Supplementary Materials

Table of contents

CATALOGUE

Supplementary Methods.

1. Overview

The Global Burden of Diseases, Injuries, and Risk Factors Study (GBD) 2021 stands as a thorough analysis of health-related losses on a global scale. This extensive report sheds light on how diseases and injuries have varied over time, across different ages, genders, geographic locations, and sociodemographic categories. The Institute for Health Metrics and Evaluation (IHME) acts as the central hub coordinating the GBD along with its associated projects. Utilizing disability-adjusted life-years (DALYs) as its principal metric, GBD quantifies health burdens—a concept first introduced in the World Bank's 1993 World Development Report, which has since been embraced by WHO, the United Nations, the World Bank, and various governmental agencies globally. GBD 2021 presents estimates related to 371 distinct diseases and injuries—comprising 96 communicable, maternal, neonatal, and nutritional illnesses, 235 non-communicable diseases, and 40 types of injuries. Data is available for 204 countries and territories, 21 countries with specific regional information, 25 age categories, and encompasses both genders as well as the combined data for all sexes, covering the period from 1990 to 2021.Diseases and injuries were categorized into a structured hierarchy, spanning from the three overarching categories of death and disability, along with other COVID-19 pandemic-related outcomes at Level 1, down to the most specific causes found at Level 4. The three primary categories at Level 1 comprise communicable, maternal, neonatal, and nutritional diseases; noncommunicable diseases; and injuries. Within this framework, there are 22 Level 2 causes, 179 Level 3 causes, and 338 Level 4 causes (This includes 167 instances where level 4 causes directly correspond to level 3 causes, and 171 level 4 causes are grouped into 43 level 3 clusters.). Overall, there are 365 non-fatal causes and 308 that are fatal.

2. Data sources

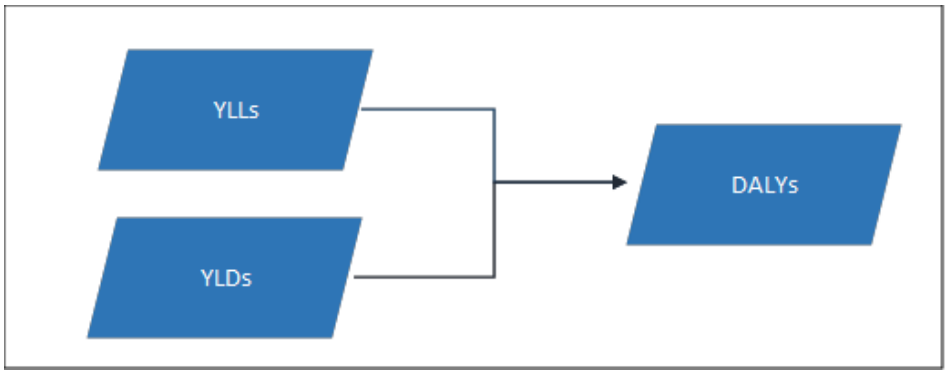
The Global Burden of Disease (GBD) 2021 integrates an extensive and expanding array of data input sources, which encompass surveys, census data, vital statistics, and various other health-related information. This comprehensive dataset is instrumental in estimating morbidity—covering illnesses, injuries, and the associated risks—across 204 countries and territories from 1990 through 2021, while deaths and years of life lost (YLLs) are projected from 1980 to 2021.

The process of estimating the Global Burden of Disease (GBD) hinges on pinpointing a variety of pertinent data sources for every disease or injury. This encompasses censuses, household surveys, civil registration and vital statistics, disease registries, health service utilization, air quality monitors, satellite imagery, disease notifications, and additional resources. Each category of data is meticulously identified through a thorough review of existing studies, explorations of government and international organization websites, published reports, primary data sources like the Demographic and Health Surveys, and the input of datasets provided by GBD collaborators. The data utilized in this research were sourced from the Global Health Data Exchange (http://ghdx.healthdata.org/gbd-results-tool). This includes: (1) the global prevalence and incidence rates, Disability-Adjusted Life Years (DALYs), and crude rates (per 100,000 individuals) categorized by age and sex, spanning from 1990 to 2021; (2) regional incidence and DALY statistics, along with crude rates segmented by age and sex from 1990 to 2021, organized by socio-demographic index (SDI) classifications; (3) national age- and sex-specific prevalence, incidence, DALYs, and crude rates from 1990 to 2021; (4) the GBD world standard population data for 2021; and (5) the GBD world projected population figures from 2017.

3. Calculation methods for DALYs

To estimate DALYs, GBD 2021 started by estimating cause-specific mortality and nonfatal health loss. For each year for which YLDs have been estimated, GBD 2021 computed DALYs by adding YLLs and YLDs for each age-sex-location (Figure A). Uncertainty in YLLs was assumed to be independent of uncertainty in YLDs. GBD 2021 calculated 500 draws for DALYs by summing the first draw of the 500 draws for YLLs and YLDs and then repeating for each subsequent draw. 95% UIs were computed by using the 25th and 975th ordered draw of the DALY uncertainty distribution. GBD 2021 calculated DALYs as the sum of YLLs and YLDs for each cause, location, age group, sex, and year. For more information, please refer to the following figure A.

Figure A. DALY burden estimation for GBD 2021



3.1 YLLs

The YLL is a metric that is computed by multiplying the number of estimated deaths by the standard life expectancy at age of death. The metric therefore highlights premature deaths by applying a larger weight to deaths that occur in younger age groups. The core equation can be written as follows:

$$YLL = \sum_{c=1,a=0,s=1}^{\infty} d_{cas} e_a$$

3.2 YLDs

YLDs was computed by sequela as prevalence multiplied by the DW for the health state associated with that sequela.

$$YLDRate_k = \frac{\sum_{l=1}^{n} ADW_{LK}}{n}$$

3.2.1 Disability Weights (DWs)

DWs are measured on a scale from 0 to 1; 0 implies a state equivalent to full health, and 1, a state equivalent to death. The formula for the cumulative DW is one minus the multiplicative sum of one minus each DW present:

$$SimulantDW_l = 1 - \prod_{k=i}^{j} (1 - DW_k)$$

Where: DW^k is the DW for the k^{th} disease sequela that the simulant l has acquired

Once the simulant DW is computed, the DW attributable to each sequela for the simulant is calculated by using the following formula:

$$ADW_{lk} = \frac{DW_k}{\sum_{k=i}^{k=j} DW_k} * \text{Simulant } DW_l$$

Where:

ADW_{lk} is the attributable DW for disease sequela k in simulant l

DW^k is the DW for disease sequela k

Simulant DW_l is the DW for simulant l from the combination of all sequelae that they have acquired.

This formula apportions the overall simulant DW to each condition in proportion to the DW of each condition in isolation.

Finally, YLDs per capita in an age-sex-country-year are computed by taking the sum of the attributable DWs for a disease sequela across simulants.

Sequela	Severity level	Lay description	DW (95% CI)
Mild psoriasis	Disfigurement, level 1 with itch/pain	The individual has a slight, visible physical deformity that is sometimes sore or itchy. Others notice the deformity, which causes some worry and discomfort.	0.027 (0.015 – 0.042)
Moderate psoriasis	Disfigurement, level 2, with itch/pain	The individual has a visible physical deformity that is sore and itchy. Other people stare and comment, which causes the person to worry. The person has trouble sleeping and concentrating.	0.188 (0.124 – 0.267)

The actual number of YLDs from disease sequela k in an age-sex-location-year is then computed as the YLD rate k times the appropriate age-sex-location-year population.

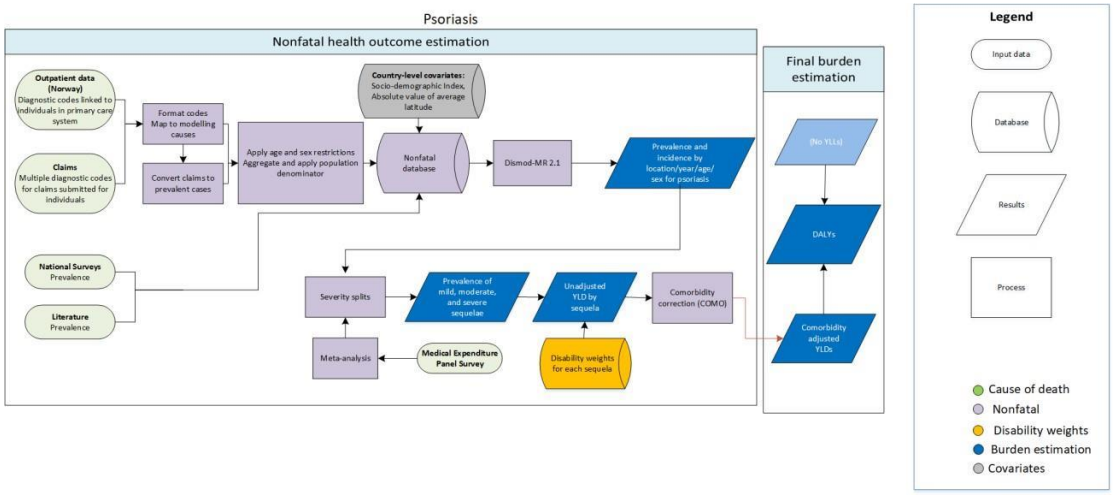
GBD 2021 determined the disability weights for each sequela from the GBD disability weight survey. The table below illustrates the severity levels, lay descriptions, and associated disability weights applicable for outcomes related to psoriasis.

Severe psoriasis	Disfigurement, level 3, with itch/pain	The individual has an obvious physical deformity that is very painful and itchy. The physical deformity makes others uncomfortable, which causes the person to avoid social contact, feel worried, sleep poorly, and think about suicide.	0.576 (0.401–0.731)

Table A. Severity distribution, details on the severity levels for psoriasis and the associated disability weight (DW) with that severity.

4. Estimation of psoriasis non-fatal burdens in GBD 2021

4.1 Flowchart



4.2 Case definition

Psoriasis is an immune-mediated disease that involves inflammation and excess growth and abnormal behavior of certain skin cells. This disease is characterized by areas of raised, red skin with silvery scales. (ICD-10: L40, L41)

Quantity of interest	Reference or Alternative	Definition
Psoriasis	Reference	Psoriasis as determined by a physical examination.
Psoriasis	Alternative	Psoriasis indicated by hospital admission.
Psoriasis	Alternative	Self-reported psoriasis by affected individuals.
Psoriasis	Alternative	Psoriasis indicated by RA diagnosis from administrative data.

4.3 Input data

The data for the psoriasis model come from scientific literature and several large, national surveys, claims data from the USA, Taiwan (province of China), Russia, and Poland.

The literature used has been described in greater detail in previous GBD appendices. In brief, in the GBD 2010 study, a systematic review of the literature was conducted using PubMed and Google Scholar to capture epidemiological data for psoriasis. In GBD 2013, the 2010 search strategy was replicated to capture studies from 2012 to 2014, and it was repeated again in GBD 2016 to capture studies through October 1, 2016. The inclusion criteria stipulated that studies (1) must provide data on the incidence or prevalence of psoriasis; (2) must use samples representative of the general population (ie, samples derived from the experimental arm of clinical trials or based in dermatology clinics were excluded); (3) must use a sample size larger than 100; and (4) must provide sufficient information on study method and sample characteristics to assess the quality of the study.

Surveys used include the Medical Expenditure Panel Survey (MEPS) in the USA for 2000–2009, the Australian National Health Survey 1995–1996, 2001, 2004–2005, 2007–2008, and the USA National Health and Nutrition Examination Survey (NHANES) in 2002 and 2005.

Claims data from the USA, Taiwan, Poland, and Russia link claims for multiple inpatient and outpatient encounters to a single individual. An individual was extracted as a prevalent case if they had one or more inpatient or outpatient encounter with a psoriasis ICD code as any encounter diagnosis.

Data from outpatient encounters from facilities in the USA and Sweden were considered for inclusion in the psoriasis database, but these data violated established regional trends and age distributions and were excluded. Data were further considered for exclusion if relatively high values in young age groups led to overestimation of subnational pseudo-random effects and poor model fit, or if GBD found

them unreasonable when compared to regional, super-regional, and global rates, but no data for these models met these criteria for exclusion.

The tables below show the number of studies included in GBD 2020, as well as the number of countries and GBD world regions represented.

Table I: Data inputs for psoriasis morbidity modelling by parameter

Cause/impairment name	**Measure**	**Countries with data**	**New Sources**	**Total Sources**
Psoriasis	All measures	30	3	120
Psoriasis	Prevalence	30	3	117
Psoriasis	Incidence	0	0	0
Psoriasis	Proportion	1	0	15

Table II: MR-BRT crosswalk adjustment factors for psoriasis

Data input	**Reference or alternative case definition**	**Gamma**	**Beta coefficient, logit (95%Cl)***	**Adjustment factor****
Literature with physical exam	Reference	0.00		
No physical exam	Alternative		1.03 (0.89 to 1.17)	0.74
USA MarketScan 2000	Alternative		-0.79(-0.93 to—0.65)	0.31
USA MarketScan 2010	Alternative		-0.49(-0.63 to -0.35)	0.38
USA MarketScan 2011	Alternative		-0.43(-0.57 to -0.30)	0.39
USA MarketScan 2012	Alternative		-0.40(-0.54 to -0.26)	0.40
USA MarketScan 2013	Alternative		-0.42(-0.56 to -0.28)	0.40
USA MarketScan 2014	Alternative		-0.30(-0.44 to -0.17)	0.42
USA MarketScan 2015	Alternative		-0.29(-0.43 to -0.15)	0.43
USA MarketScan 2016	Alternative		-0.35(-0.48 to -0.21)	0.41

USA MarketScan 2017	Alternative		-0.31(-0.45 to -0.18)	0.42
RA diagnosis from administrative data	Alternative		-0.19(-0.32 to -0.06)	0.45

*MR-BRT crosswalk adjustments can be interpreted as the factor the alternative case definition is adjusted by to reflect what it would have been had it been measured using the reference case definition. If the log/logit beta coefficient is negative, then the alternative is adjusted up to the reference. If the log/logit beta coefficient is
positive, then the alternative is adjusted down to the reference.
**The adjustment factor column is the exponentiated beta coefficient. For log beta coefficients, this is the relative rate between the two case definitions. For logit beta coefficients, this is the relative odds between the two case definitions.

4.4 Modelling strategy

DisMod-MR 2.1, a Bayesian meta-regression tool, was used to estimate prevalence by age, sex, year, and geography (subnational [select countries], country, region, super-region) for psoriasis.

Psoriasis was modelled with remission set between 0.05 and 0.15, implying a duration between 6.6 and 20 years. This was in line with the available epidemiological data, expert opinion, and previous GBD work. Excess mortality was assumed to be zero. The datasets for psoriasis were sufficiently large to make use of a relatively short time window of ten years to determine which datapoints were used for a particular year of fit. Socio-demographic Index and absolute value of average latitude were used as location-level covariates to guide estimates for countries with few or no data.

GBD 2021 have made no substantive changes in the modelling strategy from GBD 2019.

Table III. Covariates. Summary of covariates used in the psoriasis DisMod-MR meta-regression model

Covariate	Type	Parameter	Exponentiated beta (95% uncertainty interval)
Socio-demographic Index	Country-level	prevalence	3.60 (3.31–3.86)
Absolute value of average latitude	Country-level	prevalence	0.99 (0.99–1.00)

5. Processing of missing data

The data utilized in the GBD 2021 were analyzed through Spatiotemporal Gaussian Process Regression (ST-GPR), which facilitated the smoothing of variables such as age, time, and geographical location in areas lacking comprehensive datasets. This method is a stochastic modeling approach tailored to identify trends amidst a backdrop of noisy data. Additionally, it proves effective for interpolating complex, non-linear patterns. To address challenges related to zero counts and limited sample sizes for rare causes, a Bayesian noise reduction algorithm was employed.

6.Calculation methods for age-standardised rate

We calculated the age-standardised rate using demographic data from the GBD 2021 standard population dataset. This involved age-specific rates (ai) and corresponding weights (wi) reflecting the proportion of the standard population for each age category. Weights were determined by the number of individuals in an age group relative to the total standardised population size, with the maximum age (A) defining the limits for these calculations. This was done as follows:

$$\text{age} - \text{standardised rate} = \frac{\sum_{i=1}^{A} a_i w_i}{\sum_{i=1}^{A} w_i} \times 100{,}000$$

Supplementary results

Global Trends

Globally, the prevalence, incidence, and DALYs of psoriasis in children and adolescents showed an increasing trend, and the upward trends in all three indicators were similar. In 1990, there were 4.2 million children and adolescents with psoriasis worldwide, which increased to 5.5 million in 2021. Between 1990 and 2021, the age-standardised prevalence rate of psoriasis in this age group increased by 28%, from 186 per 100,000 people to 204 per 100,000, with an AAPC of 0.28% (Table 1). Notably, the increasing trend in the age-standardised prevalence rate of children and adolescents was more evident than that of the overall population with psoriasis from 1990 to 2021 (Supplementary Figure S1).

The incidence of psoriasis among young people aged 0–19 years increased by 28%, from 0.7 million to 0.9 million. The age-standardised incidence rate increased by 8.5%, from 31.81 per 100,000 people in 1990 to 34.5 per 100,000 in 2021, with an AAPC of 0.26% (Supplementary Table SI). The increasing trend of psoriasis in young people was less significant than in the overall population with psoriasis (Supplementary Figure S1).

The upward trend in DALYs was similar to that of prevalence and incidence. The age-standardised DALY rate for psoriasis in this demographic rose by 9.6%, from 16.91 per 100,000 people in 1990 to 18.54 per 100,000 in 2021, with an AAPC of 0.29% (Supplementary Table SII).

The increasing trend in age-standardised DALY rates in children and adolescents was also more evident than that in the overall population with psoriasis from 1990 to 2021 (Supplementary Figure S1). Moreover, the proportion of DALYs attributed to psoriasis in relation to all causes has steadily increased over the last 32 years among children and adolescents (Supplementary Figure S2).

Global trends by sex

From 1990 to 2021, the age-standardised prevalence, incidence, and DALY rates of psoriasis in children and adolescents increased in females and males worldwide. The increasing trend in the prevalence of psoriasis among young people was more rapid in males than in females (AAPC: 0.33% vs 0.25%). However, the prevalence of psoriasis in females in 1990 and 2021 was higher than in males (Table 1). The same trend was observed in the incidence and DALYs of psoriasis. The number of DALYs for psoriasis increased by 34% for males and 28% for females from 1990 to 2021, whereas the age-standardised DALY rate increased by 14% for males with an AAPC of 0.33% and 11% for females with an AAPC of 0.25% (Supplementary Table SII). From 1990 to 2021, the incidence of psoriasis among young people increased by 31% for males, and the age-standardised incidence rate increased from 28.34 per 100,000 people to 31.69 per 100,000 with an AAPC of 0.32%. For females, the incidence increased by 25%, and the age-standardised incidence rate increased from 35.41 per 100,000 people to 38.19 per 100,000 with an AAPC of 0.21% (Supplementary Table SI).

Global trends by age subgroup

Globally, between 1990 and 2021, the burden of psoriasis in each age category in those under 20 years demonstrated a clear increasing pattern. In general, age-standardised prevalence, age-standardized DALYs, and age-standardized incidence rates increased with age, whereas the AAPC for prevalence and DALYs decreased with age.

The age-standardised prevalence rate of psoriasis increased the most rapidly in the 0–4 years group, from 102 per 100,000 people to 113 per 100,000 with an AAPC of 0.32%. In contrast, the age-standardised prevalence rate increased the slowest in the 15–19 years group, from 287 per 100,000 people to 310 per 100,000 with an AAPC of 0.25% (Table 1). The most significant increase in

age-standardised DALY rates associated with psoriasis was observed among those 0–4 years with an AAPC of 0.44%. The least significant increase was observed among those 15–19 years, with an AAPC of 0.25% (Supplementary Table SII). The most significant increase in age-standardised incidence rate was also found in those 0–4 years with an AAPC of 0.43%. However, the least apparent increase was observed among those 10–14 years, from 35.58 per 100,000 people to 37.74 per 100,000 with an AAPC of 0.18%. Furthermore, the 15–19 group had the highest age-standardised incidence rate in 1990 and 2021, whereas the highest incidence was found among the 5–9 group in the same years (Supplementary Table SI).

Remarkably, across all age subgroups, the increasing incidence trend among males consistently outpaced that in females, especially among children and adolescents 10–14 and 15–19 years. In the 5–9 years group, the upward trend of DALYs for females slightly exceeded that for males (AAPC 0.31% vs 0.3%), whereas the prevalence trend in this age group was similar (Supplementary Figure S3).

Global trends by sociodemographic index

Between 1990 and 2021, the prevalence of psoriasis among children and adolescents increased consistently across different sociodemographic groups, notably in nations with a high-middle SDI, with an AAPC of 0.71%. In 2021, among children and adolescents, the highest age-standardised prevalence rate of psoriasis was observed in countries with a high SDI (366 per 100,000 people) (Table 1). The psoriasis-related incidence among young people increased across all sociodemographic subgroups over the same timeframe, and the most significant increase was seen in nations with a high-middle SDI (AAPC 0.64%). This increase was more than twice the 0.26% annual increase noted in countries with lower sociodemographic standing (Supplementary Table SI). The age-standardised DALY rate of psoriasis among children and adolescents also increased across all subgroups of the SDI during

1990–2021, particularly in nations with a high-middle SDI (AAPC 0.71%). In 2021, the age-standardised DALY rate was most pronounced in nations with a high SDI (33.23 per 100,000 people) and lowest in countries with a low SDI (11.97 per 100,000 people) (Supplementary Table SII). In general, the age-standardised prevalence, incidence, and DALY rates all increased with SDI in 1990 and 2021, whereas the highest prevalence, incidence, and DALYs were found in countries with a middle SDI. Furthermore, the age-standardised prevalence, incidence, and DALY rates of females were consistently higher than those of males, regardless of changes in SDI (Supplementary Figure S4). In these subgroups, there were no significant differences in the AAPC of the three indicators between males and females (Supplementary Figure S5). Except in nations with a low-middle SDI, the increasing trend of psoriasis burden in this age group was consistently higher than that in all ages (Supplementary Figure S1 and Supplementary Figure S6).

Regional trends

From 1990 to 2021, the burden of psoriasis increased in almost all 21 regions. Only in high-income North America the prevalence and DALYs of psoriasis among children and adolescents showed statistically non-significant decreasing trends with AAPCs of -0.03% (95% CI: -0.1% to 0.04%) and -0.04% (95% CI: -0.1% to 0.02%). The increase in age-standardised prevalence, incidence, and DALY rates for children and adolescents with psoriasis was particularly evident in East Asia (AAPC 0.89%, 0.86%, and 0.9%), followed by North Africa and the Middle East (AAPC 0.76%, 0.73%, and 0.77%) The slowest increases in these three measures were in tropical Latin America (AAPC 0.04%, 0.01%, and 0.06%) during the same period (Supplementary Table SIII and Supplementary Figure S7). The highest prevalence, incidence, and DALYs were found in South Asia in 1990 and 2021, while the burden of psoriasis was mainly concentrated in high-income North America, Andean Latin America

and Western Europe. In these three regions, the age-standardised prevalence, incidence, and DALY rates consistently ranked in the top three in the same 2 years. Furthermore, no notable variation was observed in the burden of psoriasis between the sexes in these regions, except for high-income North America. In North America, the prevalence, incidence, and DALYs demonstrated statistically non-significant downward trends in females, whereas the incidence among males exhibited an upward trajectory (Supplementary Figure S8).

National trends

At the national level, from 1990 to 2021, Equatorial Guinea saw the most significant trend in the growing burden of psoriasis among children and adolescents (AAPC for prevalence: 1.22%; AAPC for incidence: 1.07%; AAPC for DALYs: 1.25%), followed by Oman (AAPC for prevalence: 1.1%; AAPC for incidence: 1.01%; AAPC for DALYs: 1.13%), Sudan (AAPC for prevalence: 1.01%; AAPC for incidence: 0.94%; AAPC for DALYs: 1%) and Saudi Arabia (AAPC for prevalence: 1.01%; AAPC for incidence: 0.93%; AAPC for DALYs: 1.01%). During the same period, the burden of psoriasis in Burundi, South Sudan, and Somalia decreased. The most significant decrease was observed in Somalia. Although the prevalence and DALYs of children and adolescents with psoriasis decreased in the United States (AAPC for prevalence: -0.07% [non-significant]; AAPC for DALYs: -0.08%), its incidence still showed a non-significant increasing trend, with an AAPC of 0.03%.

In 2021, Germany had the highest age-standardised prevalence rate (594 per 100,000 people), incidence rate (90 per 100,000 people), and DALY rate (53 per 100,000 people) among young people (Supplementary Table SIV, Figure 1, and Supplementary Figure S9, S10).

Predictions

Using data on the incidence and prevalence of psoriasis compiled between 1990 and 2021, we predicted future psoriasis trends using the BAPC model. According to Supplementary Figure S11 and Supplementary Table SV, we anticipate a rise in the global prevalence and incidence per 1,000 individuals, from 5,504 cases in 2022 to 6,982 by 2050 and from 921 cases in 2022 to 1,172 in 2050, respectively. Moreover, the age-standardised prevalence and incidence rates across all four age groups are also expected to show an upward trajectory. Specifically, the predicted prevalence for the age groups is as follows: 0–4 (70–100), 5–9 (196–280), 10–14 (261–355), and 15–19 (307–398); whereas the incidence predictions are follows: 0–4 (24–35), 5–9 (38–53), 10–14 (38–51), and 15–19 (40–52). The overall burden of psoriasis is predicted to remain higher in females than in males.

Additional Results in Tables and Figure

Supplementary Table SI. Age-standardised Incidence of psoriasis in young people and their AAPCs from 1990 to 2021 at the global and SDI levels.

	Incidence(95%UI)				
	No of people with psoriasis in1990 (000s)	**Age-standardised rate in 1990 (per 100000)**	**No of people with psoriasis in 2021 (000s)**	**Age-standardised rate in 2021 (per 100000)**	**AAPC (95%CI)**
Global	718 (635to805)	31.81(28.15to35.68)	918 (813to1029)	34.5(30.56to38.63)	0.26(0.25to0.27)
Sex:					
Male	328 (290to368)	28.34(25.07to31.8)	430 (381to482)	31.69(28.06to35.51)	0.32(0.31to0.33)
Female	390 (346to437)	35.41(31.38to39.68)	488 (432to546)	38.19(33.83to42.78)	0.21(0.2to0.22)
SDI level:					
High SDI	133 (118to149)	52.56(46.78to58.76)	139 (125to154)	58.84(52.92to65.19)	0.37(0.33to0.42)
High-middle SDI	118 (105to133)	31.38(27.76to35.27)	119 (105to133)	38.25(33.8to42.93)	0.64(0.62to0.67)
Middle SDI	240 (213to270)	31.27(27.66to35.14)	284 (251to319)	37.33(32.99to41.92)	0.57(0.56to0.58)
Low-middle SDI	168 (148to188)	28.69(25.31to32.22)	243 (215to273)	31.53(27.84to35.4)	0.29(0.25to0.33)
Low SDI	57(51to64)	21.1(18.6to23.73)	133(118to150)	22.93(20.22to25.81)	0.26(0.24to0.27)
Age groups:					
<5 year	129(116to142)	20.81(18.69to22.83)	157 (141to171)	23.8(21.46to26.01)	0.43 (0.4to0.46
5-9 year	201(176to226)	34.44(30.2to38.72)	256(225to287)	37.24(32.73to41.73)	0.25(0.23to0.27)
10-14 year	191(170to214)	35.58(31.69to39.87)	252(224to282)	37.74(33.62to42.37)	0.18(0.14to0.23)
15-19 year	197 (173to224)	38(33.37to43.15)	254 (223to289)	40.74(35.73to46.24)	0.22(0.19to0.25)

Supplementary Table SII. Age-standardised DALYs of psoriasis in young people and their AAPCs from 1990 to 2021 at the global and SDI levels.

	DALYs(95%UI)				
	No of people with psoriasis in1990 (000s)	Age-standardised rate in 1990 (per 100000)	No of people with psoriasis in2021 (000s)	Age-standardised rate in 2021 (per 100000)	AAPC (95%CI)
Global	382 (271to519)	16.91(12.03to22.98)	500(356to674)	18.54(13.19to24.99)	0.29(0.26to0.32)
Sex:					
Male	176 (124to239)	15.17(10.72to20.67)	235 (167to316)	17.27(12.29to23.25)	0.33(0.32to0.35)
Female	206 (147to279)	18.73(13.34to25.37)	265 (189to358)	20.78(14.8to28.04)	0.25(0.21to0.28)
SDI level:					
High SDI	77 (54to103)	29.41(20.81to39.56)	81 (58to109)	33.23(23.67to44.68)	0.41(0.37to0.44)
High-middle SDI	61 (43to84)	15.91(11.23to21.74)	63 (44to85)	19.88(14.02to27.11)	0.71(0.69to0.74)
Middle SDI	129 (91to177)	16.68(11.78to22.88)	157 (112to213)	20.23(14.43to27.4)	0.62(0.59to0.64)
Low-middle SDI	86 (61to116)	14.89(10.56to20.17)	130 (91to175)	16.57(11.66to22.41)	0.33(0.3to0.36)
Low SDI	29 (20to39)	10.84(7.55to14.65)	69 (48to95)	11.97(8.41to16.41)	0.3(0.24to0.36)
Age groups:					
<5 year	35 (24to47)	5.58(3.92to7.51)	42 (30to56)	6.38(4.58to8.52)	0.44 (0.41to0.46)
5-9 year	96 (68to131)	16.43(11.71to22.39)	124 (87to167)	18.11(12.62to24.27)	0.3(0.26to0.34)
10-14 year	117 (83to160)	21.92(15.46to29.78)	160 (113to217)	23.97(16.97to32.52)	0.28(0.23to0.34)
15-19 year	134 (96to182)	25.78(18.48to35.03)	174 (126to235)	27.87(20.19to37.6)	0.25(0.21to0.28)

Supplementary Table SIII. Age-standardised prevalence incidence and DALYs of psoriasis in young people and their AAPCs from 1990 to 2021 at the regional levels.

	prevalence					incidence					DALYs				
	number(000s) 1990	rate1990 (per100000)	number(000s)2021	rate2021 (per100000)	AAPC	number(000s)1990	rate1990 (per100000)	number(000s)2021	rate2021 (per100000)	AAPC	number(000s)1990	rate1990 (per100000)	number(000s)2021	rate2021 (per100000)	AAPC
High-income Asia Pacific	88 (81to96)	161.86 (148.48to175.68)	56 (51to61)	170.05 (156.02to184.76)	0.16 (0.13to0.19)	16 (14to18)	30.1 (26.52to33.79)	10 (9to11)	31.63 (27.85to35.59)	0.16 (0.13to0.18)	8 (6to11)	14.75 (10.21to20.3)	5 (4to7)	15.59 (10.72to21.49)	0.17 (0.13to0.21)
East Asia	646 (593to701)	134.41 (123.4to145.84)	625 (575to678)	176.52 (162.43to191.37)	0.89 (0.87to0.91)	110 (97to124)	23.37 (20.64to26.29)	107 (94to120)	30.49 (27to34.19)	0.86 (0.81to0.91)	59 (42to81)	12.31 (8.72to16.83)	57 (41to78)	16.23 (11.5to22.06)	0.9 (0.85to0.96)
Eastern Europe	113 (104to123)	164.79 (151.02to179.24)	91 (84to99)	187.85 (172.3to204.03)	0.42 (0.41to0.44)	23 (20to25)	33.38 (29.74to37.37)	18 (16to20)	37.75 (33.63to42.2)	0.4 (0.37to0.43)	10 (7to14)	15 (10.5to20.5)	8 (6to11)	17.07 (11.92to23.27)	0.42 (0.39to0.45)
Central Europe	75 (68to81)	178.53 (163.47to193.97)	52 (48to55)	205.92 (191.6to220.43)	0.46 (0.45to0.47)	15 (13to16)	35.71 (31.8to39.93)	10 (9to11)	40.72 (36.93to44.86)	0.43 (0.4to0.45)	7 (5to9)	16.25 (11.29to22.33)	5 (3to6)	18.75 (13.17to25.4)	0.46 (0.44to0.48)
Central Latin America	246 (225to267)	299.2 (274.06to325.11)	293 (269to318)	330.24 (302.85to358.38)	0.32 (0.31to0.33)	40 (35to45)	48.79 (42.9to55.14)	46 (40to52)	53.33 (46.81to60.06)	0.29 (0.28to0.3)	22 (16to30)	27.21 (19.07to37.07)	27 (19to36)	30.11 (21.14to40.56)	0.33 (0.3to0.35)
Tropical Latin America	159 (146to173)	225.33 (207.05to243.93)	154 (142to167)	228.39 (209.93to247.15)	0.04 (0.04to0.05)	27 (24to30)	38.42 (34.01to43.17)	26 (23to29)	38.6 (34.22to43.3)	0.01 (0to0.02)	14 (10to20)	20.34 (14.31to27.72)	14 (10to19)	20.65 (14.62to28.09)	0.06 (0.03to0.1)
High-income North America	374 (344to403)	452.34 (416.75to487.24)	419 (394to445)	444.95 (418.15to472.5)	-0.03* (-0.1to0.04)	56 (50to62)	68.27 (60.91to76.35)	61 (56to68)	68.73 (62.57to75.39)	0.06* (-0.02to0.14)	34 (24to46)	41.14 (28.95to55.4)	38 (27to52)	40.34 (28.74to54.92)	-0.04* (-0.1to0.02)
Southeast Asia	410 (374to446)	185.32 (169.38to201.68)	522 (477to569)	220.28 (201.32to239.76)	0.56 (0.55to0.57)	70 (62to79)	31.82 (27.94to35.92)	87 (76to98)	37.31 (32.72to42.15)	0.52 (0.51to0.53)	37 (26to51)	16.81 (11.67to22.91)	48 (33to65)	20.07 (14.08to27.29)	0.58 (0.55to0.61)
South Asia	901 (828to975)	170.36 (156.51to184.52)	1323(1215to1434)	185.2 (170.06to200.58)	0.24 (0.2to0.28)	159 (141to179)	29.65 (26.14to33.3)	226 (199to254)	32.5 (28.71to36.46)	0.27 (0.21to0.33)	81 (57to109)	15.34 (10.82to20.54)	120 (84to163)	16.78 (11.79to22.81)	0.26 (0.21to0.31)
Central Asia	47 (43to52)	155.7 (141.36to170.49)	58 (53to64)	175.23 (158.95to191.86)	0.38 (0.37to0.39)	10 (8to11)	31.6 (27.71to35.83)	12 (10to14)	35.34 (30.91to40.06)	0.36 (0.34to0.39)	4 (3to6)	14.16 (9.64to19.59)	5 (4to7)	15.94 (11.04to22.1)	0.39 (0.34to0.44)
Australasia	15 (13to16)	226.27 (206.21to247.43)	20 (19to22)	260.3 (237.56to284.36)	0.46 (0.43to0.48)	3 (2to3)	40.47 (35.27to46.22)	3 (3to4)	45.66 (39.8to51.97)	0.39 (0.37to0.41)	1 (1to2)	20.61 (12.95to30.99)	2 (1to3)	23.61 (14.26to35.12)	0.44 (0.37to0.51)
Eastern Sub-Saharan Africa	74 (68to81)	70.82 (64.63to77.11)	164 (150to178)	72.67 (66.42to79.08)	0.08 (0.06to0.1)	14 (12to16)	13.07 (11.47to14.79)	30 (27to34)	13.43 (11.79to15.18)	0.09 (0.07to0.1)	7 (5to9)	6.56 (4.61to8.94)	15 (11to21)	6.74 (4.77to9.2)	0.08 (0.06to0.11)
North Africa and Middle East	249 (229to270)	144 (132.37to156.32)	436 (399to473)	182.42 (167.29to197.91)	0.76 (0.75to0.78)	45 (40to51)	26.08 (22.99to29.4)	78 (68to88)	32.67 (28.75to36.89)	0.73 (0.71to0.75)	23 (16to31)	13.06 (9.16to18.14)	39 (28to54)	16.54 (11.58to22.53)	0.77 (0.74to0.8)
Caribbean	45 (41to49)	297.86 (272.01to325.55)	49 (45to53)	313.34 (286.04to342.6)	0.16 (0.15to0.17)	7 (6to8)	48.43 (42.01to55.14)	8 (7to9)	50.93 (44.11to58.19)	0.16 (0.14to0.17)	4 (3to6)	26.88 (18.55to36.8)	4 (3to6)	28.31 (19.31to39.32)	0.17 (0.14to0.2)

Southern Latin America	46 (42to51)	236.3 (215.1to 258.94)	55 (50to61)	268.57 (243.81to295.17)	0.41 (0.41to0.42)	8 (7to9)	41.76 (36.12to 47.72)	9 (8to11)	47.05 (40.66to 53.7)	0.38 (0.33to0.43)	4 (3to6)	21.46 (13.78to 31.2)	5 (3to7)	24.46 (15.39to 35.62)	0.42 (0.39to0.45)
Oceania	4 (4to5)	133.83 (121.91to146.61)	9 (8to10)	149.37 (135.6to 164.14)	0.36 (0.35to0.36)	1 (1to1)	24.12 (20.9to27.64)	2 (1to2)	26.91 (23.33to 30.86)	0.35 (0.35to0.36)	0 (0to1)	12.18 (7.75to17.72)	1 (1to1)	13.62 (8.42to20.22)	0.36 (0.3to0.43)
Western Sub-Saharan Africa	154(142to167)	153.92 (141.42to166.69)	474(436to513)	182.21 (167.49to196.95)	0.54 (0.5to0.57)	26 (23to29)	24.52 (21.67to 27.56)	75 (67to85)	28.33 (25.07to 31.81)	0.46 (0.43to0.5)	14 (10to19)	13.84 (9.84to18.47)	43 (30to58)	16.48 (11.66to 22.35)	0.56 (0.52to0.6)
Western Europe	409(376to442)	389.81 (358.69to421.47)	422(389to455)	434.89 (401to469.5)	0.35 (0.31to0.39)	64 (57to72)	63.76 (56.57to 71.44)	66 (59to74)	70.37 (62.45to 78.95)	0.32 (0.27to0.37)	37 (26to50)	35.32 (24.82to 47.48)	38 (27to52)	39.41 (27.98to 53.32)	0.35 (0.3to0.4)
Andean Latin America	84 (77to92)	449.04 (409.8to 487.92)	127(117to138)	530.47 (486.84to575.27)	0.54 (0.52to0.55)	12 (11to14)	65.54 (57.19to 74.35)	18 (16to20)	76.05 (66.61to 86.27)	0.48 (0.46to0.49)	8 (5to11)	40.62 (27.92to 57.38)	12 (8to16)	48.32 (33.5to67.42)	0.55 (0.48to0.62)
Southern Sub-Saharan Africa	30 (27to32)	113.38 (103.59to123.43)	38 (35to42)	120.74 (110.35to131.54)	0.2 (0.18to0.22)	5 (5to6)	20.12 (17.63to 22.75)	7 (6to8)	21.32 (18.69to 24.14)	0.19 (0.17to0.21)	3 (2to4)	10.28 (7.1to14.23)	3 (2to5)	10.95 (7.43to15.27)	0.21 (0.15to0.28)
Central Sub-Saharan Africa	40 (36to44)	138.63 (126.03to151.29)	113(103to124)	157.17 (142.43to172.47)	0.41 (0.38to0.43)	7 (6to8)	23.32 (20.11to 26.7)	19 (17to22)	26.22 (22.65to 30.09)	0.38 (0.36to0.4)	4 (2to5)	12.37 (7.75to18.52)	10 (6to15)	14.21 (8.85to21.04)	0.44 (0.35to0.53)

***This is a statistically nonsignificant data.**

Supplementary Table SIV. Age-standardised prevalence, incidence, and DALYs of psoriasis in young people in 2021 and their AAPCs between 1990-2021 in 204 countries and territories.

	Age-standardised rate (per 100000 population) (95%UI)			AAPC (95%CI)		
	Prevalence	Incidence	DALYs	Prevalence	Incidence	DALYs
Russian Federation	189.01 (173.29to205.05)	37.95 (33.85to42.45)	17.18 (12.11to23.42)	0.44 (0.41to0.46)	0.41 (0.39to0.44)	0.43 (0.37to0.48)
Coted'Ivoire	109.02 (99.36to118.93)	19.44 (17.03to22.01)	9.91 (5.56to15.73)	0.26 (0.23to0.29)	0.25 (0.22to0.28)	0.26 (0.1to0.43)
Bolivia (Plurinational State of)	492.02 (449.13to535.73)	71.82 (62.33to81.55)	44.77 (28.68to64.97)	0.59 (0.57to0.6)	0.51 (0.49to0.53)	0.61 (0.58to0.63)
Puerto Rico	385.24 (348.86to422.28)	60.39 (51.88to69.36)	34.95 (21.95to51.12)	0.35 (0.34to0.37)	0.32 (0.3to0.35)	0.35 (0.28to0.42)
Republic of Korea	173.95 (158.17to190.46)	32.4 (28.06to37.13)	15.98 (8.9to24.88)	0.41 (0.38to0.43)	0.39 (0.37to0.41)	0.44 (0.4to0.49)
Jamaica	340.9 (309.15to373.68)	54.65 (46.98to62.79)	31 (19.04to46.62)	0.31 (0.3to0.32)	0.27 (0.26to0.29)	0.32 (0.3to0.35)
Guinea-Bissau	103.74 (94.43to113.48)	18.69 (16.33to21.23)	9.47 (5.35to15.03)	0.25 (0.21to0.29)	0.24 (0.21to0.27)	0.26 (0.16to0.36)
Sudan	179.44 (163.38to196.81)	32.48 (28.28to37.09)	16.16 (8.46to25.51)	1.01 (1to1.02)	0.94 (0.94to0.95)	1 (0.93to1.08)
Solomon Islands	144.68 (131.29to159.29)	26.26 (22.57to30.2)	13.26 (7.06to21.14)	0.46 (0.45to0.47)	0.45 (0.44to0.46)	0.49 (0.34to0.63)
Romania	190.79 (174to208.7)	38.23 (33.74to43.32)	17.37 (10.09to26.81)	0.38 (0.36to0.4)	0.36 (0.31to0.4)	0.37 (0.3to0.43)
Togo	108.57 (98.99to119.45)	19.41 (16.93to22.08)	9.88 (5.33to15.73)	0.23 (0.17to0.29)	0.24 (0.18to0.29)	0.21 (0.14to0.29)
Liberia	105.49 (96.07to115.59)	18.96 (16.54to21.57)	9.67 (5.39to15.22)	0.23 (0.18to0.28)	0.25 (0.2to0.3)	0.28 (0.21to0.35)
Montenegro	204.67 (186.61to223.72)	40.35 (35.55to45.39)	18.58 (10.91to28.55)	0.42 (0.39to0.45)	0.39 (0.36to0.42)	0.4 (0.33to0.48)
Mauritius	230.91 (208.86to254.82)	38.68 (33.2to44.79)	20.92 (11.97to32.93)	0.53 (0.52to0.55)	0.51 (0.49to0.52)	0.53 (0.44to0.62)
Eswatini	117.21 (106.14to129.44)	20.73 (17.77to23.82)	10.69 (5.51to17.36)	0.36 (0.34to0.39)	0.33 (0.31to0.35)	0.37 (0.28to0.45)
Democratic Republic of the Congo	153.67 (138.98to168.74)	25.76 (22.13to29.65)	13.85 (7.66to21.98)	0.31 (0.29to0.34)	0.31 (0.28to0.34)	0.34 (0.2to0.49)
Papua New Guinea	145.88 (131.93to160.89)	26.39 (22.7to30.2)	13.3 (7.52to20.78)	0.41 (0.4to0.42)	0.4 (0.39to0.41)	0.42 (0.32to0.51)
Italy	339.97 (311.33to369.43)	58.98 (52.31to66.16)	30.83 (21.44to41.72)	0.08 (0.06to0.11)	0.14 (0.1to0.18)	0.07 (0.04to0.1)
Malawi	69.36 (63.42to75.96)	12.94 (11.33to14.72)	6.45 (4.35to8.97)	0.09 (0.06to0.11)	0.11 (0.09to0.12)	0.11 (0.07to0.15)
France	458.71 (420.75to498.96)	73.27 (64.3to83.14)	41.4 (26.22to61.44)	0.39 (0.37to0.4)	0.35 (0.31to0.38)	0.38 (0.33to0.44)
Zimbabwe	110.19 (99.58to121.42)	19.65 (16.91to22.66)	10.04 (5.23to16.2)	0.07 (0.05to0.1)	0.08 (0.07to0.1)	0.11 (0.03to0.19)
Ukraine	183.69 (167.87to200.59)	37.07 (32.61to41.69)	16.69 (9.52to25.95)	0.33 (0.32to0.34)	0.32 (0.31to0.34)	0.32 (0.23to0.41)
Palestine	177.27 (161.17to194.47)	32.18 (27.95to36.83)	16.03 (8.96to25.7)	0.91 (0.9to0.91)	0.86 (0.85to0.86)	0.91 (0.85to0.97)
Chile	273.21 (247.4to302)	47.59 (41.06to55.06)	24.8 (14.75to37.44)	0.5 (0.5to0.51)	0.46 (0.42to0.49)	0.47 (0.41to0.54)
Dominica	360.24 (326.5to394.97)	57.2 (49.26to65.73)	32.65 (19.93to48.09)	0.4 (0.39to0.4)	0.37 (0.35to0.38)	0.4 (0.33to0.46)
Turkmenistan	180.4 (163.12to199.42)	36.23 (31.51to41.43)	16.48 (9.55to25.58)	0.39 (0.36to0.42)	0.37 (0.34to0.4)	0.42 (0.34to0.5)
Guam	196.25 (177.26to216.59)	33.8 (29.15to39.23)	17.96 (10to27.86)	0.45 (0.42to0.48)	0.43 (0.38to0.48)	0.45 (0.36to0.54)
Brunei Darussalam	179.7 (163.37to197.42)	33.05 (28.59to37.98)	16.58 (9.23to26.4)	0.27 (0.25to0.29)	0.25 (0.23to0.28)	0.28 (0.26to0.29)

Belarus	**186.04**	**37.35**	**16.82**	**0.48**	**0.45**	**0.46**
	(167.57to205.01)	**(32.55to42.68)**	**(9.53to25.94)**	**(0.46to0.5)**	**(0.42to0.48)**	**(0.1to0.6)**
Poland	**218.42**	**42.91**	**19.84**	**0.4**	**0.38**	**0.4**
	(207.4to229.77)	**(39.43to46.39)**	**(13.98to26.87)**	**(0.38to0.42)**	**(0.35to0.41)**	**(0.37to0.44)**
Colombia	**346.56**	**55.1**	**31.69**	**0.35**	**0.3**	**0.35**
	(315.16to380.18)	**(47.58to63.21)**	**(19to45.77)**	**(0.34to0.35)**	**(0.29to0.31)**	**(0.29to0.4)**
Brazil	**228.29**	**38.59**	**20.64**	**0.04**	**0.01***	**0.05**
	(209.89to247.04)	**(34.2to43.27)**	**(14.54to28.1)**	**(0.03to0.05)**	**(0to0.02)**	**(0.01to0.09)**
Kuwait	**218.49**	**38.03**	**19.96**	**0.68**	**0.67**	**0.71**
	(198.42to239.73)	**(33.11to43.55)**	**(11.45to30.98)**	**(0.64to0.72)**	**(0.61to0.72)**	**(0.56to0.87)**
Spain	**293.44**	**52.06**	**26.64**	**0.34**	**0.28**	**0.33**
	(272.79to315.05)	**(46.62to58.15)**	**(16.26to39.84)**	**(0.32to0.36)**	**(0.24to0.32)**	**(0.26to0.4)**
Mongolia	**166.7**	**33.97**	**15.3**	**0.49**	**0.46**	**0.54**
	(150.45to184.64)	**(29.51to38.83)**	**(8.82to22.9)**	**(0.48to0.5)**	**(0.44to0.47)**	**(0.44to0.65)**
Belgium	**454.97**	**72.79**	**41.59**	**0.36**	**0.33**	**0.36**
	(415.99to495.8)	**(63.74to82.53)**	**(26.98to59.66)**	**(0.35to0.37)**	**(0.31to0.36)**	**(0.3to0.42)**
Andorra	**482.64**	**76.35**	**43.75**	**0.23**	**0.24**	**0.22**
	(439.81to526.32)	**(66.97to86.59)**	**(27.55to62.71)**	**(0.19to0.26)**	**(0.16to0.32)**	**(0.17to0.26)**
Malta	**456.08**	**72.76**	**41.52**	**0.41**	**0.36**	**0.41**
	(417.57to496.62)	**(63.99to82.61)**	**(26.18to60.57)**	**(0.4to0.43)**	**(0.33to0.4)**	**(0.38to0.44)**
Bangladesh	**184.04**	**32.24**	**16.75**	**0.5**	**0.46**	**0.51**
	(168.93to201.14)	**(28.4to36.46)**	**(9.77to25.82)**	**(0.5to0.51)**	**(0.45to0.47)**	**(0.47to0.56)**
Austria	**457.01**	**72.98**	**41.52**	**0.32**	**0.29**	**0.3**
	(417.19to496.68)	**(63.92to82.61)**	**(26.38to59.07)**	**(0.3to0.33)**	**(0.26to0.33)**	**(0.26to0.34)**
Namibia	**121.44**	**21.35**	**11.16**	**0.3**	**0.28**	**0.32**
	(109.63to134.03)	**(18.32to24.62)**	**(5.84to18.25)**	**(0.26to0.34)**	**(0.25to0.31)**	**(0.16to0.48)**
Venezuela (Bolivarian	**335.18**	**53.61**	**30.56**	**0.19**	**0.18**	**0.21**
Republic of)	**(304.02to368.04)**	**(46.14to61.71)**	**(18.97to44.88)**	**(0.17to0.22)**	**(0.15to0.21)**	**(0.1to0.32)**
Bermuda	**364.62**	**57.53**	**33.2**	**0.26**	**0.24**	**0.25**
	(331.58to399.01)	**(49.25to66.18)**	**(20.38to49.77)**	**(0.25to0.27)**	**(0.22to0.25)**	**(0.2to0.31)**
Gabon	**192.78**	**31.03**	**17.49**	**0.68**	**0.6**	**0.68**
	(174.33to212.46)	**(26.52to35.94)**	**(10.05to27.66)**	**(0.67to0.69)**	**(0.58to0.63)**	**(0.63to0.73)**
United States Virgin	**382.51**	**59.82**	**34.64**	**0.29**	**0.26**	**0.28**
Islands	**(347.24to419.7)**	**(51.52to68.88)**	**(21.84to51.72)**	**(0.27to0.3)**	**(0.25to0.28)**	**(0.23to0.34)**
Denmark	**459.5**	**73.2**	**41.85**	**0.29**	**0.27**	**0.31**
	(421.18to500.22)	**(64.2to83.08)**	**(26.29to59.86)**	**(0.28to0.31)**	**(0.24to0.31)**	**(0.29to0.33)**
Antigua and Barbuda	**360.51**	**56.93**	**32.95**	**0.34**	**0.29**	**0.35**
	(327.11to395.82)	**(49.02to65.56)**	**(20.54to49.16)**	**(0.33to0.36)**	**(0.27to0.31)**	**(0.27to0.43)**
Libya	**197.87**	**35.2**	**17.94**	**0.85**	**0.81**	**0.83**
	(180.4to216.84)	**(30.5to40.17)**	**(10.32to28.33)**	**(0.82to0.88)**	**(0.78to0.83)**	**(0.72to0.94)**
Yemen	**169.26**	**30.97**	**15.18**	**0.93**	**0.86**	**0.92**
	(153.97to186.07)	**(26.9to35.37)**	**(8.32to23.88)**	**(0.91to0.94)**	**(0.85to0.88)**	**(0.87to0.97)**
Albania	**191.04**	**38.21**	**17.47**	**0.52**	**0.47**	**0.52**
	(174.03to209.26)	**(33.84to43.18)**	**(10.06to27.44)**	**(0.49to0.54)**	**(0.44to0.5)**	**(0.45to0.59)**
Dominican Republic	**317.41**	**51.57**	**28.96**	**0.39**	**0.34**	**0.42**
	(287.72to348.59)	**(44.48to59.41)**	**(17.82to44.01)**	**(0.38to0.41)**	**(0.32to0.35)**	**(0.36to0.48)**
Saudi Arabia	**215.42**	**37.5**	**19.6**	**1.01**	**0.93**	**1.01**
	(195.5to236.71)	**(32.62to43.05)**	**(10.9to30.16)**	**(1to1.02)**	**(0.92to0.94)**	**(0.98to1.05)**
Costa Rica	**354.86**	**56.49**	**32.14**	**0.33**	**0.3**	**0.31**
	(322.24to389.01)	**(48.64to65.05)**	**(19.73to47.89)**	**(0.32to0.33)**	**(0.28to0.31)**	**(0.29to0.32)**
Democratic People's	**108.61**	**20.53**	**10.05**	**0.57**	**0.61**	**0.57**
Republic of Korea	**(99.5to118.85)**	**(18.07to23.32)**	**(5.57to15.93)**	**(0.57to0.58)**	**(0.59to0.62)**	**(0.53to0.62)**
Norway	**319.51**	**55.94**	**29.02**	**0.21**	**0.2**	**0.2**
	(293.69to345.9)	**(49.57to62.7)**	**(20.17to39.35)**	**(0.2to0.22)**	**(0.17to0.24)**	**(0.16to0.24)**
Central African	**142.09**	**24.12**	**12.88**	**0.27**	**0.27**	**0.31**
Republic	**(127.98to156.66)**	**(20.68to27.9)**	**(6.83to21.07)**	**(0.25to0.29)**	**(0.25to0.28)**	**(0.26to0.35)**
Peru	**535.58**	**76.53**	**48.85**	**0.54**	**0.47**	**0.57**
	(488.53to583.51)	**(66.57to87.46)**	**(31.98to70.81)**	**(0.52to0.56)**	**(0.46to0.48)**	**(0.47to0.68)**
Rwanda	**56.03**	**10.87**	**5.24**	**0.13**	**0.13**	**0.14**
	(49.94to61.99)	**(9.31to12.54)**	**(3.61to7.13)**	**(0.07to0.2)**	**(0.04to0.21)**	**(0.06to0.22)**
American Samoa	**183.69**	**32.22**	**16.8**	**0.4**	**0.41**	**0.39**
	(166.76to202.58)	**(27.72to37.11)**	**(9.49to25.96)**	**(0.38to0.41)**	**(0.4to0.43)**	**(0.37to0.41)**
Madagascar	**68.34**	**12.78**	**6.38**	**-0.02**	**0***	**-0.01***
	(62.37to74.95)	**(11.12to14.55)**	**(4.29to9.02)**	**(-0.03to-0.01)**	**(-0.02to0.01)**	**(-0.02to0.01)**
Viet Nam	**215.85**	**36.62**	**19.76**	**0.67**	**0.61**	**0.71**
	(195.54to237.89)	**(31.4to42.32)**	**(11.4to30.73)**	**(0.65to0.7)**	**(0.59to0.62)**	**(0.69to0.74)**

Algeria	**191.32**	**34.21**	**17.41**	**0.77**	**0.74**	**0.79**
	(174.18to210.24)	**(29.7to39.24)**	**(9.56to27.54)**	**(0.76to0.78)**	**(0.72to0.75)**	**(0.75to0.82)**
San Marino	**474.39**	**75.22**	**42.71**	**0.23**	**0.23**	**0.2**
	(432.88to515.51)	**(65.97to85.25)**	**(27.64to61.55)**	**(0.21to0.25)**	**(0.19to0.27)**	**(0.16to0.25)**
Tonga	**168.05**	**29.71**	**15.21**	**0.46**	**0.43**	**0.4**
	(152.56to185.11)	**(25.57to34.12)**	**(8.4to24.03)**	**(0.45to0.47)**	**(0.42to0.45)**	**(0.28to0.52)**
Sierra Leone	**103.61**	**18.65**	**9.43**	**0.21**	**0.23**	**0.25**
	(94.53to113.86)	**(16.32to21.25)**	**(5.34to14.82)**	**(0.13to0.29)**	**(0.19to0.26)**	**(0.16to0.33)**
Taiwan (Province of	**97.82**	**19**	**8.95**	**0.64**	**0.68**	**0.59**
China)	**(90.49to105.46)**	**(16.9to21.22)**	**(5.13to13.73)**	**(0.59to0.7)**	**(0.6to0.76)**	**(0.41to0.77)**
Afghanistan	**148.01**	**27.76**	**13.43**	**0.65**	**0.65**	**0.69**
	(134.48to162.5)	**(24.16to31.67)**	**(7.22to21.38)**	**(0.63to0.68)**	**(0.61to0.68)**	**(0.64to0.73)**
Cook Islands	**188.62**	**32.75**	**17.07**	**0.53**	**0.48**	**0.51**
	(170.9to208.22)	**(28.1to37.86)**	**(9.73to26.64)**	**(0.51to0.55)**	**(0.46to0.51)**	**(0.44to0.58)**
China	**178.9**	**30.82**	**16.45**	**0.89**	**0.86**	**0.91**
	(164.6to193.94)	**(27.29to34.58)**	**(11.65to22.38)**	**(0.87to0.92)**	**(0.81to0.92)**	**(0.85to0.96)**
Slovakia	**203.82**	**40.21**	**18.63**	**0.52**	**0.47**	**0.53**
	(185.1to223.75)	**(35.39to45.28)**	**(10.91to29.09)**	**(0.48to0.55)**	**(0.44to0.49)**	**(0.5to0.56)**
Bosnia and Herzegovina	**195.22**	**38.95**	**17.68**	**0.72**	**0.64**	**0.71**
	(177.61to214.48)	**(34.42to43.88)**	**(10.26to27.12)**	**(0.69to0.75)**	**(0.6to0.67)**	**(0.57to0.85)**
Timor-Leste	**202.33**	**34.58**	**18.34**	**0.76**	**0.68**	**0.78**
	(183.23to223.3)	**(29.71to40.01)**	**(10.54to28.65)**	**(0.73to0.8)**	**(0.65to0.72)**	**(0.73to0.83)**
Lesotho	**110.1**	**19.68**	**9.97**	**0.35**	**0.32**	**0.31**
	(99.44to121.12)	**(16.95to22.61)**	**(5.42to16.18)**	**(0.32to0.38)**	**(0.3to0.35)**	**(0.24to0.38)**
Myanmar	**196.93**	**33.99**	**17.92**	**0.7**	**0.63**	**0.75**
	(178.18to217.28)	**(29.31to39.06)**	**(9.95to27.89)**	**(0.69to0.71)**	**(0.61to0.64)**	**(0.71to0.8)**
Grenada	**344.96**	**55.05**	**31.29**	**0.48**	**0.4**	**0.47**
	(312.85to378.67)	**(47.62to63.1)**	**(18.75to46.58)**	**(0.47to0.49)**	**(0.38to0.41)**	**(0.44to0.5)**
South Africa	**125.19**	**22.05**	**11.32**	**0.23**	**0.22**	**0.22**
	(114.59to136.12)	**(19.39to24.81)**	**(7.61to16.12)**	**(0.21to0.25)**	**(0.19to0.24)**	**(0.13to0.3)**
Tajikistan	**162.75**	**33.25**	**14.68**	**0.28**	**0.28**	**0.25**
	(147.06to179.35)	**(28.77to38.04)**	**(8.4to22.84)**	**(0.27to0.29)**	**(0.26to0.3)**	**(0.2to0.29)**
Singapore	**188.64**	**34.5**	**17.18**	**0.4**	**0.39**	**0.38**
	(171.31to207.59)	**(29.82to39.65)**	**(9.65to26.77)**	**(0.36to0.43)**	**(0.34to0.45)**	**(0.31to0.45)**
Uruguay	**264.06**	**46.35**	**23.83**	**0.35**	**0.33**	**0.36**
	(239.6to289.93)	**(39.99to53.38)**	**(14.17to35.74)**	**(0.34to0.36)**	**(0.28to0.38)**	**(0.32to0.39)**
Armenia	**181.23**	**36.41**	**16.49**	**0.51**	**0.47**	**0.54**
	(163.66to199.76)	**(31.7to41.65)**	**(9.4to26.12)**	**(0.49to0.54)**	**(0.45to0.5)**	**(0.47to0.61)**
Guinea	**102.04**	**18.43**	**9.37**	**0.26**	**0.25**	**0.28**
	(93.13to111.61)	**(16.11to20.88)**	**(5.4to14.77)**	**(0.21to0.3)**	**(0.21to0.28)**	**(0.2to0.36)**
Samoa	**171.06**	**30.13**	**15.56**	**0.42**	**0.4**	**0.41**
	(155.58to188.53)	**(25.9to34.58)**	**(8.58to24.52)**	**(0.41to0.42)**	**(0.38to0.41)**	**(0.39to0.43)**
Ghana	**108.95**	**19.48**	**9.88**	**0.34**	**0.31**	**0.32**
	(96.51to122.37)	**(16.72to22.49)**	**(5.25to16.27)**	**(0.3to0.37)**	**(0.29to0.34)**	**(0.23to0.41)**
Tuvalu	**167.65**	**29.7**	**15.3**	**0.54**	**0.53**	**0.55**
	(152.13to184.82)	**(25.64to34.29)**	**(8.7to24.42)**	**(0.54to0.55)**	**(0.52to0.53)**	**(0.51to0.59)**
Haiti	**276.51**	**46.3**	**24.65**	**0.27**	**0.24**	**0.28**
	(251.39to304.12)	**(39.86to53.27)**	**(14.66to37.53)**	**(0.26to0.28)**	**(0.23to0.25)**	**(0.25to0.32)**
Germany	**594.49**	**90.16**	**53.88**	**0.34**	**0.32**	**0.37**
	(543.03to646.2)	**(78.42to102.98)**	**(35.77to76.9)**	**(0.28to0.4)**	**(0.25to0.39)**	**(0.24to0.49)**
Finland	**437.93**	**70.55**	**39.77**	**0.33**	**0.3**	**0.33**
	(400.34to476.83)	**(61.85to80.12)**	**(24.89to58.23)**	**(0.32to0.34)**	**(0.28to0.32)**	**(0.27to0.39)**
United States of	**446.16**	**68.92**	**40.44**	**-0.07***	**0.03***	**-0.08**
America	**(419.72to473.51)**	**(62.75to75.53)**	**(28.76to54.83)**	**(-0.14to0.01)**	**(-0.07to0.13)**	**(-0.15to-0.01)**
Lebanon	**192.27**	**34.26**	**17.43**	**0.84**	**0.8**	**0.87**
	(174.62to210.64)	**(29.87to39.11)**	**(10.17to27.64)**	**(0.83to0.85)**	**(0.77to0.82)**	**(0.83to0.91)**
Morocco	**176.04**	**32.01**	**15.92**	**0.77**	**0.74**	**0.75**
	(160.54to192.78)	**(27.9to36.53)**	**(8.67to25.24)**	**(0.76to0.78)**	**(0.73to0.74)**	**(0.67to0.82)**
Japan	**167.59**	**31.18**	**15.35**	**0.04**	**0.05**	**0.05**
	(154.22to181.72)	**(27.56to34.91)**	**(10.73to20.96)**	**(0.02to0.06)**	**(0.01to0.08)**	**(0.02to0.08)**
Sri Lanka	**237.87**	**39.65**	**21.37**	**0.51**	**0.47**	**0.47**
	(215.39to261.73)	**(34.09to45.78)**	**(12.3to32.53)**	**(0.48to0.54)**	**(0.45to0.5)**	**(0.35to0.59)**
Sweden	**320.68**	**56**	**29.13**	**0.12**	**0.15**	**0.1***
	(294.57to349.54)	**(49.64to63.21)**	**(18.57to42.28)**	**(0.06to0.18)**	**(0.1to0.19)**	**(-0.02to0.22)**
Saint Lucia	**341.82**	**54.79**	**31.06**	**0.4**	**0.35**	**0.43**
	(309.85to374.75)	**(47.1to63.31)**	**(19.29to46.7)**	**(0.4to0.41)**	**(0.34to0.36)**	**(0.4to0.47)**

Serbia	**203.21**	**40.16**	**18.78**	**0.51**	**0.46**	**0.5**
	(185.58to222.86)	**(35.48to45.11)**	**(11.57to28.69)**	**(0.5to0.53)**	**(0.43to0.49)**	**(0.42to0.57)**
Qatar	**221.5**	**38.2**	**20.21**	**0.88**	**0.83**	**0.9**
	(201.22to243.01)	**(33.15to43.74)**	**(11.56to31.5)**	**(0.86to0.9)**	**(0.82to0.85)**	**(0.81to0.98)**
Paraguay	**230.67**	**39.04**	**21.02**	**0.16**	**0.14**	**0.17**
	(209.82to252.52)	**(34.11to44.27)**	**(12.02to31.86)**	**(0.15to0.17)**	**(0.13to0.15)**	**(0.13to0.22)**
Congo	**181.18**	**29.5**	**16.44**	**0.55**	**0.5**	**0.55**
	(163.57to199.1)	**(25.24to33.96)**	**(9.24to25.07)**	**(0.53to0.56)**	**(0.46to0.53)**	**(0.51to0.6)**
Bhutan	**178.11**	**31.4**	**16.18**	**0.58**	**0.52**	**0.61**
	(162.26to194.9)	**(27.67to35.54)**	**(9.32to25.29)**	**(0.57to0.59)**	**(0.51to0.54)**	**(0.53to0.69)**
Gambia	**106.51**	**19.08**	**9.8**	**0.29**	**0.27**	**0.32**
	(96.79to116.82)	**(16.63to21.69)**	**(5.56to15.5)**	**(0.26to0.32)**	**(0.21to0.32)**	**(0.24to0.41)**
Tokelau	**174.12**	**30.83**	**15.83**	**0.63**	**0.59**	**0.63**
	(157.84to191.68)	**(26.62to35.54)**	**(8.92to24.95)**	**(0.6to0.67)**	**(0.55to0.63)**	**(0.5to0.76)**
Seychelles	**243.74**	**40.4**	**22.21**	**0.45**	**0.43**	**0.43**
	(220.43to268.2)	**(34.64to46.6)**	**(13.14to34.02)**	**(0.44to0.46)**	**(0.4to0.46)**	**(0.36to0.5)**
Uzbekistan	**174.27**	**35.17**	**15.86**	**0.47**	**0.44**	**0.52**
	(157.33to192.31)	**(30.49to40.12)**	**(9.12to24.19)**	**(0.45to0.5)**	**(0.42to0.46)**	**(0.41to0.63)**
Philippines	**215.18**	**36.62**	**19.6**	**0.39**	**0.39**	**0.4**
	(197.67to232.89)	**(32.37to41)**	**(13.77to26.51)**	**(0.38to0.4)**	**(0.37to0.41)**	**(0.38to0.42)**
Saint Vincent and the Grenadines	**332.16**	**53.83**	**30.12**	**0.38**	**0.33**	**0.38**
	(301.93to366.31)	**(46.34to62.05)**	**(18.47to45.02)**	**(0.37to0.38)**	**(0.3to0.36)**	**(0.35to0.41)**
Canada	**432.98**	**66.93**	**39.4**	**0.37**	**0.36**	**0.37**
	(396.2to469.96)	**(59.13to75.37)**	**(25.39to57.36)**	**(0.37to0.38)**	**(0.33to0.38)**	**(0.35to0.4)**
Luxembourg	**466.51**	**74.07**	**42.16**	**0.33**	**0.31**	**0.3**
	(427.21to508.33)	**(65.16to83.88)**	**(27.32to60.18)**	**(0.31to0.34)**	**(0.3to0.32)**	**(0.24to0.35)**
Fiji	**172.86**	**30.51**	**15.68**	**0.48**	**0.45**	**0.48**
	(156.75to190.55)	**(26.32to35.11)**	**(8.73to24.63)**	**(0.47to0.49)**	**(0.44to0.47)**	**(0.33to0.63)**
Oman	**213.7**	**37.36**	**19.53**	**1.1**	**1.01**	**1.13**
	(194.71to234.74)	**(32.53to42.81)**	**(10.88to30.75)**	**(1.08to1.12)**	**(1to1.03)**	**(1.09to1.17)**
Ecuador	**547.09**	**78.07**	**49.73**	**0.52**	**0.47**	**0.5**
	(501.77to596.36)	**(67.8to88.96)**	**(31.4to71.81)**	**(0.5to0.54)**	**(0.44to0.5)**	**(0.46to0.54)**
Bulgaria	**202.51**	**40.06**	**18.46**	**0.49**	**0.45**	**0.51**
	(184.24to221.08)	**(35.42to45.12)**	**(10.52to28.52)**	**(0.46to0.52)**	**(0.42to0.48)**	**(0.35to0.66)**
Bahrain	**206.39**	**36.33**	**18.79**	**0.75**	**0.73**	**0.78**
	(187.73to226.94)	**(31.46to41.54)**	**(10.34to30.33)**	**(0.71to0.78)**	**(0.71to0.75)**	**(0.74to0.81)**
Cambodia	**194.26**	**33.58**	**17.58**	**0.62**	**0.57**	**0.68**
	(175.98to214.25)	**(28.95to38.65)**	**(10.07to27.05)**	**(0.61to0.63)**	**(0.56to0.58)**	**(0.63to0.73)**
Greenland	**405.81**	**63.76**	**36.77**	**0.44**	**0.42**	**0.42**
	(370.89to441.73)	**(56.39to71.54)**	**(23.8to54.52)**	**(0.41to0.46)**	**(0.31to0.53)**	**(0.39to0.45)**
Mozambique	**65.74**	**12.36**	**6.13**	**0.11**	**0.12**	**0.13**
	(59.81to71.99)	**(10.75to14.13)**	**(4.21to8.47)**	**(0.1to0.13)**	**(0.1to0.13)**	**(0.1to0.16)**
Burundi	**66.63**	**12.49**	**6.21**	**-0.12**	**-0.08**	**-0.1**
	(60.67to72.85)	**(10.87to14.21)**	**(4.24to8.59)**	**(-0.14to-0.1)**	**(-0.1to-0.07)**	**(-0.13to-0.06)**
Portugal	**432.88**	**69.94**	**39.18**	**0.43**	**0.38**	**0.42**
	(395.21to472.66)	**(61.61to79.1)**	**(24.82to56.89)**	**(0.41to0.45)**	**(0.32to0.43)**	**(0.36to0.48)**
Guatemala	**303.41**	**49.93**	**27.64**	**0.51**	**0.44**	**0.51**
	(274.75to334.02)	**(43.31to57.36)**	**(16.57to41.52)**	**(0.49to0.53)**	**(0.42to0.47)**	**(0.47to0.55)**
Mali	**103.81**	**18.7**	**9.57**	**0.29**	**0.28**	**0.34**
	(91.73to116.6)	**(16.03to21.7)**	**(5.31to15.26)**	**(0.24to0.34)**	**(0.25to0.3)**	**(0.24to0.44)**
Estonia	**191.95**	**38.24**	**17.52**	**0.55**	**0.5**	**0.57**
	(173.61to212.24)	**(33.01to43.74)**	**(10.05to26.87)**	**(0.53to0.57)**	**(0.47to0.53)**	**(0.47to0.68)**
Kiribati	**163.59**	**29.13**	**14.91**	**0.43**	**0.43**	**0.45**
	(147.99to180.11)	**(24.94to33.44)**	**(8.34to23.46)**	**(0.42to0.44)**	**(0.42to0.44)**	**(0.41to0.49)**
Saint Kitts and Nevis	**363.34**	**57.46**	**33.1**	**0.36**	**0.31**	**0.37**
	(329.22to398.77)	**(49.21to66)**	**(20.14to48.04)**	**(0.35to0.37)**	**(0.28to0.34)**	**(0.27to0.46)**
Egypt	**117.63**	**22.98**	**10.72**	**0.77**	**0.77**	**0.77**
	(108.19to128.28)	**(20.14to26.03)**	**(5.91to17.42)**	**(0.73to0.81)**	**(0.75to0.78)**	**(0.58to0.96)**
Barbados	**363.15**	**57.36**	**33.19**	**0.15**	**0.16**	**0.15**
	(329.1to396.91)	**(49.18to65.86)**	**(20.56to49.06)**	**(0.13to0.16)**	**(0.1to0.21)**	**(0.1to0.2)**
Thailand	**226.89**	**38.1**	**20.63**	**0.54**	**0.49**	**0.56**
	(205.62to250.46)	**(32.71to44.23)**	**(12.2to32.14)**	**(0.52to0.55)**	**(0.47to0.51)**	**(0.5to0.61)**
Vanuatu	**150.09**	**27.1**	**13.76**	**0.45**	**0.44**	**0.46**
	(135.72to165.55)	**(23.32to31.16)**	**(7.48to21.9)**	**(0.44to0.45)**	**(0.43to0.46)**	**(0.42to0.49)**
Australia	**262.52**	**45.94**	**23.81**	**0.47**	**0.39**	**0.45**
	(239.17to287.57)	**(39.84to52.43)**	**(13.76to36.65)**	**(0.42to0.52)**	**(0.35to0.43)**	**(0.35to0.55)**

Equatorial Guinea	**195.51**	**31.43**	**17.66**	**1.22**	**1.07**	**1.25**
	(176.73to214.94)	**(26.79to36.28)**	**(10.27to27.31)**	**(1.2to1.25)**	**(1.04to1.09)**	**(1.17to1.34)**
Nicaragua	**305.4**	**50.09**	**27.69**	**0.42**	**0.36**	**0.44**
	(277.05to335.5)	**(43.2to57.55)**	**(16.61to41.02)**	**(0.41to0.43)**	**(0.34to0.39)**	**(0.41to0.47)**
Cyprus	**472.05**	**74.69**	**42.65**	**0.53**	**0.46**	**0.51**
	(432.41to513.45)	**(65.6to84.87)**	**(26.97to62.6)**	**(0.51to0.54)**	**(0.43to0.49)**	**(0.48to0.55)**
Benin	**104.14**	**18.73**	**9.56**	**0.24**	**0.23**	**0.26**
	(94.78to113.97)	**(16.38to21.25)**	**(5.55to14.95)**	**(0.21to0.27)**	**(0.19to0.26)**	**(0.18to0.34)**
Indonesia	**227.06**	**38.35**	**20.71**	**0.6**	**0.54**	**0.61**
	(208.43to245.64)	**(33.94to43.05)**	**(14.42to28.49)**	**(0.58to0.62)**	**(0.52to0.56)**	**(0.57to0.65)**
Slovenia	**212.4**	**41.61**	**19.25**	**0.45**	**0.42**	**0.42**
	(192.9to233.29)	**(36.78to46.84)**	**(11.4to29.12)**	**(0.43to0.47)**	**(0.4to0.43)**	**(0.33to0.51)**
Georgia	**183.26**	**36.8**	**16.77**	**0.22**	**0.23**	**0.23**
	(166.13to201.76)	**(31.91to42.03)**	**(9.7to25.87)**	**(0.21to0.24)**	**(0.2to0.25)**	**(0.12to0.34)**
Comoros	**74.19**	**13.69**	**6.92**	**0.13**	**0.13**	**0.14**
	(67.42to81.44)	**(11.96to15.67)**	**(4.62to9.76)**	**(0.11to0.14)**	**(0.11to0.15)**	**(0.08to0.19)**
Croatia	**205.76**	**40.49**	**18.85**	**0.48**	**0.43**	**0.46**
	(187.14to226.1)	**(35.59to45.64)**	**(11.08to29.46)**	**(0.45to0.51)**	**(0.41to0.45)**	**(0.35to0.57)**
Burkina Faso	**97.51**	**17.75**	**8.92**	**0.25**	**0.24**	**0.29**
	(88.86to106.43)	**(15.58to20.17)**	**(4.87to14.34)**	**(0.22to0.28)**	**(0.21to0.27)**	**(0.19to0.39)**
El Salvador	**318.73**	**51.71**	**29.14**	**0.44**	**0.39**	**0.47**
	(289.43to349.51)	**(44.76to59.33)**	**(17.76to43.66)**	**(0.42to0.47)**	**(0.36to0.41)**	**(0.41to0.53)**
Tunisia	**190.35**	**34.08**	**17.24**	**0.84**	**0.8**	**0.85**
	(173.59to209.07)	**(29.82to39.07)**	**(9.76to26.82)**	**(0.84to0.85)**	**(0.79to0.81)**	**(0.77to0.94)**
India	**187.66**	**32.88**	**16.99**	**0.18**	**0.22**	**0.2**
	(172.37to203.38)	**(29.08to36.9)**	**(11.85to23.24)**	**(0.12to0.23)**	**(0.15to0.28)**	**(0.16to0.24)**
Monaco	**485.16**	**76.5**	**44.13**	**0.24**	**0.26**	**0.24**
	(445.7to526.59)	**(67.48to86.26)**	**(28.32to62.86)**	**(0.23to0.25)**	**(0.23to0.28)**	**(0.18to0.3)**
Czechia	**206.12**	**40.61**	**18.76**	**0.49**	**0.45**	**0.48**
	(188.17to225.93)	**(35.77to45.96)**	**(11.06to28.5)**	**(0.48to0.5)**	**(0.43to0.48)**	**(0.41to0.55)**
Bahamas	**370.04**	**58.33**	**33.34**	**0.22**	**0.22**	**0.19**
	(335.7to405.97)	**(50.05to66.95)**	**(21.32to49.09)**	**(0.2to0.23)**	**(0.18to0.26)**	**(0.1to0.28)**
Mauritania	**112.06**	**19.9**	**10.31**	**0.32**	**0.31**	**0.3**
	(102.21to122.92)	**(17.37to22.62)**	**(5.54to16.29)**	**(0.28to0.36)**	**(0.27to0.34)**	**(0.23to0.38)**
Hungary	**204.15**	**40.28**	**18.52**	**0.52**	**0.48**	**0.54**
	(185.18to223.01)	**(35.44to45.56)**	**(10.82to28.55)**	**(0.49to0.55)**	**(0.45to0.5)**	**(0.43to0.64)**
Netherlands	**463.24**	**73.58**	**41.76**	**0.3**	**0.28**	**0.26**
	(424.65to504.93)	**(64.7to83.25)**	**(26.89to59.86)**	**(0.28to0.31)**	**(0.26to0.29)**	**(0.22to0.3)**
Latvia	**191**	**38.16**	**17.33**	**0.49**	**0.45**	**0.49**
	(172.08to211.42)	**(33.08to43.67)**	**(9.83to26.68)**	**(0.47to0.51)**	**(0.42to0.48)**	**(0.38to0.61)**
South Sudan	**65.42**	**12.24**	**6.08**	**-0.16**	**-0.14**	**-0.16**
	(59.55to71.56)	**(10.68to13.9)**	**(4.19to8.39)**	**(-0.19to-0.14)**	**(-0.16to-0.11)**	**(-0.2to-0.12)**
Greece	**450.37**	**72.09**	**40.87**	**0.36**	**0.31**	**0.33**
	(412.2to490.45)	**(63.24to81.41)**	**(26.09to59.08)**	**(0.35to0.37)**	**(0.28to0.34)**	**(0.31to0.36)**
Mexico	**331.22**	**53.68**	**30.2**	**0.33**	**0.29**	**0.33**
	(304.42to358.23)	**(47.64to60.13)**	**(21.5to40.99)**	**(0.32to0.33)**	**(0.28to0.31)**	**(0.31to0.35)**
Somalia	**57.66**	**10.94**	**5.38**	**-0.21**	**-0.2**	**-0.2**
	(52.43to63.2)	**(9.56to12.45)**	**(3.71to7.35)**	**(-0.23to-0.2)**	**(-0.23to-0.16)**	**(-0.24to-0.17)**
Iran (Islamic Republic of)	**191.74**	**34.57**	**17.41**	**0.89**	**0.84**	**0.9**
	(175.87to208.2)	**(30.59to38.75)**	**(12.3to23.87)**	**(0.87to0.92)**	**(0.82to0.87)**	**(0.86to0.95)**
Cuba	**334.71**	**54.01**	**30.37**	**0.17**	**0.17**	**0.18**
	(304.36to367.96)	**(46.41to61.97)**	**(18.93to44.7)**	**(0.16to0.18)**	**(0.15to0.2)**	**(0.11to0.26)**
United Republic of Tanzania	**75.47**	**13.88**	**7.01**	**0.11**	**0.11**	**0.11**
	(66.82to85.33)	**(11.8to16.28)**	**(4.65to10.04)**	**(0.09to0.12)**	**(0.1to0.12)**	**(0.06to0.15)**
Argentina	**267.22**	**46.9**	**24.37**	**0.38**	**0.36**	**0.4**
	(241.56to294.38)	**(40.38to53.72)**	**(14.36to36.95)**	**(0.37to0.39)**	**(0.31to0.41)**	**(0.35to0.44)**
Guyana	**342.04**	**54.67**	**31.15**	**0.43**	**0.39**	**0.46**
	(310.15to376.09)	**(46.95to62.86)**	**(19.32to47.86)**	**(0.42to0.44)**	**(0.36to0.42)**	**(0.4to0.52)**
Nepal	**177.34**	**31.29**	**16.27**	**0.81**	**0.73**	**0.85**
	(161.75to193.6)	**(27.6to35.46)**	**(9.4to25.51)**	**(0.75to0.87)**	**(0.65to0.8)**	**(0.69to1.01)**
Micronesia (Federated States of)	**167.67**	**29.79**	**15.19**	**0.45**	**0.44**	**0.47**
	(151.63to185.11)	**(25.59to34.28)**	**(8.53to24.12)**	**(0.44to0.46)**	**(0.43to0.44)**	**(0.4to0.54)**
Eritrea	**70.01**	**13.04**	**6.55**	**0.14**	**0.13**	**0.16**
	(63.83to76.64)	**(11.35to14.85)**	**(4.4to9.34)**	**(0.11to0.16)**	**(0.11to0.15)**	**(0.14to0.18)**
Cabo Verde	**115.59**	**20.44**	**10.5**	**0.44**	**0.39**	**0.44**
	(105.4to126.44)	**(17.79to23.18)**	**(5.26to17.18)**	**(0.41to0.48)**	**(0.34to0.44)**	**(0.38to0.51)**

Lithuania	**197.29**	**39.2**	**17.9**	**0.62**	**0.56**	**0.63**
	(178.37to218.28)	**(34.1to45.02)**	**(10.49to27.79)**	**(0.59to0.64)**	**(0.53to0.59)**	**(0.51to0.75)**
United Kingdom	**394.83**	**65.18**	**35.8**	**0.36**	**0.34**	**0.36**
	(363.17to426.19)	**(57.6to73.11)**	**(25.43to48.9)**	**(0.3to0.42)**	**(0.3to0.37)**	**(0.29to0.43)**
Niue	**177.96**	**31.3**	**16.18**	**0.49**	**0.45**	**0.49**
	(160.98to195.74)	**(27to36.17)**	**(9.16to24.94)**	**(0.48to0.5)**	**(0.42to0.47)**	**(0.45to0.53)**
Kazakhstan	**182.55**	**36.53**	**16.61**	**0.42**	**0.38**	**0.4**
	(164.54to201.38)	**(31.61to41.85)**	**(9.74to25.68)**	**(0.41to0.43)**	**(0.36to0.4)**	**(0.36to0.44)**
Israel	**461.96**	**73.53**	**41.9**	**0.29**	**0.27**	**0.27**
	(421.79to503.63)	**(64.54to83.13)**	**(26.45to61.13)**	**(0.28to0.3)**	**(0.25to0.28)**	**(0.21to0.33)**
Malaysia	**245.6**	**40.72**	**22.44**	**0.56**	**0.52**	**0.58**
	(222.57to269.94)	**(34.83to47.11)**	**(13.28to34.67)**	**(0.54to0.58)**	**(0.5to0.54)**	**(0.48to0.67)**
Azerbaijan	**180.75**	**36.31**	**16.43**	**0.38**	**0.36**	**0.39**
	(162.89to199.86)	**(31.56to41.38)**	**(9.12to25.89)**	**(0.36to0.4)**	**(0.34to0.39)**	**(0.33to0.44)**
Sao Tome and Principe	**118.46**	**20.78**	**10.78**	**0.35**	**0.32**	**0.34**
	(107.77to130.04)	**(18.1to23.71)**	**(5.5to17.54)**	**(0.33to0.38)**	**(0.27to0.38)**	**(0.19to0.5)**
Honduras	**299.78**	**49.26**	**27.17**	**0.4**	**0.35**	**0.42**
	(270.93to328.89)	**(42.47to56.61)**	**(16.21to40.64)**	**(0.4to0.41)**	**(0.33to0.36)**	**(0.4to0.45)**
Iceland	**438.6**	**70.36**	**39.89**	**0.32**	**0.3**	**0.32**
	(402.31to476.4)	**(61.75to79.67)**	**(25.46to59.02)**	**(0.3to0.34)**	**(0.27to0.33)**	**(0.24to0.4)**
New Zealand	**249.72**	**44.32**	**22.63**	**0.4**	**0.36**	**0.42**
	(228.33to272.38)	**(38.96to49.97)**	**(13.87to33.28)**	**(0.39to0.41)**	**(0.32to0.4)**	**(0.35to0.5)**
Cameroon	**115.41**	**20.32**	**10.45**	**0.3**	**0.29**	**0.28**
	(104.97to125.74)	**(17.77to23.13)**	**(5.35to17.66)**	**(0.23to0.37)**	**(0.23to0.35)**	**(0.06to0.5)**
Syrian Arab Republic	**183.92**	**33.15**	**16.6**	**0.91**	**0.85**	**0.9**
	(167.91to201.62)	**(28.72to37.83)**	**(9.41to26.01)**	**(0.9to0.92)**	**(0.83to0.87)**	**(0.86to0.95)**
Nauru	**177.44**	**31.09**	**16.18**	**0.43**	**0.41**	**0.46**
	(160.68to195.16)	**(26.77to35.77)**	**(8.96to25.36)**	**(0.42to0.44)**	**(0.38to0.44)**	**(0.43to0.5)**
North Macedonia	**200.3**	**39.69**	**18.15**	**0.52**	**0.47**	**0.52**
	(182.31to218.9)	**(35.11to44.65)**	**(10.68to27.57)**	**(0.5to0.53)**	**(0.44to0.51)**	**(0.45to0.6)**
Suriname	**343.74**	**54.91**	**31.04**	**0.27**	**0.23**	**0.32**
	(311.66to377.25)	**(47.43to63.07)**	**(19.55to45.61)**	**(0.26to0.28)**	**(0.23to0.24)**	**(0.3to0.33)**
Lao People's	**194.08**	**33.53**	**17.69**	**0.68**	**0.62**	**0.73**
Democratic Republic	**(175.34to213.37)**	**(28.93to38.76)**	**(10.01to27.67)**	**(0.67to0.69)**	**(0.61to0.63)**	**(0.67to0.79)**
Switzerland	**487.63**	**76.81**	**44.17**	**0.23**	**0.23**	**0.24**
	(445.57to532.01)	**(67.27to86.99)**	**(28.12to63.61)**	**(0.22to0.24)**	**(0.21to0.25)**	**(0.19to0.29)**
Belize	**322.54**	**52.3**	**29.27**	**0.4**	**0.34**	**0.42**
	(292.57to353.91)	**(45.09to59.94)**	**(18.06to43.68)**	**(0.39to0.42)**	**(0.31to0.37)**	**(0.37to0.47)**
Ireland	**457.69**	**73.15**	**41.41**	**0.44**	**0.38**	**0.43**
	(419.18to498.53)	**(64.08to83)**	**(26.3to59.31)**	**(0.43to0.45)**	**(0.35to0.41)**	**(0.41to0.46)**
Marshall Islands	**162.89**	**29.07**	**14.87**	**0.45**	**0.43**	**0.51**
	(147.8to179.87)	**(25.17to33.47)**	**(8.34to23.49)**	**(0.44to0.46)**	**(0.43to0.44)**	**(0.43to0.58)**
Zambia	**74.84**	**13.8**	**6.94**	**0.15**	**0.15**	**0.15**
	(68.07to82.01)	**(12.09to15.69)**	**(4.64to9.74)**	**(0.12to0.17)**	**(0.13to0.17)**	**(0.11to0.2)**
Trinidad and Tobago	**376.61**	**59.23**	**34.1**	**0.3**	**0.25**	**0.32**
	(342.14to412.17)	**(50.97to67.92)**	**(21.39to50.88)**	**(0.3to0.31)**	**(0.24to0.27)**	**(0.27to0.37)**
Pakistan	**175.05**	**31.1**	**15.83**	**0.44**	**0.43**	**0.45**
	(160.52to190.47)	**(27.39to34.98)**	**(10.18to22.51)**	**(0.44to0.44)**	**(0.4to0.45)**	**(0.42to0.48)**
Nigeria	**267.08**	**38.99**	**24.07**	**0.59**	**0.52**	**0.62**
	(245.74to288.03)	**(34.52to43.75)**	**(17.01to32.65)**	**(0.56to0.62)**	**(0.5to0.54)**	**(0.57to0.66)**
Turkey	**253.26**	**42.84**	**23**	**0.95**	**0.91**	**0.96**
	(230.71to277.22)	**(36.96to49.07)**	**(13.42to35.58)**	**(0.95to0.96)**	**(0.89to0.92)**	**(0.9to1.02)**
Republic of Moldova	**180.11**	**36.33**	**16.39**	**0.47**	**0.44**	**0.48**
	(162.94to199.09)	**(31.67to41.7)**	**(9.26to25.64)**	**(0.46to0.48)**	**(0.42to0.45)**	**(0.43to0.52)**
Uganda	**72.38**	**13.39**	**6.75**	**0.23**	**0.22**	**0.23**
	(65.8to79.03)	**(11.65to15.26)**	**(4.51to9.47)**	**(0.21to0.25)**	**(0.2to0.24)**	**(0.16to0.31)**
Palau	**190.66**	**33.15**	**17.45**	**0.41**	**0.41**	**0.43**
	(172.44to210.67)	**(28.47to38.08)**	**(9.84to27.45)**	**(0.4to0.43)**	**(0.39to0.42)**	**(0.29to0.57)**
Northern Mariana	**191.99**	**33.34**	**17.42**	**0.29**	**0.33**	**0.28**
Islands	**(174.05to210.88)**	**(28.66to38.4)**	**(9.96to27.23)**	**(0.24to0.34)**	**(0.25to0.4)**	**(0.17to0.39)**
Niger	**87**	**16.17**	**8.03**	**0.05**	**0.09**	**0.06***
	(79.28to94.93)	**(14.16to18.32)**	**(4.97to12.16)**	**(0.02to0.09)**	**(0.04to0.14)**	**(-0.05to0.18)**
Chad	**93.53**	**17.16**	**8.45**	**0.17**	**0.19**	**0.17**
	(85.24to102.05)	**(15.01to19.38)**	**(4.62to13.71)**	**(0.14to0.2)**	**(0.14to0.23)**	**(0.06to0.29)**
Kyrgyzstan	**170.73**	**34.67**	**15.59**	**0.28**	**0.27**	**0.27**
	(154.74to188.45)	**(30.26to39.55)**	**(8.98to24.59)**	**(0.26to0.29)**	**(0.26to0.29)**	**(0.22to0.32)**

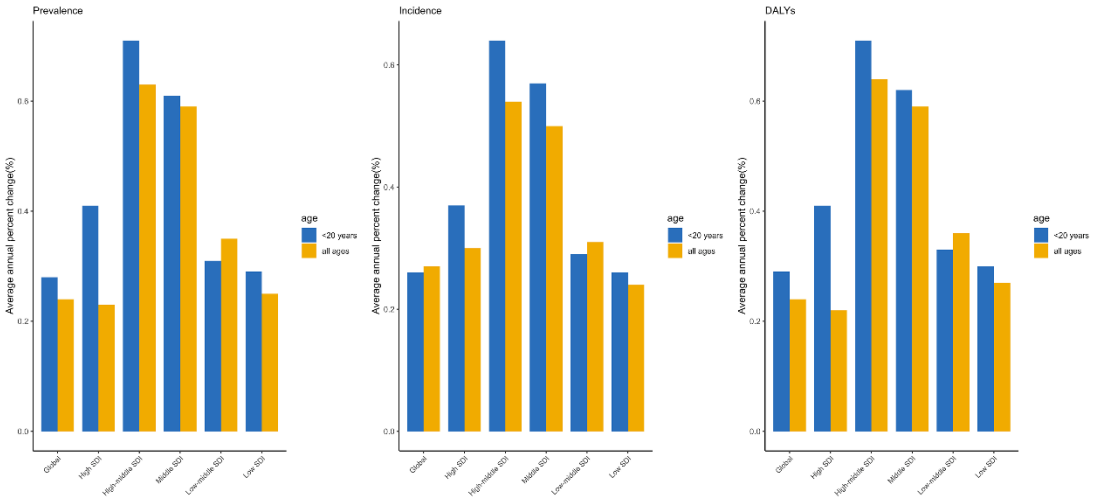
Jordan	**196.74**	**34.96**	**17.96**	**0.75**	**0.73**	**0.77**
	(178.91to215.98)	**(30.35to40.06)**	**(10.21to27.79)**	**(0.75to0.76)**	**(0.71to0.75)**	**(0.73to0.81)**
United Arab Emirates	**226.55**	**39.21**	**20.49**	**0.91**	**0.86**	**0.92**
	(206.05to248.53)	**(33.97to44.89)**	**(11.86to32.11)**	**(0.88to0.93)**	**(0.82to0.91)**	**(0.81to1.03)**
Iraq	**238.33**	**40.66**	**21.59**	**0.99**	**0.92**	**0.98**
	(217.75to260.89)	**(35.29to46.53)**	**(12.42to33.08)**	**(0.94to1.03)**	**(0.89to0.95)**	**(0.92to1.04)**
Angola	**162.02**	**26.85**	**14.74**	**0.67**	**0.59**	**0.71**
	(146.54to178.57)	**(23.03to30.9)**	**(7.99to22.87)**	**(0.65to0.69)**	**(0.57to0.61)**	**(0.65to0.76)**
Djibouti	**72.19**	**13.38**	**6.71**	**0.09**	**0.1**	**0.08**
	(65.74to78.81)	**(11.65to15.15)**	**(4.44to9.54)**	**(0.07to0.11)**	**(0.07to0.12)**	**(0.06to0.11)**
Panama	**357.48**	**56.61**	**32.51**	**0.32**	**0.28**	**0.33**
	(325.7to392.74)	**(48.56to65.08)**	**(19.71to48.1)**	**(0.31to0.33)**	**(0.25to0.3)**	**(0.28to0.38)**
Senegal	**106.62**	**19.12**	**9.66**	**0.29**	**0.29**	**0.29**
	(96.99to117.27)	**(16.68to21.67)**	**(5.42to15.54)**	**(0.24to0.35)**	**(0.24to0.33)**	**(0.21to0.38)**
Maldives	**224.51**	**37.84**	**20.58**	**0.85**	**0.76**	**0.89**
	(203.29to247.64)	**(32.32to43.74)**	**(12.03to31.57)**	**(0.83to0.88)**	**(0.74to0.78)**	**(0.85to0.93)**
Kenya	**77.93**	**14.23**	**7.23**	**0.09**	**0.09**	**0.09**
	(71.47to84.69)	**(12.52to16.05)**	**(5.07to9.79)**	**(0.07to0.11)**	**(0.08to0.11)**	**(0.06to0.12)**
Botswana	**124.05**	**21.75**	**11.27**	**0.43**	**0.38**	**0.45**
	(111.75to137.02)	**(18.67to25.14)**	**(5.79to18.2)**	**(0.41to0.45)**	**(0.37to0.4)**	**(0.27to0.63)**
Ethiopia	**79.06**	**14.45**	**7.28**	**0.12**	**0.13**	**0.12**
	(72.26to86.14)	**(12.65to16.35)**	**(5.01to10.06)**	**(0.11to0.13)**	**(0.12to0.14)**	**(0.08to0.15)**

***This is a statistically nonsignificant data.**

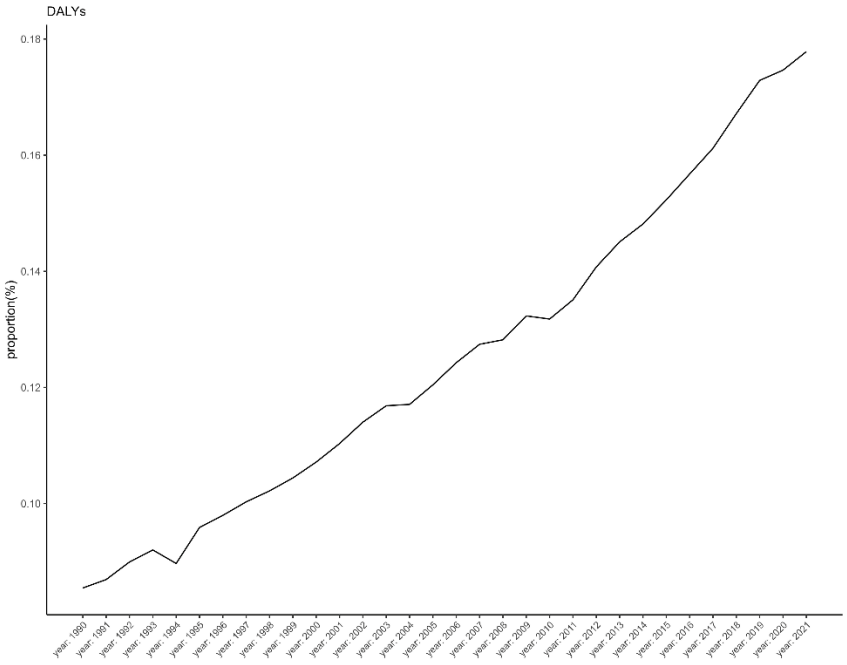
Supplementary Table SV. Predictions of prevalence and incidence in children and adolescents by 2050

	Prevalence		Incidence	
	Number(000s)	Rate (per 100000)	Number(000s)	Rate (per 100000)
Both				
All age	**6982**	**276**	**1173**	**47**
0 to 4	**587**	**100**	**205**	**35**
5 to 9	**1696**	**280**	**322**	**53**
10 to 14	**2194**	**355**	**316**	**51**
15 to 19	**2504**	**398**	**330**	**52**
Male				
All age	**3319**	**236**	**584**	**42**
0 to 4	**297**	**98**	**107**	**35**
5 to 9	**838**	**268**	**161**	**52**
10 to 14	**1034**	**325**	**151**	**47**
15 to 19	**1150**	**355**	**164**	**51**
Female				
All age	**3663**	**276**	**589**	**45**
0 to 4	**291**	**102**	**98**	**34**
5 to 9	**858**	**292**	**161**	**55**
10 to 14	**1159**	**387**	**165**	**55**
15 to 19	**1354**	**444**	**166**	**54**

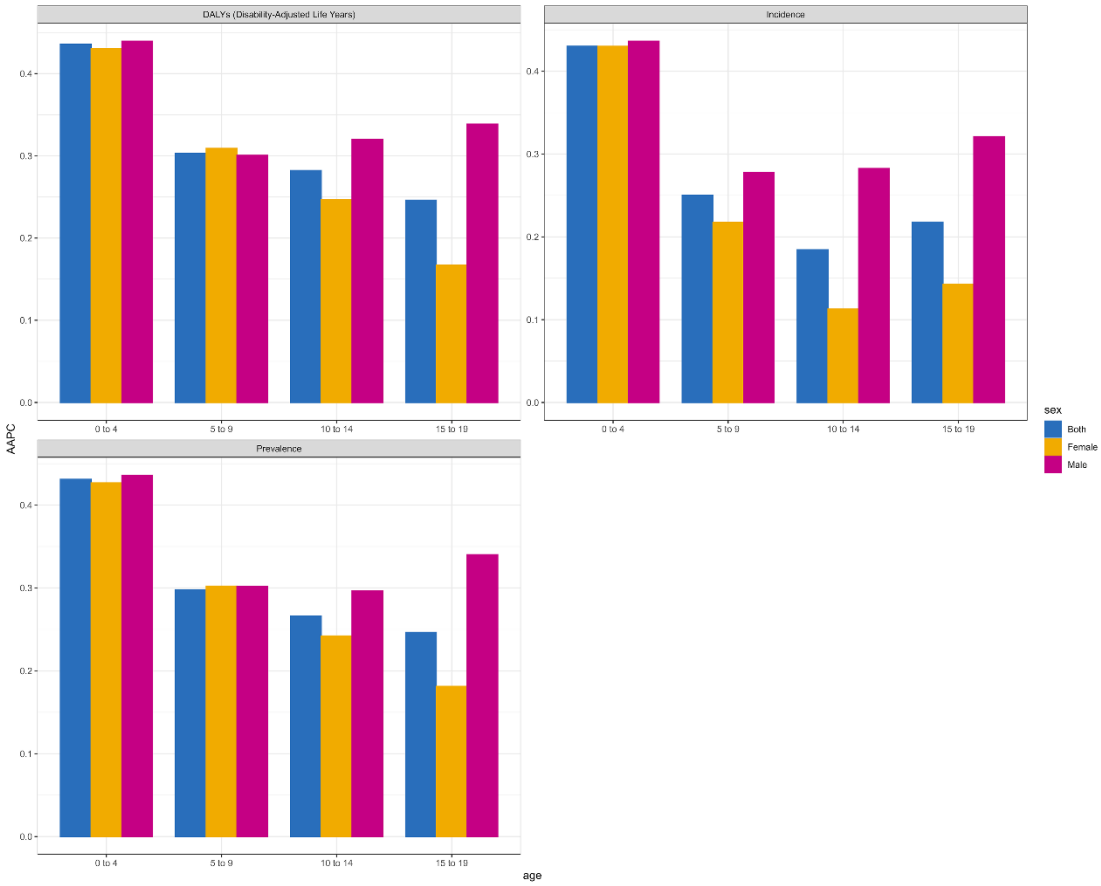
Supplementary Figure S1. Temporal trend of age-standardised prevalence, incidence and DALYs for psoriasis patients aged <20 years and overall psoriasis patients from 1990 to 2021.



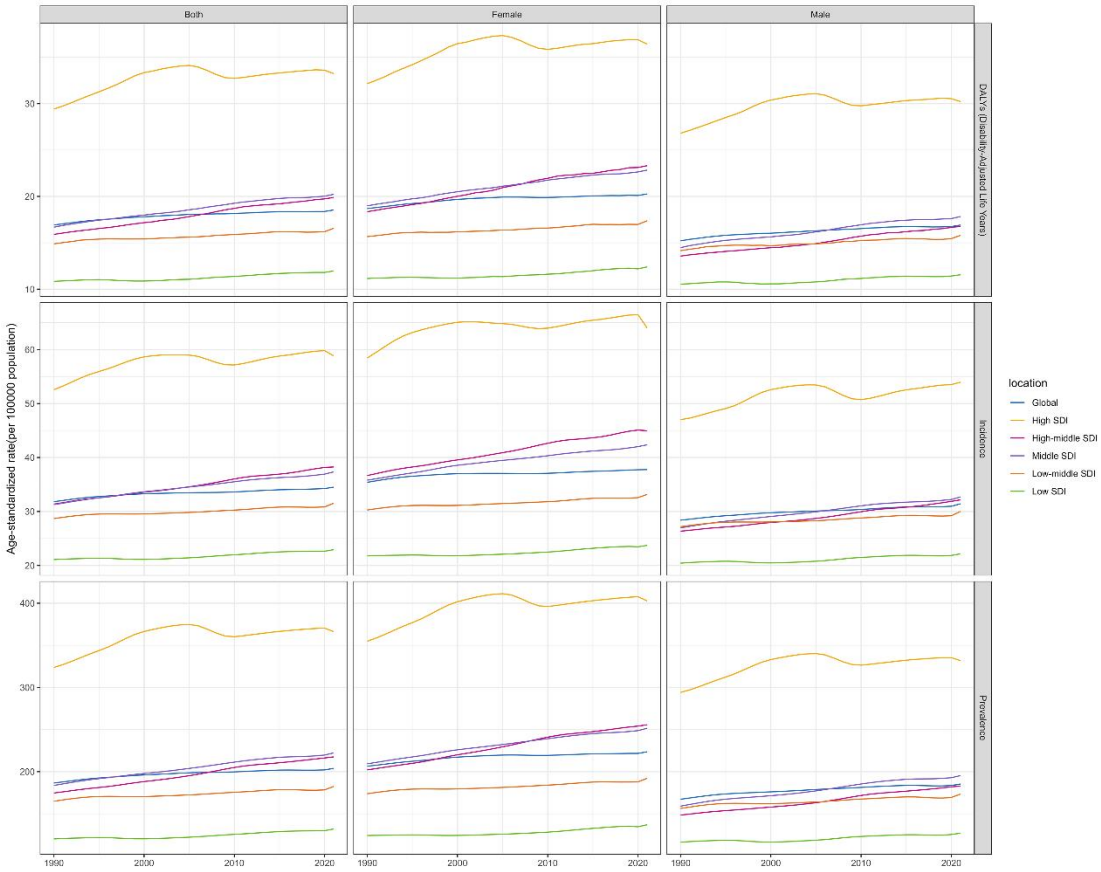
Supplementary Figure S2. The age-standardised DALYs proportion of psoriasis to all cause in patients aged <20 years from 1990 to 2021



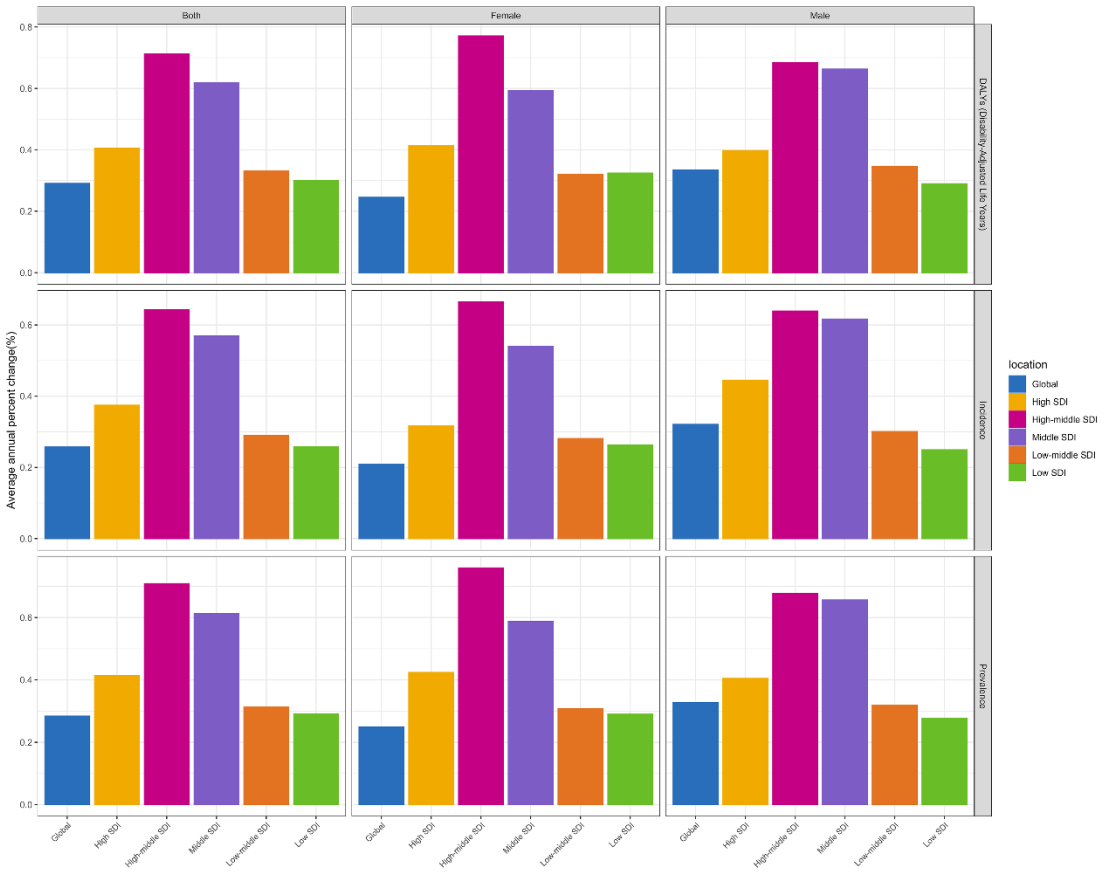
Supplementary Figure S3. Average annual percent changes of age-standardised prevalence, incidence and disability-adjusted life years of psoriasis in young people from 1990 to 2021 by sex and age.



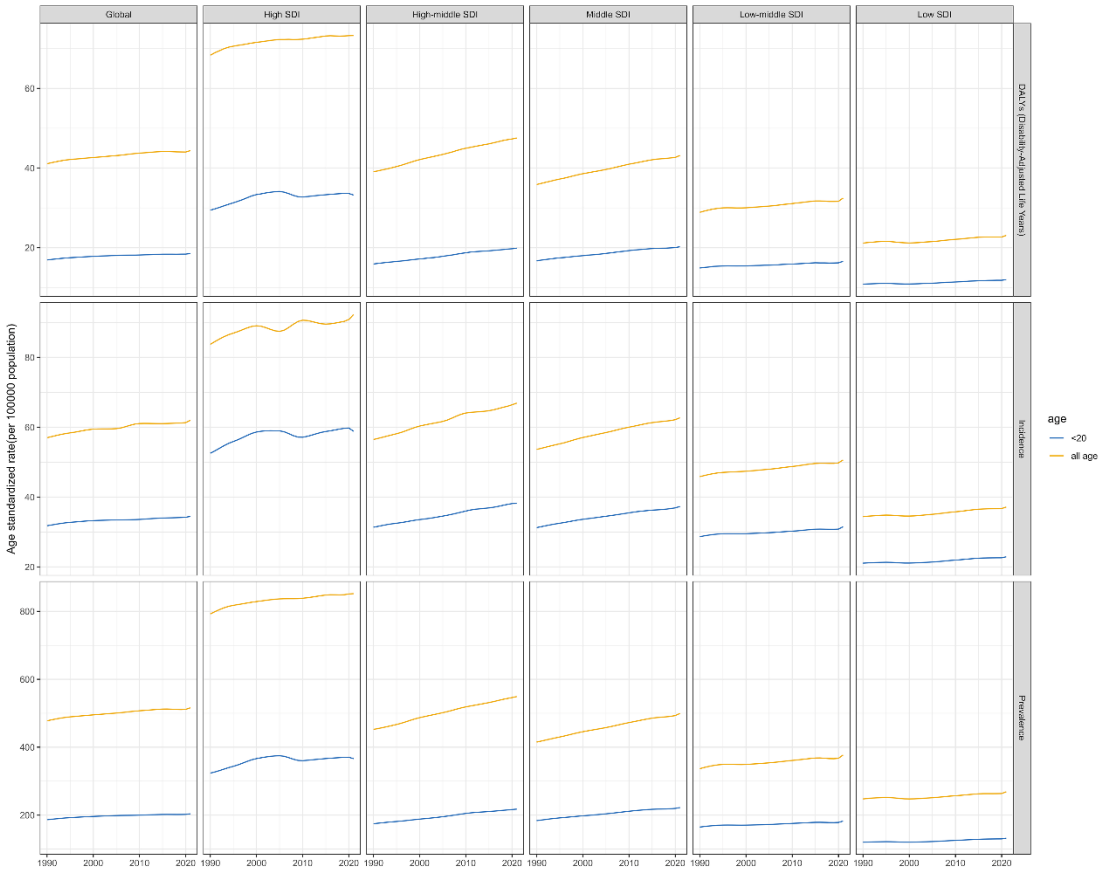
Supplementary Figure S4. Temporal trend of age-standardised of prevalence, incidence and DALYs of psoriasis in young people from 1990 to 2021 at global and socio-demographic index levels by sex.



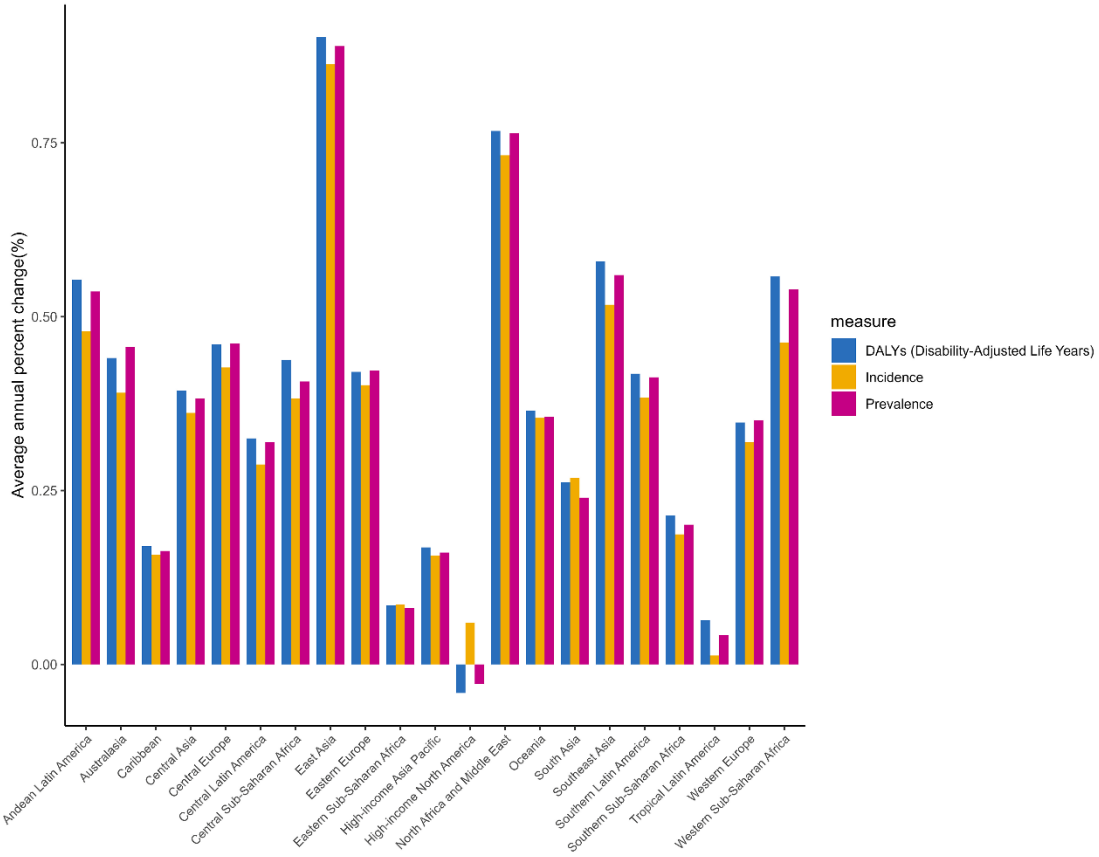
Supplementary Figure S5. Average annual percent changes of age-standardised prevalence, incidence and DALYs of psoriasis in young people aged <20 years from 1990 to 2021 at socio-demographic index levels by sex.



Supplementary Figure S6. Temporal trend of age-standardised prevalence, incidence and disability-adjusted life years of psoriasis aged<20 years and overall psoriasis patients from 1990 to 2021 at global and socio demographic index levels.

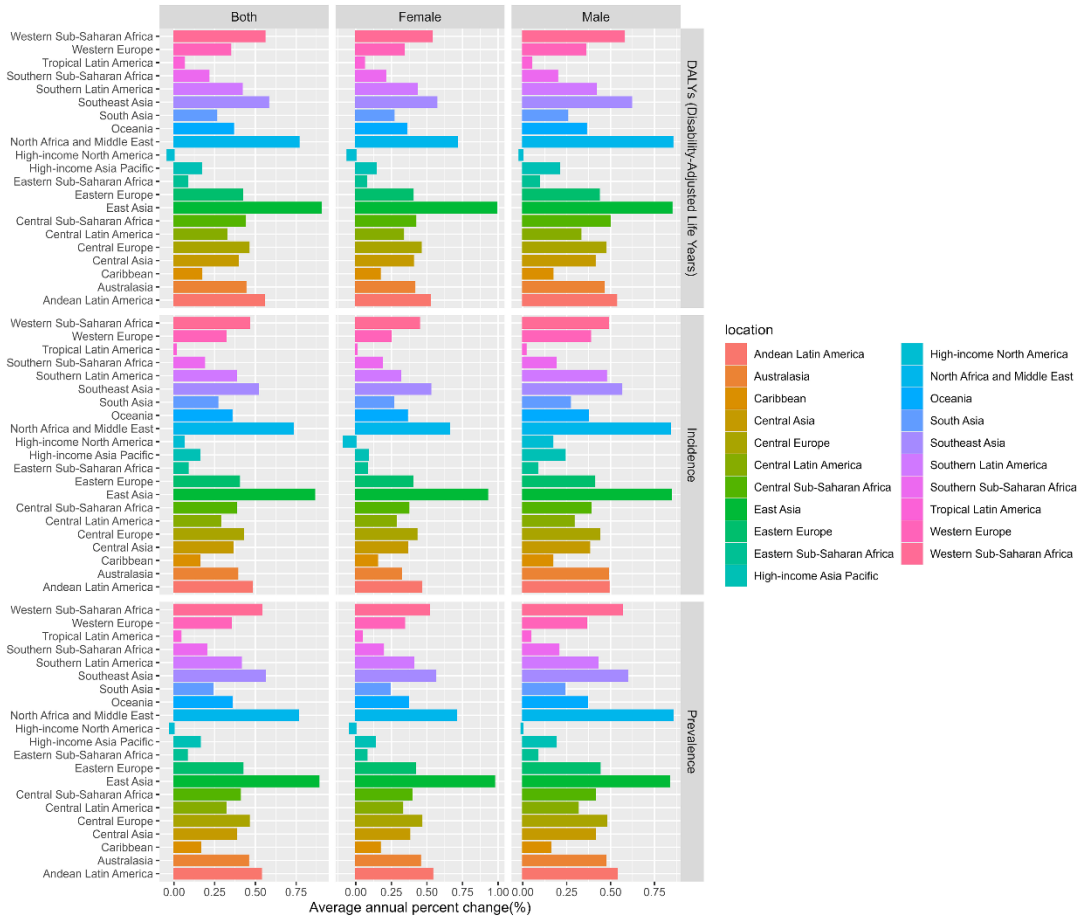


Supplementary Figure S7. Average annual percent changes of age-standardised prevalence, incidence and disability-adjusted life years of psoriasis in young people aged<20 years from 1990 to 2021 at regions levels.



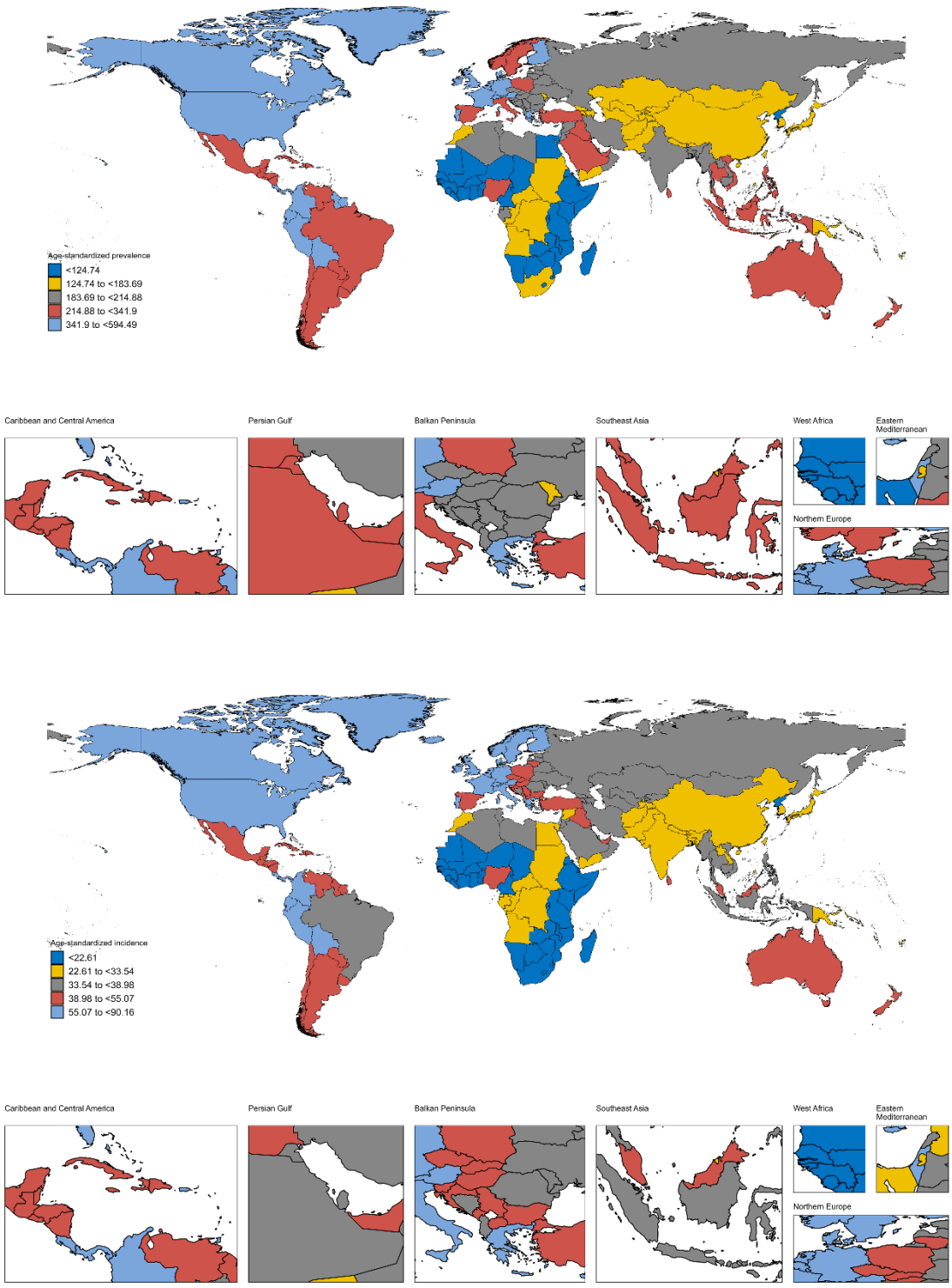
***AAPCs for High-income North America are statistically nonsignificant.**

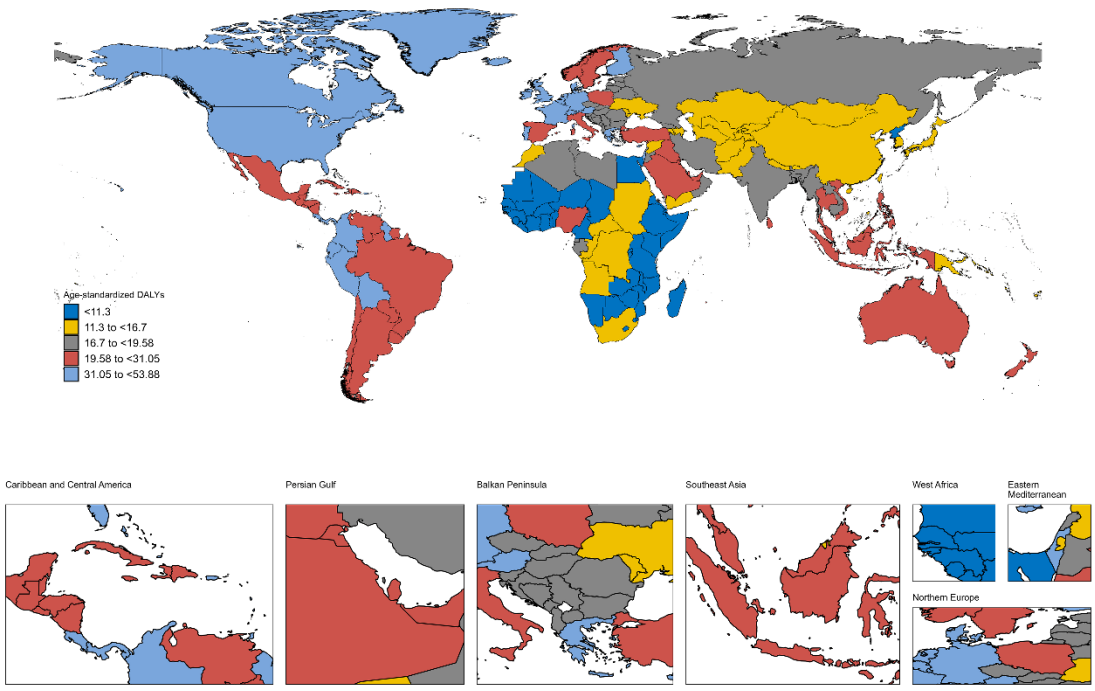
Supplementary Figure S8. Average annual percent changes of age-standardised prevalence, incidence and disability-adjusted life years of psoriasis in young people aged <20 years from 1990 to 2021 at regions levels by sex.



***AAPCs for DALYs of both, male, and female in High-income North America; incidence of both and female in High-income North America; incidence of female in Tropical Latin America; prevalence of both, male, and female in High-income North America are statistically nonsignificant.**

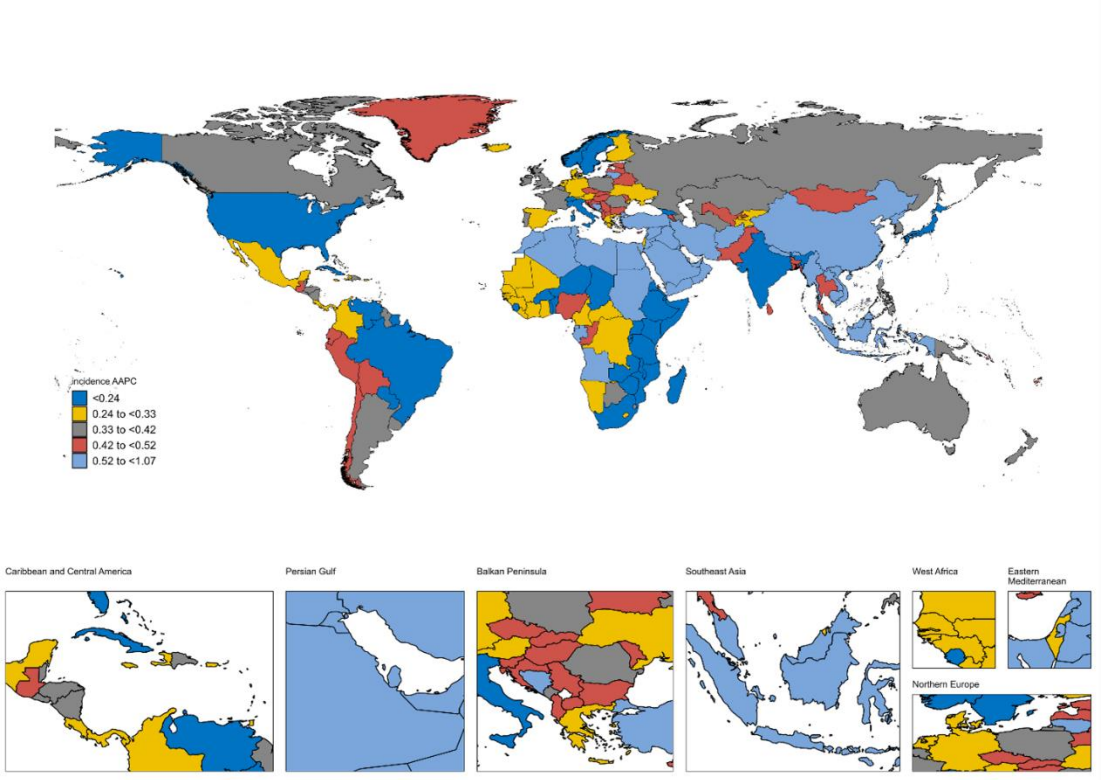
Supplementary Figure S9. Map respectively showing age-standardised rate of global prevalence, incidence and DALYs of psoriasis among people aged <20 years in 2021.

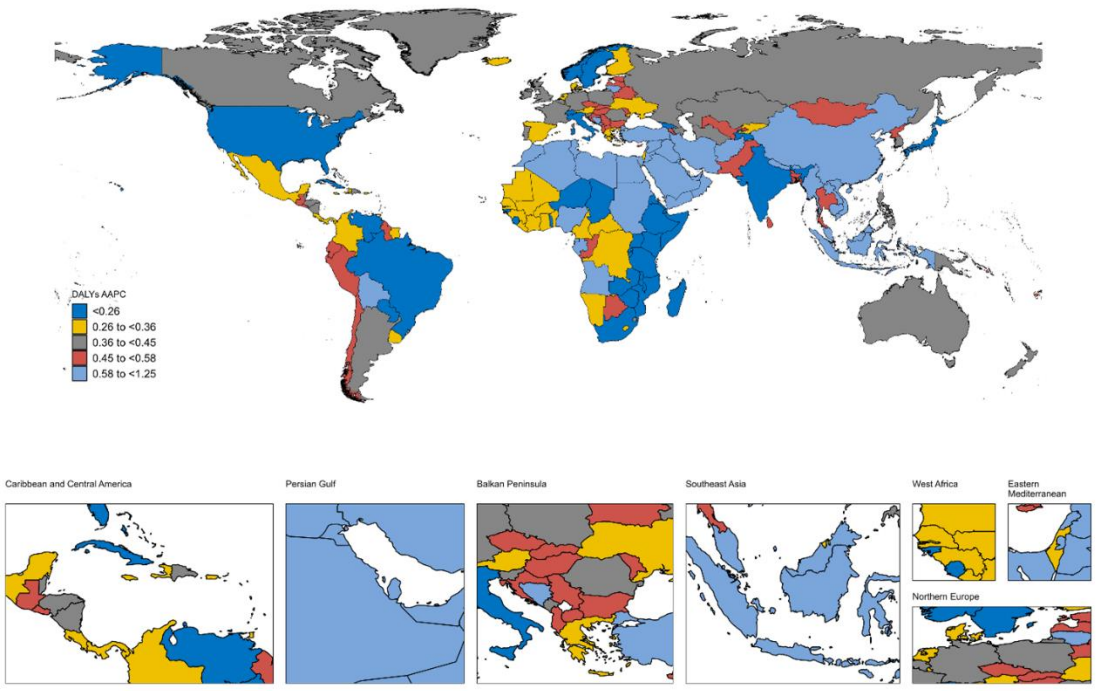



Age-standardized DALYs
<11.3
11.3 to <16.7
16.7 to <19.58
19.58 to <31.05
31.05 to <53.88
Caribbean and Central America
Persian Gulf
Balkan Peninsula
Southeast Asia
West Africa
Eastern Mediterranean
Northern Europe

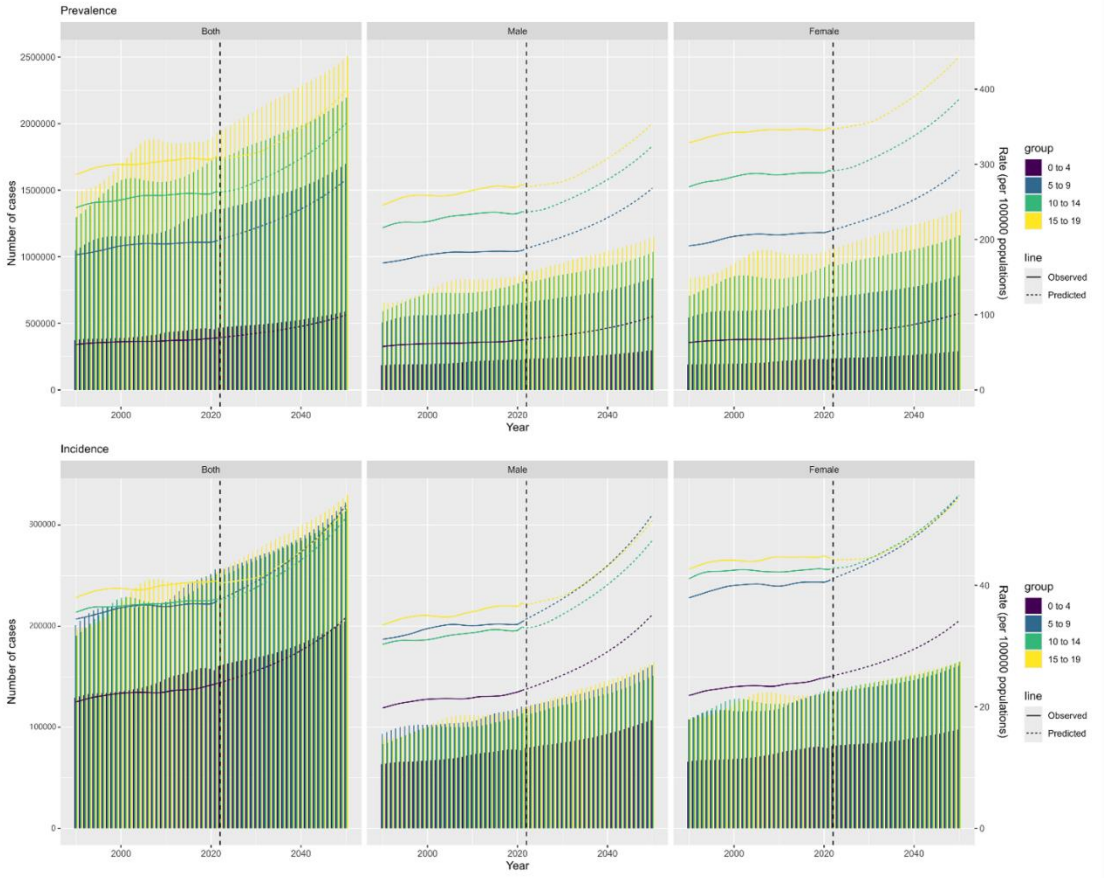
Supplementary Figure S10. Map respectively showing average annual percentage change in global incidence and DALYs of psoriasis among people aged <20 years, 1990-2021.

.





Supplementary Figure S11. Predicted incidence and prevalence of psoriasis in children and adolescents by 2050.


Prevalence
Both
Male
Female
Number of cases
Rate (per 100000 populations)
Year
group
0 to 4
5 to 9
10 to 14
15 to 19
line
Observed
Predicted
Incidence
Both
Male
Female
Number of cases
Rate (per 100000 populations)
Year
group
0 to 4
5 to 9
10 to 14
15 to 19
line
Observed
Predicted

STROBE Statement—Checklist of items that should be included in reports of cross-sectional studies

	Item No	Recommendation	pages
Title and abstract	1	(a) Indicate the study's design with a commonly used term in the title or the abstract	1
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	1
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	1
Objectives	3	State specific objectives, including any prespecified hypotheses	1
Methods			
Study design	4	Present key elements of study design early in the paper	1-2
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	1-2

Participants	6	(*a*) Give the eligibility criteria, and the sources and methods of selection of participants	1-2
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	1-2
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	1-2
Bias	9	Describe any efforts to address potential sources of bias	1-2
Study size	10	Explain how the study size was arrived at	N/A
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	1-2
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	1-2
		(*b*) Describe any methods used to examine subgroups and interactions	1-2
		(*c*) Explain how missing data were addressed	Supplementary Methods
		(*d*) If applicable, describe analytical methods taking account of sampling strategy	1-2
		(*e*) Describe any sensitivity analyses	N/A
Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analyzed	2-3

		(b) Give reasons for non-participation at each stage	Supplementary Methods
		(c) Consider use of a flow diagram	Supplementary Methods
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	2-3
		(b) Indicate number of participants with missing data for each variable of interest	Supplementary Methods
Outcome data	15*	Report numbers of outcome events or summary measures	2-3
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	2-3
		(*b*) Report category boundaries when continuous variables were categorized	2-3
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	N/A
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	Supplementary Tables and figures
Discussion			
Key results	18	Summarize key results with reference to study objectives	3-4
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	3-4
Interpretation	20	Give a cautious overall interpretation of results considering	3-4

		objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	
Generalizability	21	Discuss the generalizability (external validity) of the study results	3-4
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	4

*Give information separately for exposed and unexposed groups.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org.