Executive Summary
During the last decade, there’s been a global paradigm shift in our understanding of progress. A nation’s progress cannot and should not be reduced to gross domestic product (GDP) per capita. Instead, the ultimate goal of public policies should be to improve quality of life.

In 2011, the United Nations passed the resolution on happiness. The same year, the OECD included life satisfaction as a parameter for the development of the member countries. It concluded that subjective well-being measures are valid and reliable and can be used to inform policy makers and citizens.

The World Psoriasis Happiness Report 2017 aims to shed light on what impacts the subjective well-being - interpreted as happiness - of people living with psoriasis.¹

We received input from 121,800 people with self-reported psoriasis across 184 countries on how living with this chronic illness impacts their well-being.

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### Executive Summary

The countries included in the detailed analysis in Chapters 2 and 3 have been grouped based on the definitions of EUROVOC and World Happiness Report² in the following regions³:

<table>
<thead>
<tr>
<th>Regions</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>LATIN AMERICA</td>
<td>Brazil, Colombia and Mexico</td>
</tr>
<tr>
<td>WESTERN EUROPE</td>
<td>France, Germany, UK and Ireland</td>
</tr>
<tr>
<td>THE NORDICS</td>
<td>Norway and Denmark</td>
</tr>
<tr>
<td>RUSSIAN FEDERATION</td>
<td>Russian Federation</td>
</tr>
<tr>
<td>SOUTHERN EUROPE</td>
<td>Spain, Portugal, Italy and Greece</td>
</tr>
<tr>
<td>NORTHERN AMERICA &amp; AUSTRALIA</td>
<td>USA, Canada and Australia</td>
</tr>
</tbody>
</table>

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¹ As presented in more detail in the Report, the diagnosis was self-reported by the participants in the study.
³ It is important to stress that these regions only serve as categories for the 19 countries included in the analysis, and thus only as indications of the regional performance. For a complete assessment of the regional performance we would need more country cases within each geographical region.
1) Psoriasis has an impact on happiness

Our study shows that living with psoriasis impacts people’s quality of life across a wide spectrum of subjective well-being indicators. When people report severe symptoms, they also report lower levels of happiness.

Using the World Happiness Report 2017 as a benchmark, our study shows that people living with severe psoriasis in some countries report 30% lower levels of happiness than their fellow citizens. What stands out is the particular ranking of all 19 countries according to their average happiness levels.

Countries that don’t make the top 10 in the annual UN World Happiness Reports – such as Colombia, Brazil, Mexico and Spain – rank as the top countries, when considering the group of people living with psoriasis. Correspondingly, Norway and Denmark – the two happiest countries in the world according to the World Happiness Report – are listed as number 9 and 14, respectively. With an average happiness score of 5.65 for people living with psoriasis in Denmark and 5.99 in Norway, the selected countries in the Nordics become subject to the largest happiness gaps considering that the general populations in these countries report an average happiness level of 7.5.

‘It is surprising to see that Norway and Denmark, which have recently been named as the world’s happiest countries in the two most recent annual UN World Happiness Reports, had the biggest happiness gaps among those living with psoriasis, compared to other countries in our research,’ said Meik Wiking, CEO of the Happiness Research Institute. ‘There were similar, large gaps in other countries that have consistently scored high on the UN’s global happiness index, so it could indicate that the negative impact of chronic health conditions may be flying under the policy radar of otherwise healthy and happy societies and leaving people behind.’
2) Psoriasis reduces the happiness of women more than men

While both men and women with psoriasis are very much affected physically, emotionally and psychologically, the impact on women is greater. Compared to their countrymen and countrywomen, men and women living with severe psoriasis report respectively 11.3% and 18.5% lower levels of happiness. However, for moderate severity the difference was marginal. In addition, women consistently reported higher levels of stress and loneliness than men.
The different symptoms of psoriasis - such as scaling, itchiness and trouble walking - have very different effects on happiness. While ‘scaling’ is associated with 11.7% lower happiness levels, ‘trouble walking’ is associated with 22% lower happiness levels compared to the average population. This pattern is consistent across the different levels of severity.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Avg. Happiness Gap for people reporting the following symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scaling</td>
<td>-11.7%</td>
</tr>
<tr>
<td>Itching</td>
<td>-12.4%</td>
</tr>
<tr>
<td>Fragile Skin</td>
<td>-14.3%</td>
</tr>
<tr>
<td>Bleeding</td>
<td>-15.5%</td>
</tr>
<tr>
<td>Pain in Lesion</td>
<td>-17.6%</td>
</tr>
<tr>
<td>Pain in Joints</td>
<td>-17.6%</td>
</tr>
<tr>
<td>Trouble Sleeping</td>
<td>-18.3%</td>
</tr>
<tr>
<td>Trouble Walking</td>
<td>-22%</td>
</tr>
</tbody>
</table>

n = 6,903
Looking at the relationship between happiness levels and where on the body people have psoriasis, we find that psoriasis on the scalp is associated with a happiness gap of -7.5% while psoriasis on the genitals is associated to happiness gap of -12.9%.

This may be due to that psoriasis on intimate areas of the body may create physical or psychological challenges impacting people’s love lives.

Happiness gaps and body areas affected

- Scalp -7.5%
- Face -9.0%
- Neck -8.9%
- Shoulders -8.4%
- Chest -9.3%
- Back -9.8%
- Arms -8.5%
- Stomach -10.4%
- Thighs -12.8%
- Genitals -12.9%
- Anal area -11.2%
- Hands -10.1%
- Nails -9.2%
- Skin folds -9.6%
- Knees -11.9%
- Lower legs -11.5%
- Feet -12%

n = 43,686
5) Stress is the strongest psychological predictor of unhappiness for people living with psoriasis

We analysed a wide range of factors that impact well-being and found that stress is the best psychological predictor of unhappiness for people living with psoriasis. In all countries, the average stress level of people living with psoriasis exceeds that of the general population in the United States (15.2 on a scale from 0 to 40)\(^4\). Also, in the majority of countries the average level is even higher than what is considered high stress (scores above 20). In addition, we find that stress is a non-discriminating factor, in the sense that it affects people living with psoriasis regardless of demographics, socioeconomic status and severity.

Furthermore, of all daily emotions and experience - both positive and negative - distress is the most common among people with psoriasis. 60% report feeling distressed in a moderate to extreme degree in their daily life.

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**EXECUTIVE SUMMARY**

Stress levels per country

- **Average Stress Score**
  - Colombia
  - Russian Federation
  - Colombia
  - Mexico
  - Denmark
  - Brazil
  - United States
  - Australia
  - Canada
  - Ireland
  - Germany
  - Italy
  - Portugal
  - Greece
  - United Kingdom
  - France

- **20: High Stress**

- **15.2: US general population**

Percentage of people who feel distressed in a moderate to extreme degree in their daily life - per country

- **n = 9,656**

- **43%**
  - Spain
  - Russian Federation
  - Colombia
  - Mexico
  - Portugal
  - Italy
  - Brazil
  - United States
  - Australia
  - United Kingdom
  - Ireland
  - Germany
  - Canada
  - Denmark
  - France
  - Greece

- **91%**
  - France
  - Greece

- **n = 5,161**
6) Loneliness is widespread among people living with psoriasis

Using the most conservative threshold for loneliness, we find that 33% of all people living with psoriasis are lonely. It impacts their happiness levels and it is the second strongest predictor of unhappiness after stress.

The levels of loneliness vary a lot between the different countries from 21% in Portugal to 48% in the United Kingdom. Furthermore, loneliness is not only non-discriminating in terms of countries, it also affects people regardless of their age, disease severity and socioeconomic status.

The percentage of people living with loneliness varies a lot between the different countries

21% to 48%

From 21% in Portugal to 48% in the United Kingdom

33%

33% of all people living with psoriasis are lonely
Our study shows that living with psoriasis has a major negative impact on happiness, well-being and quality of life. Compared to national averages, people living with severe psoriasis are subject to happiness gaps, from 7.3% less happy in Portugal to 37.4% in Australia.

However, the happiness gaps vary a lot, including cases of positive happiness gaps, notably in Portugal and Greece.

We have identified two assumptions that could explain the variation:

- **The culture assumption**: the countries characterized by small happiness gap are characterized as collectivistic; correspondingly, the countries characterized by large happiness gap can at the same time be characterized as individualistic.

- **The social comparison assumption**: people with a debilitating condition find it harder to live in an otherwise happy country - explaining the higher prevalence of mental health issues and even suicide rates in richer and happier regions.

### Countries vary in the level of well-being inequality due to psoriasis

Happiness gaps for severe psoriasis - per country

<table>
<thead>
<tr>
<th>Country</th>
<th>n</th>
<th>Average Happiness Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portugal</td>
<td>176</td>
<td>-7.31%</td>
</tr>
<tr>
<td>Colombia</td>
<td>251</td>
<td>-8.99%</td>
</tr>
<tr>
<td>Greece</td>
<td>61</td>
<td>-8.63%</td>
</tr>
<tr>
<td>Spain</td>
<td>332</td>
<td>-9.09%</td>
</tr>
<tr>
<td>Mexico</td>
<td>246</td>
<td>-15.11%</td>
</tr>
<tr>
<td>Brazil</td>
<td>258</td>
<td>-25.12%</td>
</tr>
<tr>
<td>Ireland</td>
<td>72</td>
<td>-26.02%</td>
</tr>
<tr>
<td>United States</td>
<td>182</td>
<td>-27.36%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>114</td>
<td>-27.58%</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>266</td>
<td>-27.61%</td>
</tr>
<tr>
<td>Italy</td>
<td>180</td>
<td>-30.04%</td>
</tr>
<tr>
<td>France</td>
<td>150</td>
<td>-31.00%</td>
</tr>
<tr>
<td>Denmark</td>
<td>69</td>
<td>-34.31%</td>
</tr>
<tr>
<td>Norway</td>
<td>24</td>
<td>-35.32%</td>
</tr>
<tr>
<td>Canada</td>
<td>129</td>
<td>-35.61%</td>
</tr>
<tr>
<td>Germany</td>
<td>68</td>
<td>-37.95%</td>
</tr>
<tr>
<td>Australia</td>
<td>63</td>
<td>-37.41%</td>
</tr>
</tbody>
</table>

7) Countries vary in the level of well-being inequality due to psoriasis
8) Happiness gaps may be reduced by improving the understanding of how psoriasis impacts well-being

Our data suggest that increasing the understanding of how psoriasis impacts well-being - especially stress and loneliness - may take us quite far in bridging these health related happiness gaps.

48% feel that their healthcare professionals do not fully understand the impact psoriasis has on their mental well-being and experience happiness gaps of 21%. Meanwhile, the 52% who feel that their healthcare professionals fully understand the impact psoriasis has on their mental well-being only experience happiness gaps of 3%.
9) Up to 35.6% of people with psoriasis can be lifted out of misery by reducing extreme stress

In order to identify the most affected people – which we label as people in misery – we pinpoint those who have assigned themselves low scores on our main well-being measure – Cantrill’s Ladder, (the 11-point scale where scores range from 0 - 10.) Our approach is consistent to that of the The World Happiness Report, where people in misery are identified as everyone who scores themselves between 0 and 4 on the same scale.5

We find that people experiencing stress while living with psoriasis are 23% more likely to be in misery (report a happiness score of 0-4). At the same time, analysing what factors would reduce the number of people living in misery makes a compelling case for particularly reducing stress levels across all regions.

If we could ensure that no people living with psoriasis experience extreme stress6, we could reduce the number of people living in misery by up to 35.6%. The evidence again suggests that the effects vary between regions, however, it is clear that reducing the most extreme cases of stress can lift a lot of people out of misery, regardless the region we investigate.

### How many can be lifted out of misery by eliminating extreme stress

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin America</td>
<td>29.70%</td>
</tr>
<tr>
<td>Southern Europe</td>
<td>20.90%</td>
</tr>
<tr>
<td>North America &amp; Australia</td>
<td>25.40%</td>
</tr>
<tr>
<td>Western Europe</td>
<td>35.60%</td>
</tr>
</tbody>
</table>

**Method:**

These numbers reflect the percentage of people who can be lifted out of misery based on the total number of people in misery. In Western Europe 11.3% of the total population can be lifted out of misery by eliminating extreme stress, and considering that 31.7% are living in misery, a 35.6% of the people in misery can be lifted out of that situation - 0.113/0.317 * 100 = 0.356

n= 7,310

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5 This approach is also consistent with the Gallup classification, where 0-4 are defined as ‘suffering’
6 Extreme stress is a conservative stress threshold: Scores above the median score in each region. For Latin America, this encompasses all respondents with a score above 21; in Southern Europe 22; in Northern America and Australia 23 and in Western Europe 24. As these stress-thresholds are much higher than the threshold provided by the original measure (A stress score of 20) we choose to label this new threshold ‘extreme stress’.
EXECUTIVE SUMMARY

10) Up to 12.9% of people with psoriasis can be lifted out of misery by reducing extreme loneliness

The prevalence of loneliness and effect varies between regions. However, the impact of loneliness should not be neglected as up to 12.9% people with psoriasis can be lifted out of misery by reducing the extreme loneliness. If we consider loneliness and stress as ‘psychological drivers’, a reduction of these together would lift more people out of misery than anything else – no matter which region we target.

<table>
<thead>
<tr>
<th>Region</th>
<th>Lifted Out of Misery (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin America</td>
<td>18.60%</td>
</tr>
<tr>
<td>Southern Europe</td>
<td>7.50%</td>
</tr>
<tr>
<td>North America &amp; Australia</td>
<td>13.40%</td>
</tr>
<tr>
<td>Western Europe</td>
<td>12.90%</td>
</tr>
</tbody>
</table>

n = 7,310

Limitations of methodology - summary

**Diagnosis and severity classification**
The participants in the study self-reported both their diagnosis and severity of psoriasis.

**Data collection and sampling**
All data is collected by Self-Administered Questionnaires (SAQs), provided through an app and a web-based (browser enabled) app. Therefore we must consider both coverage errors (where we fail to reach some certain segments) and non-response bias (due to preferences for certain modes among respondents). Furthermore, survey modes also become important to consider when we compare our data to data collected by different modes. Because a robust and demographically well-distributed sample can reduce the impact of these errors, we will continue to further refine our methodology to include control variables and weights.

See the full report for more details on Limitations of the study and Methodology.