

IMPACT OF AGEING ON THE LIFESTYLE OF ADULTS IN AFRICA

Background of the Study

Old age is often portrayed as a time of rest, reflection and opportunities to do things that were put off while raising families and pursuing careers.

Unfortunately, the aging process is not always so idyllic. Late-life events such as chronic and debilitating medical disorders, loss of friends and loved ones and the inability to take part in once-cherished activities can take a heavy toll on an aging person's emotional well-being.

An older adult may also sense a loss of control over his or her life due to failing eyesight, hearing loss and other physical changes, as well as external pressures such as limited financial resources. These and other issues often give rise to negative emotions such as sadness, anxiety, loneliness and lowered self-esteem, which in turn lead to social withdrawal and apathy.

In conclusion our study shows that health has the greatest impact on adults lifestyle.

BUSINESS UNDERSTANDING

Business Description

Statement of problem:Ageing has an impact on all aspects of society and demand for goods and services, such as education, housing, health, long-term care, social protection, transportation, information and communication, as well as family structures and intergenerational ties is continually increasing. Many of today's older people do not have access to even the basic resources necessary for a life of meaning. Many face numerous barriers every day that prevent them from fully participating in society and resources are more limited and barriers higher. Preparing for the social and economic shifts associated with an ageing adults is essential to ensure progress in development, including the achievement of the goals outlined in the sustainable development agenda. The extent of the beneficial opportunities that arise from increasing longevity will depend heavily on one key factor: health. Good health adds life to years. Longer and healthier lives must be our next greatest achievement and poor health does not need to dominate older age.

Research question: Impact of ageing on adult lifestyle in Africa.

Business Objectives

1. To determine how adults above the age of 50 are affected healthwise in intervals of five years.
2. To formulate the relationship between emotional stability and health for adults as they hit their peak years.
3. Create a visualisation of the impact of social-economic status on healthy living and happiness.
4. To determine the relationship between education and healthier lifestyle in adult life.

Available Resources

Source:Indepth Network:US National Institute on Aging - Four African sites plus Matlab
World Health Organization - Swedish Council for Working Life and Social Research (FAS)
Umeå University - Umeå Centre for Global

Resources:

Personel:4 Junior Data scientists

Data: Researched data on lifestyle of random subjects from African Countries.

Problem and their limitations

- A. Data represents a small portion of the entire African continent.
- B. Most columns had rather similar questions.

Current solutions and their benefits

- A. We have worked with the assumption that the data is a good representation of the entire continent.
- B.We dropped the repetitive columns.

Assumptions

- I.The data is a representation of the entire African continent.
- II.The response given for the questionnaires are accurate and honest.

Risks and Contingencies

Risk: The questionnaire responses could have been biased.

Contingency Plan: Outliers to determine bias information.

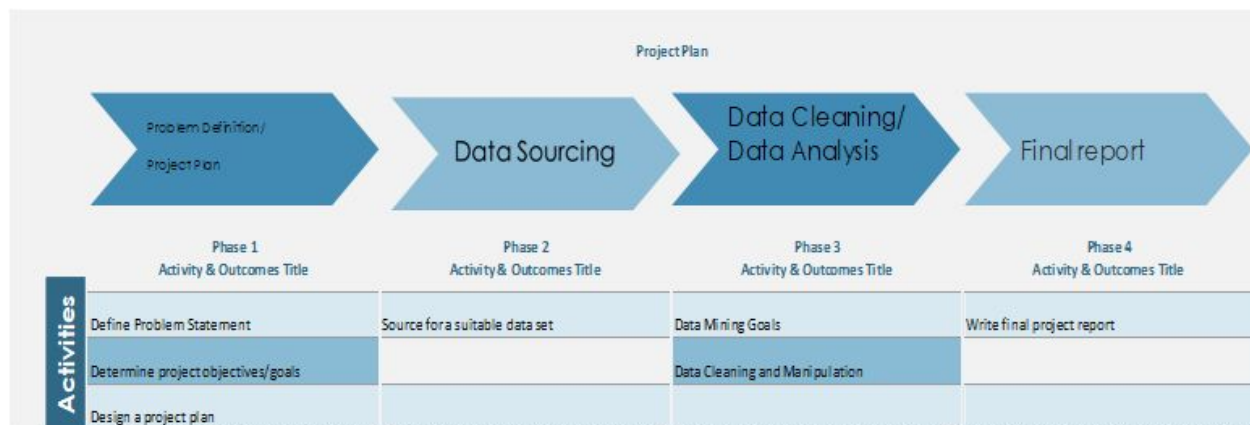
Significance of the study

By meeting the objectives we shall accurately provide an overview of the demographic and health characteristics of participating countries, describe the research collaboration and introduce a clean dataset and outputs.

Data Mining Goals

1. Determine the health per individual country.
2. Determining health status by age groups.
3. Compute the ratio by age group of subjects dependent on device aid.
4. Visualize family size by age group.
5. Compute the relationship between wealth, health and individuals in Africa.

Project Plan



DATA UNDERSTANDING

Data Description:

Our dataset consists of 15000 columns and 90 rows originally.

There contains data about health,financial status, emotional stability and living conditions statistics collected from individuals in four African countries. Each row is unique to each individual.

The columns in the dataset are:

*'id', 'country_code', 'study_sites', 'popweight', 'popstd', 'sex',
'age', 'agegroup10', 'agegroup05', 'education', 'marital_stat',
'living_arr', 'ses', 'household_50_plus', 'family_size',
'health_status', 'diff_work', 'diff_grooming', 'body_pain',
'diff_memory', 'diff_new_friends', 'diff_sleep', 'depression_level',
'long_sighted', 'device_aid', 'money_status', 'health_satisfaction',
'general_happiness'*

Data Quality Verification

Missing data: The column *'diff_new_friends'* contains an insignificant amount of null values. The rest of the columns have clearly indicated values.

DATA PREPARATION

Selecting data: We selected the entire dataset after affirming of its relevance in the research.

Excluding data: We have excluded multiple columns whose content was either irrelevant or similar to the existing data. The columns excluded were:

*'ison', 'prop50',
'prop50cat', 'diff_movement',
'diff_heavywork', 'diff_selfcare', 'diff_loneliving',
'body_discomfort', 'daily_life_pains',
'diff_learning_task', 'diff_prship', 'diff_tension',
'stranger_tension', 'restlessness',
'anxiety_level', 'short_sighted', 'q1023', 'q1024',
'q1025', 'q1026', 'q1027', 'diff_concentration', 'q1029', 'q1030',
'q1031', 'q1032', 'emotional_health', 'q1034',
'energy_level', 'q2004', 'q2005',
'q2006', 'q2007', 'general_life_satisfaction', 'q2009',
'WHODAS', 'WHODASi', 'WHOQOL', 'WHOQOLr'*

Cleaning data:

Renaming columns	We have renamed columns to a more interpretable form
Dropping rows	We have dropped all rows containing multiple null values

Constructing new data: We have formatted our dataset to an sql query after storing it in a csv database.

ANALYSIS

Health

1. What is the health status per individual countries

<i>country_code</i>	<i>health_status</i>	<i>id</i>	
ZAF	<i>good</i>	1792	1792
	<i>moderate</i>	1301	1301
	<i>bad</i>	601	601
	<i>very good</i>	112	112
	<i>very bad</i>	29	29
TZA	<i>good</i>	2606	2606
	<i>moderate</i>	1685	1685
	<i>bad</i>	491	491
	<i>very good</i>	202	202
	<i>very bad</i>	39	39
KEN	<i>good</i>	989	989
	<i>moderate</i>	526	526
	<i>bad</i>	235	235
	<i>very good</i>	215	215
	<i>very bad</i>	26	26
GHA	<i>good</i>	2113	2113
	<i>moderate</i>	1592	1592
	<i>very good</i>	379	379
	<i>bad</i>	204	204
	<i>very bad</i>	6	6

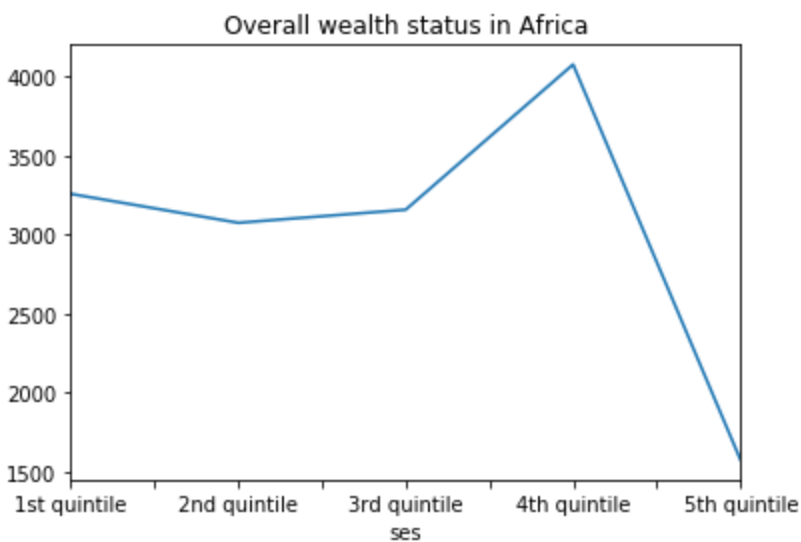
2. Relationship

The marital status by sex

<u>Marital_stat</u>	<u>sex</u>	<u>Id</u>	
Now single	Female	5325	5325
	Male	1028	1028
In current partnership	Male	5241	5241
	Female	3554	3554

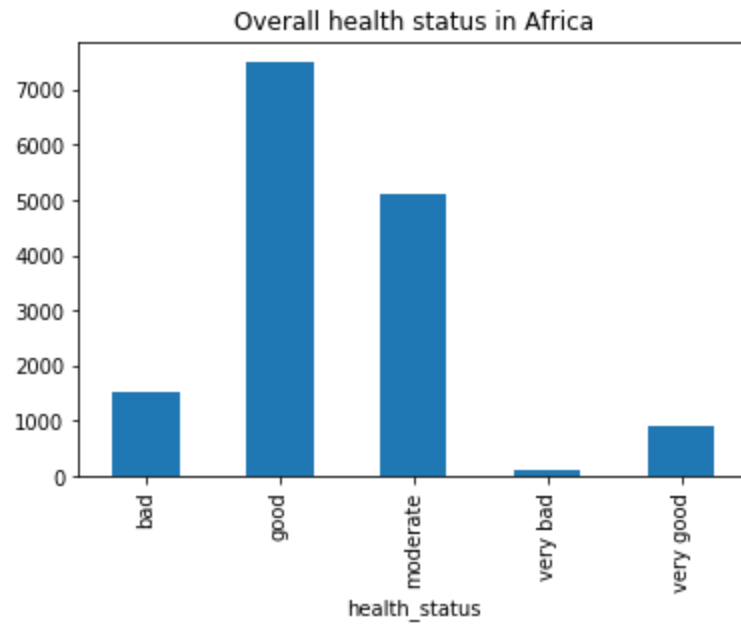
3. Wealth

Overall social economic status of subjects in relation to their current living status.



RECOMMENDATION

it is important to have a numerical understanding to these factors influencing aging so as to advocate for longer and healthier lives. This study will therefore help us have a conclusive understanding and can be translated in theory and practically.



LINKS:

GITHUB: <https://github.com/MuthomiTed/Determining-Impact-of-Ageing-on-Adult-Lifestyle.git>

SLIDES: https://docs.google.com/presentation/d/1EGzJ9gmF1XdUFVHD99pieFd8WzIEmB2FwxshiXV0dfY/edit#slide=id.g5d85cdf96b_0_30