgA with
	tobacco smoking[J]. Australian Dental Journal, 2013, 58(2): 219-223. https://doi.org/10.1111/adj.12059
	Hegde M, Devadiga D, Shetty C, et al. Correlation between dental caries and salivary immunoglobulin
12	in adult Indian population: An in vivo study[J]. Journal of Restorative Dentistry, 2013, 1(1): 22-25.
	https://doi.org/10.4103/2321-4619.111229
13	Hocini H, Iscaki S, Bouvet J P, et al. Unexpectedly high levels of some presumably protective secretory
	immunoglobulin A antibodies to dental plaque bacteria in salivas of both caries-resistant and caries-

	susceptible subjects[J]. Infection and immunity, 1993, 61(9): 3597-3604.							
	https://doi.org/10.1128/IAI.61.9.3597-3604.1993							
	Huang H H, Yu H, Zhang L, et al. Correlation between immunochemical level and patient with caries[J].							
14	West China journal of stomatology, 2006, 24(1): 77-78. <u>https://doi.org/10.3321/j.issn:1000-</u>							
	<u>1182.2006.01.023</u> (in Chinese)							
	Kirtaniya B C, Chawla H S, Tiwari A, et al. Natural prevalence of antibody titres to GTF of S. mutans in							
15	saliva in high and low caries active children[J]. Journal of Indian Society of Pedodontics and Preventive							
	Dentistry, 2009, 27(3): 135-138. https://doi.org/10.4103/0970-4388.57092							
	Kuriakose S, Sundaresan C, Mathai V, et al. A comparative study of salivary buffering capacity, flow rate,							
16	resting pH, and salivary Immunoglobulin A in children with rampant caries and caries-resistant							
10	children[J]. Journal of Indian Society of Pedodontics and Preventive Dentistry, 2013, 31(2): 69-73.							
	https://doi.org/10.4103/0970-4388.115697							
	Letieri A S, Freitas-Fernandes L B, Valente A P C, et al. Longitudinal Evaluation of Salivary Iga-S in							
17	Children with Early Childhood Caries Before and After Restorative Treatment[J]. Journal of Clinical							
	Pediatric Dentistry, 2019, 43(4): 239-243. https://doi.org/10.17796/1053-4625-43.4.3							
	Nawaz A, Batool H, Kashif M, et al. Immune profiling of saliva in patients with and without dental							
18	caries[J]. Bangladesh Journal of Medical Science, 2019, 18(3): 536-539.							
	https://doi.org/10.3329/bjms.v18i3.41622							
	Omar O M, Khattab N M A, Rashed L A. Glucosyltransferase B, immunoglobulin a, and caries experience							
19	among a group of Egyptian preschool children[J]. Journal of Dentistry for Children, 2012, 79(2): 63-68.							
	PMID: <u>22828760</u> .							
	Pal S, Mitra M, Mishra J, et al. Correlation of total salivary secretory immunoglobulin A (SIgA) and							
20	mutans specific SIgA in children having different caries status[J]. Journal of Indian Society of							
	Pedodontics and Preventive Dentistry, 2013, 31(4): 270-274. <u>https://doi.org/10.4103/0970-4388.121831</u>							
	Pandey S, Goel M, Nagpal R, et al. Evaluation of Total Salivary Secretory Immunoglobulin A and							
21	Mi/fans-specific SIgA among Children having Dissimilar Caries Status[J]. The journal of contemporary							
	dental practice, 2018, 19(6): 651-655. https://doi.org/10.5005/jp-journals-10024-2314							
	Parisotto T M, King W F, Duque C, et al. Immunological and microbiologic changes during caries							
22	development in young children[J]. Caries research, 2011, 45(4): 377-385.							
	https://doi.org/10.1159/000330230							
	Primasari A, Octiara E, Yanti N. Risk factor of secretory immunoglobulin A and salivary lysozyme level							
23	in children aged under 3 years to severe early childhood caries[C]. IOP Conference Series: Earth and							
	Environmental Science. IOP Publishing, 2019, 305(1): 012001.							
	https://iopscience.iop.org/article/10.1088/1755-1315/305/1/012001/meta							
	Priya P R G, Asokan S, Karthick K, et al. Effect of dental treatments on salivary immunoglobulin A of							
24	children with and without dental caries: a comparative study[J]. Indian Journal of Dental Research, 2013,							
	24(3): 394. <u>https://doi.org/10.4103/0970-9290.118004</u>							

25	Ranadheer E, Nayak U A, Reddy N V, et al. The relationship between salivary IgA levels and dental caries						
	in children[J]. Journal of Indian Society of Pedodontics and Preventive Dentistry, 2011, 29(2): 106-112.						
	https://doi.org/10.4103/0970-4388.84681						
	Razi M A, Qamar S, Singhal A, et al. Role of natural salivary defenses in the maintenance of healthy oral						
26	microbiota in children and adolescents[J]. Journal of Family Medicine and Primary Care, 2020, 9(3):						
	1603-1607. https://doi.org/10.4103/jfmpc.jfmpc_1134_19						
	Shifa S, Muthu M S, Amarlal D, et al. Quantitative assessment of IgA levels in the unstimulated whole						
27	saliva of caries-free and caries-active children[J]. Journal of Indian Society of Pedodontics and Preventive						
	Dentistry, 2008, 26(4): 158-161. <u>https://doi.org/10.4103/0970-4388.44031</u>						
	Soesilawati P, Notopuro H, Yuliati Y, et al. The role of salivary sIgA as protection for dental caries activity						
28	in Indonesian children[J]. Clinical, Cosmetic and Investigational Dentistry, 2019, 11: 291-						
	295.https://doi.org/10.2147/CCIDE.S194865						
	Wu X, Liu S, Liu J. Investigation of relationship between secretory immunoglobulin A, salivary						
29	peroxidase and caries in children[J]. Journal of Modern Stomatology, 2004 (3): 199-201.						
	https://doi.org/10.3969/j.issn.1003-7632.2004.03.003 (in Chinese)						
	Yassin H N. Comparison of immunoglobulin IgA level in the stimulated saliva of caries-free and caries-						
30	active children aged 7-10 years[J]. Journal of Baghdad College of Dentistry, 2016; 28(3):155-158.						
	https://jcodental-uobaghdad-edu.org/index.php/jbcd/article/view/1443.						