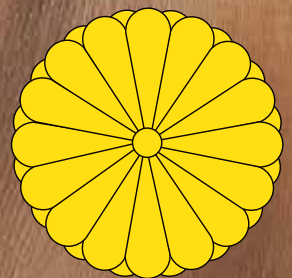




World  
Psoriasis  
Happiness  
Report 2018



Japan

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Institute (2018), World Psoriasis Happiness Report 2018.

Available at <https://psoriasisishappiness.report/>

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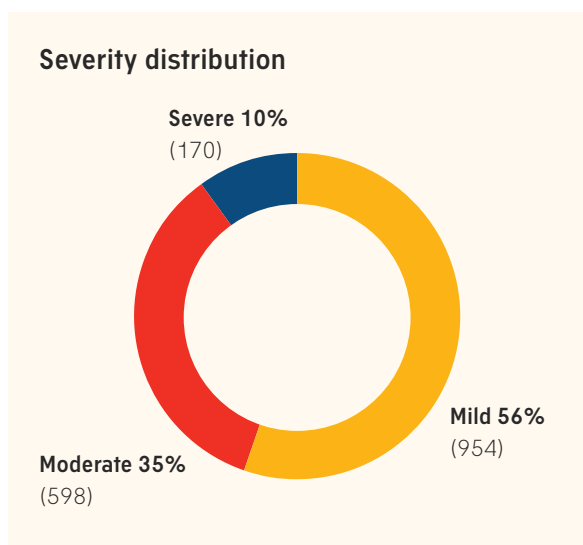
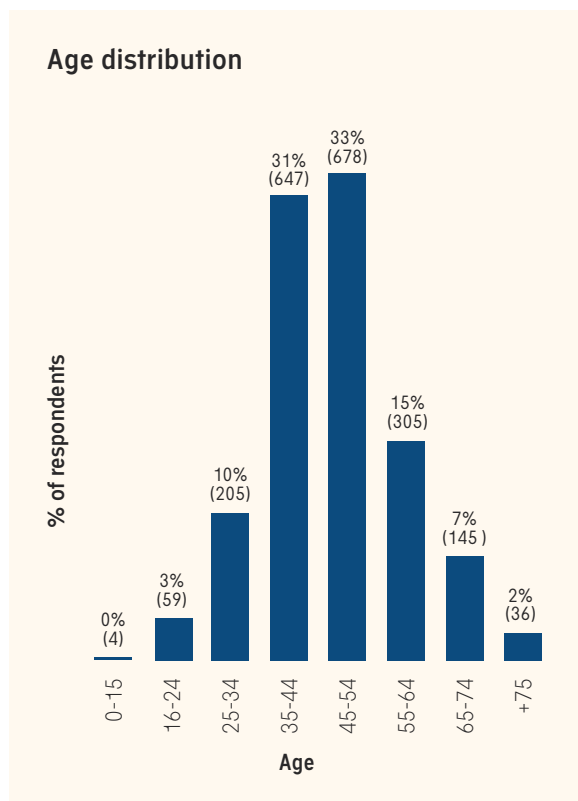
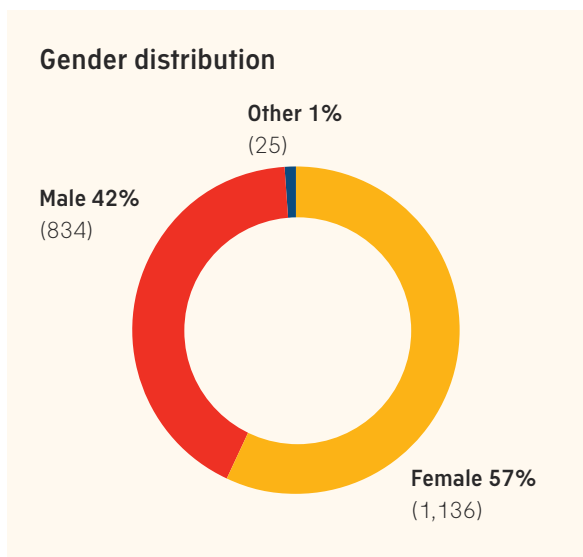
### Authors:

Christian Birch Okkels, MSc Physics, Data Scientist at LEO Innovation Lab  
Michael Birkjær, MSc Political Science, Analyst at the Happiness Research Institute



# General Data & Happiness Results

General Data & Distributions. Total sample size: 2,079



Severity distribution	Japan (N = 1,732)	Global (N = 54,438)
Mild	56%	37%
Moderate	35%	47%
Severe	10%	16%

In Japan, more than half (56%) of all respondents report mild psoriasis (subjective, self-perceived severity), 35% report moderate, and 10% severe psoriasis<sup>1</sup>. Compared to the global picture and the other countries in the analysis,

Japan is one of the countries with the largest proportion of people reporting self-perceived mild psoriasis and, similarly, the smallest proportions of people reporting moderate and severe psoriasis (see also Fig. A.1 in the Appendix).

<sup>1</sup> The target population of PsoHappy is people living with self-reported psoriasis, meaning that the respondents do not necessarily have the diagnosis confirmed by a dermatologist. For this reason, the findings of this report can't be cited or referred to as if they were based on a clinical diagnosis confirmed by healthcare specialists.

## Happiness & Well-being

Happiness level: 5.4 Happiness ranking: 17th / 21

Happiness	Japan		Global	
	Happiness level	Happiness gap	Happiness level	Happiness gap
<b>Overall</b>	5.4	-8.8%	5.8	-11.1%
<b>Gender</b>				
- female	5.4	-8.9%	5.7	-14.1%
- male	5.4	-8.4%	6.1	-5.8%
<b>Severity</b>				
- mild	5.8	-2.5%	6.0	-6.1%
- moderate	5.2	-12.0%	5.6	-14.1%
- severe	4.3	-26.8%	4.6	-30.6%

The average happiness level of 5.5 places Japan as 17th in the happiness ranking of the 21 countries in the analysis. With a happiness gap of -9%, however, Japan is in the middle to the better half of countries in this regard (see also Fig. A.2 and A.3 in the Appendix).

### Some of the things that stand out in the table above are that:

- Women and men with self-perceived psoriasis in Japan report equal levels of happiness on average, in contrast with the global picture and many other countries where women are slightly less happy than men.
- The happiness level drops between respondents with self-perceived mild and moderate psoriasis, and takes an even larger plunge for people with severe psoriasis. I.e., people reporting more severe degrees of self-perceived psoriasis are significantly less happy and experience larger happiness gaps.

## Stress & Loneliness

As seen from Fig. D.1 and D.2 in the Appendix, the percentages of respondents in Japan who experience high stress and loneliness are<sup>2</sup>:

**High stress: 51.7%**

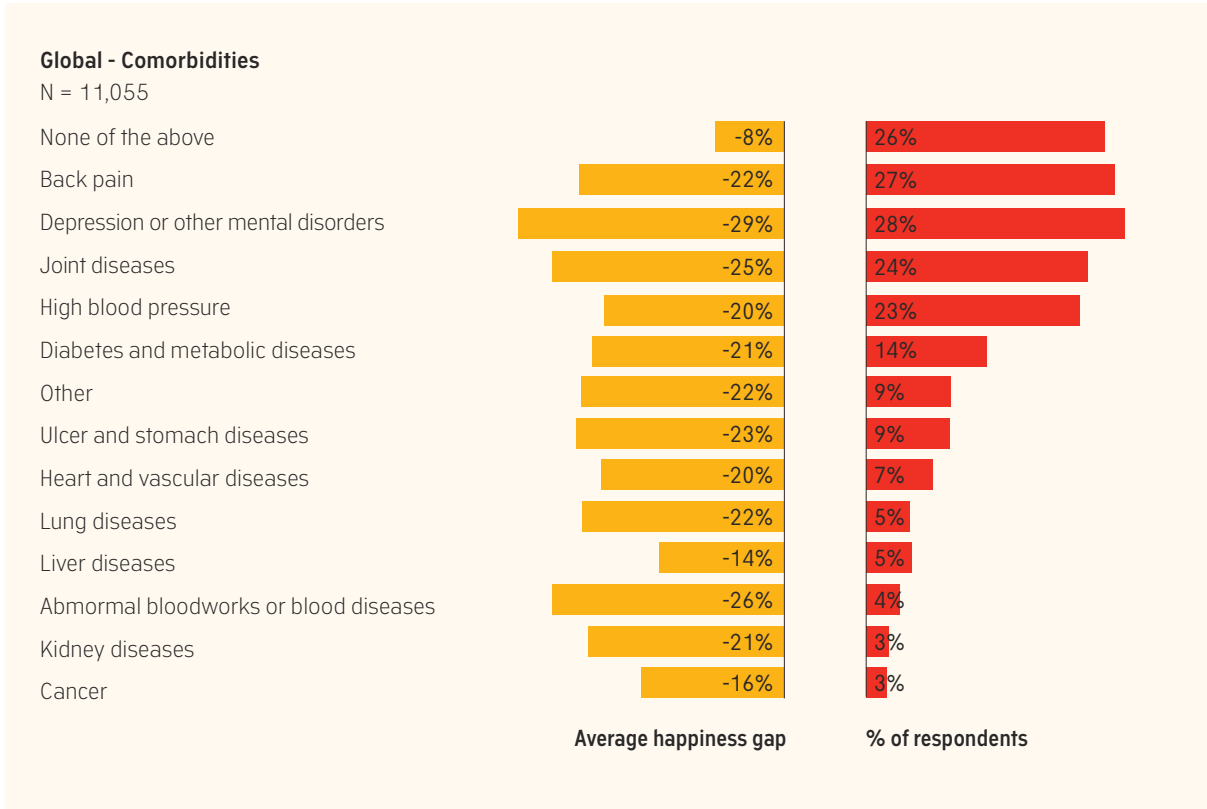
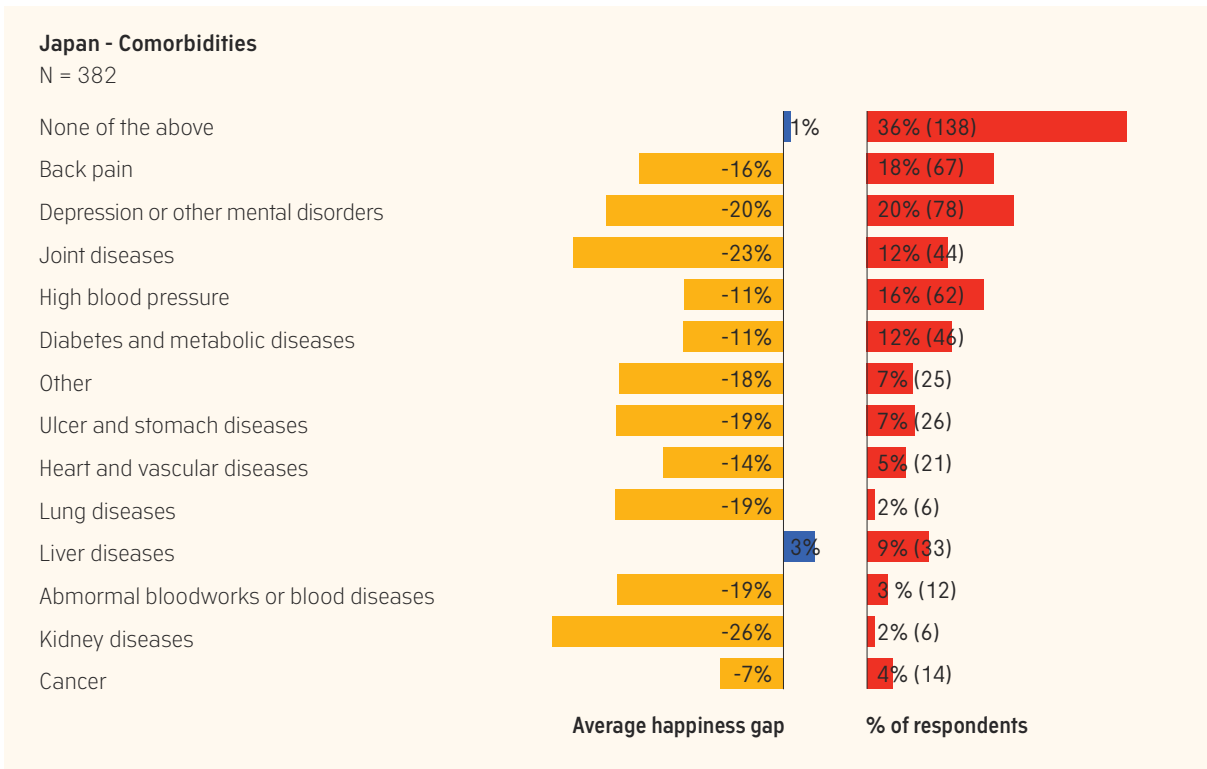
**Loneliness: 26.5%**

Japan is one of the countries with the smallest proportion of people reporting high stress, although 52%, i.e. more than half, is still a significant amount. As for loneliness, Japan is also in the best handful of countries, with more than a quarter (27%) of respondents reportedly living in loneliness.

<sup>2</sup> See Appendix Fig. D.1 and Fig. D.2 for methodology and calculation used to determine “high stress” and “loneliness”.

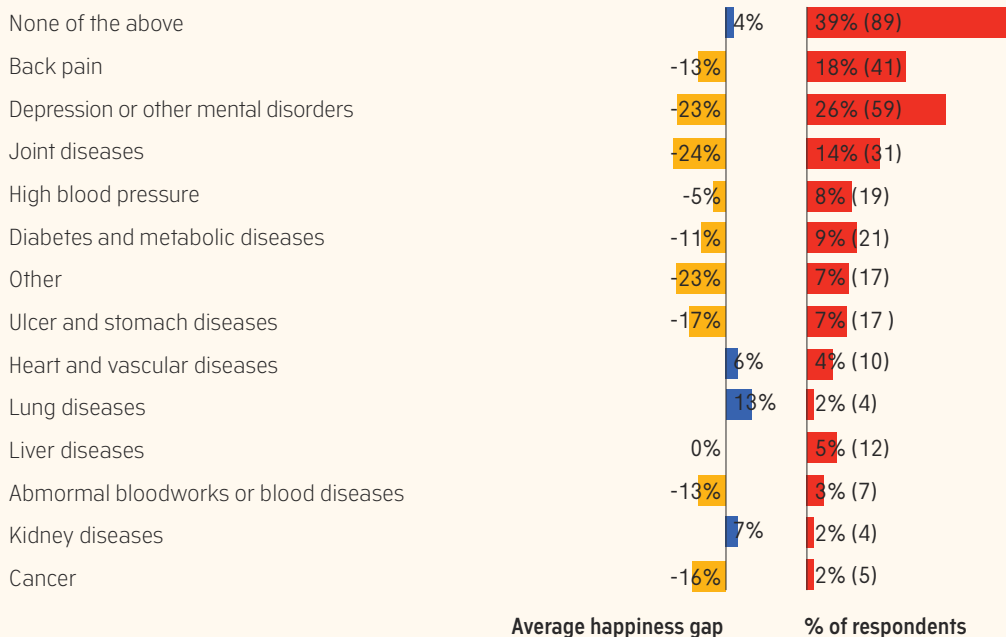
### Psoriasis and Comorbidities

We have analysed a variety of comorbidities reported by people living with self-perceived psoriasis and their effect on people’s happiness and well-being. The graphs below show the overall distribution of comorbidities as well as detailed by gender and self-perceived psoriasis severity. Numbers and results for the global picture of all countries considered are included for reference and comparison.



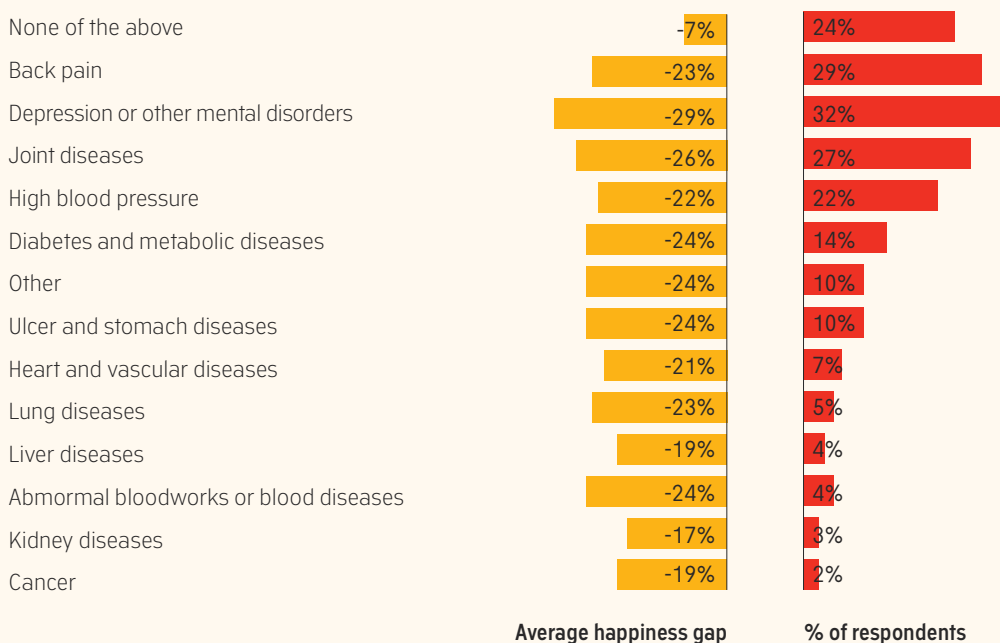
**Japan - Comorbidities by gender - Female**

N = 228



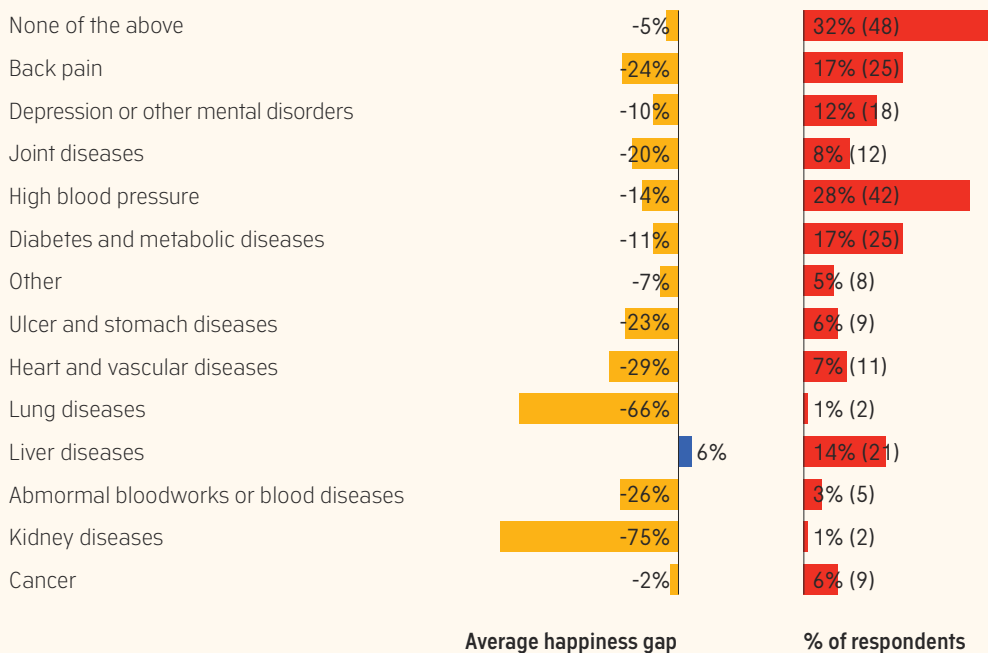
**Global - Comorbidities by gender - Female**

N = 8,649



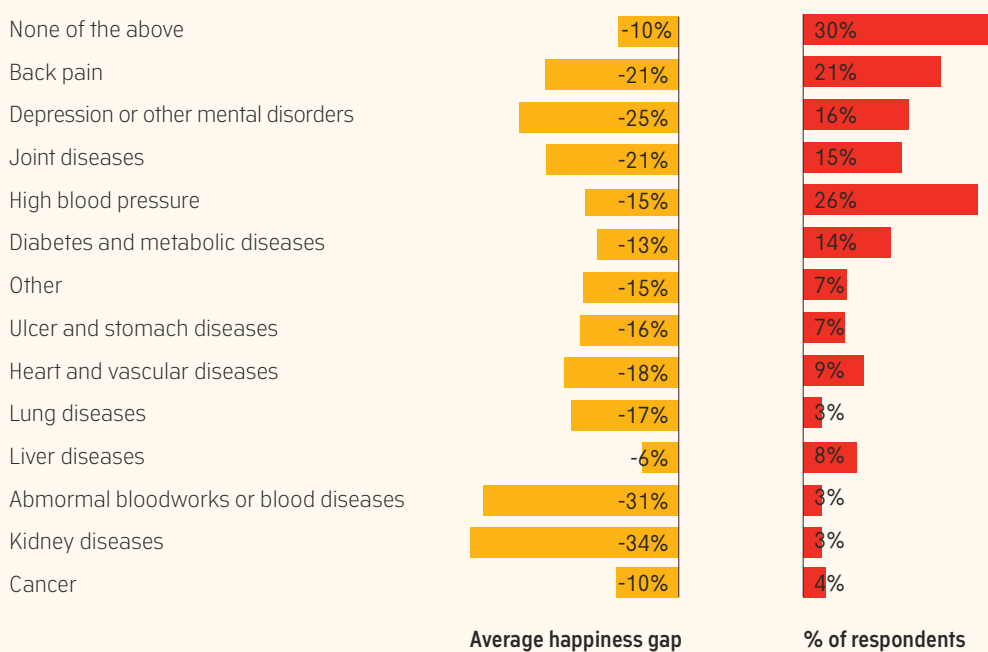
**Japan - Comorbidities by gender - Male**

N = 150



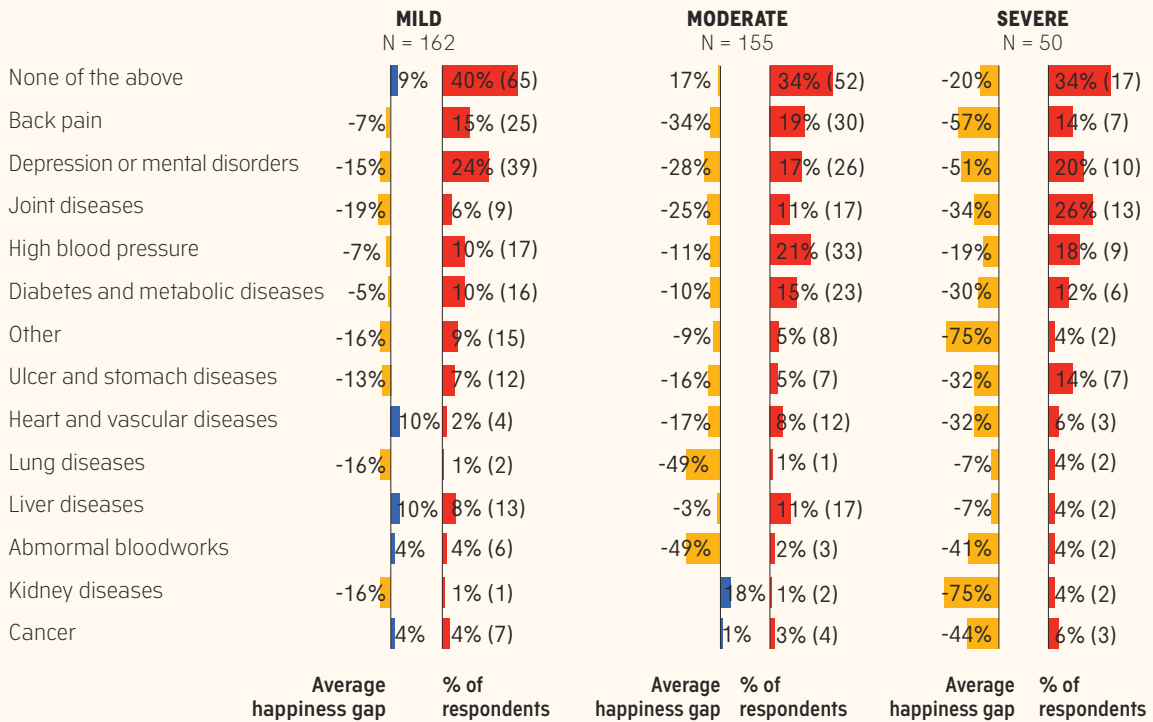
**Global - Comorbidities by gender - Male**

N = 2,349

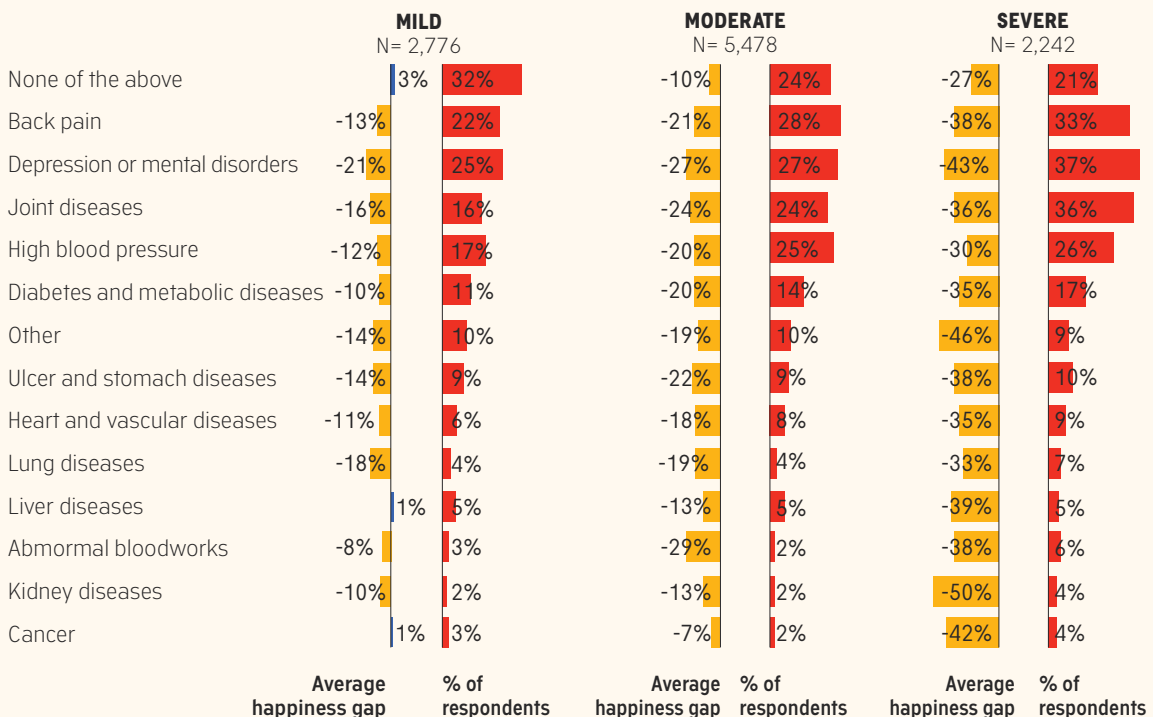




Japan - Comorbidities by severity



Global - Comorbidities by severity



**Looking at the first figure with overall results on comorbidities and happiness gaps, we note, among other things, that:**

- Almost 2 in 3 (64%) of the respondents in Japan report that they have one or more of the listed comorbidities (as we see that 36% report “none of the listed”). Although it’s a high proportion, it’s still fewer than the global norm of 74%.
- The most reported comorbidities from respondents in Japan are back pain (18%), depression or other mental disorders (20%), and high blood pressure (16%). These are also some of the most reported comorbidities globally, where the proportions of people reporting them are even larger. We see a much smaller prevalence for joint diseases in Japan than globally. On the other hand, joint diseases is also the comorbidity related to the largest happiness gap for respondents in Japan.
- The happiness gaps related to most of the other comorbidities are also smaller in Japan than the global norms<sup>3</sup>.

**Turning to the split by gender, we see that:**

- Slightly more men than women report that they have one or more of the listed comorbidities (68% of men vs. 61% of women).
- The most commonly reported comorbidity for women is depression or other mental disorders (26%), while for men it’s high blood pressure (28%). A larger proportion of men than women also report both diabetes or metabolic diseases (17% of men vs. 9% of women) as well as liver diseases (14% vs. 5%).

- For women, the comorbidities related to the largest happiness gaps are depression or other mental disorders and joint diseases (-23% and -24%, respectively). For men, where we disregard some of the comorbidities with only very few respondents, it’s back pain, heart and vascular diseases, ulcer and stomach diseases, and joint diseases with gaps of -20% to -29%.

**Moving on to the split by severity in the bottom graphs, we see that:**

- A slightly larger percentage of respondents with self-perceived severe psoriasis experience comorbidities compared to people with mild and moderate psoriasis (66% vs. 60%).
- The reported prevalence of especially joint diseases increases with self-perceived severity, from 6% for people with mild psoriasis to 26% for people with severe psoriasis. To a slightly smaller extent, the same is seen for high blood pressure.
- Finally, we see that, in general, and as in the global case, the worse the severity, the larger the happiness gap (although no claim of causality can be made).

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<sup>3</sup> It is important to stress the fact that we cannot make any claims of causality in regards to comorbidities and happiness gaps; it’s not necessarily one or more particular comorbidities that cause the given happiness gap.

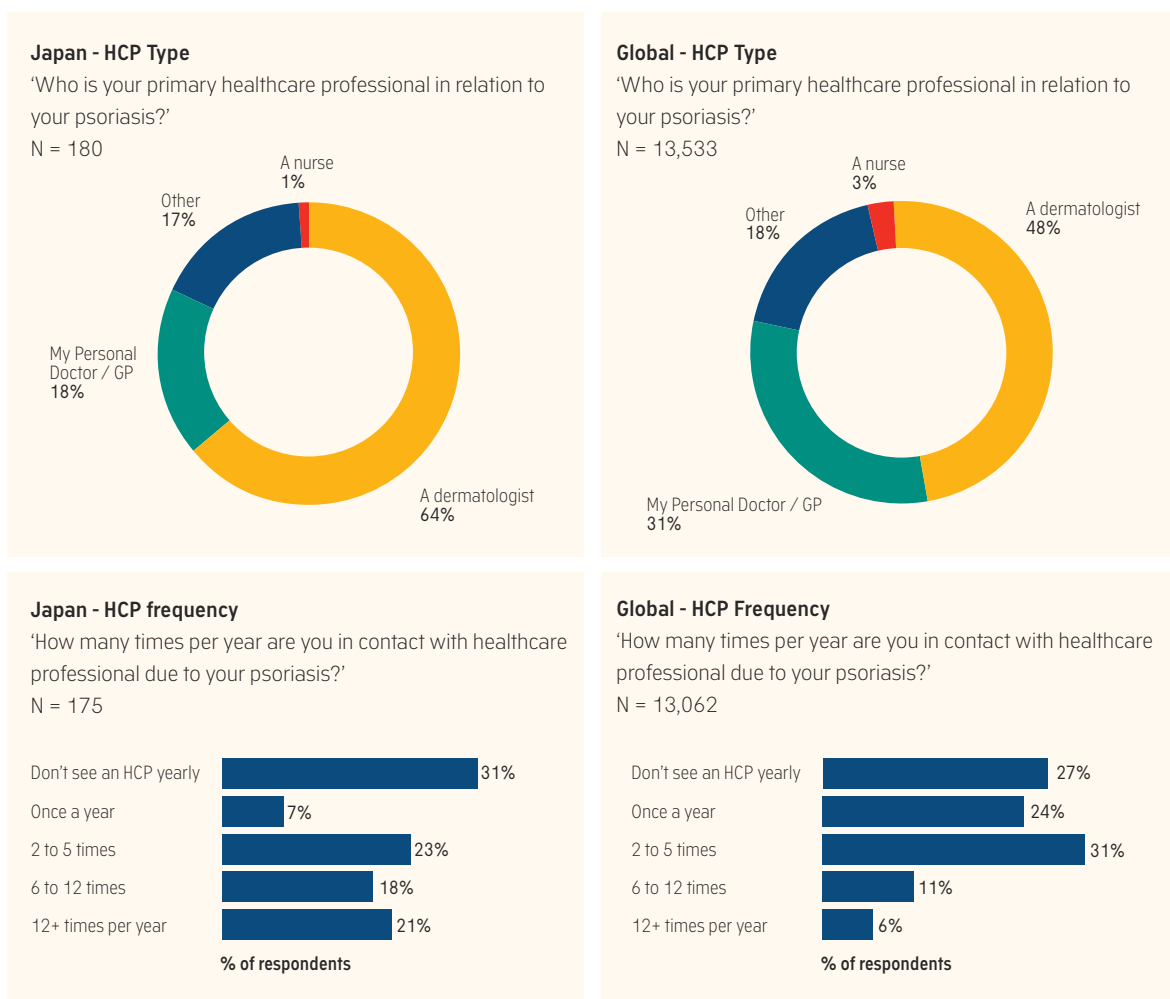
# Healthcare Professionals



A variety of aspects related to the perceived relationship with healthcare professionals (HCPs) are analysed in this section. This includes people's satisfaction with their healthcare providers overall, as well as general perceptions of the quality of the relationship and interactions with them.

### Healthcare Professional Type & Frequency of Visits

First, we consider the distributions for the type of healthcare professional, how often people see their healthcare professional, and where the healthcare professional works. These are shown in the figures below for both the US and the global case.

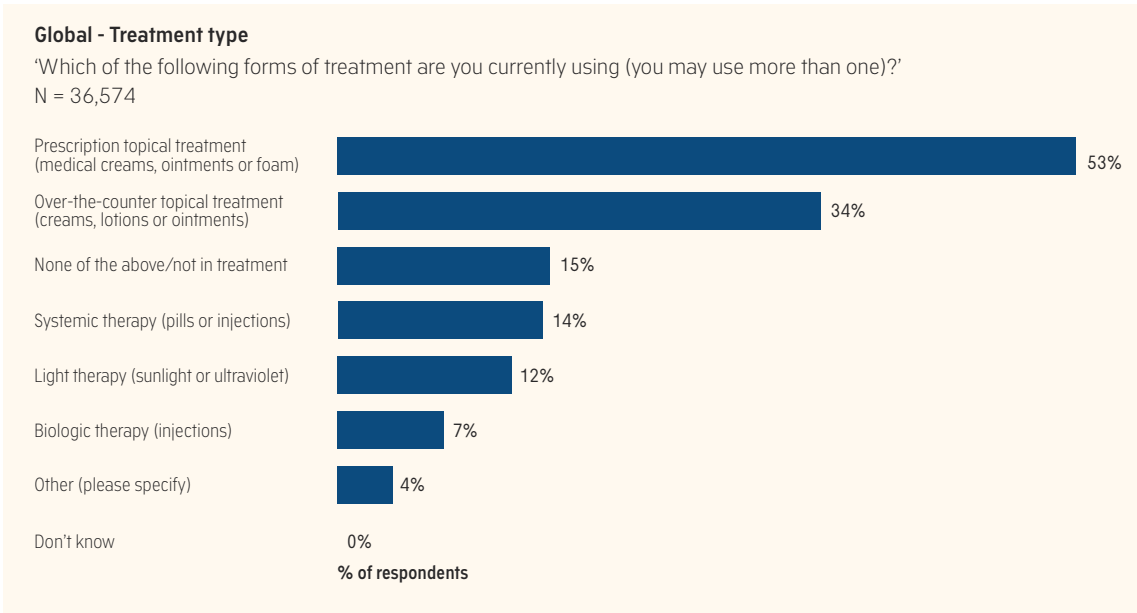
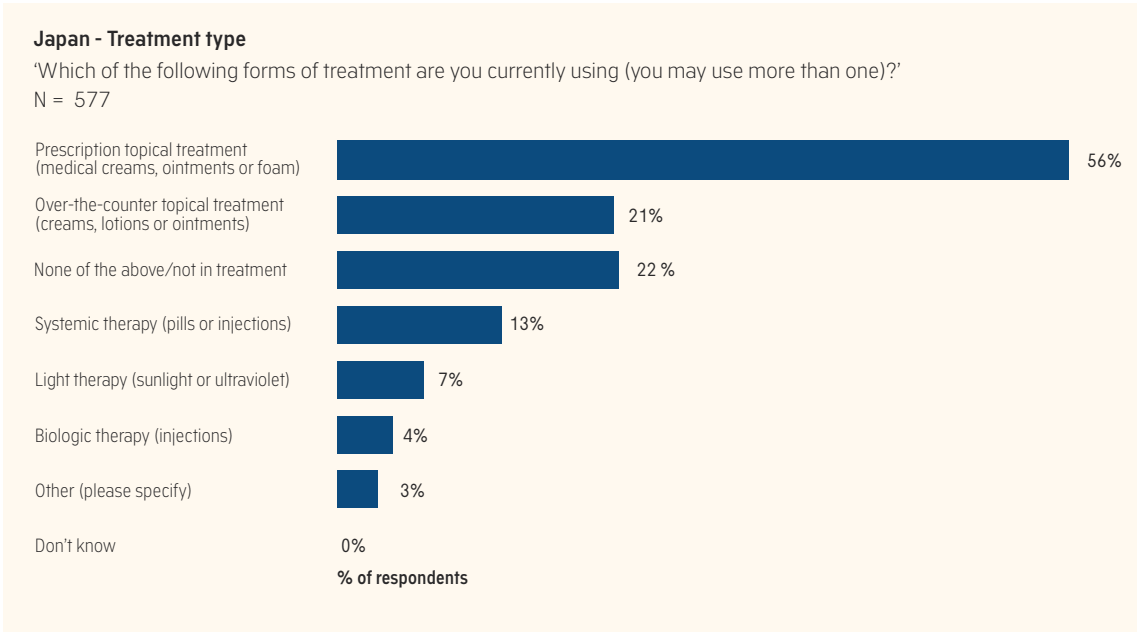


#### Some of the things we see from the figures above are that:

- Almost 2 in 3 (64%) of the respondents in Japan see a dermatologist as their main healthcare professional in relation to their psoriasis, which is higher than the global average of 48%. This makes Japan one of the countries with the largest proportion of people doing this (see Fig. C.1 in the Appendix for data on the other countries).
- In regards to frequency of visits, almost a third (31%) of the respondents in Japan don't see their healthcare

professional yearly, which is slightly more than the global norm of 27%. Also, we see that as many as 18% and 21% in Japan see their healthcare professional 6-12 and 12+ times per year, respectively, meaning that respondents in Japan see their healthcare professionals much more often than the global norm. In fact, compared to other countries, Japan is the country where respondents visit their healthcare professionals most often (see Fig. C.2 in the Appendix for data on the other countries).

As for the type of treatment and how people get or buy it, this is shown in the figures below.



The most commonly reported treatment type in Japan is prescription topicals (used by 56%), which is very comparable to the global norm. However, only 21% in Japan reportedly use over-the-counter topicals compared to 34% in the global picture. Compared to

other countries, Japan is the country with the smallest proportion of respondents on over-the-counter topicals and the largest proportion of respondents not in treatment or not using any of the listed treatments (see Fig. C.5 in the Appendix for data on the other countries).

## Healthcare Professional Relationship

The table below shows the number of people disagreeing with different statements around the healthcare professional relationship.

'To what extent do you agree with each of the following statements?' % who 'Disagree' or 'Strongly disagree'	Japan			Global		
	Overall	Women	Men	Overall	Women	Men
"My healthcare professionals are clear with the information about how to treat psoriasis"	45% (75)	49% (41)	40% (33)	40% (5,329)	41% (3,933)	36% (1,341)
"My healthcare professionals fully understand the impact psoriasis has on my mental well-being"	49% (81)	55% (44)	43% (36)	53% (7,055)	56% (5,311)	44% (1,683)
"I can get in touch with the healthcare professional when I'm in need"	49% (80)	58% (47)	40% (32)	36% (4,798)	37% (3,532)	34% (1,227)
"I have confidence in the abilities of my healthcare professionals to treat psoriasis"	41% (69)	46% (38)	37% (31)	42% (5,946)	44% (4,344)	39% (1,550)
"I always follow the advice of my healthcare professionals"	30% (50)	35% (28)	27% (22)	27% (3,692)	27% (2,611)	28% (1,035)
"I've been informed about all the different treatment options related to my condition"	63% (101)	71% (56)	56% (45)	55% (7,240)	57% (5,424)	50% (1,763)
"The system provides me with sufficient financial support in relation to my skin condition"	81% (128)	82% (65)	79% (62)	67% (8,865)	69% (6,535)	63% (2,267)
"There is sufficient public awareness regarding my disease"	90% (145)	92% (73)	89% (72)	79% (10,127)	82% (7,524)	72% (2,532)

(The numbers in parentheses indicate the number of respondents corresponding to the particular percentages, and are therefore not the total sample sizes.)

The respondents in Japan with self-reported psoriasis are generally more dissatisfied with aspects around their relationship with their healthcare professional than is seen in the global picture.

For instance, roughly half (49%) don't think they can get in touch with their healthcare professional when in need, compared to 36% globally. The largest degree of dissatisfaction and disagreement occurs both in Japan and the global picture when it comes to financial support and public awareness. In Japan, however, even more respondents are dissatisfied than globally, with 81% of

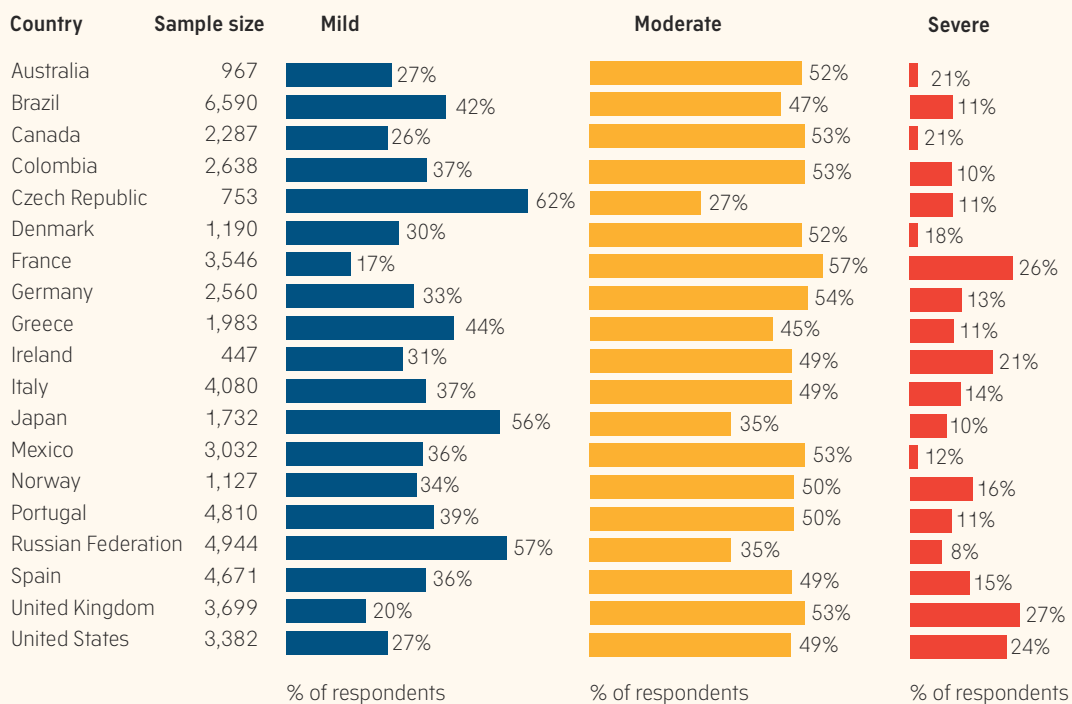
respondents disagreeing that there is sufficient financial support in relation to their skin condition (vs. 67% globally) and as many as 90% disagreeing that there is enough public awareness regarding psoriasis (vs. 79% globally).

In regards to gender differences, we see women are generally more dissatisfied than men, especially in regards to e.g. getting in touch with the healthcare professional (58% of women vs. 40% of men disagree) and being informed of treatment options (71% of women disagree vs. 56% of men).

# Appendix

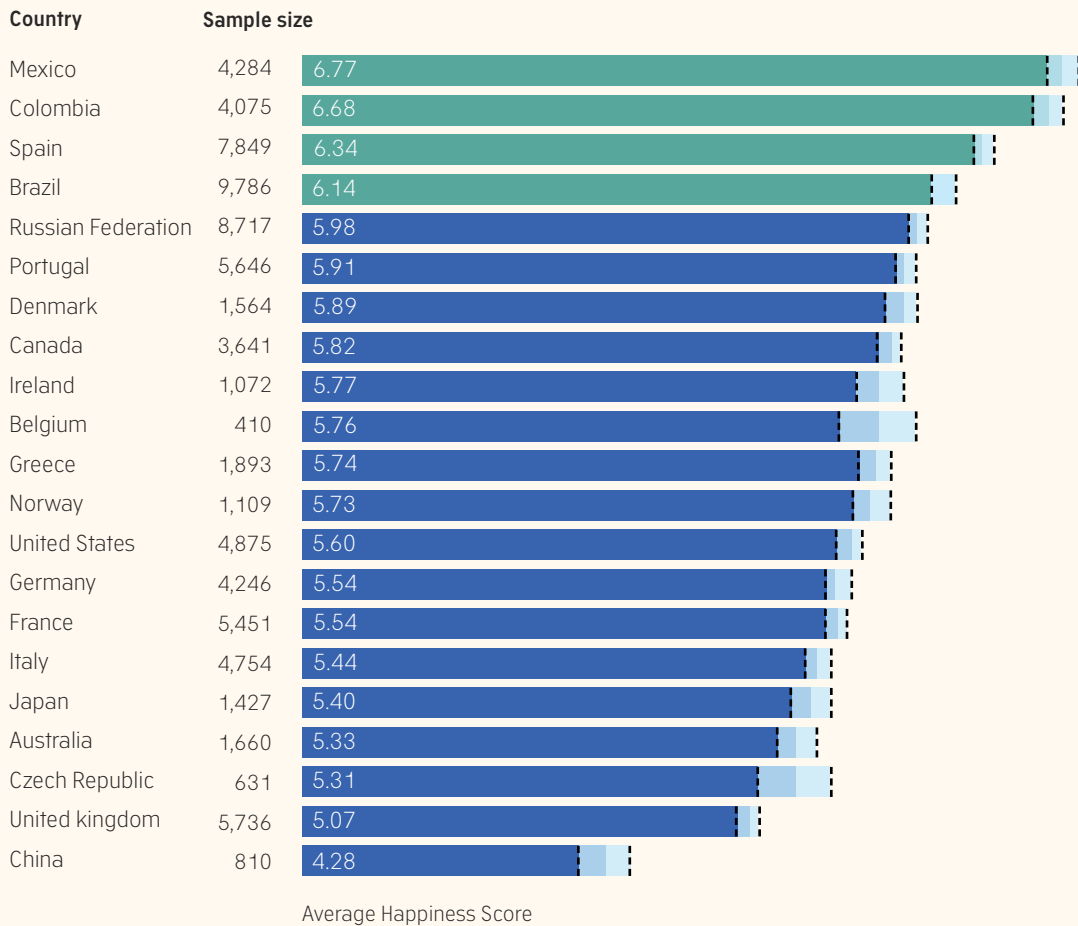
# General Results & Happiness

**Figure A.1:** Distribution of subjective, self-perceived severity by country  
Severity by country



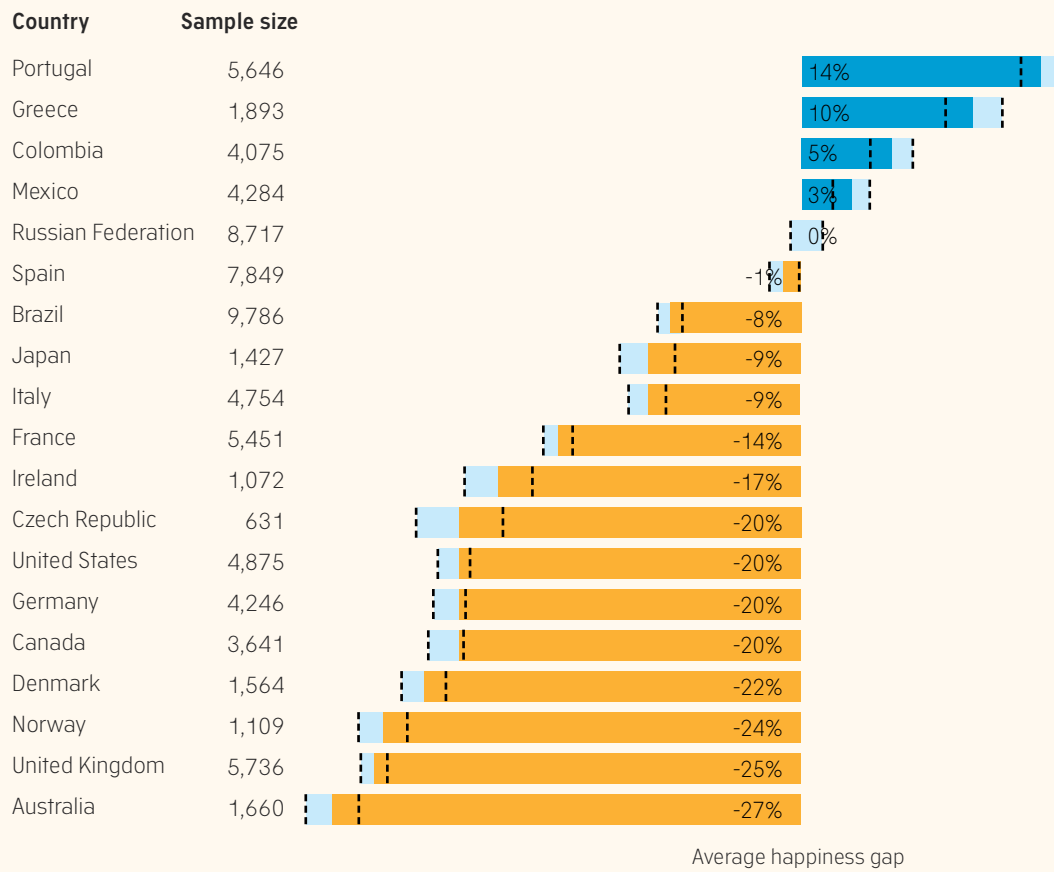


**Figure A.2:** Country ranking: Psoriasis happiness levels per country  
(With 95% confidence interval bands)



Average happiness score for each country. Colours show the score difference, with green indicating an average score higher than 6 and dark blue a lower average score. The context is filtered on Cantril Ladder which ranges from 0-10.

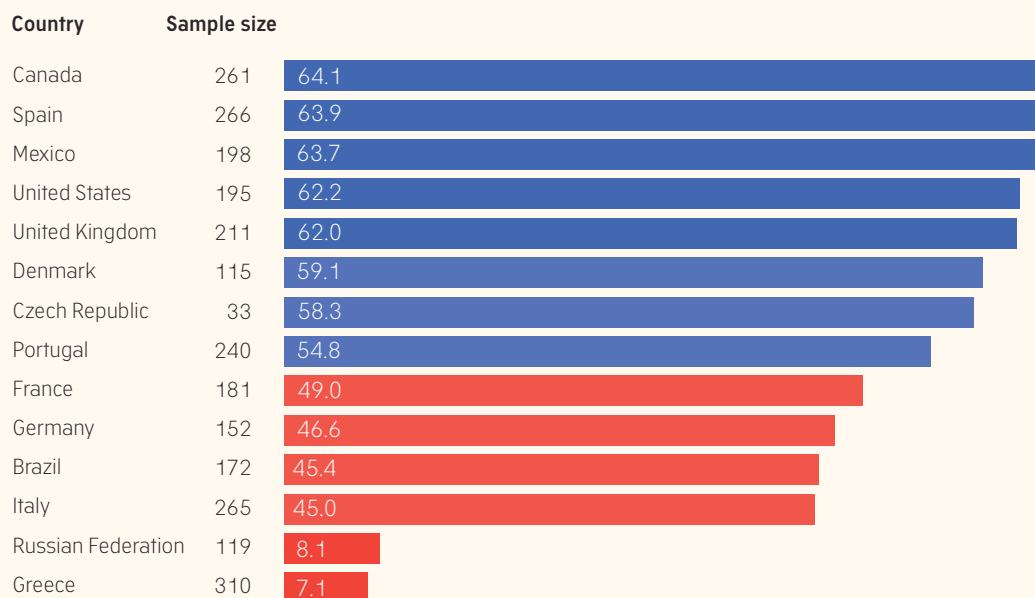
**Figure A.3:** Average happiness gap by country  
(With 95% confidence interval bands)



# Productivity & Happiness

**Figure B.1:** Productivity at work (measured on a scale from 0-100) when people should have stayed home because of their psoriasis

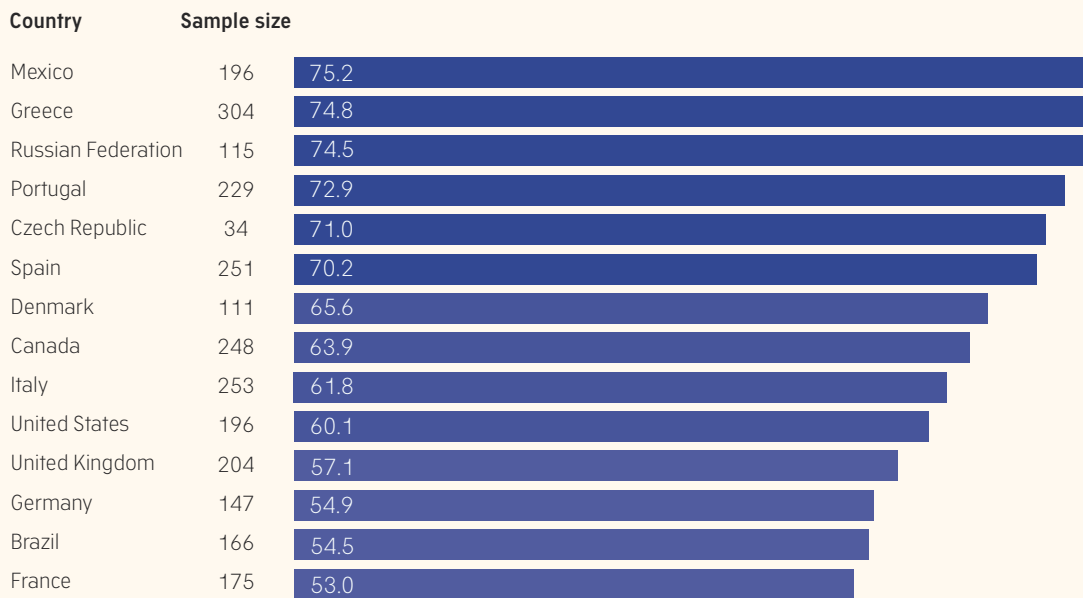
“In the last 4 weeks, for the time when you worked even though you felt you should be at home because of your psoriasis, how productive would you say you were? Use a scale from 0 to 100, 0 being not at all productive, 100 being totally productive.”



Average productivity at work when people should have stayed home because of their psoriasis

**Figure B.2:** Productivity at work (measured on a scale from 0-100) when people should have stayed home because of other health issues

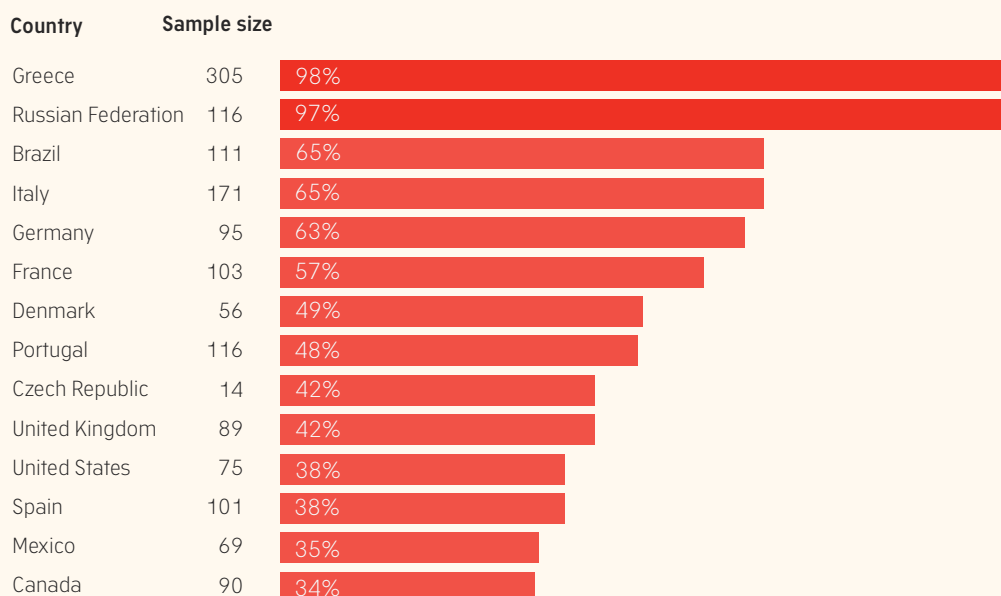
“Using the same scale, how affected was your productivity at work while you felt you should have stayed home because of other health issues? 0 means not at all productive, 100 means totally productive.”



Average Productivity at work when people should have stayed home because of other health issues

**Figure B.3:** Percentage of people working at 50% productivity or less (measured on a scale from 0-100) when they should have stayed home because of their psoriasis

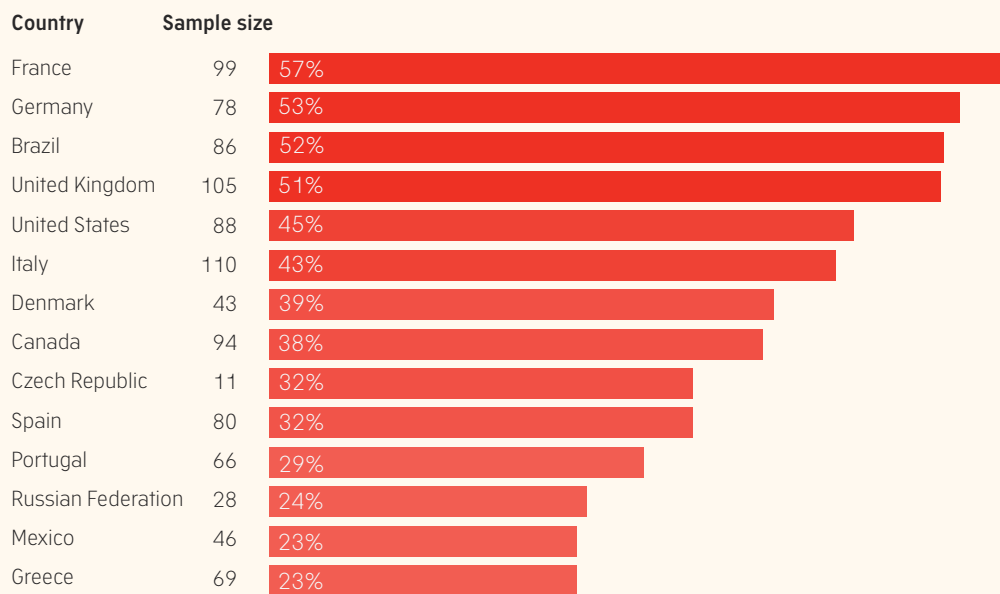
“In the last 4 weeks, for the time when you worked even though you felt you should be at home because of your psoriasis, how productive would you say you were? Use a scale from 0 to 100, 0 being not at all productive, 100 being tptally productive.”



Percentage of people working at 50% productivity or less when they should have stayed home because of their psoriasis

**Figure B.4:** Percentage of people working at 50% productivity or less (measured on a scale from 0-100) when they should have stayed home because of other health issues

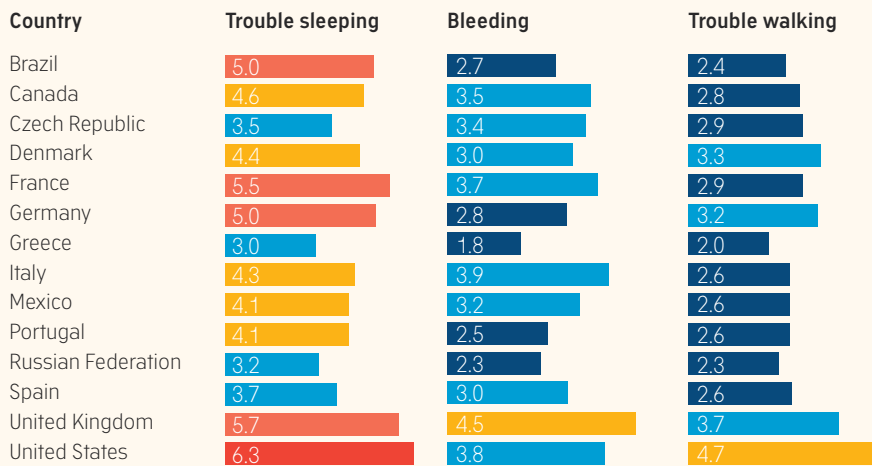
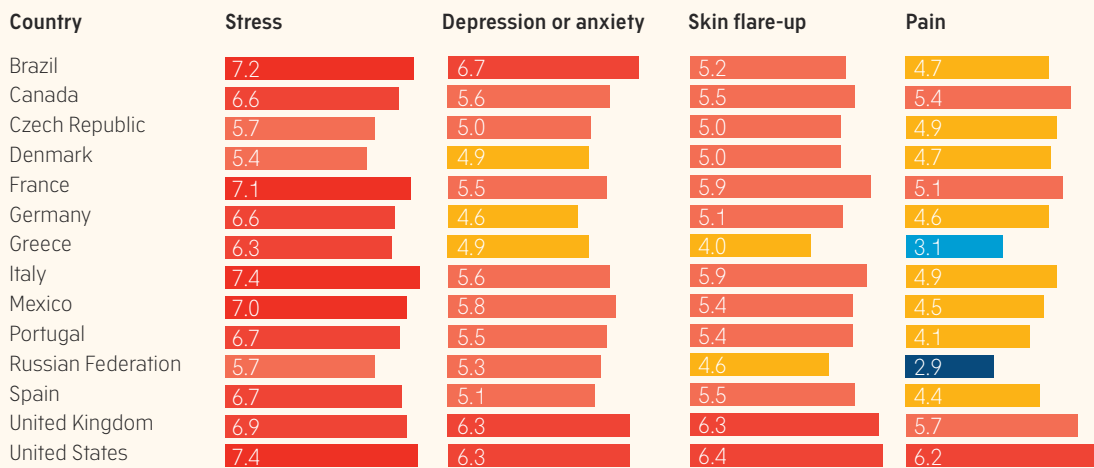
“Using the same scale, how affected was your productivity at work while you felt you should have stayed home because of other health issues? 0 means not at all productive, 100 means totally productive.”



Percentage of people working at 50% productivity or less when they should have stayed home because of other health issues

**Figure B.5:** Average impact of symptoms on work life in the past 4 weeks, as measured on a scale from 0-10

“On a scale from 0 to 10, 0 being no impact, 10 being maximum impact, please assess how each of the below aspects has impacted your work life in the past 4 weeks”



**Table B.6:** Estimated cost to society from lost productivity (adjusted for purchase) power parity):

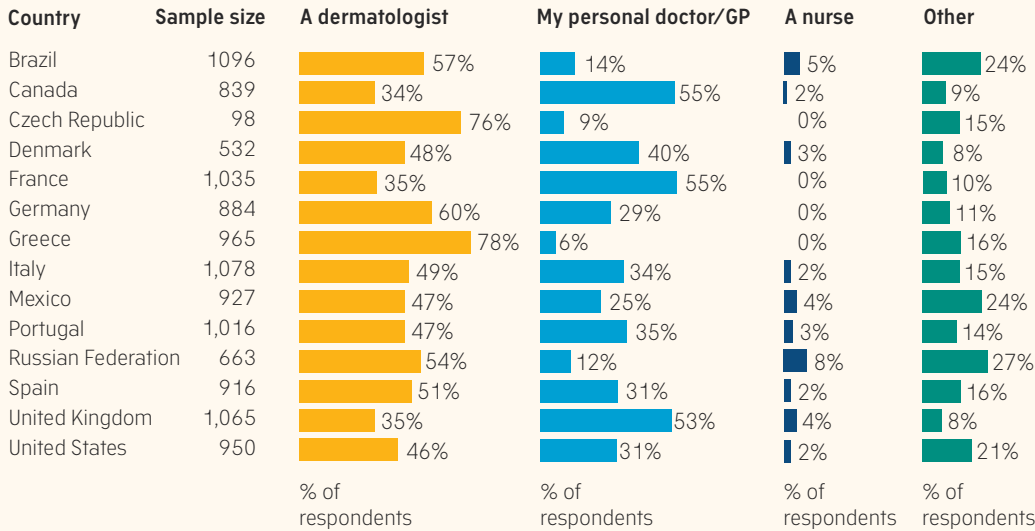
	Annual cost Absen-teeism (\$Million)	% Absen-teeism due to psoriasis	Annual cost Presen-teeism (\$Million)	% Presen-teeism due to psoriasis	Total cost (\$Million)	Total cost per 100.000 people in employ-ment (\$Million)	Total cost as a percentage of GDP
<b>Brazil</b>	\$2,724	37.0%	\$689	55.8%	\$3,413	\$3.8	0.11%
<b>Canada</b>	\$586	34.1%	\$182	44.0%	\$767	\$4.1	0.05%
<b>Denmark</b>	\$531	30.8%	\$44	59.5%	\$574	\$20.2	0.20%
<b>France</b>	\$17,281	39.2%	\$3,215	60.6%	\$20,497	\$74.8	0.71%
<b>Germany</b>	\$14,416	41.4%	\$1,569	46.9%	\$15,985	\$38.5	0.38%
<b>Greece</b>	\$36	30.6%	\$21	63.2%	\$57	\$1.4	0.02%
<b>Italy</b>	\$2,184	42.9%	\$1,027	47.0%	\$3,211	\$14.5	0.13%
<b>Mexico</b>	\$920	63.1%	\$149	62.9%	\$1,070	\$1.9	0.05%
<b>Portugal</b>	\$179	35.4%	\$35	75.6%	\$215	\$4.5	0.06%
<b>Russia</b>	\$2,644	30.6%	\$806	83.5%	\$3,450	\$4.8	0.09%
<b>Spain</b>	\$1,083	32.6%	\$230	60.3%	\$1,313	\$6.9	0.07%
<b>UK</b>	\$2,174	50.8%	\$463	56.4%	\$2,638	\$8.1	0.09%
<b>US</b>	\$22,906	54.8%	\$7,611	68.0%	\$30,517	\$19.6	0.16%



# Healthcare professionals and Psoriasis

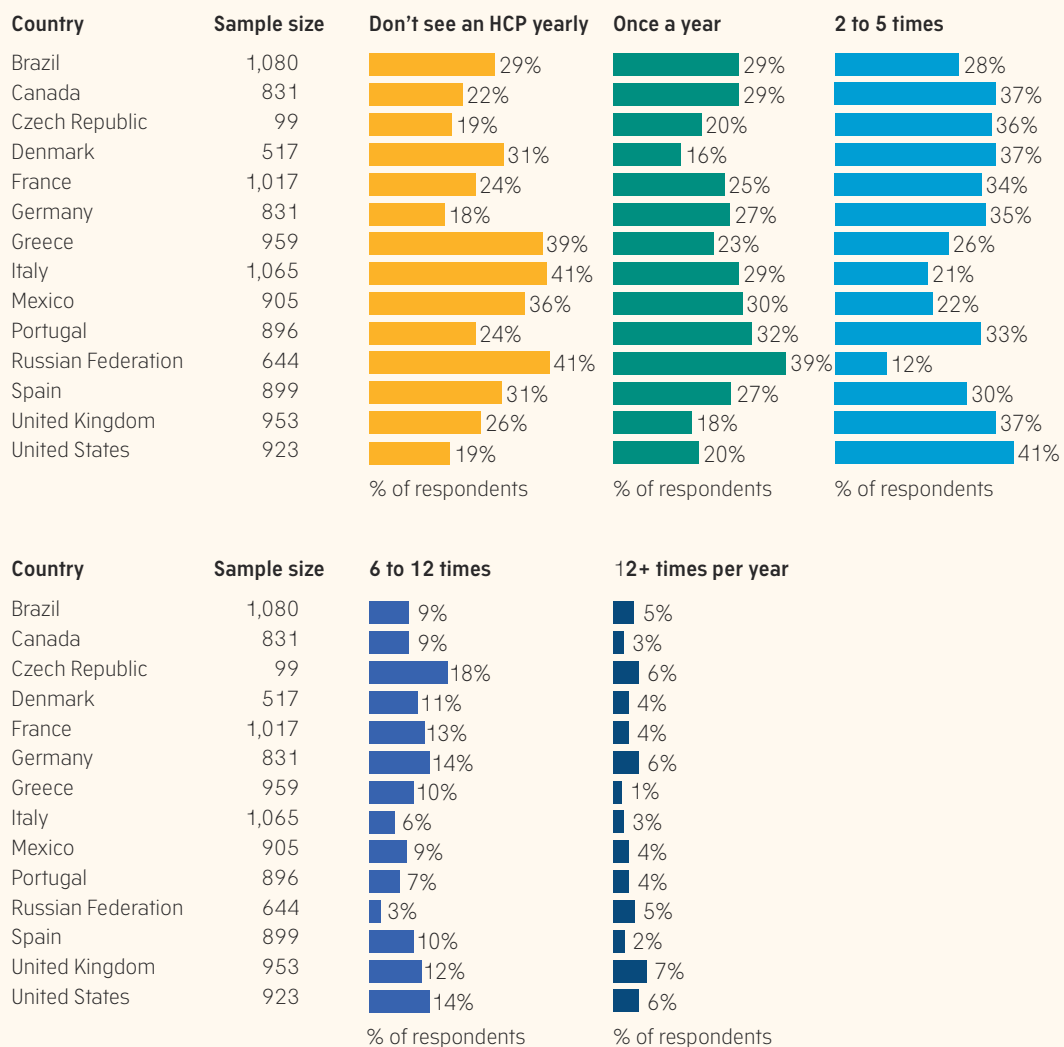
**Figure C.1:** Distribution of type of healthcare professionals engaged for psoriasis by country

“Who is your primary healthcare professional in relation to your psoriasis?”



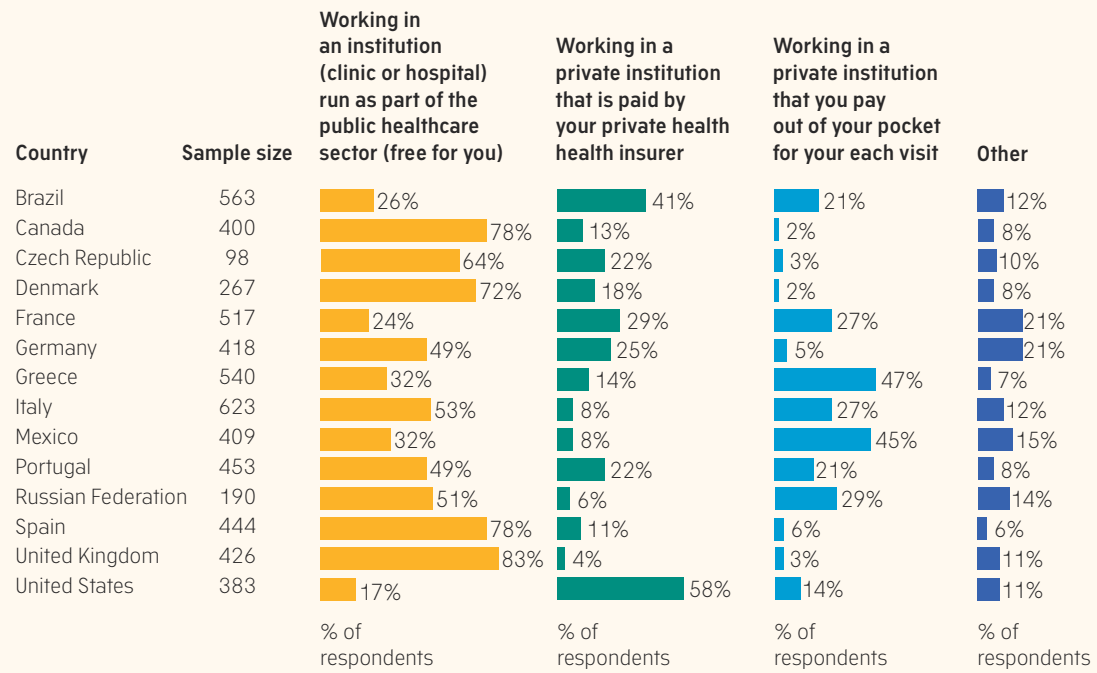
**Figure C.2:** Frequency of visits to healthcare professional for psoriasis by country

“How many times per year are you in contact with healthcare professionals due to your psoriasis?”



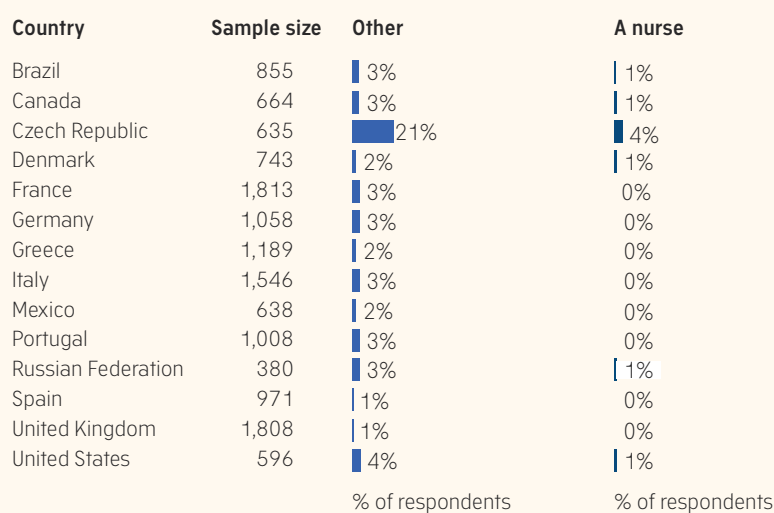
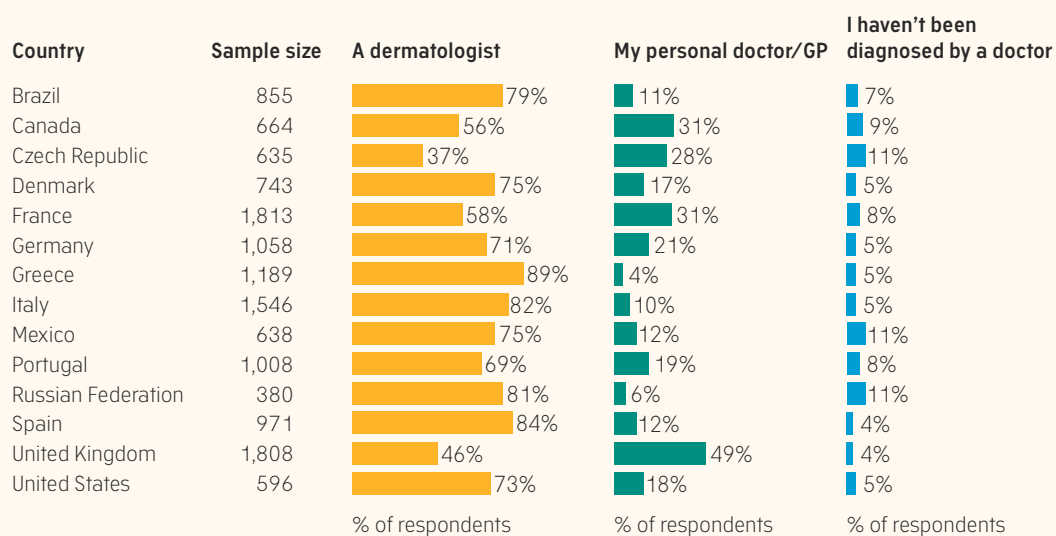
**Figure C.3:** Healthcare Professional institution by country

“Is your primary healthcare professional for your psoriasis?”



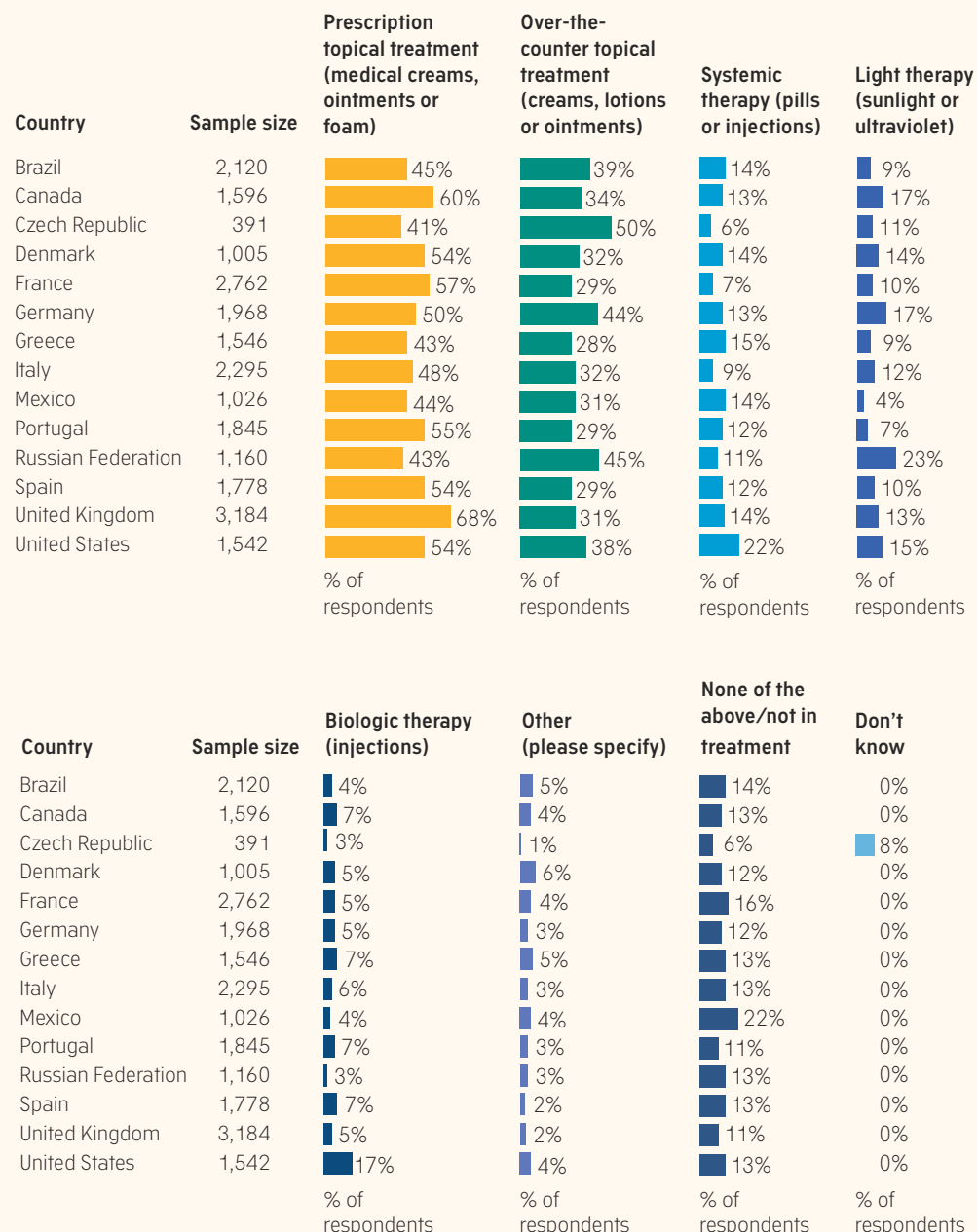
**Figure C.4:** Distribution of who has diagnosed their psoriasis (please note this report is based on self-reported psoriasis)

“Has your psoriasis been diagnosed by:”



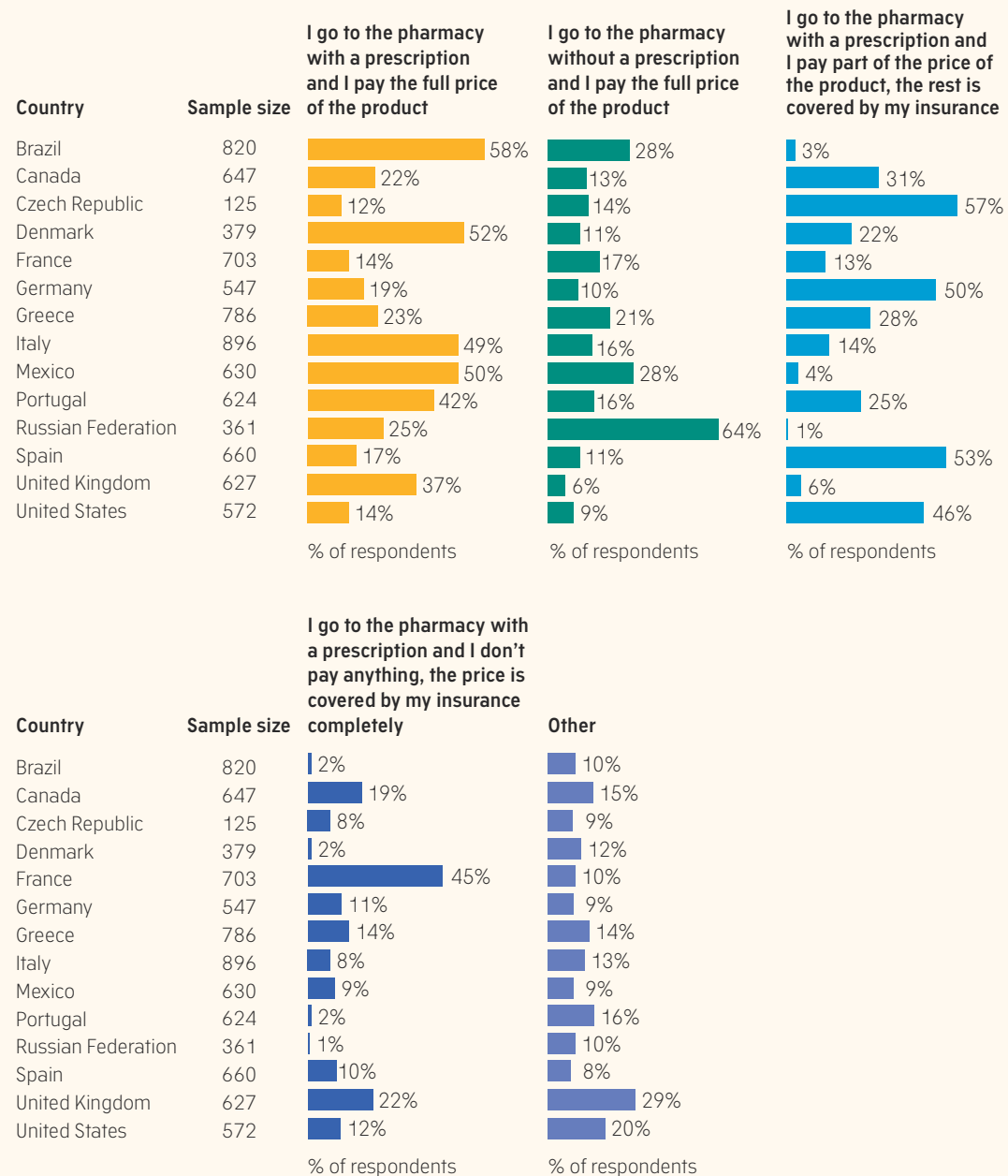
**Figure C.5:** Distribution of treatment type by country

“Which of the following forms of treatments are you currently using (you may use more than one)?”



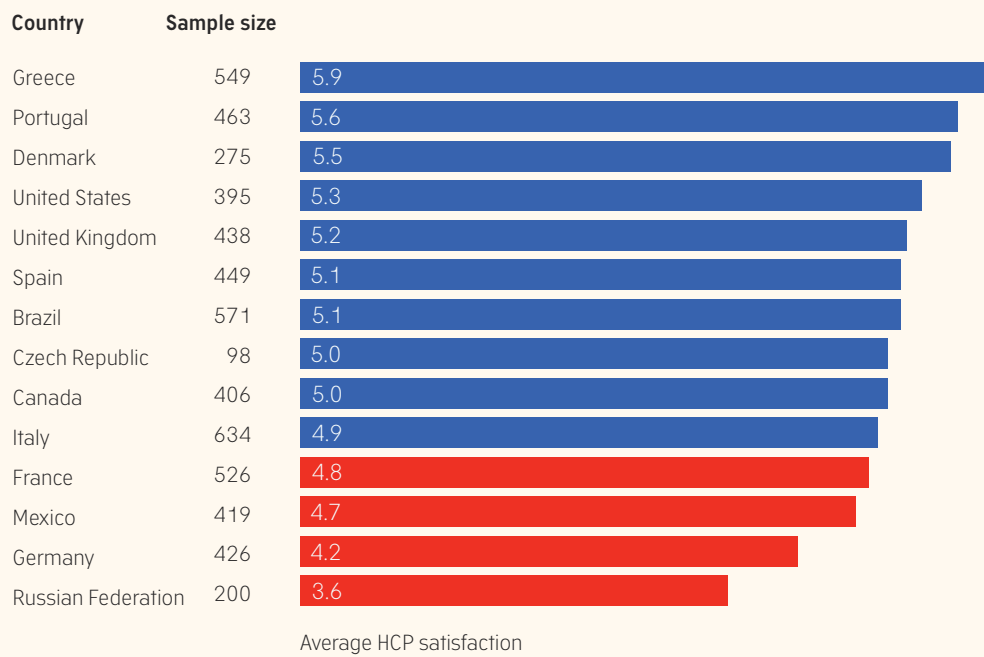
**Figure C.6:** Distribution of how people get and pay for their treatment

“When getting your treatment, which of the statements below best fits your situation?”



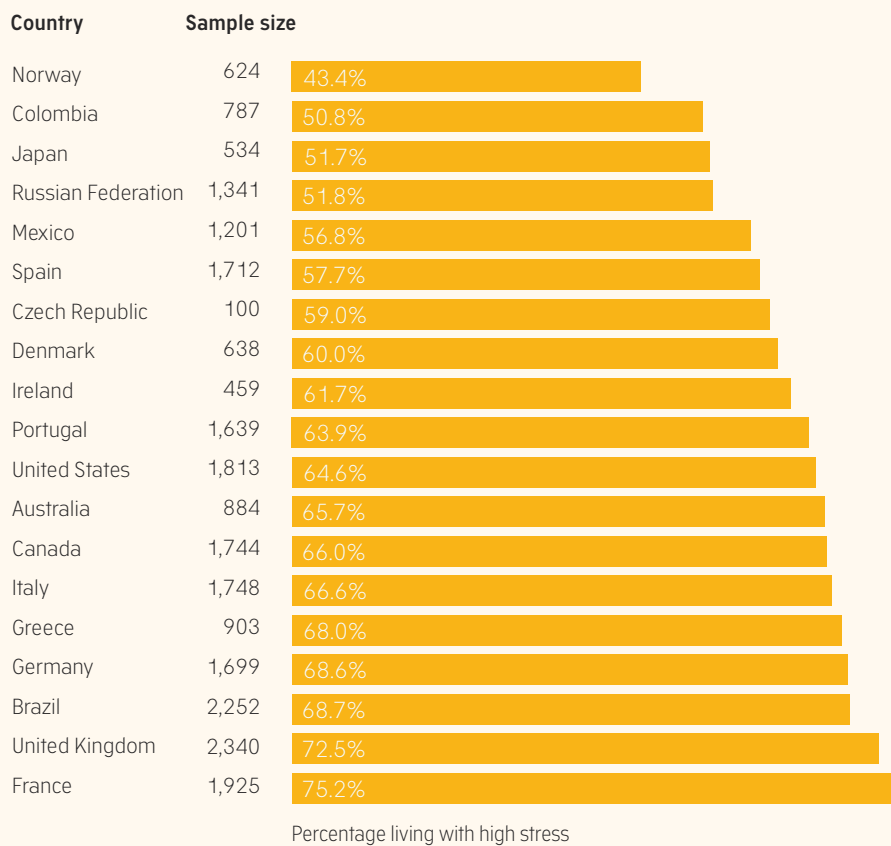
**Figure C.7:** Average levels of satisfaction with healthcare provider in relation to psoriasis by country, as measured on a scale from 0-10

“On a scale from 0 to 10, how satisfied are you overall with your healthcare provider in regards to your psoriasis?”



# Levels of self-reported Stress & Loneliness

**Figure D.1:** Percentage of people living with high stress<sup>1</sup>

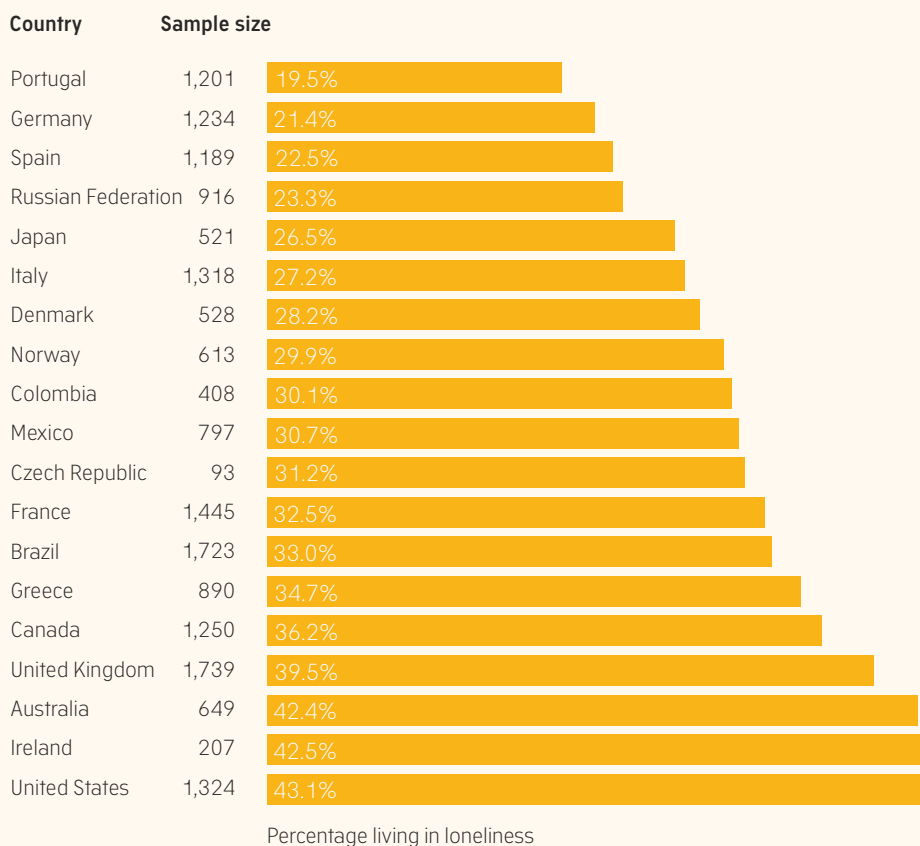


<sup>1</sup> In this case, "high stress" is characterised by a score of 20 or higher on Cohen's Self-perceived Stress Scale. This scale consists of 10 questions related to how the respondent experiences life events and gives an indication of the general resilience of the respondent. The Perceived Stress Scale is not suitable to give an actual stress diagnosis of the individual, but is often used to evaluate and address stress levels in sub-groups of the population.

Source: Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24, 385-396.



**Figure D.2:** Percentage of people living in loneliness. (The methodology employed for exploring loneliness was a revised version of the UCLA Loneliness Scale, considered by some the 'golden standard'. The methodology consists of three questions related to social isolation and loneliness<sup>2</sup>. The analysis of the results used the most conservative interpretation of the loneliness scores.<sup>3</sup>)



<sup>2</sup>The three questions are: "How often do you feel that you lack companionship?", "How often do you feel left out?", and "How often do you feel isolated from others?", all of which are answered with "often", "some of the time", or "hardly ever". Source: Hughes, M. E., Waite, L. J., Hawkey, L. C., & Cacioppo, J. T. (2004). A short scale for measuring loneliness in large surveys: Results from two population-based studies. *Research on Aging*, 26, 655-672.

<sup>3</sup>Examples of establishing a minimum score for loneliness: A total score of at least '4' (Chalise, Kai, & Saito, 2010), '6' (Hand et al., 2014; Shiovitz-Ezra & Ayalon, 2012) and '7' (Boehlen et al., 2014). We have picked the latter, which is the most conservative approach. It means that the respondents have to answer at least 'often' to one of the 3 questions and at least 'some of the time' to the other two.

Source: Boehlen, F., Herzog, W., Quinzler, R., Haefeli, W. E., Maatouk, I., Niehoff, D., et al. (2014). Loneliness in the elderly is associated with the use of psychotropic drugs. *International Journal of Geriatric Psychiatry*.