

SUPPLEMENTARY MATERIAL

Global associations between UV exposure and current eczema prevalence in children from ISAAC Phase Three

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English questions used to assess eczema symptoms in ISAAC Phase Three

1. Has your child / Have you *ever* had an itchy rash which was coming and going for at least six months? (Yes or No)
2. Has your child / Have you had this itchy rash at any time *in the past 12 months*? (Yes or No)
3. Has this itchy rash *at any time* affected any of the following places: the folds of the elbows, behind the knees, in front of the ankles, under the buttocks, or around the neck, ears or eyes? (Yes or No)
4. At what age did this itchy rash first occur? (Under 2 years, Age 2-4 years, or Age 5 or more; Asked to 6-7 year-old age group only)
5. Has this itchy rash cleared completely at any time *during the past 12 months* (Yes or No)
6. *In the past 12 months*, how often on average, has your child/have you been kept awake at night by this itchy rash? (Never, Less than one night per week, or One or more nights per week)
7. Has your child / Have you *ever* had eczema? (Yes or No)

Questionnaires were translated from English into the local language if necessary. Translated questionnaires were back-translated into English by an independent person according to ISAAC translation guidelines to confirm that other languages used terms as equivalent as possible to the English version

Table S1: Descriptive statistics for the centres with 13-14 year olds

Country	centre	N	Eczema %	Monthly mean UV dose
Africa				
Algeria	West Algiers	4203	6.5	2.5
Cameroon	Yaounde	2983	7.2	4.4
Congo	Brazzaville	1012	16.2	4.6
Cote d'Ivoire	Urban Cote d'Ivoire	3342	18.2	4.5
Ethiopia	Addis Ababa	3195	19.0	5.3
Gabon	Port-Gentil	3166	14.3	4.5
Kenya	Eldoret	3289	15.5	5.5
Kenya	Nairobi	3023	14.9	5.2
Morocco	Benslimane	1008	12.1	2.8
Morocco	Boulmene	1254	8.0	3.2
Morocco	Casablanca	1777	23.0	2.8
Morocco	Marrakech	1689	20.5	3.2
Nigeria	Ibadan	3142	7.7	4.5
République de Guinée	Conakry	3115	18.8	4.5
République Democratique du Congo	Kinshasa	2930	10.9	4.6
Reunion Island	Reunion Island	2362	13.7	4.1
South Africa	Cape Town	5037	13.3	3.0
South Africa	Polokwane	4660	11.2	4.1
Sudan	Khartoum	2896	4.7	4.7
Togo	Lome	3090	10.7	4.6
Tunisia	Grand Tunis	6119	13.0	2.6
Tunisia	Sousse	3042	9.4	2.7
Asia - Pacific				
China	Beijing	3530	1.2	2.1
China	Guangzhou	3514	1.6	3.7
China	Tibet	2878	0.2	4.2
China	Tong Zhou	3542	0.5	2.1
China	Wulumuqi	3884	0.8	2.1
Hong Kong	Hong Kong	3321	3.3	3.8
Indonesia	Bali	2569	3.7	4.9
Indonesia	Semarang	2435	3.4	4.9
Malaysia	Alor Setar	2941	12.2	4.5
Malaysia	Klang Valley	3025	9.2	4.6
Malaysia	Kota Bharu	2989	8.5	4.5

Philippines	Metro Manila	3658	7.8	4.2
Singapore	Singapore	4217	9.2	4.6
South Korea	Provincial Korea	7375	5.7	2.4
South Korea	Seoul	2888	5.7	2.3
Taiwan	Taipei	6378	4.1	3.5
Taiwan	Taoyuan	3190	4.5	3.5
Thailand	Bangkok	4669	10.4	4.3
Thailand	Chantaburi	2901	10.6	4.4
Thailand	Chiang Mai	3538	8.6	4.3
Thailand	Chiangrai	1809	5.0	4.3
Thailand	Khon Kaen	3410	4.7	4.4
Thailand	Nakorn Pathom	6975	4.7	4.3
Vietnam	Ho Chi Minh City	4240	3.2	4.5
Eastern Mediterranean				
Egypt	Cairo	3047	4.4	3.3
Iran	Birjand	2829	4.1	3.6
Iran	Rasht	3004	4.5	2.8
Iran	Tehran	3119	4.3	3.1
Iran	Zanjan	2805	3.8	3.1
Jordan	Amman	2447	8.9	3.3
Kuwait	Kuwait	2882	6.1	3.6
Malta	Malta	4136	5.4	2.7
Pakistan	Islamabad	4069	11.4	3.2
Pakistan	Karachi	2999	13.2	3.9
Palestine	North Gaza	3627	5.9	3.2
Sultanate of Oman	Al-Khod	3747	7.1	4.1
Syrian Arab Republic	Aleppo	3063	4.1	2.8
Syrian Arab Republic	Lattakia	3010	3.4	2.8
Syrian Arab Republic	Tartous	2995	4.2	2.8
Indian subcontinent				
India	Bangalore	3440	5.6	4.7
India	Bikaner	3059	8.5	3.8
India	Mumbai (18)	2982	1.4	4.2
India	Borivali	1004	0.9	4.2
India	Chandigarh	3122	3.6	3.3
India	Davangere	2945	1.4	4.6
India	Jaipur	3607	4.4	3.8
India	Jodhpur	2341	2.7	3.8
India	Kottayam	3685	9.3	4.6

India	Lucknow	3000	3.3	3.7
India	Ludhiana	3108	4.0	3.3
India	Chennai	2181	1.2	4.5
India	Nagpur	4150	2.8	4.1
India	New Delhi	3469	3.5	3.6
India	Pimpri	3128	0.9	4.4
India	Pune	1983	2.1	4.4
India	Rasta Peth	3065	1.7	4.4
Sri Lanka	Sri Lanka	3717	7.7	4.8
Latin America				
Argentina	Córdoba	3445	6.3	3.3
Argentina	Neuquén	3172	8.4	2.7
Argentina	Rosario City	3099	6.4	3.1
Argentina	Salta	3000	8.0	4.2
Bolivia	Santa Cruz	3257	21.1	4.4
Brazil	Belo Horizonte	3088	3.8	4.2
Brazil	Brasília	3009	4.3	4.6
Brazil	Caruaru	3026	4.9	4.7
Brazil	Curitiba	3628	3.7	3.7
Brazil	Feira de Santana	1732	3.8	4.4
Brazil	Itajaí	2737	3.3	3.4
Brazil	Maceió	2745	3.9	4.5
Brazil	Manaus Amazonas	3009	5.7	4.7
Brazil	Nova Iguaçu	3185	4.1	3.8
Brazil	Passo Fundo	2949	5.0	3.4
Brazil	Porto Alegre	3007	4.1	3.2
Brazil	Recife	2865	4.8	4.8
Brazil	Rural Santa Maria	3057	4.0	3.3
Brazil	Salvador	3020	5.1	4.3
Brazil	Santa Maria	3065	3.2	3.3
Brazil	Santo Andre	3232	3.4	3.8
Brazil	São Paulo	3161	3.5	3.8
Brazil	São Paulo West	3181	4.8	3.8
Brazil	Vitória da Conquista	1679	4.6	4.5
Chile	Calama	1618	19.7	4.8
Chile	Chiloe	3000	9.8	2.2
Chile	Punta Arenas	3044	13.2	1.4
Chile	South Santiago	3026	22.0	3.2
Chile	Valdivia	3105	13.1	2.5

Colombia	Barranquilla	3204	24.6	4.6
Colombia	Bogotá	3830	12.1	5.3
Colombia	Cali	3100	6.9	5.1
Costa Rica	Costa Rica	2436	6.3	4.7
Cuba	La Habana	3026	10.1	3.8
Ecuador	Guayaquil	3082	13.3	4.7
Ecuador	Quito	3014	19.9	5.3
El Salvador	San Salvador	3260	5.3	4.6
Honduras	San Pedro Sula	2675	15.6	4.2
Mexico	Ciudad de México (1)	3891	8.5	4.8
Mexico	Ciudad de México (3)	3474	7.4	4.8
Mexico	Ciudad de México (4)	2662	6.7	4.8
Mexico	Ciudad Victoria	3122	5.1	3.8
Mexico	Cuernavaca	1431	2.8	4.6
Mexico	Mérida	3019	3.4	4.0
Mexico	Mexicali Valley	2988	2.8	2.9
Mexico	Monterrey	3006	4.0	3.6
Mexico	Toluca	3021	3.1	4.8
Mexico	Villahermosa	3109	5.3	4.1
Nicaragua	Managua	3263	20.4	4.4
Panama	David-Panamá	3183	14.5	4.6
Paraguay	Asunción	3000	17.7	3.7
Peru	Lima	3022	10.5	4.5
Uruguay	Montevideo	3177	5.2	2.9
Venezuela	Caracas	3000	7.2	4.9
North America				
Barbados	Barbados	2498	7.0	4.5
Canada	Vancouver	2853	8.9	1.5
Trinidad and Tobago	St Augustine	3512	7.9	4.7
Trinidad and Tobago	Tobago	1464	10.4	4.6
USA	Sarasota	1245	4.4	3.3
USA	Seattle	2422	8.3	1.6
Northern and Eastern Europe				
Albania	Tiranë	2983	2.0	2.2
Bulgaria	Sofia	1926	3.0	2.0
Croatia	Rijeka	2194	2.9	1.8
Estonia	Tallinn	3603	8.7	1.1
Former Yugoslav Republic of Macedonia	Skopje	3026	2.7	2.1

Georgia	Kutaisi	2650	1.8	2.2
Hungary	Svábhegy	4219	5.7	1.6
Hungary	Szeged	2889	4.4	1.7
Kyrgyzstan	Balykchi	1382	2.7	2.4
Kyrgyzstan	Bishkek	5048	2.9	2.3
Kyrgyzstan	Jalalabat	2404	3.7	2.5
Latvia	Riga	1283	3.4	1.2
Lithuania	Kaunas	2723	1.8	1.3
Lithuania	Panevezys	1187	2.4	1.2
Lithuania	Siauliai	3516	2.8	1.2
Poland	Krakow	2545	8.9	1.5
Poland	Poznan	1875	8.1	1.4
Romania	Cluj	3019	5.4	1.7
Russia	Novosibirsk	3769	3.8	1.2
Serbia and Montenegro	Belgrade	3228	8.0	1.8
Serbia and Montenegro	Nis	1207	6.5	2.0
Serbia and Montenegro	Novi Sad	1171	2.8	1.8
Serbia and Montenegro	Podgorica	1014	3.3	2.1
Serbia and Montenegro	Sombor	1105	3.1	1.8
Sweden	Linköping	2679	12.9	1.1
Ukraine	Kharkiv	2428	5.7	1.5
Ukraine	Rural Kharkiv	3968	2.6	1.6
Oceania				
Australia	Melbourne	2192	10.7	2.5
New Zealand	Auckland	2870	8.9	2.5
New Zealand	Christchurch	3116	7.0	2.0
New Zealand	Nelson	2305	7.5	2.2
New Zealand	Wellington	3050	12.1	2.2
Nouvelle Calédonie	Nouvelle Calédonie	7247	7.2	4.1
Western Europe				
Austria	Urfahr-Umgebung	1439	7.5	1.6
Belgium	Antwerp	3250	7.2	1.4
Channel Islands	Guernsey	1248	11.2	1.5
Channel Islands	Jersey	773	10.7	1.5
Germany	Münster	4132	7.7	1.4
Italy	Bari	1287	9.2	2.1
Italy	Colleferro-Tivoli	1361	3.7	2.1
Italy	Cosenza	925	3.6	2.4
Italy	Emilia-Romagna	1347	8.8	1.9

Italy	Empoli	1229	5.2	2.0
Italy	Firenze	1383	8.0	2.0
Italy	Mantova	1114	7.1	1.8
Italy	Milano	1410	8.4	1.8
Italy	Palermo	1221	6.9	2.4
Italy	Roma	1325	7.8	2.1
Italy	Siena	1082	10.0	2.0
Italy	Torino	1180	10.3	1.9
Italy	Trento	1311	6.7	1.9
Netherlands	Netherlands	6896	8.1	1.3
Portugal	Coimbra	1177	6.0	2.1
Portugal	Lisbon	3024	5.6	2.3
Portugal	Portimao	1109	4.9	2.4
Portugal	Porto	3336	5.3	2.1
Republic of Ireland	Republic of Ireland	3089	8.6	1.3
Spain	A Coruña	2979	4.9	1.9
Spain	Almeria	4051	5.6	2.5
Spain	Asturias	4184	3.4	2.0
Spain	Barcelona	3066	2.6	2.1
Spain	Bilbao	3401	4.0	1.9
Spain	Cartagena	3998	4.0	2.4
Spain	Castellón	4024	4.1	2.3
Spain	Madrid	2652	5.2	2.3
Spain	Pamplona	2932	4.0	2.0
Spain	San Sebastián	1195	5.5	1.9
Spain	Valencia	3132	4.1	2.3
Spain	Valladolid	2944	4.5	2.2
United Kingdom	North Thames	2356	11.2	1.4
United Kingdom	Scotland	4662	11.8	1.1
United Kingdom	South Thames	2432	10.4	1.4
United Kingdom	Sunderland	2193	10.3	1.2
United Kingdom	Surrey-Sussex	5082	9.5	1.4
United Kingdom	Wales	2501	10.6	1.4

Table S2: Descriptive statistics for the centres with 6-7 year olds

Country	centre	N	Eczema %	Monthly mean UV dose
Africa				
Nigeria	Ibadan	2396	5.0	4.5
South Africa	Polokwane	3480	12.3	4.1
Asia - Pacific				
Hong Kong	Hong Kong	4448	4.6	3.8
Indonesia	Bandung	2503	3.7	4.8
Malaysia	Alor Setar	3786	12.7	4.5
Malaysia	Klang Valley	3044	12.0	4.6
Malaysia	Kota Bharu	3110	12.9	4.5
Singapore	Singapore	5389	8.9	4.6
South Korea	Provincial Korea	4258	10.9	2.4
South Korea	Seoul	1760	12.0	2.3
Taiwan	Taipei	4832	6.7	3.5
Taiwan	Taoyuan	3293	8.7	3.5
Thailand	Bangkok	4209	16.9	4.3
Thailand	Chantaburi	3321	13.4	4.4
Thailand	Chiang Mai	3106	16.3	4.3
Thailand	Chiangrai	1677	9.2	4.3
Thailand	Khon Kaen	2658	11.8	4.4
Thailand	Nakorn Pathom	1821	7.4	4.3
Vietnam	Ho Chi Minh City	3879	4.7	4.5
Eastern Mediterranean				
Iran	Birjand	2693	2.8	3.6
Iran	Rasht	3057	3.0	2.8
Iran	Tehran	3008	1.1	3.1
Iran	Zanjan	2777	5.9	3.1
Jordan	Amman	2598	6.9	3.3
Malta	Malta	3795	4.0	2.7
Pakistan	Islamabad	3966	5.2	3.2
Pakistan	Karachi	2113	3.5	3.9
Palestine	North Gaza	3575	11.4	3.2
Sultanate of Oman	Al-Khod	4130	4.2	4.1
Syrian Arab Republic	Lattakia	2373	2.4	2.8
Syrian Arab Republic	Tartous	2734	2.7	2.8

Indian subcontinent				
India	Bangalore	2959	3.9	4.7
India	Mumbai (18)	4862	2.4	4.2
India	Davangere	3043	1.1	4.6
India	Jaipur	2545	6.2	3.8
India	Jodhpur	2114	0.9	3.8
India	Kottayam	2619	2.3	4.6
India	Lucknow	3000	2.5	3.7
India	Ludhiana	3225	2.4	3.3
India	Nagpur	4294	3.0	4.1
India	New Delhi	3706	4.2	3.6
India	Pimpri	3838	2.7	4.4
India	Pune	2711	2.0	4.4
India	Rasta Peth	3147	3.1	4.4
Sri Lanka	Sri Lanka	3345	7.2	4.8
Latin America				
Argentina	Neuquén	1930	9.7	2.7
Argentina	Rosario City	2952	4.2	3.1
Brazil	Itajaí	1511	6.9	3.4
Brazil	Maceió	1990	7.1	4.5
Brazil	Manaus Amazonas	3011	7.7	4.7
Brazil	Nova Iguaçu	3249	8.9	3.8
Brazil	Salvador	1069	6.1	4.3
Brazil	Santo Andre	2167	5.3	3.8
Brazil	São Paulo	3047	6.8	3.8
Brazil	São Paulo West	3312	7.4	3.8
Chile	Punta Arenas	3052	12.1	1.4
Chile	South Santiago	3075	14.8	3.2
Chile	Valdivia	3183	11.7	2.5
Colombia	Barranquilla	3209	20.9	4.6
Colombia	Bogotá	3256	14.3	5.3
Colombia	Cali	3005	7.3	5.1
Costa Rica	Costa Rica	3234	8.9	4.7
Cuba	La Habana	1803	18.2	3.8
Ecuador	Quito	3055	22.5	5.3
El Salvador	San Salvador	1365	6.4	4.6
Honduras	San Pedro Sula	1907	15.9	4.2
Mexico	Ciudad de México (1)	3205	8.7	4.8
Mexico	Ciudad de México (3)	3493	8.8	4.8

Mexico	Ciudad Victoria	2603	2.3	3.8
Mexico	Cuernavaca	2579	4.0	4.6
Mexico	Mérida	2896	8.2	4.0
Mexico	Mexicali Valley	2568	5.4	2.9
Mexico	Monterrey	3030	4.1	3.6
Mexico	Toluca	3235	5.4	4.8
Mexico	Villahermosa	2678	6.1	4.1
Nicaragua	Managua	3286	20	4.4
Panama	David-Panamá	2942	14.4	4.6
Venezuela	Caracas	2999	12.4	4.9
North America				
Barbados	Barbados	2759	9.2	4.5
Canada	Saskatoon	1255	12.0	1.4
Northern and Eastern Europe				
Albania	Tiranë	2896	3.7	2.2
Bulgaria	Sofia	1181	3.2	2.0
Croatia	Rijeka	1633	4.4	1.8
Estonia	Tallinn	2385	11.5	1.1
Georgia	Kutaisi	2666	2.4	2.2
Hungary	Svábhegy	2451	4.7	1.6
Kyrgyzstan	Bishkek	3146	1.7	2.3
Lithuania	Kaunas	2772	3.0	1.3
Lithuania	Panevezys	1176	2.4	1.2
Lithuania	Siauliai	1341	2.8	1.2
Poland	Krakow	2497	10.4	1.5
Poland	Poznan	1999	12.9	1.4
Russia	Novosibirsk	2730	6.6	1.2
Serbia and Montenegro	Belgrade	1932	7.0	1.8
Serbia and Montenegro	Nis	1002	6.4	2.0
Serbia and Montenegro	Novi Sad	1044	5.1	1.8
Serbia and Montenegro	Sombor	1029	5.3	1.8
Sweden	Linköping	2089	22.3	1.1
Ukraine	Kharkiv	1950	5.3	1.5
Ukraine	Rural Kharkiv	3000	3.8	1.6
Oceania				
Australia	Melbourne	2968	17.1	2.5
New Zealand	Auckland	3541	14.3	2.5
New Zealand	Christchurch	3315	18.5	2.0
New Zealand	Nelson	1867	11.6	2.2

Western Europe

Austria	Urfahr-Umgebung	2029	6.6	1.6
Belgium	Antwerp	5645	11.6	1.4
Germany	Münster	3830	7.9	1.4
Greece	Thessaloniki	1228	3.3	2.2
Italy	Bari	1943	9.1	2.1
Italy	Colleferro-Tivoli	1143	8.3	2.1
Italy	Emilia-Romagna	2265	10.3	1.9
Italy	Empoli	1152	8.6	2.0
Italy	Firenze	1036	10.0	2.0
Italy	Mantova	1288	11.3	1.8
Italy	Milano	2249	10.0	1.8
Italy	Roma	2224	10.2	2.1
Italy	Torino	2361	10.6	1.9
Italy	Trento	2359	10.3	1.9
Portugal	Lisbon	2477	10.2	2.3
Portugal	Portimao	1069	8.0	2.4
Portugal	Porto	2464	8.5	2.1
Spain	A Coruña	3016	7.3	1.9
Spain	Almeria	3349	8.5	2.5
Spain	Asturias	3193	6.5	2.0
Spain	Barcelona	3002	4.0	2.1
Spain	Bilbao	3157	6.8	1.9
Spain	Cartagena	2948	4.5	2.4
Spain	Castellón	3915	5.3	2.3
Spain	Madrid	2347	6.0	2.3
Spain	Pamplona	3176	7.0	2.0
Spain	Valencia	3398	5.9	2.3
United Kingdom	Sunderland	1843	16.0	1.2

Table S3: Spearman correlations between modeled centre-level variables for the centres with 6-7 year olds (N=132)

Variable	Period	Median (IQR)	Eczema symptoms	GNI per capita	Population density	Temp	Relative humidity	Mean	Max	Min	SD	Range
Eczema symptoms	2000-2003	7.0 (6.7)	1	0.43**	-0.03	-0.06	0.47***	0.00	-0.08	0.03	-0.18*	-0.19*
GNI per capita per 1000	2001	3.5 (11.2)		1	-0.06	-0.39***	0.26**	-0.43***	-0.44***	-0.41***	0.17	0.16
Population density per 1000	2000	1.2 (2.4)			1	0.24**	0.00	0.28**	0.22*	0.28**	-0.17	-0.16
Monthly mean temperature (°C)	1991-2000	17.6 (12.4)				1	-0.02	0.82***	0.60***	0.86***	-0.48***	-0.47***
Monthly mean relative humidity (%)	1961-1990	73.5 (13.5)						0.01	-0.14	0.05	-0.43***	-0.43***
UV monthly mean	2001	3.2 (2.4)						1	0.86***	0.98***	-0.51***	-0.49***
UV monthly maximum	2001	5.1 (1.6)							1	0.81***	-0.10	-0.07
UV monthly minimum	2001	0.9 (2.6)								1	-0.56***	-0.54***
UV monthly SD	2001	1.3 (0.5)									1	0.99***
UV monthly range	2001	3.3 (1.3)										1

*<0.05; **<0.01; ***<0.001

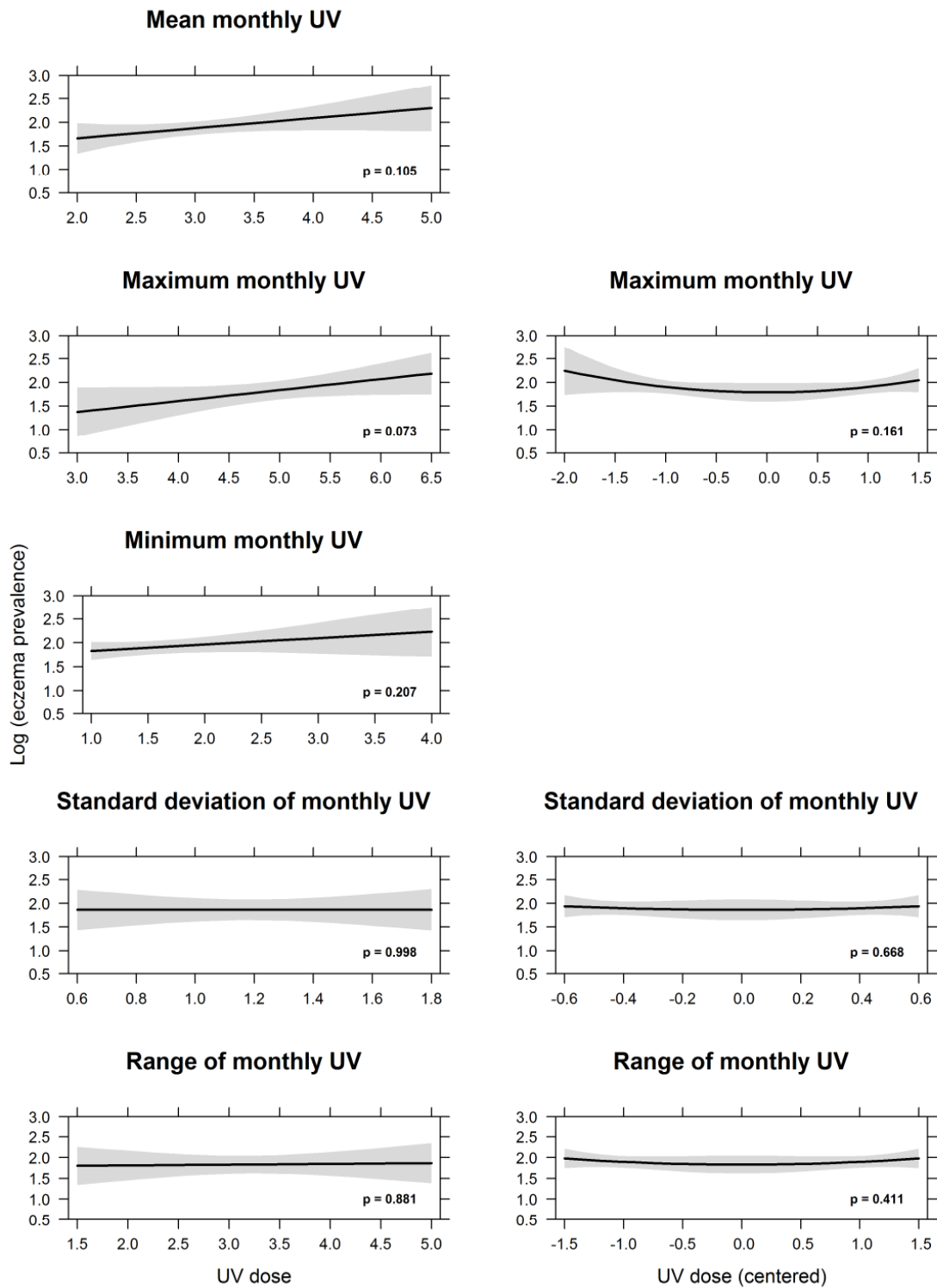


Figure S1: Effect plots for the between-country association (comparing country-level information) for current eczema symptom prevalence and UV exposures for the centres with 6-7 year-olds. The linear effects are presented in the left column and the quadratic effects presented in the right column. The corresponding 95% confidence intervals are presented in grey.

Table S4: Between- and within-country associations from models containing linear terms only for current eczema symptom prevalence and UV exposures for the centres with 13-14 year olds and 6-7 year olds. Beta estimates have been back-transformed from the natural logarithmic scale and thus prevalence ratios and their corresponding 95% confidence intervals are presented.

UV exposure	13-14 yr olds	6-7 yr olds
Between-country associations (comparing country-level information)		
	N = 214 centres in 87 countries	N = 132 centres in 57 countries
Mean	1.31 [1.05, 1.63]	1.24 [0.96, 1.59]
Max	1.25 [1.00, 1.56]	1.25 [0.98, 1.59]
Min	1.25 [1.06, 1.47]	1.15 [0.93, 1.41]
SD	0.71 [0.46, 1.10]	0.98 [0.53, 1.81]
Range ²	0.88 [0.74, 1.05]	1.02 [0.81, 1.30]
Within-country associations (comparing centres within countries)		
	N = 161 centres in 34 countries	N = 96 centres in 21 countries
Mean	1.05 [0.89, 1.23]	0.92 [0.71, 1.18]
Max	0.88 [0.73, 1.05]	0.92 [0.70, 1.21]
Min	1.14[0.99, 1.32]	0.93 [0.76, 1.13]
SD	0.48 [0.31, 0.72]	1.21 [0.72, 2.01]
Range	0.74 [0.62, 0.87]	1.04 [0.84, 1.27]

¹Adjusted for centre mean exposure of interest (for between-country associations) or country mean exposure of interest (for within-country associations), as well as the centre and country mean population density, mean monthly temperature and mean monthly relative humidity, as well as country gross national per capita income and climate type.

Bold: p-value < 0.05

Table S5: Between- and within-country associations for current severe eczema symptom prevalence and UV exposures for the centres with 13-14 year olds and 6-7 year olds. Beta estimates (not back-transformed from the natural logarithmic scale) and their corresponding 95% confidence intervals are presented¹

UV exposure	13-14 yr olds		6-7 yr olds	
	Linear term	Quadratic term	Linear term	Quadratic term
Between-country associations (comparing country-level information)				
	N = 209 centres in 85 countries		N = 128 centres in 56 countries	
Mean	0.31 [-0.01, 0.63]	-	0.34 [-0.07, 0.75]	-
Max ²	0.43 [0.09, 0.77]	-	0.39 [0.00, 0.78]	-
	0.49 [0.15, 0.83]	0.24 [0.02, 0.45]	0.44 [0.05, 0.83]	0.28 [0.04, 0.53]
Min	0.19 [-0.06, 0.44]	-	0.16 [-0.18, 0.50]	-
SD ²	-0.01 [-0.70, 0.67]	-	0.29 [-0.70, 1.28]	-
	0.19 [-0.50, 0.88]	1.46 [0.15, 2.76]	0.31 [-0.70, 1.32]	0.30 [-1.27, 1.88]
Range ²	0.01 [-0.26, 0.28]	-	0.15 [-0.24, 0.53]	-
	0.06 [-0.21, 0.32]	0.25 [0.05, 0.45]	0.14 [-0.24, 0.53]	0.09 [-0.16, 0.34]
Within-country associations (comparing centres within countries)				
	N = 158 centres in 34 countries		N = 93 centres in 21 countries	
Mean	0.09 [-0.12, 0.30]	-	-0.06 [-0.45, 0.34]	-
Max	-0.04 [-0.29, 0.20]	-	-0.01 [-0.44, 0.41]	-
Min	0.14 [-0.05, 0.34]	-	-0.08 [-0.39, 0.24]	-
SD	-0.66 [-1.22, -0.09]	-	0.20 [-0.59, 0.99]	-
Range	-0.23 [-0.45, 0.00]	-	0.08 [-0.24, 0.39]	-

¹Adjusted for centre mean exposure of interest (for between-country associations) or country mean exposure of interest (for within-country associations), as well as the centre and country mean population density, mean monthly temperature and mean monthly relative humidity, as well as country gross national income per capita and climate type. Because of a centre prevalence of severe symptoms of 0%, five and four centres had to be excluded from the between-country associations for the centres with 13-14 and 6-7 year olds, respectively, and three centres for both age groups for the within-country associations. Estimates from the models containing only linear terms can be interpreted as increases in prevalence ratios after natural exponentiation.

²Results from two models are presented: one including only a linear term for the UV exposure and one including a linear and quadratic term for the UV exposure. The significant positive quadratic terms observed for the maximum, standard deviation and range of monthly UV measurements among the 13-14 year-olds suggest the existence of a non-linear (convex) association with eczema prevalence.

Bold: p-value < 0.05

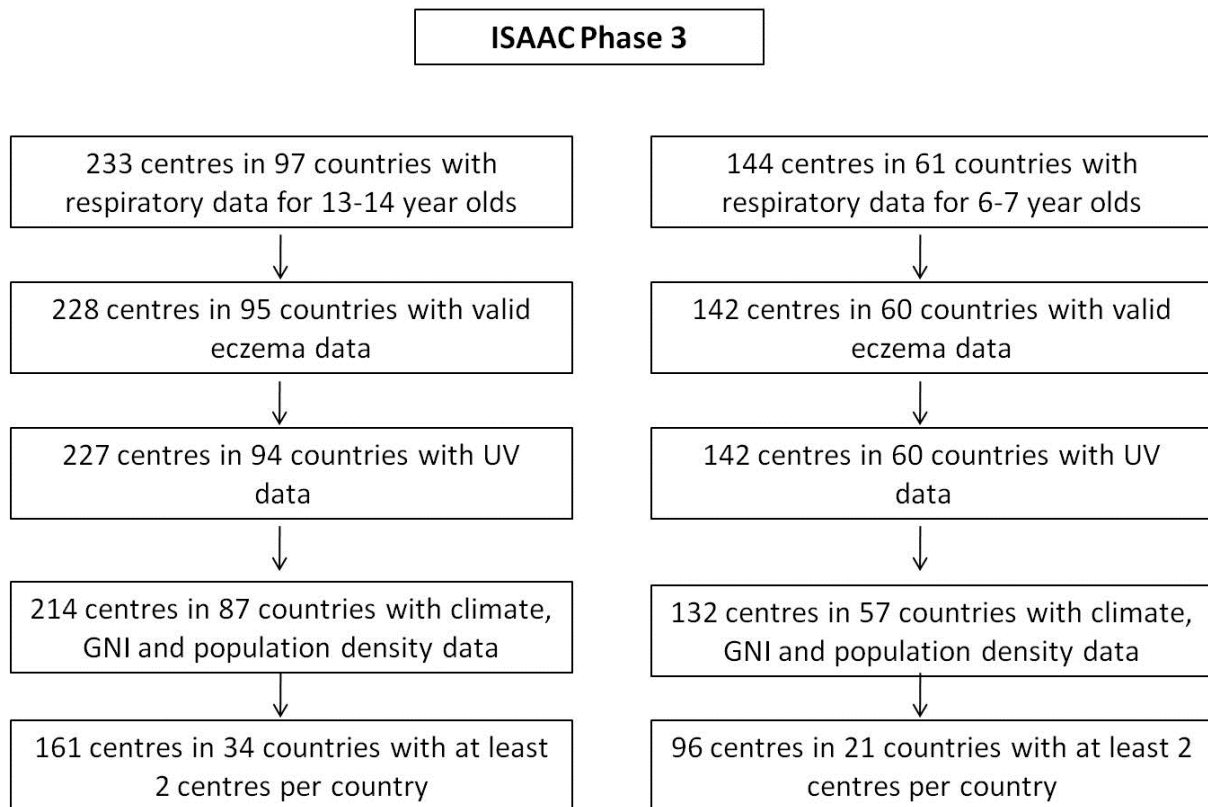


Figure S2: Flow chart of study population

International Study of Asthma and Allergies in Childhood (ISAAC) Phase Three Study Groups

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