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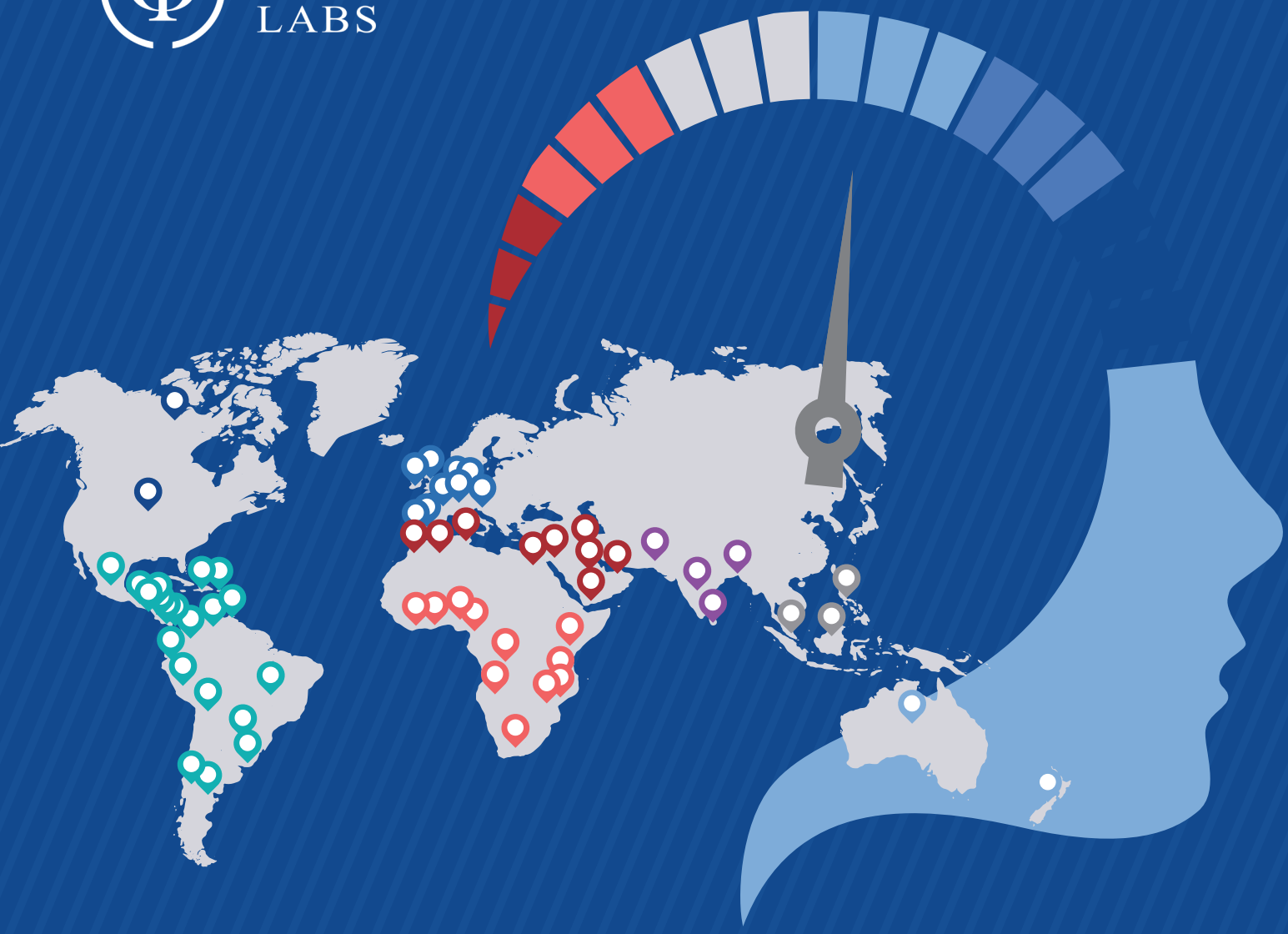

The Mental State of the World in 2022

A publication of the Mental Health Million Project

March 1, 2023

Dear Reader,

We are happy to present the 3rd year of the Mental State of the World report, providing a view of the mental wellbeing of the Internet-enabled world. This report aggregates data acquired in nine languages from almost 500,000 people across 64 countries in 2022, a substantial expansion over 2021 making it now the largest database of comprehensive mental wellbeing profiles in the world.

Here are the highlights: In 2022 mental wellbeing remained the same as in 2021 showing no recovery following the substantial 2-year decline associated with the COVID-19 pandemic. As at the peak of the pandemic, almost a third of this population still struggled with their mental health, and young adults age 18-24 were five times more likely to have mental health challenges compared to their grandparents' generation. This pattern, apparent even prior to the pandemic, represents a sharp reversal of patterns documented prior to 2010, indicating a dramatic decline in mental wellbeing with each younger generation rather than an increase in wellbeing as we age.

The most dramatic decline from older to younger generations has been along the dimension of the *Social Self*, a metric of the way we see ourselves and our ability to form and maintain relationships with others. In 2022 we probed the state of family relationships and friendships and highlight here their progressive degradation over generations as one driving factor. Younger adults report increasingly higher rates of family instability and conflict and lack of love and emotional warmth during childhood, despite growing rates of material support by their parents and investment in their accomplishments. They are also three times more likely to have poor adult family relationships compared to their parents' generation and twice as likely to lack friends who will help them in times of need. Poignantly, those with poor family relationships and no close friends are ten times more likely to suffer from significant mental health challenges than those with many close family bonds and friendships.

These data suggest that we have not fully appreciated the profoundly relational nature of the human psyche. Importantly, it invites each of us to reflect on our role in the growing social disintegration. What have we valued and why? Where have we focused our attention? And with finite time, just how much have we cast aside an active commitment to love or social nurturing for material success or even just mindless scrolling of the Internet? We can't change the past, but with some collective reflection perhaps we can change how it plays out for future generations.

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A report of the Mental Health Million project

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Executive Summary

This Mental State of the World report provides insight into the mental wellbeing of Internet-enabled populations around the globe in 2022 across 64 countries in the Core Anglosphere, continental Europe, Latin America, the Arab world, South and South East Asia and Africa based on responses to the Mental Health Quotient (MHQ) assessment in English, Spanish, French, Arabic, Portuguese (European and Brazilian), German, Swahili and Hindi. The assessment provides an aggregate metric of mental wellbeing (the MHQ) as well as multiple dimensional views.

Key findings this year are as follows:

- **The global MHQ average was 64** in the category "Managing" in the lower half of the positive scale.

- **In the aggregate, the highest mental wellbeing was largely in Spanish-speaking Latin America although Tanzania topped the list at 94**. At the bottom were the United Kingdom, South Africa and Brazil with MHQ scores between 46 and 53.

- **Mental wellbeing stays largely the same compared to 2021** across the majority of countries tracked in previous years showing little to no recovery from the Covid-19 pandemic years during which average MHQ scores declined 32 MHQ points (11% of the scale).

- **The dimension of *Social Self* is the most challenged across the world** followed by *Mood & Outlook*, **and has the largest drop from older to younger generations**. The regions of Latin America, South and South East Asia see the greatest deterioration in the *Social Self* from older to younger generations with Peru and India topping the list.

- **Family relationships are increasingly disintegrating across the globe**. The youngest generation of adults are half as likely to be close to their adult families and three times more likely to not get along with them at all relative to their grandparents' generation.

- **The fraying of adult family relationships may have its origins in changing childhood experience**. The percentage who report growing up in stable, loving homes declined three-fold from older to younger generations, although having material comfort and parents invested in their accomplishments grew.

- **Friendships too, are deteriorating**. While younger generations do not consistently report fewer close friends, they are less likely to be able to confide in their friends or rely on them for help when they need it.

- **The risk of mental health challenges is ten times higher among those who lack close family relationships and friendships compared to those with many close family and friends**. For each individually, the difference was about 5-fold suggesting an additive impact of family and friends.

Altogether this year's report describes a global population still mentally scarred by the pandemic years, highlights the global deterioration of the *Social Self* in younger generations, and quantifies the globally diminished bonds of family and friendship that may lie at its core. While many factors such as the Internet are likely to contribute to the diminishing *Social Self* and bonds of family and friendship, one significant factor may also be cultural trends in parenting that trade off warmth, love and stability for greater focus on material comfort and accomplishments.

As always the data is freely available to academic researchers and we invite deeper analysis of the relationships between factors.

Introduction

Our collective mental wellbeing in 2022

The Mental State of the World report is the annual report of the Mental Health Million Project and provides a comprehensive view of the evolving mental wellbeing of the Internet-enabled world and insights into significant underlying trends. As of January 2022, there were 4.95 billion active Internet users worldwide, representing 62% of the global population. 2022 was the third year of the project and consolidates responses from 407,959 people during the year across 64 countries spanning a wide range of demographic groups in the Core Anglosphere, Continental Europe, Latin America, South and South East Asia, West and North Africa with translations in English, Spanish, French, Arabic, Portuguese (European and Brazilian), German, Swahili and Hindi.

It is important to keep in mind that trends reported here are not likely to be reflective of offline populations who typically live in a different context. This is particularly relevant for developing countries such as those in Africa where the Internet-enabled population are a minority and generally represent higher socioeconomic groups or those who have achieved greater levels of education.

The Mental Health Million Project

The objective of the Mental Health Million Project is to provide an evolving global map of mental wellbeing, and enable deep insights into its drivers that can be used for more effective management of population mental wellbeing through evidence-based social policy and interventions. This project utilizes the Mental Health Quotient, or MHQ (Newson, Pastukh, & Thiagarajan, 2022; Newson & Thiagarajan, 2020), delivered as an open online anonymous survey that takes approximately 15 minutes to complete and returns overall wellbeing scores as well as a comprehensive report with tailored self-care and help-seeking recommendations via email. The MHQ has been demonstrated to relate systematically to productivity in work and life as well as clinical burden (Newson et al., 2022, see also Appendix 1) and is a functional reflection of how well-equipped we are to handle both life's adversities and opportunities. More information on the MHQ can be found **here**. Feel free to take it yourself.

Mental wellbeing on a spectrum from Distressed to Thriving

The MHQ assessment captures a comprehensive spectrum of emotional, social and cognitive attributes encompassing both problems (or symptoms) across 10 different mental health disorders (as defined by the DSM-5), as well as positive mental attributes. An aggregate mental wellbeing score based on these aspects (the MHQ) positions individuals on a spectrum from Distressed to Thriving (Newson et al., 2022; Newson & Thiagarajan, 2020). The scale is divided into positive and negative components. The positive range of the scale represents the spectrum of normal functioning, and is a 200-point scale calibrated to a mean of 100 based on pre-pandemic responses in 2019, similar to the IQ scale. The negative range of the scale represents mental wellbeing scores associated with a negative impact on the ability to function and is associated with clinical level risks and challenges. Six functional dimensions of *Mood & Outlook, Social Self, Drive & Motivation, Adaptability & Resilience, Cognition,* and *Mind-Body Connection* are also computed. In addition, the assessment captures information on demographics, lifestyle factors, friend and family dynamics, and traumas and adversities, providing a rich context for understanding key drivers of risks. You can learn more about the MHQ and its scale in Appendix 1.

Interpreting the MHQ

Mental wellbeing, a reflection of how we 'feel', is by its very nature subjective. The MHQ captures the perceptions of each mental aspect on a life impact scale. Thus, individual judgement of how much a mental aspect impacts our ability to function must necessarily be within our individual context. For one person this may mean being able to carry out a particular type of knowledge work, while for another it may mean managing a household or performing physical labor. Furthermore, each person will have in their own mind what appropriate functioning looks like. Thus, mental wellbeing, as we measure it, inherently reflects an individual's sense of how their inner state impacts their ability to function within their life context rather than an absolute of human mental function.

What's in this report

In this report we show mental wellbeing comparisons of 64 countries and regions, highlighting the dramatically lower mental wellbeing of younger (18-24) generations across the globe, one that largely reflects a decline of the *Social Self* with each younger generation.

Additionally, we focus on family relationships and friendships across the globe. The importance of friendship and family to mental health and wellbeing has been highlighted across multiple studies over the past few decades (Berkman, Glass, Brissette, & Seeman, 2000; Sroufe, Egeland, Carlson, & Collins, 2005; Thomas, Liu, & Umberson, 2017; Umberson & Montez, 2010). For example, longitudinal studies, tracking individuals from childhood through adulthood have shown how the warmth of family upbringing

can impact relationships people have during adulthood (Waldinger & Schulz, 2016), while others have shown how parental relationships and practices during adolescence have long-term consequences for people's wellbeing as young adults (Aquilino & Supple, 2001; Chen & Harris, 2019). In addition, having positive and supportive family relationships as a child creates a foundation for positive family relationship in adulthood (Ramos et al., 2022). Beyond family, studies have also shown that having a network of close friends is important for increasing happiness and wellbeing (Dunbar, 2018) and preventing loneliness (Nicolaisen & Thorsen, 2017) by providing the context for meaningful social connections and interactions (Cacioppo & Patrick, 2008).

However, evidence also suggests that feelings of loneliness are on the rise around the world (Buecker, Mund, Chwastek, Sostmann, & Luhmann, 2021), something exacerbated by the Covid-19 pandemic (Ernst et al., 2022) and other studies have documented the fraying of social relationships and communities in nations such as the United States (McPherson, Smith-Lovin, & Brashears, 2006; Putnam, 2000). With social relationships through kin and friendship being critical not only for mental health, but also physical health (Holt-Lunstad, Smith, Baker, Harris, & Stephenson, 2015), it's imperative that we better understand the characteristics that are most important to mental wellbeing, and how these are changing over time and across generations around the globe. Here we document trends in family relationships and friendships across the Internet-enabled world to determine the extent to which these factors contribute to the deterioration of the *Social Self*.

The descriptive analysis in this report represents the tip of the iceberg. The data from the Mental Health Million Project is freely available for academic research and we hope that it will interest researchers interested in changing sociocultural trends and the human experience to look more deeply at the trends and relationships between factors.

1. The Mental State of the Internet-Enabled World

In 2022, the Mental Health Million Project collected data on the mental wellbeing status of 491,196 Internet-enabled individuals across the globe. In this report, following data cleaning we report findings from 407,959 respondents from 64 countries with adequate data samples (Figure 1.1). This represents an expansion to 30 additional countries over 2021 arising from the addition of 5 new languages to now include English, Spanish, French, Arabic, Portuguese (European and Brazilian), German, Swahili and Hindi. Throughout this report we show two aggregated views, one that reflects geographic regions, and the other that reflects linguistic culture and heritage. These groupings are shown below.

Figure 1.1: **Countries and regions that form part of the 2022 report**

North America

Canada, United States

Europe

Austria*, Belgium, France, Germany, Ireland, Portugal, Spain, Switzerland*, United Kingdom

Middle East and North Africa

Algeria, Egypt, Iraq, Jordan, Morocco, Saudi Arabia, Tunisia, United Arab Emirates, Syria*, Yemen

Oceania

Australia, New Zealand

Latin America and Caribbean

Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica*, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Trinidad and Tobago, Uruguay, Venezuela

Sub-Saharan Africa

Angola, Cameroon, Cote d'Ivoire, Democratic Republic of Congo, Ghana*, Kenya, Mozambique, Nigeria, South Africa, Sudan*, Tanzania, Zimbabwe

South Asia

Bangladesh, India, Nepal*, Pakistan, Sri Lanka

South-East Asia

Malaysia, Philippines, Singapore

Language Groupings

Anglosphere (core)

English-speaking in United States, Canada, United Kingdom, Ireland, Australia, New Zealand, Jamaica, Trinidad and Tobago

Germanosphere

German speaking in Germany, Austria*, Switzerland*

Lusosphone

Portuguese speaking in Portugal, Brazil, Angola, Mozambique

Swahili

Kenya, Tanzania

Anglosphere (other)

English-speaking in India, Pakistan, Bangladesh, Sri Lanka, Cameroon, Ghana*, Malaysia, Nepal*, Philippines, Singapore, South Africa, Tanzania, Zimbabwe, Kenya, Nigeria

Hispanosphere

Spanish speaking in Argentina, Bolivia, Chile, Uruguay, Venezuela, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Spain, United States

Arabsphere

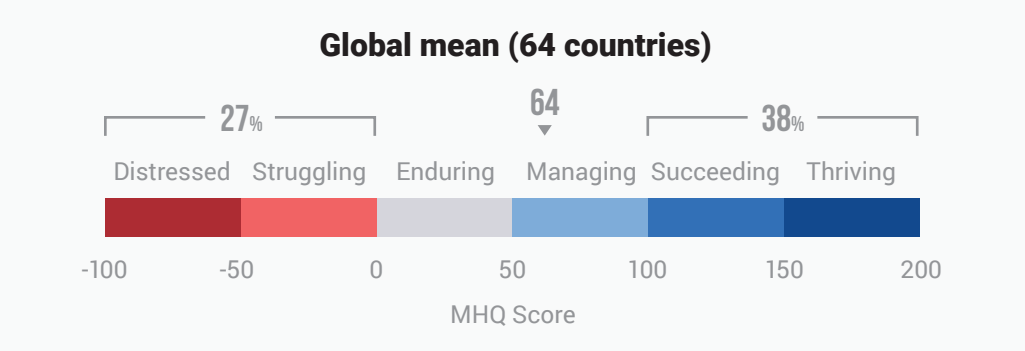
Arabic speaking in Algeria, Egypt, Iraq, Jordan, Morocco, Sudan*, Syria*, Tunisia, Saudi Arabia, United Arab Emirates, Yemen

Francosphere

French speaking in France, Belgium, Switzerland*, Canada, Algeria, Morocco, Tunisia, Cote d'Ivoire, Democratic Republic of Congo

* Countries with under 1000 respondents

The mental state of the world in 2022 relative to previous years



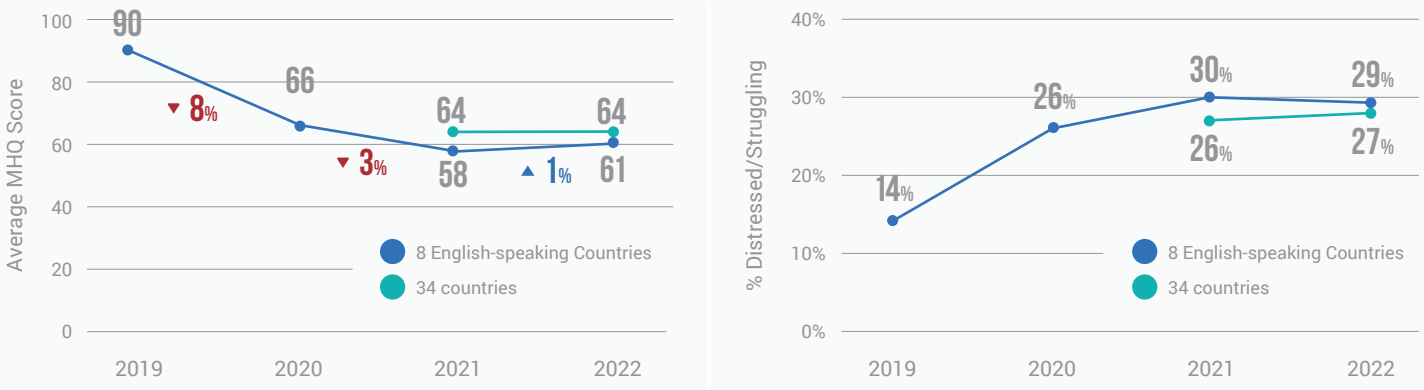
The average MHQ score across the 64 countries measured in 2022 was 64 on the 300-point MHQ scale as shown above. Across the spectrum of mental wellbeing 27% of respondents were Distressed or Struggling (MHQ scores of below 0, typically indicating 5 or more clinical symptoms according to the DSM-5), while 38% were Succeeding or Thriving (MHQ scores above 100).

The average MHQ score across the 64 countries measured in 2022 was 64 on the 300-point MHQ scale with 27% Distressed or Struggling and 38% Succeeding or Thriving (MHQ scores above 100).

Of these 64 countries, eight core English-speaking countries have been tracked since 2019 (Figure 1.2), with an additional 26 countries tracked since 2021. Across the eight English-speaking countries during the Covid-19 pandemic, the MHQ slid 24 points or 8% down the scale in 2020 and a further 8 points or 3% down the scale in 2021. In 2022, we see no further overall decline in these countries with an overall MHQ score of 61 and 29% Distressed or Struggling. However, there is also no recovery towards pre-pandemic levels and mental wellbeing in the aggregate remains at the same level as 2021. Similarly, for all 34 countries tracked in 2021, average MHQ remained constant at 64 and the percentage Distressed or Struggling shifted insignificantly from 26% to 27%.

Figure 1.2: **Mental wellbeing trends 2019-2022**

The mental wellbeing of 8 English-speaking countries tracked since 2019 showed little recovery after the dramatic fall of the Covid-19 pandemic years with only an insignificant upward movement of 1% of the MHQ scale with only 1% fewer people Distressed or Struggling. In the aggregate 34 countries tracked since 2021 showed no change in 2022.



In 2022, we see no further decline. However, there is also no recovery towards pre-pandemic levels and mental wellbeing in the aggregate remains at the same level as 2021.

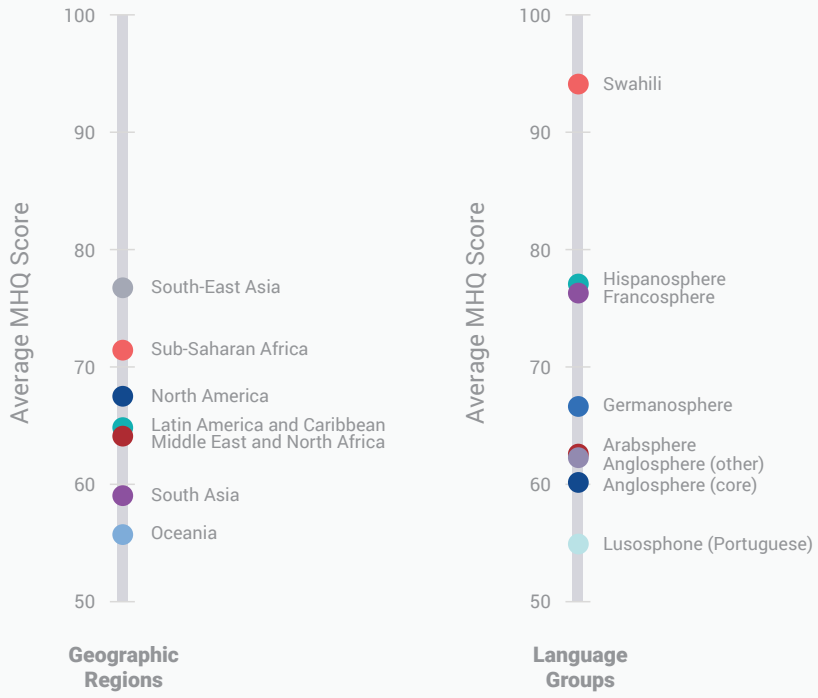
Mental wellbeing by regions and language groups

Regional views of the data are provided by geography and language groups (Figures 1.3 and 1.4; for details on construction of these regional views see Appendix 2). Regional analysis by geography showed average MHQ scores were highest in South East Asia and Sub Saharan Africa, while Oceania and South Asia showed the lowest overall mental wellbeing (Figure 1.3). Among language groupings Swahili (average MHQ of 94) and Spanish speaking (Hispanosphere; 77) populations had the highest MHQ

scores while Portuguese speaking populations (Lusophone, 55) and the Core Anglosphere (60) had the lowest. Conversely, the percentage of respondents who were Distressed or Struggling were highest in the geographical regions of Oceania and South Asia (31% and 29%, respectively) and in the Core Anglosphere and Portuguese speaking populations (29% and 32%, respectively) (Figure 1.4). Sub-Saharan Africa, South East Asia, Swahili and French-speaking populations showed the lowest portions of respondents who were Distressed or Struggling (all below 23%). Altogether, mental wellbeing was highest in Swahili-speaking Sub Saharan Africa, French-speaking North Africa, and English-speaking South East Asia, and lowest in the Core Anglosphere, English-speaking South Asia and Portuguese Latin America.

Figure 1.3: **Mental wellbeing across regions and language groups**

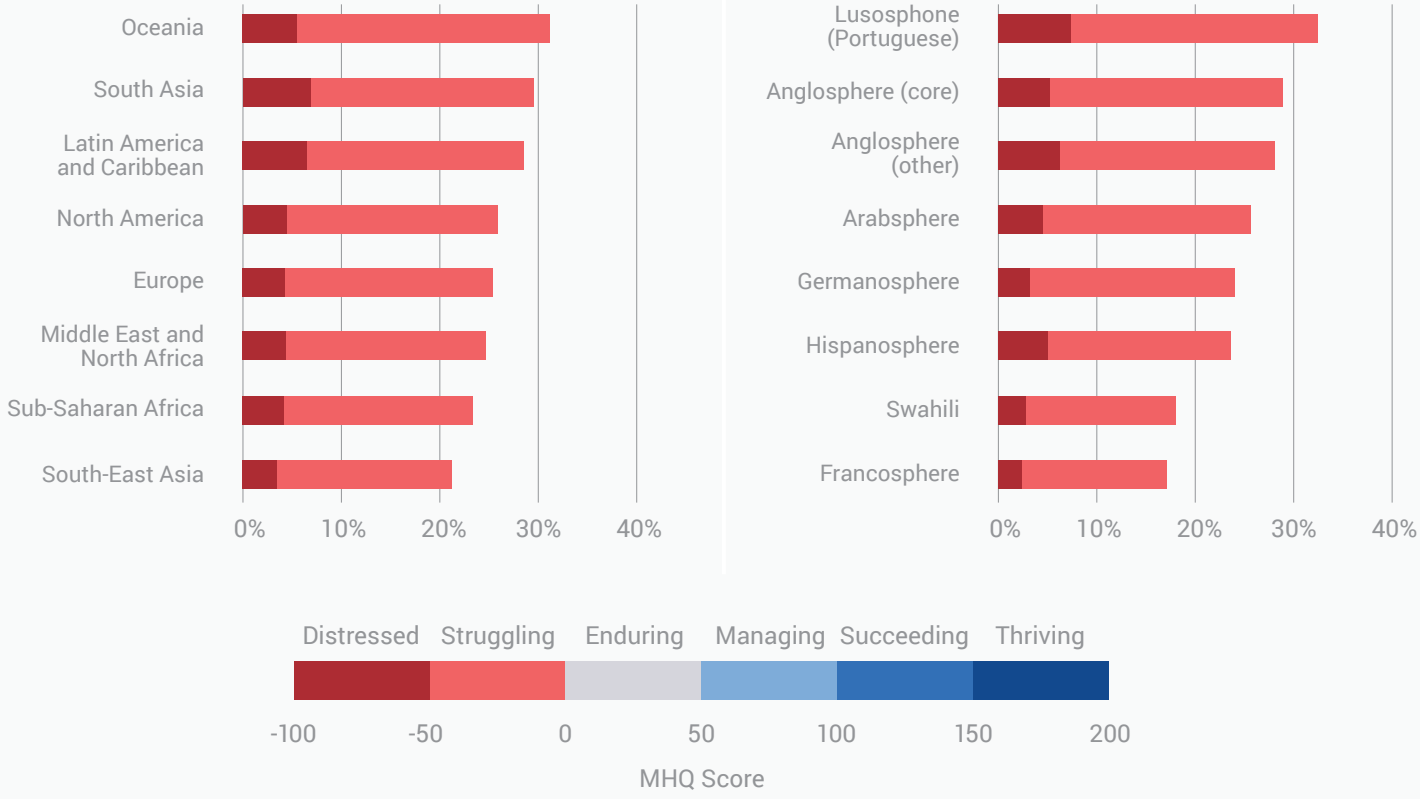
Average MHQ scores were highest in Swahili-speaking Sub-Saharan Africa and English-speaking South-East Asia and lowest in the Core Anglosphere, English-speaking South Asia and Portuguese Latin America.



Mental wellbeing was highest in Swahili-speaking Sub Saharan Africa, French-speaking North Africa, and English-speaking South East Asia, and lowest in the Core Anglosphere, English-speaking South Asia and Portuguese Latin America.

Figure 1.4: **Percentage Distressed or Struggling across regions**

The percentage of the Internet-enabled population that were Distressed or Struggling with their mental wellbeing (i.e. had negative MHQ scores indicating typically 5 or more clinical symptoms) varied across regions and language groups from 17% to 32%. Portuguese Latin America had the greatest percentage while Francophone North Africa, Swahili Sub Saharan Africa and English South East Asia had the lowest percentage.



We note once again that these are views limited to the Internet-enabled populations. Developing regions have low Internet penetration typically less than 50%, and in some countries in Sub Saharan Africa it is still as low as 22%. Thus, in these regions the Internet-enabled populations are not reflective of the overall population of the country but instead represent individuals who typically have greater levels of education and come from higher socioeconomic groups. In addition, cultural and language differences across countries are also likely to influence how people interpret and respond to survey questions and may also play a role in the differences between countries. Comparisons of whole country populations will therefore provide a very different view.

How countries rank

Figure 1.5 shows the ranking of 64 countries measured in 2022 based on MHQ scores that are a weighted average of each age and gender group in the proportion that they are represented in the country's population (see Appendix 2 for more information). Thus, differences in these demographics can play a role in the ranking position.

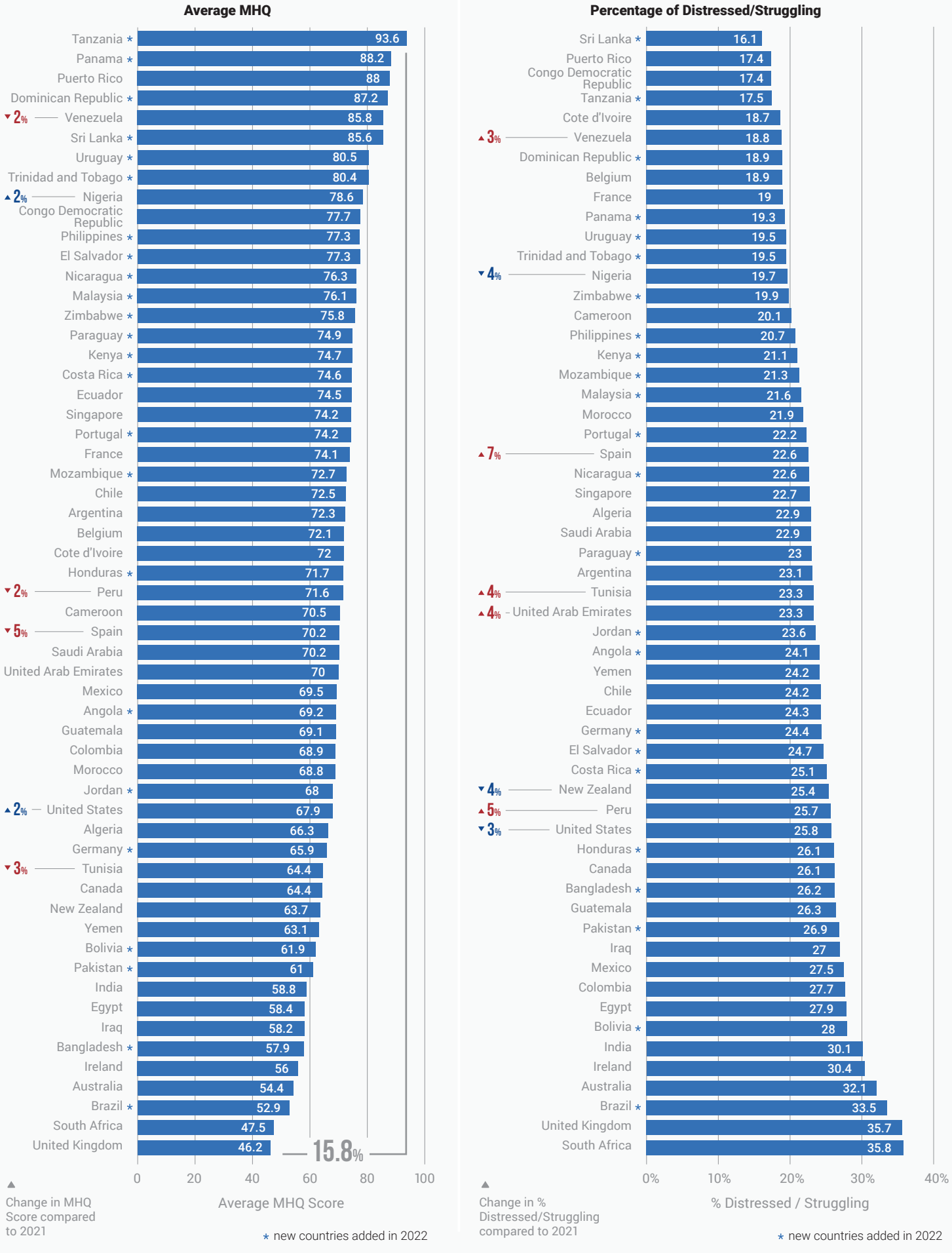
Within these parameters, Tanzania, Panama, Puerto Rico, Dominican Republic and Venezuela top the rankings with MHQ scores ranging from 86 to 94 (Figure 1.5 left). Ireland, Australia, Brazil, South Africa and the United Kingdom are at the bottom with MHQ scores ranging from 56 to 46. Overall, there is a 16% difference in the position of MHQ scores on the scale between the top and bottom ranked countries.

Tanzania, Panama, Puerto Rico, Dominican Republic and Venezuela top the rankings while Ireland, Australia, Brazil, South Africa and the United Kingdom are at the bottom

On the right are the percentages of respondents who were Distressed or Struggling in each country. While the pattern is similar to the pattern for average MHQ scores, there are some differences. While Puerto Rico, Tanzania and Sri Lanka have the lowest percentages of Distressed/Struggling, the Democratic Republic of Congo and Cote d'Ivoire also rank highly for this metric (Distressed/Struggling proportion ranging from 16 to 19%). At the other end, Ireland, Australia, Brazil, South Africa and the United Kingdom all show the greatest proportion of respondents who are Distressed or Struggling ranging from 30 to 36%. Compared to 2021, the majority of the 34 repeat countries remained the same or changed by a marginal 2% or less in both directions. The only notable change in average MHQ scores was for Spain (5% decline in MHQ scores compare to 2021), while Spain, Peru, United Arab Emirates, Tunisia all showed small increases in the proportion of Distressed/Struggling in the range of 4-5%.

Figure 1.5: **Mental wellbeing across countries**

Countries positioned in terms of average MHQ scores on the left and the percentage of the population Distressed or Struggling with their mental health on the right. Countries with the highest MHQ scores were Tanzania followed mainly by Spanish speaking countries. At the bottom end of these mental wellbeing rankings were mainly English-speaking countries and Brazil.



2. The global decline in younger generations

One of the most prominent trends in the Mental Health Million data over the years is the declining mental wellbeing with each successively younger generation. This is reflected in decreasing MHQ scores and a corresponding increase in percentage Distressed or Struggling with significant mental health challenges in each younger age group.

This trend is apparent in the Internet-enabled populations of every country measured from Africa to Asia, Europe to the Americas. The trend was already clear in data from 2019 prior to the Covid-19 pandemic. Given the Mental Health Million data alone, one interpretation could be that mental wellbeing simply increases with age. However, studies on psychological wellbeing prior to 2010 showed universally that young adults fared best in all countries and regions of the world measured (Stone, Schwartz, Broderick, & Deaton, 2010). This reversal points to a progressive global decline of younger generations since then, one that is corroborated by the growing suicide rates among young adults over the last decade or more (Twenge, Cooper, Joiner, Duffy, & Binau, 2019).

One of the most prominent trends in the Mental Health Million data over the years is the declining mental wellbeing with each successively younger generation, a decline that is most severe along the dimension of the Social Self, a measure of how we see ourselves with respect to others and our ability to form and maintain positive relationships with others.

Here we show in more detail the dimensional and geographic contours of this decline. We show that the decline is most severe along the dimension of the *Social Self*, a measure of how we see ourselves with respect to others and our ability to form and maintain positive relationships with others. A close second is the dimension of *Mood & Outlook*. We also show that English-speaking South and South East Asia as well as Latin America have the greatest collapse in *Social Self* scores across generations despite high scores overall, while Sub Saharan African countries are still relatively more stable across generations.

Globally young adults struggle with mental health far more than older generations

There is not a single region or language group or country where the decline in mental wellbeing across successively younger generations is not apparent. This translates into a dramatic increase in the percentage of each younger generation that are mentally distressed or struggling at a level that would qualify as clinical in nature or requiring of professional help.

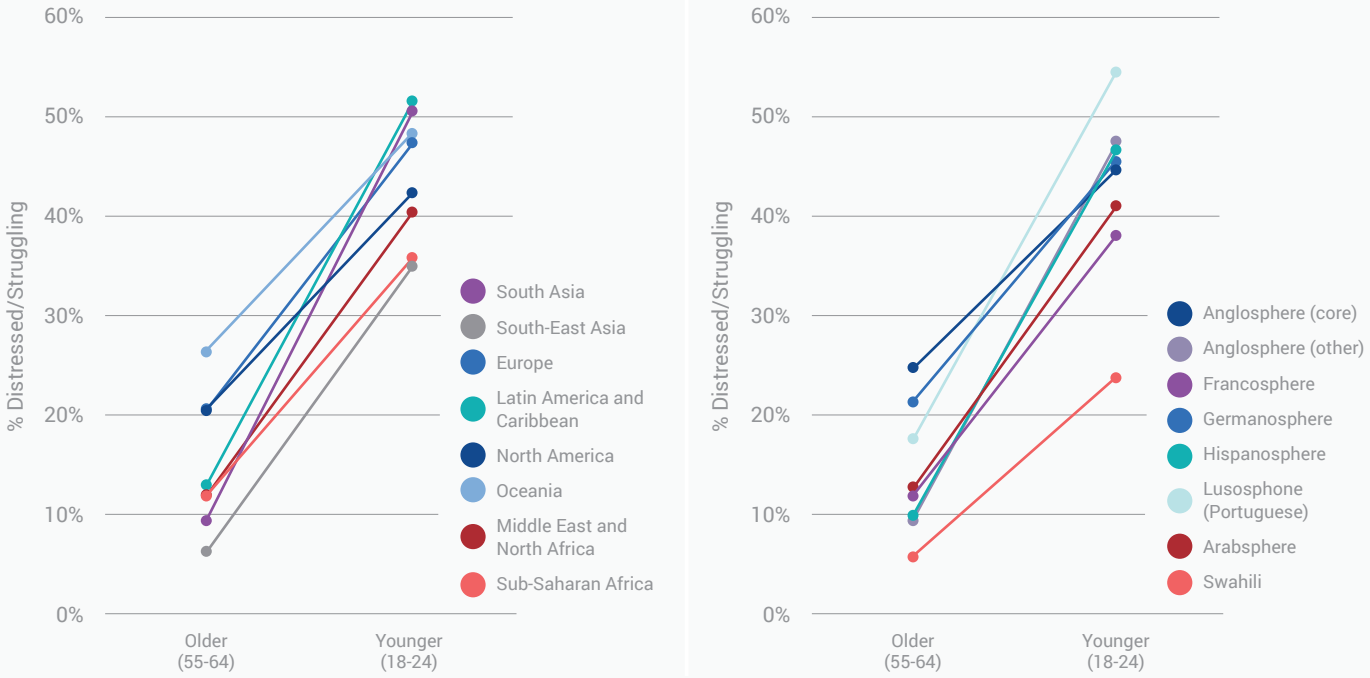
Below we show the percentage that are Distressed or Struggling across regions and language groups for two age groups, 55-64 and 18-24. The percentage Distressed or Struggling in the 18-24 age group was three to five times higher than in the 55-64 age group across all regions and language groups. Latin America (both Spanish and Portuguese) as well as English-speaking South Asia had the steepest increase from older to younger generations. For example, while only 10-12% of the 55-64 age group in Spanish-speaking Latin America and English-speaking South Asia were Distressed or Struggling in 2022, 45-50% were Distressed or Struggling among the 18-24 age group.

The percentage of the 18-24 age group Distressed or Struggling was three to five times higher than in the 55-64 age group across all regions and language groups.

The smallest increases in the percent Distressed or Struggling were in the Core Anglosphere and Swahili speaking Sub Saharan Africa, both growing 20%. However, while the Core Anglosphere had the highest percentage Distressed or Struggling in the 55-64 age group at 25% growing to 45% among those 18-24, Swahili speaking Sub Saharan Africa had the lowest percentage Distressed or Struggling in the 55-64 age group at 6%, growing to 24% among those 18-24.

Figure 2.1: **Globally young adults are three to four times as likely to struggle with their mental health as their parents' generation**

The percentage of those Distressed or Struggling with their mental health is dramatically higher among 18-24 year olds relative to 55-64 year olds across all regions and language groups. This differential in mental health is greatest among the Portuguese and Spanish speakers of Latin America and English speakers of South Asia.



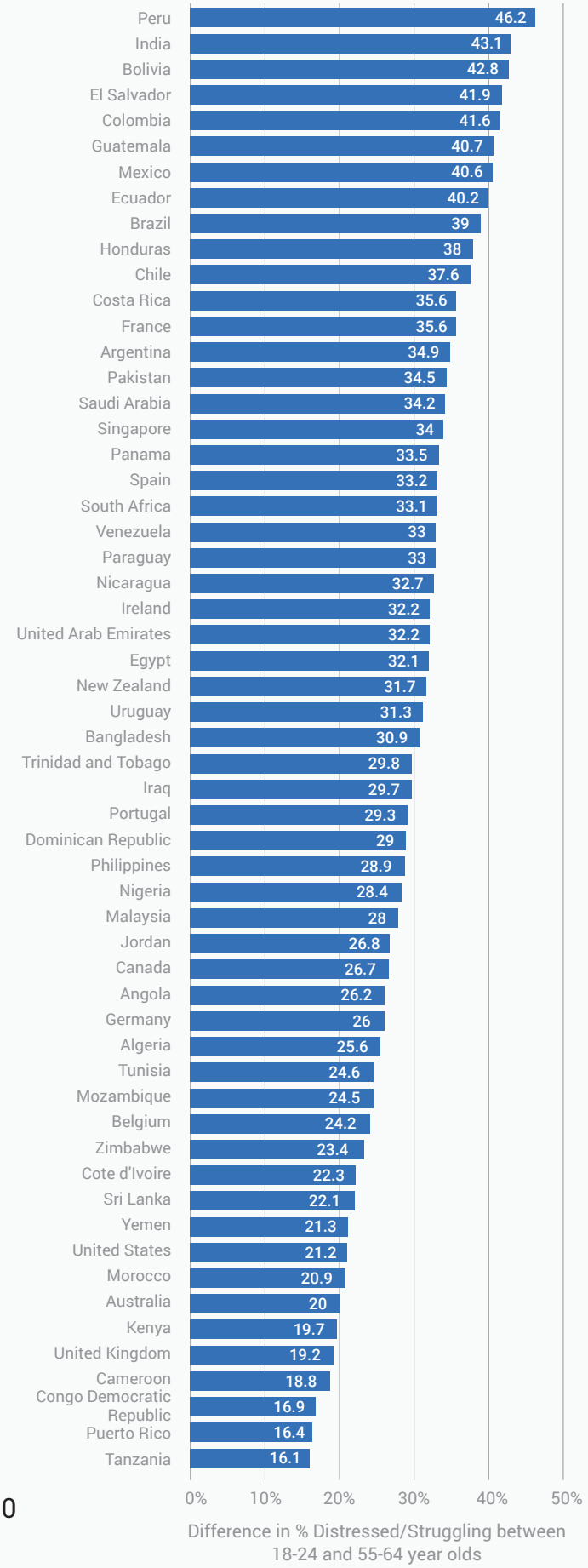
Among countries, nine of the ten with the greatest increase in the percentage Distressed or Struggling from older to younger generations were in Latin America. Peru held the top position with 46% more 18-24 year olds Distressed or Struggling compared to the 55-64 age group. The only country outside of Latin America in the top 10 was India which came in second on the list at 43%.

Latin America (both Spanish and Portuguese) as well as English-speaking South Asia had the steepest increase in the percentage Distressed or Struggling from older to younger generations.

In the bottom ten were a mix of countries largely from Sub Saharan Africa and the Core Anglosphere. Tanzania was the lowest at 16% followed by Puerto Rico, the Democratic Republic of Congo and Cameroon.

Figure 2.2: **Difference in mental health distress between older and younger generations by country**

Peru, India, Bolivia top the list with over 42% more young adults 18-24 Distressed or Struggling with their mental health compared to those aged 55-64. Tanzania, Puerto Rico and the Democratic Republic of Congo are the lowest with only ~16% more young people struggling relative to their parents' generation.



Dimensional scores across generations

Dimensional scores represent metrics relating to specific aspects of mental function. We compute scores for six dimensions of mental function. These include *Social Self, Mood & Outlook, Adaptability & Resilience, Drive & Motivation, Cognition* and *Mind-Body Connection*. Each dimensional score aggregates across a subset of the elements in the MHQ. Furthermore, some elements in the MHQ may contribute to more than one dimension.

Mood and Outlook

Your ability to manage and regulate your emotions effectively and to have a constructive or optimistic outlook for the future.

Social Self

How you interact with, relate to and see yourself with respect to others.

Drive and Motivation

Your ability to work towards achieving your desired goals and to initiate, persevere and complete activities in your daily life.

Cognition

Your ability to perform basic cognitive functions, make sense of complex sets of events and situations and display a longer-term perspective in your thoughts and behavior.

Adaptability & Resilience

Your ability to shift your behaviour and outlook in response to changing circumstances and cope with the challenges and setbacks that you encounter.

Mind-Body Connection

The regulation of the balance between your mind and body.

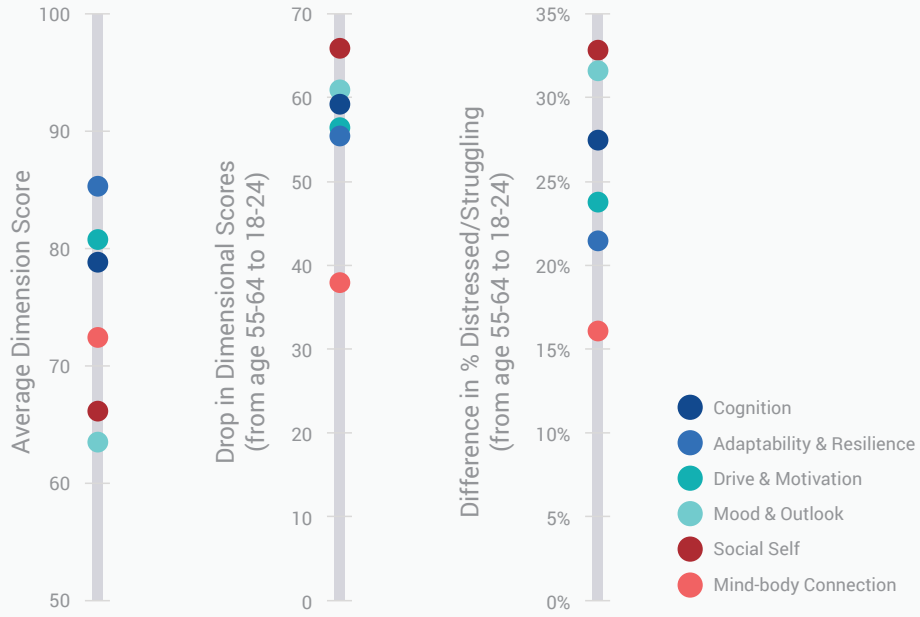
Across the global Internet-enabled population, average scores were highest for *Adaptability & Resilience* at 85 followed by *Drive & Motivation* at 81 and lowest for *Social Self* at 66 and *Mood & Outlook* at 63 (Figure 2.3).

Furthermore, the drop in MHQ points was highest for *Social Self* at 66. Correspondingly the increase in the percentage of young adults 18-24 struggling relative to those age 55-64 was also highest for this dimension at 33%. This was followed by *Mood & Outlook* as a close second.

Of all dimensions the drop in MHQ points was highest for Social Self at 66 MHQ points.

Figure 2.3: **Mental wellbeing across dimensions**

Globally the dimension of *Adaptability & Resilience* scored high while *Mood & Outlook* and *Social Self* scored the poorest. Among the dimensional scores *Social Self* has the biggest drop from older to younger generations. All differences shown are between the age groups of 55-64 and 18-24.



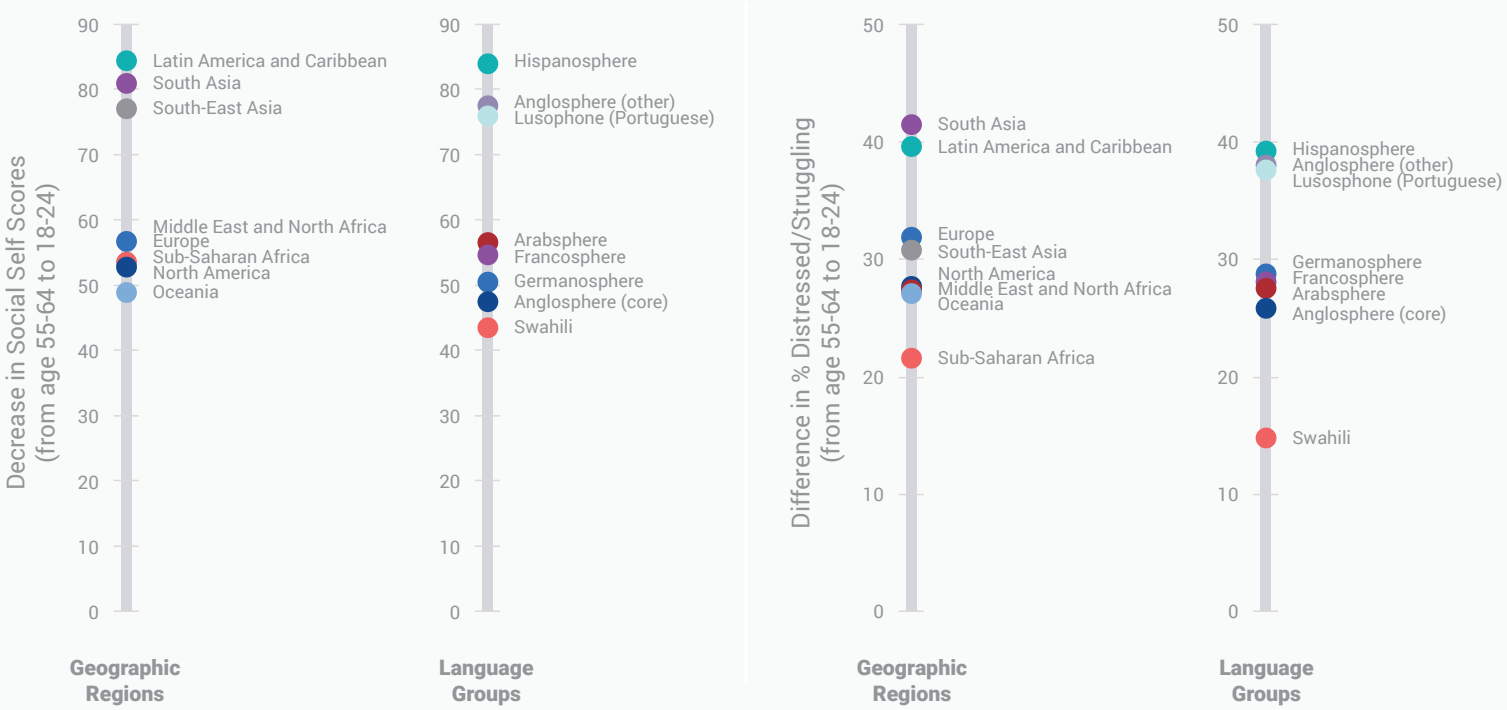
The decline in the Social Self: a geographic view

The geographic trends in the decline in *Social Self* across age groups are similar to those for overall mental wellbeing. Latin America and English-speaking South and South-East Asia form a distinct group with high decline of 77 to 84 *Social Self* points relative to other regions which ranged from 43 to 57. Here again Swahili-speaking Sub Saharan Africa shows the smallest decline. Thus, the overall decline in mental wellbeing is driven substantially by a deterioration of the *Social Self*.

Interestingly while the *Social Self* is highest in Asian and African countries that have been traditionally collectivist cultures, it is the English-speaking of these that are seeing the greatest deterioration.

Figure 2.4: **The generational decline of *Social Self* by Regions and Language Groups**

The *Social Self* has declined most substantially from older to younger generations in English-speaking South and South East Asia, Spanish and Portuguese Latin America and least among Swahili speakers of Sub-Saharan Africa.



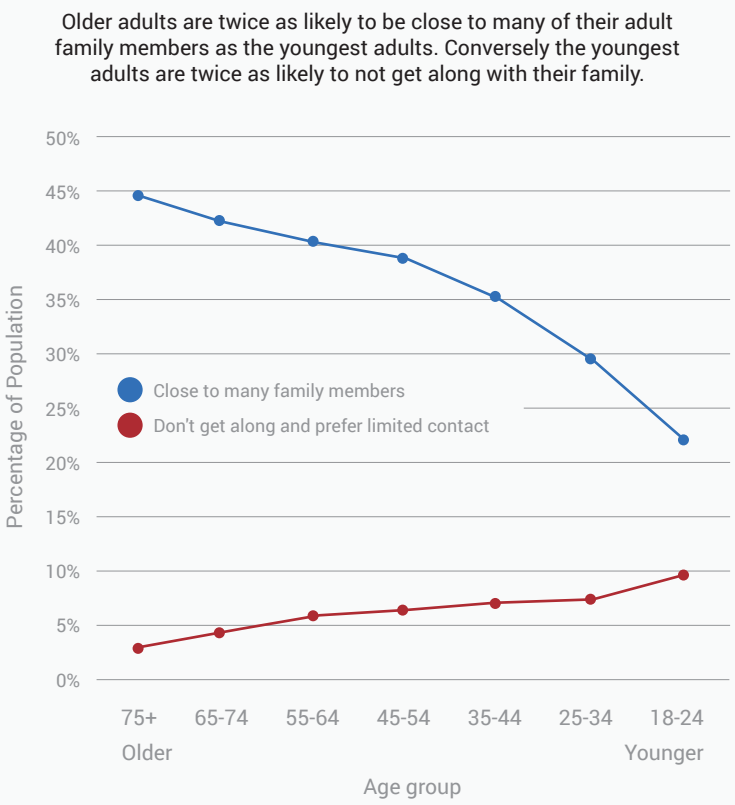
In the next sections we explore trends relating to family relationships and friendships to understand the nuances of the *Social Self* and its deterioration.

3. Family Relationships and Mental Wellbeing

The breakdown of the *Social Self* in younger generations reflects a breakdown of relationships, the sense of self and the sense of secure embeddedness within a social fabric. Our first relationships are with our family and many studies have shown a link between strong family relationships and happiness as well as other outcomes of life success (Martin-Joy et al., 2017; Ramos et al., 2022; Sroufe et al., 2005; Thomas et al., 2017; Waldinger & Schulz, 2016). Here we explore the nature of family relationships across generations and geographies to reveal a progressive deterioration in younger generations across the global Internet-enabled world. We also show the profound relationship between family bonds and mental wellbeing that suggests the breakdown of family relationships as a substantial contributor to the progressive decline of mental wellbeing in younger generations.

Trends in family closeness

Figure 3.1: **Relationship with adult family across age groups**



We asked in the MHQ how close people were to their adult families. Were they close to many of their family members or just a few? Did they get along with their families but were not close, or did not get along at all, preferring not to see them. Perhaps not surprisingly, across the globe, the percentage who reported being close to many members of their family decreased with each younger generation. On average only 22% of young adults 18-24 were close to their families compared to 44% of the oldest generation aged 75+, a two-fold difference. Conversely, 10% in the 18-24 age group did not get along with any of their family and preferred not to see them compared to only 3% of the oldest generation.

10% in the 18-24 age group did not get along with any of their family and preferred not to see them compared to only 3% of the oldest generation.

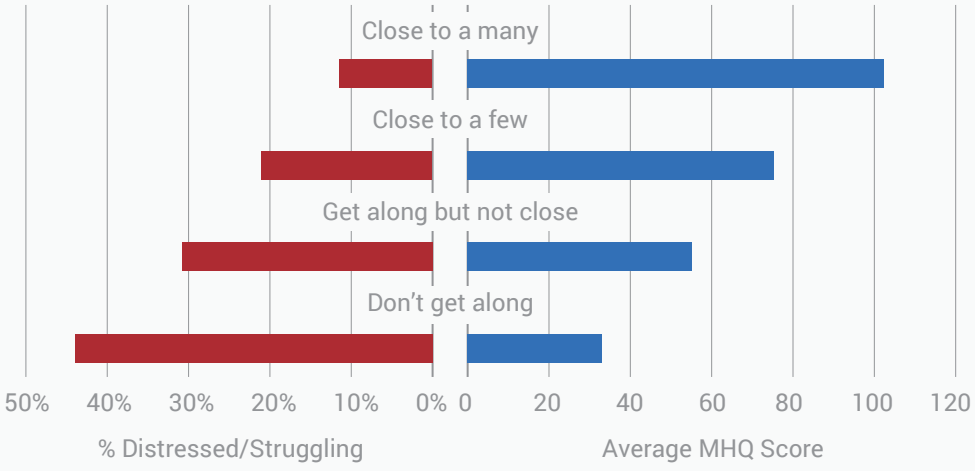
Family relationships and mental wellbeing

We looked at mental wellbeing across all adults for each answer group. MHQ scores were highest for those who were close to many of their family members with an average of 102, placed in the range we call 'Succeeding', and declining steadily to 33 for those who did not get along with any of their family, in the range we call "Enduring". Among those close to their families, 12% still struggled with their mental health. However, this was almost four times lower than the 44% of those who did not get along with their families. Thus, in the aggregate, the risk of mental health challenges are four times lower if you have close family relationships. This 70 MHQ point difference and four-fold differential in mental health struggles was consistent across all age groups. This is a profound difference in risk, twice that of the mental health risks associated with other factors such as lack of exercise, lack of education or unemployment.

In the aggregate, the risk of mental health challenges in adulthood are four times lower if you have close family relationships.

Figure 3.2: **Relationship with adult family and mental wellbeing outcomes**

Globally, those who have a close relationship with many of their adult family have an average MHQ score of 102 with only 12% struggling with their mental health. In contrast, those who do not get along with their family have an average MHQ score of 33 with 44% Distressed or Struggling.



Why is this so?

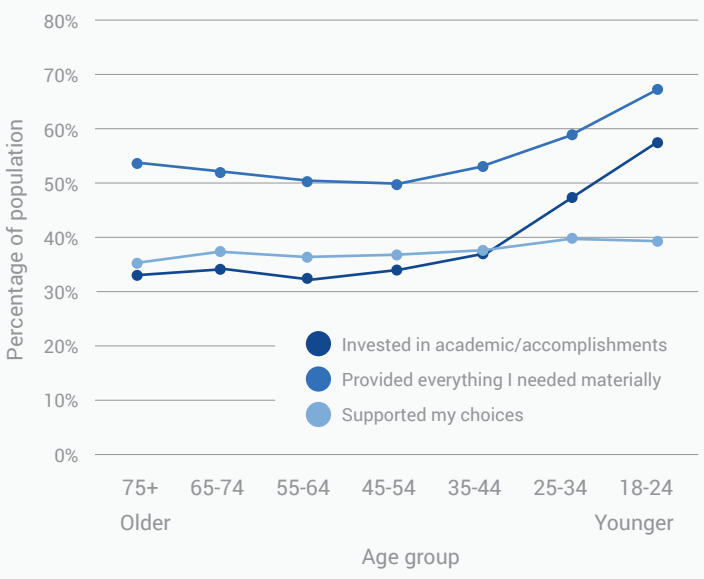
Is it that young people have increasingly abandoned the idea of family or have younger generations of parents precipitated a crisis of family? To gain insight into this we probed their childhood family experience. Did their parents provide for all their material needs? Were they invested in their academic and other accomplishments? How did they rate their childhood home from unstable with conflict to stable and supportive? From emotionally distant to warm and loving? And how did these factors influence how close they were to their families in adulthood and their adult mental wellbeing? We summarize the results in the next section.

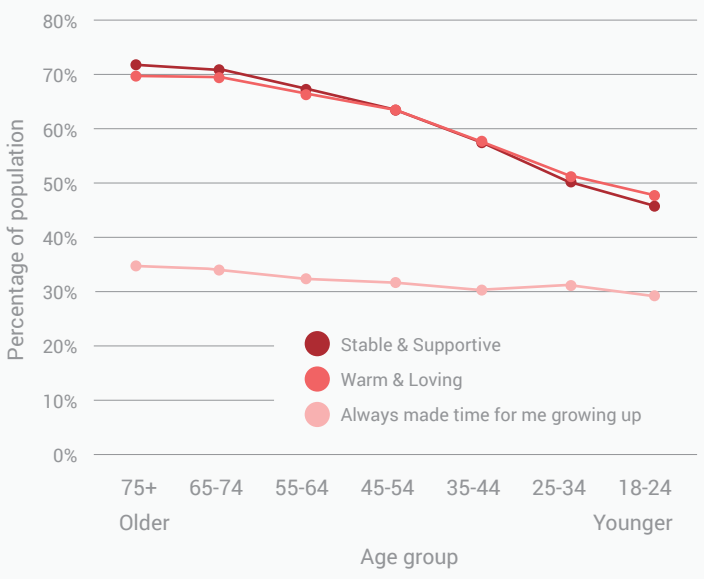
The generational shift in childhood family experience

Starting with those who were born in the 1980s (age 45 and younger), there was a steady and substantial increase in the percentage who reported that their parents provided everything they needed materially, soaring to 68% of those 18-24 from only 50-54% in generations older than 45. Similarly, there was also a dramatic increase in the percentage who reported that their parents were invested in their academic and other accomplishments which grew from about 33-35% to 58%. There was also a small increase in the percentage of younger generations who reported that their parents always supported their choices from 36% for those over 65 to 39% of the 18-24 age group.

Figure 3.3: **Nature of childhood home across generations**

Adults younger than 35 increasingly report that their parents provided everything they needed materially and were very invested in their academic and other accomplishments. On the other hand the percentage reporting a stable and loving childhood home decreases dramatically with younger generations.

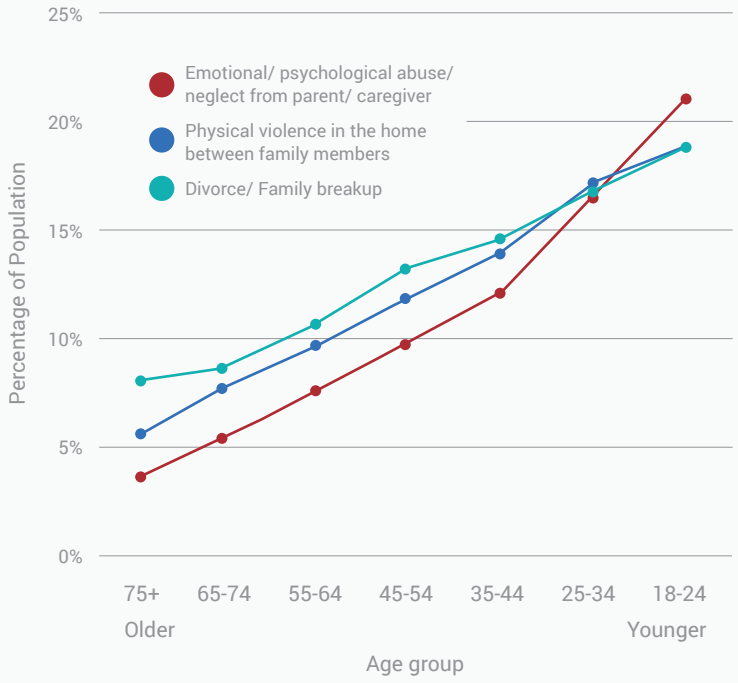




On the other hand, while 70-72% of those over 65 reported growing up in homes that were both stable and loving, only 46-48% of the 18-24 age group reported the same. So also the percentage reporting that their parents always made time for them declined but only slightly from about 35% for those 65+ to 29% for those 18-24.

Figure 3.4: **Prevalence of parent driven traumas in childhood across age groups**

The reported incidence of trauma in childhood increases with each younger generation of adults. This includes incidence of emotional abuse or neglect by a parent or caregiver to physical violence in the home and divorce or family breakup.



Further probing of the nature of instabilities, conflict and lack of emotional warmth showed a dramatic and steady increase with each younger generation in the percentage reporting parental divorce or family breakups, violence between family members and emotional abuse or neglect by their parents (Figure 3.4).

Among the age groups between 18 and 34, those who were provided everything they needed materially and whose parents were invested in their academics or accomplishments, only 48% reported a stable and loving home. This was in contrast to 70% for the age groups between 45 and 64. And unsurprisingly, 49% of those from stable and loving homes reported being close to many family members in adulthood compared to only 14% of those who reported unstable and emotionally distant childhood homes. Altogether this paints a picture of changing parenting priorities from providing a stable and loving childhood home to a greater focus on material comfort and accomplishment. Alongside this shift is a home life with greater conflict and abuse.

This paints a picture of changing parenting priorities in younger generations from providing a stable and loving childhood home to one focused on material comfort and accomplishment, that fosters greater conflict and abuse.

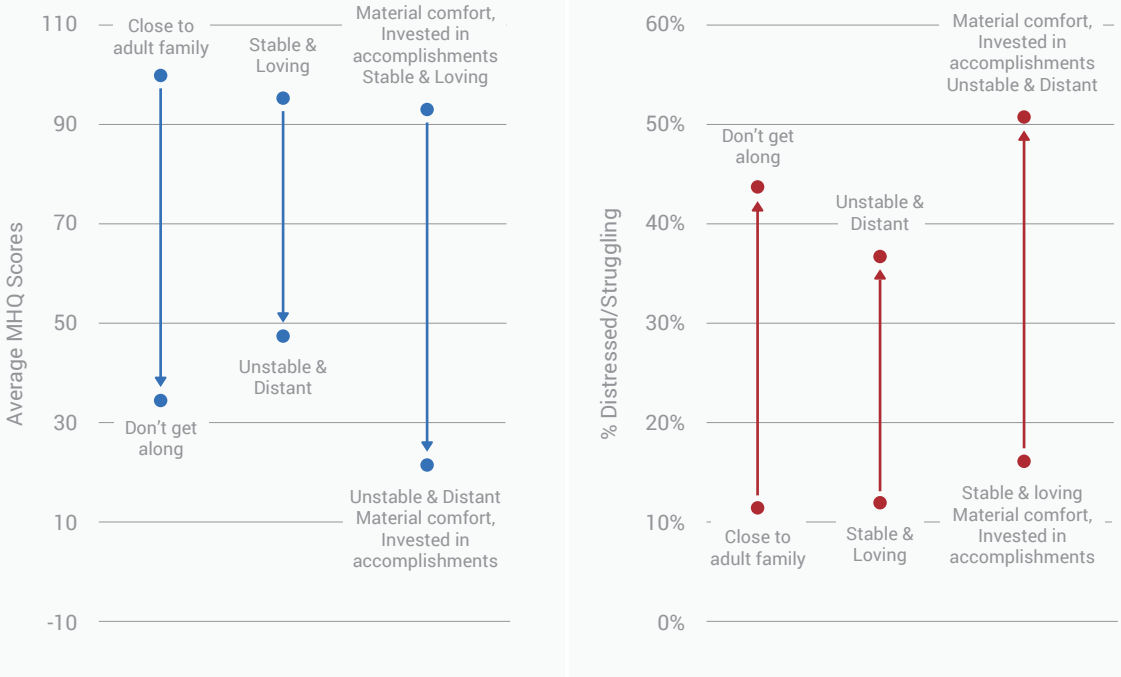
The childhood home and mental wellbeing in adulthood

Mental wellbeing increased with ratings of warmth and stability of the childhood home. Those who came from both stable and loving homes had MHQ scores that were 58 points higher on average than those who came from homes that were both unstable with conflict and emotionally distant. Correspondingly, 35-40% of those who reported either homes that were unstable with conflict or emotionally distant struggled with their mental health in adulthood while only 13-17% of those who reported homes that were stable or loving had mental health challenges. When combined, 41% of those who reported *both* instability and emotional distance had mental health challenges compared to just 13% of those from stable and loving homes.

41% of those who reported both instability and emotional distance had mental health challenges compared to just 13% of those from stable and loving homes.

Figure 3.5: **Difference in mental wellbeing based on childhood home and adult family relationships**

Having a stable and loving childhood home means much higher MHQ scores on average in adulthood and far less likelihood of mental health struggles. For those with parents who provided all material comfort and were invested in their accomplishments MHQ scores were slightly lower and distress slightly higher.



Interestingly, those from stable and loving homes whose parents provided all material comfort and were invested in their accomplishments had MHQ scores that were not much different on average (Figure 3.5). On the other hand, those who came from unstable and emotionally distant homes where their parents provided everything they needed materially and invested in their accomplishments had worse mental wellbeing than those whose parents did not.

A geographic view of family trends

Where are family bonds the strongest? And in which regions of the world is this deterioration of family bonds most apparent?

First, in the aggregate, the Middle East & North Africa had the highest percentage of reported closeness to many adult family members (42%) as well as stable and loving childhood homes (60%). This was followed by English-speaking South Asia and South East Asia as well as Sub Saharan Africa, (in particular Swahili-speaking) that were all similar. At the bottom was Portuguese Latin America (Brazil) and the Core Anglosphere (North America and Oceania as well as UK and Ireland) where closeness to many adult family members ranged from 23 to 29% while growing up in a stable and loving home ranged from 39 to 41% (shown as dots on the left of each panel in Figure 3.6 and 3.7)

Figure 3.6: **The demographics of close adult family relationships**

English-speaking South and South East Asia, the Middle East & North Africa and Swahili-speaking Sub Saharan Africa have the closest families overall. However the decline in family closeness from older to younger generations is also steepest. Conversely, North America, Europe and Oceania as well as Portuguese Brazil are least likely to have close families.

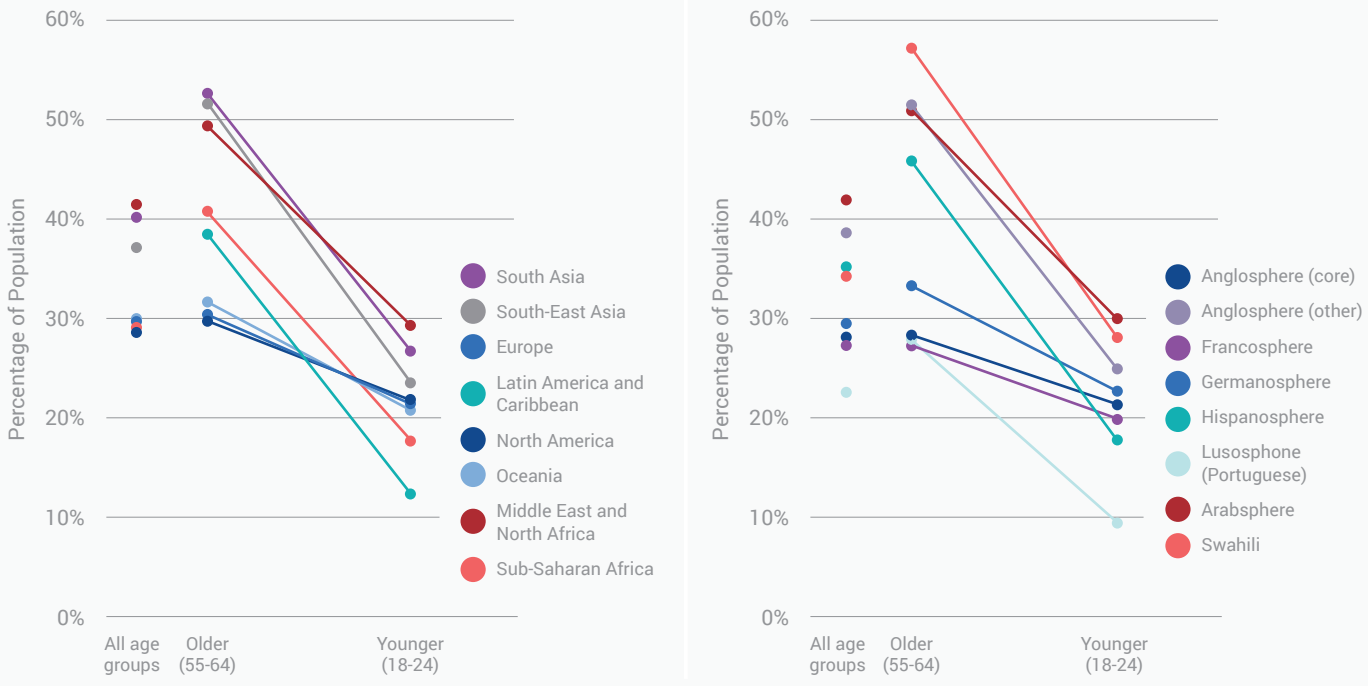
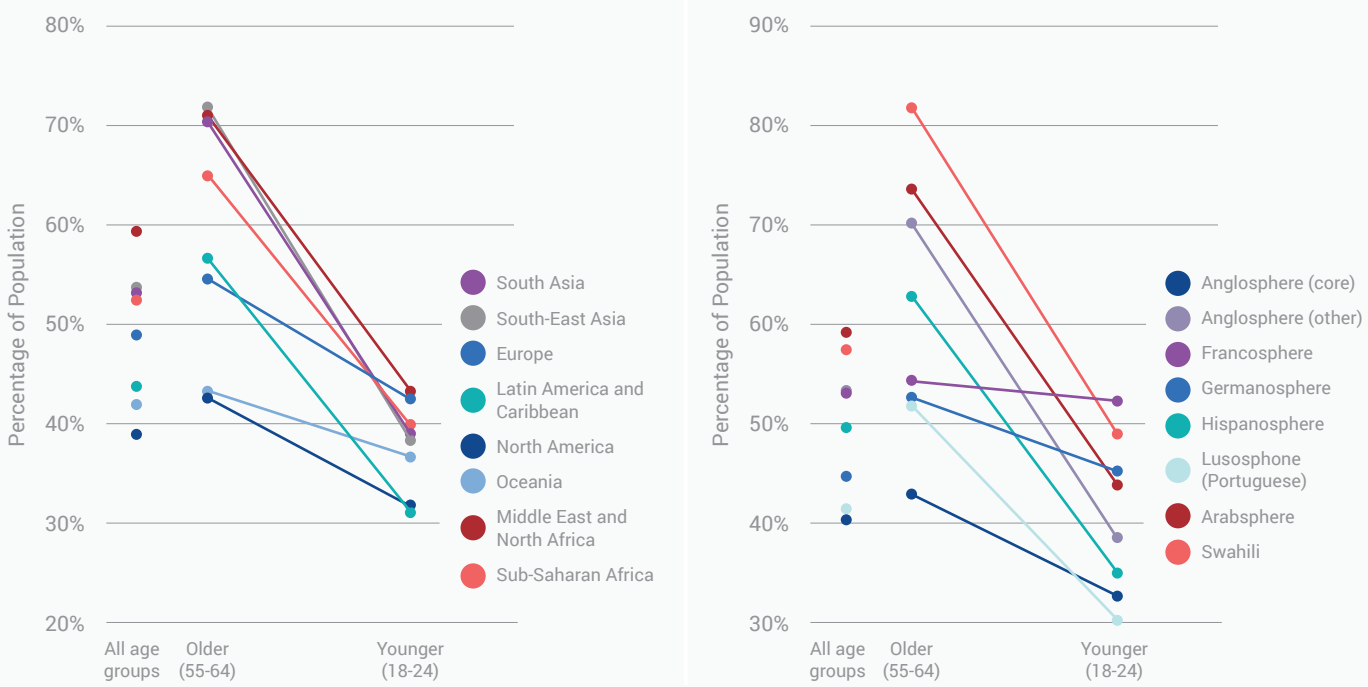


Figure 3.7: **The demographics of adults from stable and loving childhood homes**

Adults in the Middle East and North Africa, Swahili speaking Sub Saharan Africa and South and South East Asia grew up in the most stable and loving homes. However the decline in stable and loving childhood homes from older to younger generations is also steepest. Overall adults in North America and Portuguese Brazil had the least stable and loving childhood homes.



However, when comparing older and younger generations separately, a different picture emerges. While the deterioration encompasses the entire Internet-enabled world, the fall was steepest from older to younger generations among English-speaking South & South East Asia, followed by the Middle East & North Africa and Sub Saharan Africa where older generations had considerably higher family closeness and stable, loving childhood homes. In contrast, the fall was not as significant in Europe and the Core Anglosphere where closeness and stable, loving childhood homes are already lower among older generations. Thus, for the youngest generation of adults, the gap between regions was narrowed.

The Middle East & North Africa had the highest percentage of reported closeness to many adult family members (42%) as well as stable and loving childhood homes (60%) while Portuguese Latin America (Brazil) and the Core Anglosphere had the lowest closeness to many adult family members (23-29%) and stable and loving childhood home (39-41%).

4. Friendships and Mental Wellbeing

What about the bonds of friendship? Like family relationships, friendships form an essential bedrock to our adult lives as well as providing a supportive social buffer during times of adversity, and studies have shown a link between friendship and mental health outcomes. Are friendships too deteriorating? Here we explore the nature of friendship across generations and geographies and reveal a decline in the percentage of people with friends to confide in and rely on with increasingly younger generations across the global Internet-enabled world. We also show that the nature of people's home life growing up, and the relationship they have with their family as an adult, influence the number and quality of their friendships. Finally, we show that close family relationships and friendships have an additive impact on mental wellbeing.

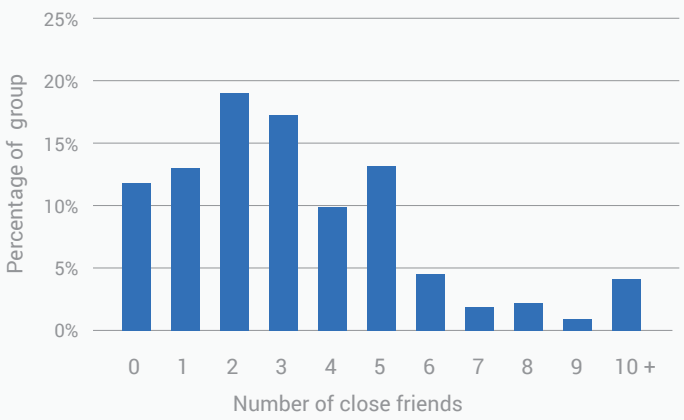
The demographics of friendships

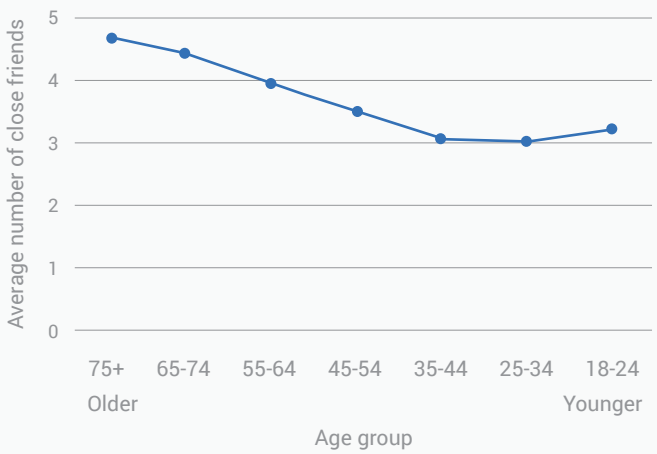
Across the global population in 2022 most people indicated having between 1 and 5 close friends with a global average of 3.5. 12% reported having no friends while an equivalent percentage have 7 or more close friends (Figure 4.1 left). Across age groups the average number of friends decreased with younger generations, flattening out after age 45 (Figure 4.1 right). The generation aged 75+ reported 4.7 close friends on average while those under 45 reported an average of 3 to 3.2 friends. Twice as many 18-24 year olds (12%) reported having no close friends compared 75+ year olds (6%) (Figure 4.2 right)

On average people have between 3 and 4 close friends while 12% have no close friends at all.

Figure 4.1: **The Demographics of Friendships**

The majority of the population has between 1 and 5 close friends while 12% have no close friends (left) while adults older than 45 have increasingly more close friends (right). The average number of close friends across the population is 3.5.



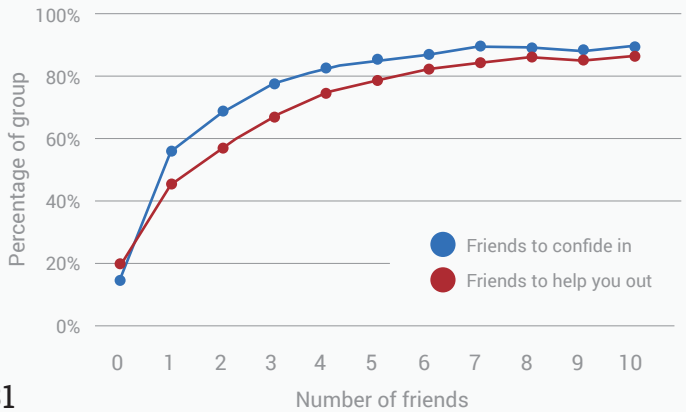


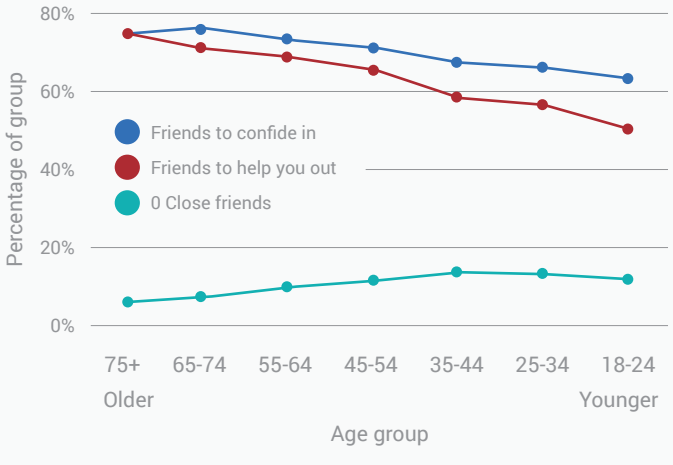
The quality of friendships

Close friends can mean different things. To understand the support offered by close friendships, we also asked people whether they had friends who they could confide in, or who would help them out in practical ways during times of need. The more close friends you have, the more likely you are that some of them are ones you can confide in or will help you out (Figure 4.2 left). Furthermore, 75% of 75+ year olds said they had friends they could confide in and help them out. This declined with each younger generation such that only 64% of 18-24 year olds had friends that they could confide in, and only 51% had friends who would help them out, an even sharper decline (Figure 4.2 right). This despite 18-24 year olds reporting slightly more close friends on average than the next two older generations.

Figure 4.2: **The changing quality of friendships**

The probability of having a friend you could confide in or one who would help you out practically in a time of need increased steeply as the number of reported close friends increased from 0 to 5 (left). The percentage having friends to confide in and help them out decreased with each younger age group. This was despite all adult age groups younger than 45 having an equivalent average number of close friends.





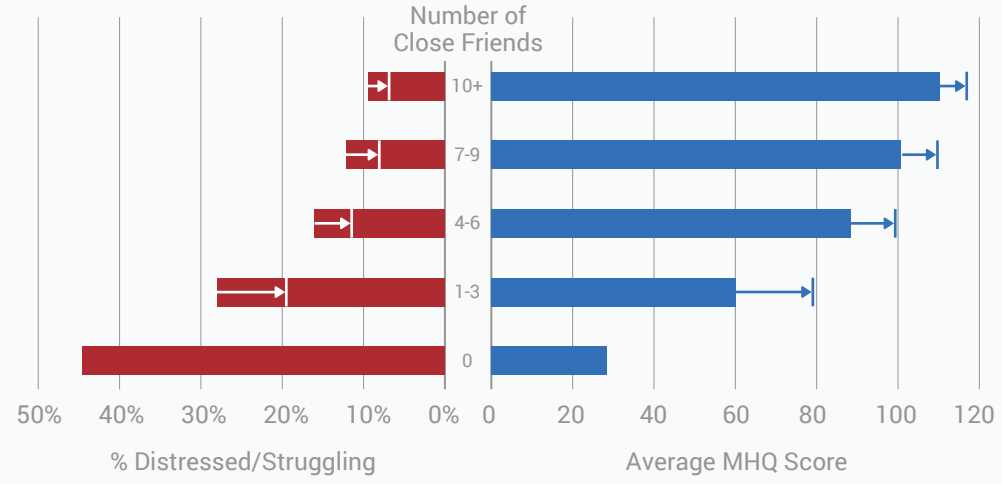
Across the generations there is a decline in the proportion of people reporting that they had friends who they could confide in or who would help them out.

Friendships and mental wellbeing

How does the number of close friends impact mental wellbeing? MHQ scores increased as number of close friends increased, plateauing slightly at higher numbers (Figure 4.3 right bars). MHQ scores were lowest for those who reported no close friends, with an average of 28, a score in the "Enduring" range, increasing to an average of 110, in the "Succeeding" range for those with 10+ close friends. Conversely, among those who reported having no close friends, 45% reported struggling with their mental health, four times greater than people with 10+ friends (9.5%; Figure 4.3 left bars). Even having 4-6 close friends was associated with a 60-point increase in MHQ score and a 3-fold reduction in people with mental health struggles compared to having no close friends. This substantial difference in MHQ score, and multi-fold difference in the proportion of people struggling was consistent across all age groups, highlighting the importance of close friendship on mental health.

Figure 4.3: **Relationship between friendship and mental wellbeing**

The average MHQ score of those having 10+ close friends was 110 with ~9% Distressed or Struggling. In contrast the average MHQ score of those with no close friends was 28 with 44% Distressed or Struggling, a 4.5-fold increase. MHQ scores went up and % Distressed or Struggling decreased when those friendships included someone to confide in and rely on to help you out (shown by vertical bars).



For each number of friends, when specifically considering those who also reported friends they could confide in and rely on to help them out in times of need, MHQ scores were higher and the percentage

Distressed or Struggling lower than when considering only number of friends alone. This difference is shown by the arrows in Figure 4.3.

The percentage of people Distressed or Struggling with their mental wellbeing is over 3.5 times higher in those who report having no friends compared to those with many close friends they can confide in and rely on.

A geographic view of friendship trends

Where do people have the greatest number of friends? And in which regions around the globe are people more likely to have friends who will help them out or who they can confide in?

Most regions of the world had between 3 and 3.5 friends per person on average. However, South East Asia and the Spanish-speaking world stood out with 4.7 and 4.3 friends on average, respectively. South East Asia also had the highest percentage of people who reported having friends that they can confide in (74%). Sub-Saharan Africa has the lowest average number of close friends, but has the second highest percentage of people who report having friends that they can confide in (72%), and the second highest percentage of people who report having friends who will help them out during times of need (65%).

Conversely, it's Portuguese speakers who report the lowest number of close friends (2.8), and the lowest likelihood of having friends who would help them out (54%) and who they can confide in (66%). The Core Anglosphere also reports a similarly low proportion of people who have friends that they can confide in (66%).

While these numbers are not shown here graphically they are available in the associated tables.

South East Asia and the Spanish-speaking world have the highest number of close friends on average while Sub Saharan Africa has the highest proportion of friends to confide in and rely on for help.

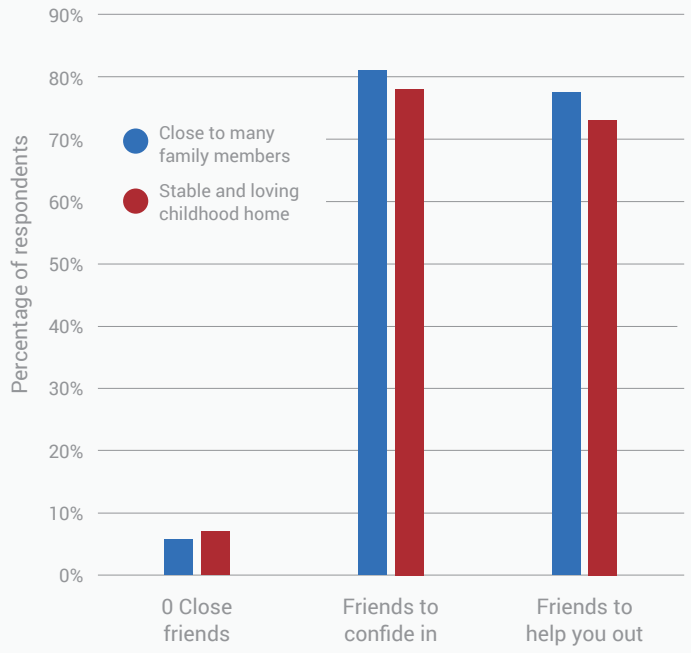
The impact of family relationships on friendships

Family relationships are typically the first relationships we experience. How does the nature of your childhood home or the relationship you have with your adult family impact the number of close friends you have or the quality of those friendships?

First, those who reported being close to many family members have 4.6 close friends on average compared to an average of 2.6 among those who reported that they don't get along with their family. In addition, those who grew up in loving stable homes have more close friends as adults (average 4.3) compared to those who grew up in emotionally distant and unstable home (average 2.9).

Figure 4.4: **Strong family relationships mean better friendships**

Of those who were close to many of their family members and/or grew up in stable and loving homes 78-81% had one or more close friends to confide in and 75-78% had one or more close friends who they could rely on to help them out when they needed it. Only 6-7% had no close friends.



Moreover, among those who were close to their families only 6% reported having no close friends, while 81% reported friends they could confide in, and 77% reported friends they could rely on to help them in times of need (Figure 4.4). In contrast, more than 3 times as many people who reported not getting on with their family at all reported having no close friends (19%, not shown in Figure).

Only 6% of those who were close to their families had no close friends compared to 19% of those who did not get along with their family.

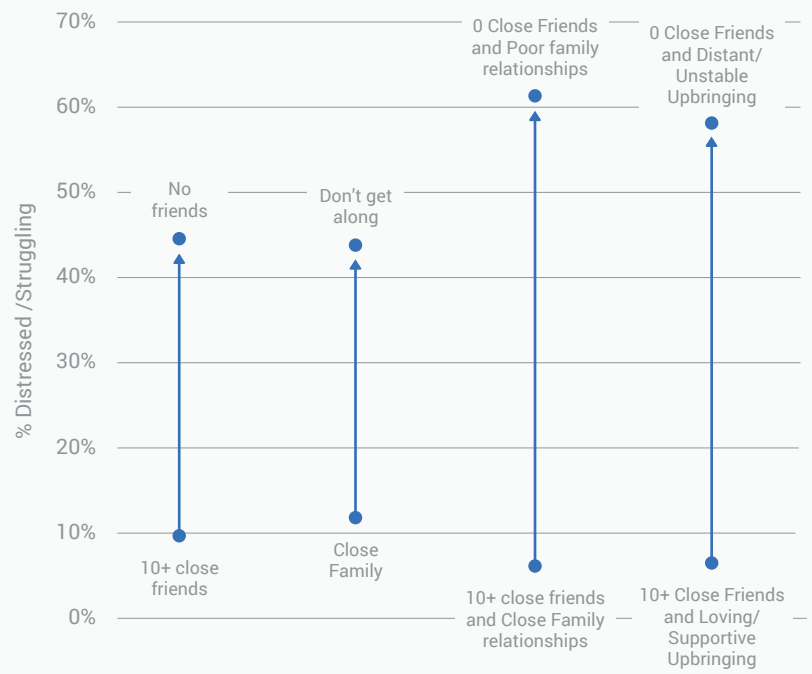
This pattern was similar for those who grew up in stable and loving homes where 78% and 73% had friends they could confide in and rely on respectively, a 17-20% difference compared to those who grew up in unstable and emotionally distant homes. Thus, having a stable, loving childhood home and strong relationships with one's adult family are strongly associated with more friendships and higher quality friendships in adulthood.

An additive impact of family relationships and friendships on mental wellbeing

Among those with close family relationships and a large number of friends, 74% were Succeeding or Thriving compared to only 14% of those who did not get along with their family and had no close friends. Conversely, only 6% of people with close family relationships and a large number of friends were Distressed or Struggling with their mental wellbeing, in contrast to 61% of people who didn't get along with their family and who did not have any close friends (Figure 4.5). Thus, the risk of mental health challenges is ten times lower for those with a large number of both close family relationships and friendships.

Figure 4.5: **The combined impact of family relationships and friendship on mental wellbeing**

Having having no close friends and not getting along with family were both associated with four times higher risk of mental health struggles or distress compared to having many close friends and family. When combined the risk was ten times higher suggesting that close friendships and family relationships are additive to our wellbeing.



This was a much larger difference in risk compared to that conferred by either not having close friends or getting along with family where the percentage Distressed or Struggling decreased from 44% to about 10% when going from either no friends to 10+ friends or poor family relationships to many close relationships. Thus, the benefits of close family and friendships appear to be additive in nature.

Indeed, having friends can also lift mental wellbeing when people experienced a difficult childhood or when they don't get along with family as an adult. For example, 58% of those who grew up in homes that were emotionally distant and unstable and also had no close friends were struggling with their mental wellbeing but this reduced to 19% for those with a similarly difficult upbringing but who had more than 10 close friends. Similarly, 61% of people who didn't get along with their family and who had 0 close friends were struggling with their mental wellbeing but this reduced to 27% for those with similarly poor family relationships but who had more than 10 close friends.

Insights and Interpretations

The global trends of 2022

The data presented here provides a barometer for how our global society is faring as we emerge from the Covid-19 pandemic. We find that in 2022, the needle on this barometer stayed steady, with no further decline in mental wellbeing, but also no signs of a recovery to pre-pandemic levels. At an individual country level, the trend was similar, with only small or insignificant increases or decreases across a handful of countries. Heading into 2023, we will continue to track how the 64 countries included in this report are faring while expanding outreach to new countries in new languages.

The persistent decline of younger generations

Across these 64 countries, another worrying trend persists; the decrease in MHQ scores and corresponding increase in the proportion of those distressed or struggling with significant mental health challenges in each successively younger age group. This trend is apparent in the Internet-enabled populations of every country measured from Africa to Asia, Europe to the Americas. Identified first in our data in 2019 and exacerbated by the pandemic, this trend is also reported by others (Krokstad et al., 2022; Twenge et al., 2019) and is at odds with studies of psychological wellbeing prior to 2010 that showed universally that young adults fared best in all countries and regions of the world measured (Stone et al., 2010). Furthermore, in the United States for instance, where the CDC has consistently measured mental distress in teens over three decades, rates of reported sadness and hopelessness have steadily increased from 2011 to 2021 and particularly in girls where it has increased from 36% to 57% (Centers for Disease Control and Prevention, 2023). This points to a progressive global decline of younger generations since that time rather than a natural increase in wellbeing as we age.

Deteriorating Social Self, family bonds and friendships

We find that it's the *Social Self* – a dimensional score encapsulating the way we see ourselves and our ability to relate to others - that is most diminished in young adults aged 18-24 compared to older generations. The global deterioration of family relationships and friendships across generations that we document here is thus both a reflection of, and a dominant contributor to our deteriorating *Social Self* in a self-reinforcing feedback loop.

A poor *Social Self* does not just represent an absence of positive relationships. Poor *Social Self* at a country level correlates with national rates of suicide, physical assault and sexual abuse (Sapien Labs, 2022). Conversely, the experience of assault and abuse in turn impact the *Social Self* and our overall mental wellbeing. For instance, the negative impact of parental emotional abuse and neglect or divorce/family separation on mental wellbeing is well established (Auersperg, Vlasak, Ponocny, & Barth, 2019; Carr, Martins, Stingel, Lemgruber, & Juruena, 2013). The growing rates of parent driven trauma across generations we show here may thus reflect a downward spiral as childhood experiences translate into one's own parental behavior (Condon, Dettmer, Baker, McFaul, & Stover, 2022; Dixon, Browne, & Hamilton-Giachritsis, 2005). So too the growing rates of sexual abuse, assault and cyberbullying with younger generations that we described in a previous report, where the perpetrators are likely peers, both reflect and perpetuate the deteriorating peer relationships and *Social Self*.

We have perhaps not appreciated the degree to which we are evolved as social beings. As much as we may believe that we are each independent, our wellbeing is profoundly relational in nature.

Altogether, the mental wellbeing differential between those with strong family bonds and friendships and those without at ten-fold, is greater than the differential between the extremes of any other driver of mental health that we have documented such as education, employment or exercise. While deteriorating family bonds in childhood may be a dominant precipitating factor, it is also possible that mental health problems arising for other reasons, in turn cause challenges to family dynamics and social bonds.

This suggests that we have not appreciated the degree to which we are evolved as social beings. That as much as we may believe that we are each independent, our mental wellbeing is profoundly relational in nature. This also explains in large part why countries such as Tanzania and Venezuela top the countries' rankings despite relatively lower wealth and political challenges. Tanzania, for instance, has among the strongest relationships of both friends and family.

Culture and our deteriorating social bonds

What drives our deteriorating social bonds? There are many possible factors. Prominently among them is our changing culture. We have shown in last year's report a positive correlation between average MHQ scores of countries and the cultural index of Family Collectivism (Hofstede, 2013) and conversely a negative correlation between the cultural indices of Individualism and Performance Orientation (House, Hanges, Javidan, Dorfman, & Gupta, 2004). Thus, countries with greater Individualism and Performance Orientation had worse mental wellbeing despite greater economic success.

Decades of analysis show a growing spread of western cultural values of Individualism across the world (Santos, Varnum, & Grossmann, 2017). This comes alongside greater economic productivity and changing employment trends where it is now more common for both parents to work as the number of women participating in the labor market has increased (Our World in Data, 2017). In reflection of these trends, this data shows a growing proportion of adults in younger generations who report that their parents provided everything they needed materially and were invested in their accomplishments. While there is no evidence that these factors of material comfort and performance orientation alone have a directly negative impact on mental wellbeing, what the data reveals is that they increasingly come not as an addition to, but as a trade-off to nurturing stable and loving family bonds. It is this loss of stable, loving family bonds that fundamentally challenges our psyche.

The data suggests that material comfort and performance orientation increasingly come not in addition to, but as a trade-off to stable and loving family bonds. It is this loss of stable, loving family bonds that fundamentally challenges our psyche.

In developing countries these cultural shifts towards individualism, materialism and performance orientation are most prominent for younger generations where many are also first generation English speakers. The consequent experience of a profoundly different environment of culture and values relative to their parents can also lead to inter-generational conflict. Together this may be one explanation as to why the core English-speaking countries or Core Anglosphere show poorer mental health across even older generations, but that the English-speaking of South and South East Asia see a greater fall between older and younger generations.

The Internet and our deteriorating social bonds

Beyond facilitating the rapid global spread of western culture, the Internet also exerts an impact on culture that may play an outsized role in driving the deterioration of our *Social Self*. With its command of our individual attention for an average of 7 to 10 hours a day, it leaves little time for the effort required to nurture social bonds. For the younger generation who are born as digital natives, it diminishes from the outset the time available to both develop their social capabilities and form strong social bonds.

With its command of our individual attention for an average of 7 to 10 hours a day, it leaves little time for the effort required to nurture social bonds. Like team sports, getting good at navigating social situations and building relationships requires putting in the time on the field.

While we are all born with an inherent social capability, it must nonetheless be learned, practiced, and developed (Soto-Icaza, Aboitiz, & Billeke, 2015). Like team sports, getting good at navigating social situations and building relationships requires putting in the time on the field. Developing and navigating relationships is complex. It requires us to learn how to read facial expression, body language and tone to judge intent, how to navigate complex group dynamics, resolve conflict, regulate emotions to the situation and more. If we spend just a quarter of the time or less, as younger generations now do, the outcomes of social bonding and the capability for positive social behavior will be commensurate. And of course, even if you developed it well, like all human capabilities, when you don't use it you lose it.

Besides the diminished time for in-person social interaction, there is also the increasingly documented challenges to sense of self arising from social media (Saiphoo, Dahoah Halevi, & Vahedi, 2020; Strimbu & O'Connell, 2019). This altered mode of interaction drives less moderated social exchange and permanent record of comments and opinions that distort our social perceptions with lasting consequences. The mental health challenges resulting from this mode of social engagement may therefore precipitate challenges in relating to others. In an earlier report, for example, we have described the rapid increase in the rate of young adults reporting the experience of cyberbullying in childhood. This experience appears to have an equal impact on their adult mental wellbeing as childhood sexual abuse; a further testament to the profoundly relational nature of our psyches.

In conclusion

Our success in the creation and garnering of resources depends on our ability to cooperate, which is in large part motivated by relationally derived purpose, trust and affection. In the quest for material success as a path to enhancing our wellbeing, by turning away so profoundly from social nurturing, we are paradoxically dismantling the very wellbeing and economic success for which we have cast it aside. If there is one clear message in this data, it is that we must more explicitly acknowledge our inherently relational nature and its crucial role in our collective wellbeing.

Appendix 1:

The MHQ Assessment and Scores

Understanding the MHQ

Data for the Mental Health Million project is collected using an online assessment tool called the Mental Health Quotient (MHQ) that was developed at Sapien Labs. The MHQ is a unique comprehensive assessment of mental wellbeing comprised of 47 elements of mental function including both problems that include symptoms of ten major disorders and positive assets of mental function (Newson & Thiagarajan, 2020). It uses these elements to provide an aggregate score to position individuals on a spectrum from Distressed to Thriving, as well as sub-scores across 6 broad functional dimensions. The MHQ is freely available online, is anonymous, and takes ~15 minutes to complete. It is currently available in English, Spanish, French, Arabic, Hindi, German, Portuguese (European & Brazilian) and Swahili with additional translations planned for 2023 and beyond. In addition to the 47 scored questions, respondents answer questions relating to their demographics, life experience and lifestyle. To encourage thoughtful and honest responses, respondents receive an MHQ score along with tailored feedback on completion of the MHQ and can opt to receive a more detailed report with recommendations for action via email.

More information on the development and validation of the assessment can be found in peer reviewed publications here and here.

The MHQ scale

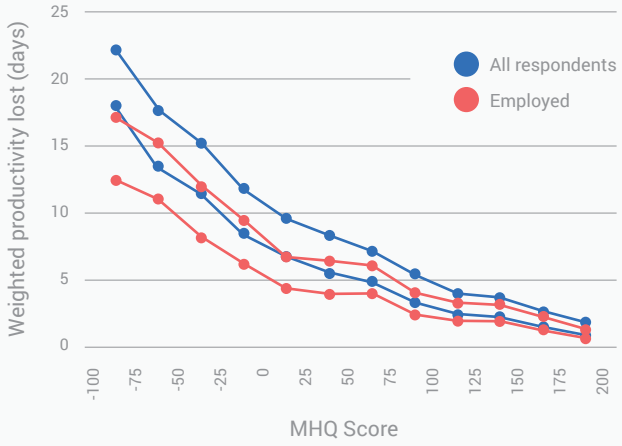
The MHQ positions individuals on the spectrum from Distressed to Thriving, spanning a possible range of scores from −100 to +200 where negative scores indicate a mental wellbeing status that has significant negative impact on the ability to function. Importantly the MHQ score is not based on a simple averaging of question ratings but rather each individual rating is thresholded along the functional scale between positive and negative impact to function and nonlinearly transformed based on a ranked severity of

implications. The positive range of the scale is modeled on the IQ scale. Positive scores, which are largely normally distributed, are calibrated to a mean of 100 based on our original 2019 sample and can range from 1 to 200. Negative scores, on the other hand, have a long-tailed distribution. In order to ensure that overall average scores are not inordinately determined by the small number of individuals in the long tail, the negative scale was compressed to a smaller scale of 0 to -100 in order to mitigate the impact of negative scores on the population average. More details of this methodology are provided in (Newson & Thiagarajan, 2020).

Functional implications of the MHQ

The MHQ score has been demonstrated to relate systematically to the productive function of an individual in work and life (Sapien Labs, 2021; Newson et al., 2022). For example, we have shown that the average number of days of work missed in the past month decreases systematically as MHQ scores increase (Newson et al., 2022). Cumulatively, when considering the total loss of life productivity as a function of MHQ score (taking into account both days of work missed and days that were less productive and assuming a range of 20% to 50% loss of productivity on less productive days) those with the lowest MHQ scores (between -75 and -100) had an overall reduction in life productivity of anywhere from 18-23 days per month on average (Figure A1). While those with the highest MHQ scores did not often miss a day of work, even this group reported a few unproductive days a month. Thus, the MHQ score is a good representation of behavioral loss of function and supports the use of the MHQ as an assessment of the productive capacity of a population, independent of any disorder classification. It also positions the MHQ as an important tool for companies and universities to be more strategic in their management of mental health and wellbeing.

Figure A1: **Relationship of MHQ score to productivity**



Lines show top and bottom of the range

Relationship of the MHQ scale to clinical disorders

The MHQ elements map to diagnostic criteria for each of 10 major DSM-5 disorders (Newson & Thiagarajan, 2020, 2021). Mapping individual profiles to these criteria has shown that MHQ scores relate systematically to clinical burden (Newson et al., 2022). The percentage of people with clinical symptom profiles that aligned with any of 10 DSM-5 defined disorder criteria increased as the MHQ score decreased, such that 89% of those with scores in the Distressed range had symptom profiles that aligned with at least one of the 10 DSM-5 defined disorders compared to 0% for those with scores in the Succeeding or Thriving range (Newson et al., 2022). Similarly, the number of disorders per individual decreased systematically as MHQ scores increased with the average number of disorders per person at 3.8 for those in the Distressed group and 0.0 for those in the Succeeding and Thriving groups. Thus, the MHQ score is also reflective of the overall clinical burden of mental health.

Friendship and Family Questions

In addition to the standard MHQ questions, various other questions were asked on family relationships and friendships as well as childhood traumas and adversities that are compiled here. These included ratings of the nature of their childhood home on a 5-point scale as shown below as well as selections of whether or not the following statements were true.

Friendship Questions:

How many close friends do you have?
(Number answer)
Do you have friends who would help you out when you are sick or have a problem (e.g. bring food, watch kids)?
Yes/No/Not sure
Do you have friends you can confide in and with whom you can express your true feelings and opinions?
Yes/No/Not sure

Family Questions:

What was the nature of your household growing up?
1 = Unstable with Conflict…5 = Stable and Supportive
How would you describe your household growing up?
1 = Emotionally distant…5 = Warm and Loving
How did your parents or caregivers support you? Please select any of the following that apply:
They provided everything I needed materially; They were supportive of my choices; They were very invested in my academic and other accomplishments; They always made time for me
How would you describe your relationships with your adult family?
I don't have any family; I don't get along with most of them and prefer not to see them often; I get along OK with them but we are not close; I am very close to some of them but not all; I am very close to many of my family members

Appendix 2:

Data Acquisition and Analysis

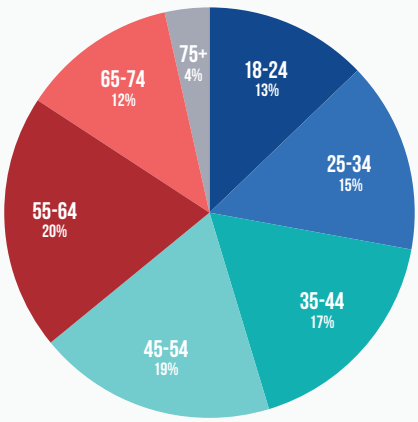
Data Acquisition

491,196 respondents from around the world completed the MHQ assessment between 1st January and December 31st 2022. Participants were recruited through advertising on Google and Facebook by targeting a broad audience within each age-gender demographic across a wide geography within each of 64 countries (See Section 1 of this report for a map and list of countries). Recruitment in 2022 initially focused on English, Spanish, French and Arabic speaking countries, and was then expanded to German, Portuguese (European and Brazilian), Swahili and Hindi speaking countries with the launch of these translations in May, August, September and October, respectively. The Google Ads outreach specifically targeted those individuals who were searching for terms relevant to mental health (e.g. psychological test, cognitive assessment test, mental health assessment) and were applied consistently across all countries. Those recruited through this stream may therefore have had a specific interest or concern relating to their mental health. In contrast, Facebook outreach was much broader, spanning individuals who had shown a previous interest in mental health and wellness topics, as well as all adults in that country with the simple tagline "What is your mental wellbeing score?". Those recruited through this stream were therefore not specifically searching for information relating to a mental health interest or concern.

The number of respondents for each targeted country is shown in the associated data tables.

Respondents spanned all age groups roughly equally (Figure A2) while the gender split was 54% female, 46% male. Those who answered that they were "Under 18" were unable to continue with the assessment and so were automatically excluded.

Figure A2: **Distribution of sample by age groups**



Data exclusion criteria

Only those respondents who stated that they found the MHQ easy to understand were included in the analysis. This exclusion criterion was applied by only selecting respondents who answered "Yes" to the final question in the MHQ which asks them "Did you find this assessment easy to understand?". In addition, those who completed the assessment in under 7 minutes were excluded (the minimum time needed to read and respond to the MHQ) and responses with a standard deviation of less than 0.2 (representing people who answered with the same value across all 47 rating items) were excluded. This resulted in 407,959 data responses being available for the final analysis.

Computing average MHQ Scores for countries

The spread of respondents across age and gender groups was not an accurate representation of their proportion of the population in each country. Furthermore, the proportion of respondents in each age-gender group were not identical across countries. Thus, to enable a more representative view of a country's population, and more accurate comparisons between countries, scores were first computed for each age-gender group and then a weighted average score was computed based on the relative proportions of each group within individual countries. Analyses comparing age brackets were only weighted by gender, while conversely, analyses comparing genders were only weighted by age. All population estimates and age-gender distributions that are utilized for these weightings were taken from the United Nations population estimates (United Nations, 2022). Note that in some countries (e.g. some Sub-Saharan nations such as Tanzania), the general population profile is generally younger, something that is also observed in the spread of respondents across age groups for these countries in this data. In some cases, there were no respondents over the age of 75 for these countries and therefore they are not represented in these older age groups.

We note that respondents across countries varied in terms of their education level and employment status. Education and employment levels are shown in the associated data tables.

Computing average MHQ Scores for regions

Computation of the regional MHQ and dimension scores were not a simple average across countries but were additionally weighted based on the proportion of Internet users within the country (Data Reportal, 2022). Thus, more populous countries or countries with larger Internet populations would have a greater contribution to these regional estimates. Where the Internet population may be larger than the particular language groups in the country in which the MHQ was offered (e.g. Belgium), the proportion of those language groups was used as the weighting factor rather than the proportion of Internet users.

Score Reporting in MHQ points and percentage differences

We typically report differences in terms of MHQ points and the corresponding percentage shift along a 300-point scale i.e. ((Value 1 – Value 2)/300) * 100. For instance, 75 points represents 25% of the 37 possible length of the scale. Thus a 75-point shift or difference between groups would be a 25% shift along this scale.

Statistical analysis

Statistics were computed by comparing groups using a standard t-test. P-values obtained were then corrected for multiple comparisons using a Bonferroni correction. All statistical tables showing these corrected p-values are provided in a supplementary download along with the report.

Limitations of sampling and data interpretation

Although respondents were similarly recruited across all countries, three key caveats must be highlighted. First, these samples may not reflect a true sample of any country's population and will be biased by those with language proficiency, Internet access and the willingness to spend 15 minutes completing an online assessment. Thus, results must be interpreted strictly in this context. Second, cultural differences in language usage and culture itself can significantly influence how people interpret and respond to each individual question. Any individual country's results will therefore reflect these differential effects of culture. Third, data is cross-selectional and not longitudinal and therefore trends over time do not reflect the same individuals. However, we note that the MHQ has been validated for sample-to-sample reliability within the same time frame.

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