

Group exercise 1: Survey research

DATA5207: Data Analysis in the Social Sciences

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Introduction

In this study, data from The World Value Survey will be explored to explain quality of life. Part 1 will explore potential predictors to predict higher/lower quality of life with supported theory. Part 2 will tests these predictors through the creation of a dependent variable and predictive models.

Part 1: Understanding survey data

```
survey.data <- read.csv("wvs_data.csv")
```

Chosen Predictors

Quality of life is difficult to quantify and can be affected by numerous factors in ones life. Another issue is that ‘quality’ for an individual could be determined by numerous things such as satisfaction, health and wealth.

To help guide our choices of predictors, we will use the World Health Organisations definition of quality of life (QoL) as an “individuals’ perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns”.

[<https://www.who.int/tools/whoqol>]

We believe the factors that affect an individual’s perception of life spans further than physical health and wellbeing (however this is obviously also a factor to consider), it can include psychological, environmental, societal and spiritual factors.

Employment - as means of wealth

Q279: Are you employed now or not? If yes, about how many hours a week do you work? If you have more than one job, please tell us about your main job only.

Education - as means of standard of living

Q275: What is your highest educational level that you have attained?

Security

Q131: how secure do you feel these days?

Human Rights

Q253: How much respect is there for individual human rights nowadays in this country? Do you feel there is...

Health Levels

Q47. All in all, how would you describe your state of health these days? Would you say it is...?

Q53: "In the last 12 months, how often have you or your family gone without medicine or medical treatment that you needed?"

Social & Personal Connectivity

Q46. Taking all things together, would you say you are...?

Q2. For each of the following, indicate how important it is in your life. How important is... Family, Friends

Theory

Education and employment: When an individual has higher educational attainments and are employed, they are able to have a better quality of life. This is due to higher economic well being and financial security to meet basic needs such as healthcare access and participating in leisure activities. It also can lead to a greater sense of purpose and personal development.

Confounding factor here may be income, since these factors are indicators of what sort of job an individual has and how much they are getting paid as a result (higher education levels = greater income, more hours in employment = higher income)

Security: When an individual is able to live without fear or risk and feels stable, their quality of life will increase. Security can be an impact on the quality of life as it is a measure of both physical safety and economic safety, physical safety affecting individuals health and mental well being, while as economic security to have social safety net to tackle financial challenges and access basic needs.

Human rights: When society upholds and protects human rights, individuals tend to experience better QoL. It is a basic need but also a measure of psychological well-being because of its ability to foster belonging within communities and equality within a just society. It also could promote quality of opportunity, a fair chance for success in society. can you add a blurb for health levels and social and personal connectivity

Health Levels: Health is a foundational element of quality of life. Good health enables individuals to engage actively in various aspects of life including work, social interactions, and leisure activities, thus directly influencing their overall life satisfaction and well-being. The state of an individual's health often reflects the access to and quality of medical services, as well as their lifestyle choices. Chronic illnesses or frequent lack of access to necessary medical treatments can lead to decreased physical capabilities, psychological stress, and financial burdens, all of which negatively affect one's quality of life.

Social & Personal Connectivity: Human beings are inherently social creatures, and the quality of our social interactions can significantly impact our mental and emotional well-being. Strong connections with family and friends provide emotional support, reduce stress, and contribute to a sense of belonging and happiness. These relationships can act as buffers against mental health issues and provide a network of support during times of crisis or need. Furthermore, personal relationships can influence one's self-esteem and provide opportunities for meaningful engagement in community activities, thereby enhancing an individual's overall quality of life.

Exploring Predictors

```
colnames(survey.data)
```

##	[1]	"ID"	"Mode"	"State"	"V1"	"V2"
##	[6]	"V3"	"V4"	"V5"	"V6"	"V7"
##	[11]	"V8"	"V9"	"Q7"	"V12"	"V13"
##	[16]	"V14"	"V15"	"V16"	"V17"	"V18"
##	[21]	"V19"	"V20"	"V21"	"A2_12"	"A2_13"
##	[26]	"V36"	"V37"	"V38"	"V39"	"V40"
##	[31]	"V41"	"V42"	"V43"	"V44"	"A5_11"
##	[36]	"V49"	"V50"	"V51"	"V52"	"V53"
##	[41]	"V54"	"V45"	"V46"	"V47"	"Q36"

##	[46]	"Q37"	"Q38"	"Q39"	"Q40"	"Q40_imp_flag"
##	[51]	"Q41"	"Q42"	"V67"	"V68"	"V69"
##	[56]	"V10"	"V11"	"V55"	"V23"	"V59"
##	[61]	"V188"	"V189"	"V190"	"V191"	"Q55"
##	[66]	"Q56"	"V24"	"V102"	"V103"	"V104"
##	[71]	"V105"	"V106"	"V107"	"V108"	"V109"
##	[76]	"V110"	"V111"	"V112"	"V113"	"V114"
##	[81]	"V115"	"V116"	"V117"	"V118"	"V119"
##	[86]	"Q76"	"V120"	"V121"	"V122"	"V123"
##	[91]	"V124"	"V126"	"Q84"	"Q85"	"Q86"
##	[96]	"Q87"	"Q88"	"Q89"	"Q90"	"Q91"
##	[101]	"Q92"	"Q93"	"V25"	"V26"	"V27"
##	[106]	"V28"	"V29"	"V30"	"V31"	"V32"
##	[111]	"V33"	"V34"	"Q104"	"V35"	"V96"
##	[116]	"V97"	"V98"	"V99"	"V100"	"V81"
##	[121]	"Q112"	"Q113"	"Q114"	"Q115"	"Q116"
##	[126]	"Q117"	"Q118"	"Q119"	"Q120"	"Q121"
##	[131]	"Q122"	"Q123"	"Q124"	"Q125"	"Q126"
##	[136]	"Q127"	"Q128"	"Q129"	"Q130"	"V170"
##	[141]	"V171"	"V172"	"V173"	"V174"	"V175"
##	[146]	"Q137"	"Q138"	"V176"	"V177"	"V178"
##	[151]	"V176_V178"	"V181"	"V182"	"V179"	"V180"
##	[156]	"V183"	"V184"	"V185"	"Q149"	"Q150"
##	[161]	"V66"	"V60"	"V61"	"V62"	"V63"
##	[166]	"V64"	"V65"	"V192"	"V193"	"V194"
##	[171]	"V195"	"V196"	"V197"	"V152"	"V148"
##	[176]	"Q166"	"V149"	"Q168"	"V153"	"V154"
##	[181]	"V145"	"V146"	"V147"	"Q174"	"Q175"
##	[186]	"Q176"	"V198"	"V199"	"V200"	"V201"
##	[191]	"V202"	"V203"	"V203A"	"V204"	"V205"
##	[196]	"V206"	"V207"	"Q188"	"V208"	"V209"
##	[201]	"V210"	"Q192"	"Q193"	"Q194"	"Q195"
##	[206]	"Q196"	"Q197"	"Q198"	"V84"	"Q200"
##	[211]	"V217"	"V218"	"V219"	"V220"	"V221"
##	[216]	"V222"	"V223"	"V224"	"V85"	"V86"
##	[221]	"V87"	"V88"	"Q213"	"Q214"	"Q215"
##	[226]	"Q216"	"Q217"	"Q218"	"Q219"	"Q220"
##	[231]	"V226"	"V227"	"V228"	"V228_OTHER"	"V228A"
##	[236]	"V228B"	"V228C"	"V228D"	"V228E"	"V228F"
##	[241]	"V228G"	"V228H"	"V228I"	"Q233"	"Q234"
##	[246]	"SDG1"	"V127"	"V128"	"V129"	"V130"
##	[251]	"Q239"	"V95"	"V131"	"V132"	"V133"
##	[256]	"V134"	"V135"	"V136"	"V137"	"V138"
##	[261]	"V139"	"V140"	"V141"	"Q252"	"V142"
##	[266]	"V211"	"Q255"	"Q256"	"Q257"	"Q258"
##	[271]	"Q259"	"V238"	"V239"	"V240"	"V243_R"
##	[276]	"V241_R"	"V242_R"	"V244"	"Q270"	"Q271"
##	[281]	"V245"	"V57"	"V58"	"Q275"	"Q276"
##	[286]	"Q277"	"Q278"	"V249"	"Q280"	"Q280_OTHER"
##	[291]	"Q281"	"Q282"	"Q283A"	"Q283B"	"V250"
##	[296]	"V233"	"V235"	"V236"	"V237"	"V144"
##	[301]	"V254"	"V253"	"H1"	"H"	"V251"
##	[306]	"J"	"N"	"I"	"K1"	"K2"
##	[311]	"L"	"M"	"wt_final"	"V254_OTHER_R"	"V35_OTHER_R"

```
## [316] "V249_OTHER_R" "StateMap"
```

Not entirely that helpful.

```
#survey.data
```

```
categories = c("Employment", "Employment", "Security", "Human Rights", "Health Levels", "Health Levels")
questions = c("Q279", "Q275", "Q131", "Q253", "Q47", "Q53", "Q46", "Q2")
key = c("V249", "Q275", "V170", "V142", "V11", "V190", "V10", "V5")
```

```
Question.key = data.frame(Categories = categories, Question.Number = questions, Codebook = key)
Question.key
```

```
##           Categories Question.Number Codebook
## 1           Employment           Q279      V249
## 2           Employment           Q275      Q275
## 3             Security           Q131      V170
## 4           Human Rights           Q253      V142
## 5           Health Levels           Q47       V11
## 6           Health Levels           Q53      V190
## 7 Social & Personal Connectivity           Q46      V10
## 8 Social & Personal Connectivity           Q2       V5
```

```
###v249 Employment
```

```
# Define the vector of categories including a placeholder for the missing '-1' code
```

```
v249_employment_status <- c(
  "No answer",
  "Full time employee (30 hours a week or more)",
  "Part time employee (less than 30 hours a week)",
  "Self-employed",
  "Retired / On a pension",
  "Home duties, not otherwise employed",
  "Student",
  "Unemployed",
  "Other (please specify)"
)
```

```
values.249 = c(-2,1,2,3,4,5,6,7,8)
```

```
q275_education = c("No answer",
  "No formal education",
  "Primary education only",
  "Lower secondary education (i.e. Year 9 or less)",
  "Upper secondary education (i.e. between Year 10 and Year 12)",
  "Post-secondary non-tertiary education (e.g. apprenticeship or certificate)",
  "Bachelor or equivalent",
  "Master or equivalent",
  "Doctoral or equivalent")
```

```
values.275 = c(-2,1,2,3,4,5,6,7,8,9)
```

```
v170_how_secure_are_you = c(
  "No answer",
  "Very secure",
  "Quite secure",
```

```

"Not very secure",
"Not at all secure"
)

values.275 = c(-2,1,2,3,4)

v142_respect_human_rights = c(
"No answer",
"A great deal of respect",
"Some respect",
"Not much respect",
"No respect at all"
)

values.142 = c(-2,1,2,3,4)

v11_state_of_health = c(
"No answer",
"Very good",
"Good",
"Fair",
"Poor",
"Very poor"
)

values.11 = c(-2,1,2,3,4,5)

v190_gone_without_medicine = c(
"No answer",
"Often",
"Sometimes",
"Rarely",
"Never"
)

values.190 = c(-2,1,2,3,4)

v10_how_happy = c(
"No answer",
"Very happy",
"Rather happy",
"Not very happy",
"Not at all happy"
)

values.190 = c(-2,1,2,3,4)

v5_friends = c(
"No answer",
"Very important",
"Rather important",
"Not very important",
"Not at all important"
)

```

```
)  
values.5 = c(-2,1,2,3,4)
```