



# Original Article Exploring Multidimensional Influences on Self-Rated Subjective Health: A Cross-Sectional Study in Pakistan

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**Abstract: Background:** The study explored the multidimensional factors that shape a persons' self-rated subjective health in Pakistan using secondary data from World Values Survey Pakistan 2018. **Methods:** The study used a sample of 1750 cases of population aged 18 – 85 years. The independent variables were age, number of children, financial satisfaction, autonomy, gender, region, social organization, literacy, marital status, employment status, importance of family, friends, and work, general trust and trust on neighborhood, earning status, happiness, and financial savings. Data was analyzed using Statistical Package for the Social Sciences (SPSS, v. 26) and multivariate ordinal logistic regression was conducted to predict adjusted odds of self-rated health with respect to independent variables. **Results**: The adjusted odds of good health increased with increase in autonomy (AOR = 1.07, 95% CI: 1.02 - 1.12, p < .01), full-time employment (AOR = 2.24, 95% CI: 1.24 - 4.05, p < .01), importance of friends (AOR = 1.86, 95% CI: 1.09 - 3.18, p < .05), and higher happiness (AOR = 6.39, 95% CI: 3.42 - 11.9, p < .001). **Conclusion:** The study has opened avenues for exploring the mechanisms and processes through which these factors affect subjective health and recommend using longitudinal data to understand and validate these mechanisms.

Keywords: Subjective Health, Happiness, Autonomy, WVS



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## 1. Introduction

Self-Rated Health has been applied in a great variety of contexts, with a broad spectrum of demographic groups, and for an enormous number of reasons, from studies aimed to help people in crisis situations make decisions to screening for specific health issues (Salomon et al., 2004). The term self-rated health has been used to describe the response given by people when questioned about their health; as a result, it can be used to describe any self-report of an individual's health or of particular indications like pain or the feeling of palpitation, tiredness or exhaustion (Shadbolt, 1997). It is a method of assessing a person's health that incorporates knowledge of their biological, psychological, functional, and spiritual well-being (Bjorner et al., 1996). A number of researches have been carried out by the scientists to measure self-rated health which demonstrates the high level of interest in employing it in studies that evaluate the state of health (Benyamini, 2011). A number of health surveys being conducted on older adults are already using it (Ocampo, 2010).

Self-rated health represents a significant divergence from traditional medical metrics by offering a thorough and person-centered evaluation of a person's wellbeing (Liang et al., 2022). Although self-rated health identifies the intrinsic subjectivity and individuality of each individual's health experience (Zhang et al., 2020), traditional medical assessments often place a higher importance on objective clinical markers (Althubaiti, 2016). A level of depth to health valuation that cannot be fully characterized through just medical tests and diagnoses is added by the emphasis on personal lived experience and perception (Callan et al., 2015). The meaning of self-evaluated wellbeing lies in its capacity to envelop a wide range of elements that impact a person's general personal satisfaction (Sundaresan & Sharma, 2021). Beyond the confines of biological parameters, this approach takes into account functional, psychological, social, and even spiritual dimensions (Trudel-Fitzgerald et al., 2019; Bożek et al., 2020). It recognizes that being healthy goes beyond simply being free of disease (Raphael, 2016), but a dynamic equilibrium that involves social connections (Kleinman, 2020; Rogers & Pilgrim, 2021), emotional well-being (Ruggeri et al., 2020), and personal fulfillment (Kubzansky et al., 2018).

Pakistan is distinguished by urban-rural inequalities (Hussain et al., 2023), a diverse geographic landscape (Ali et al., 2017), and cultural influences (Greenhalgh, 2016), each with unique environmental, socioeconomic, and health issues. In Pakistan, there is a distinct difference between rural and urban areas, which has an effect on access to education, healthcare, and employment prospects (Asif & Pervaiz, 2019). The examination of these complex factors that influence one's perception of one's own worth opens a window into the many different aspects of wellbeing. Beyond the conventional biomedical framework, the current paper explores the extensive range of reasons that together shape a person's impression of their own health. This study explores the complex relationship of biological, psychological, social, and environmental elements in order to diagnose that health is a multidimensional concept that goes beyond only physical factors (Kolotkin & Andersen, 2017). The study aims to explain the underlying dynamics that motivate people to assess their own health state, ultimately influencing their overall quality of life, by researching into this entire framework (Chen et al., 2015).

In an increasingly complicated environment, this study is extremely crucial. Self-rated subjective health can be viewed holistically by using this knowledge of it as a multidimensional phenomenon (Zadworna, 2022). Each person's viewpoint of their health is a unique, complex mosaic made of an individual's own life experiences, socioeconomic variables and the context of their culture (Purnell, 2016). The study concedes the complex interactions between these factors by going on this exploration journey, highlighting the fact that one's self-rated subjective health is a reflection of both their physical well-being and their overall life circumstances. Because it offers an improved understanding of how people integrate many parts of their lives to produce their self-assessed well-being (Zuzanek & Hilbrecht, 2019), the study has the potential to provide significant data to both the scientific community and public health practitioners.

## 2. Materials and Methods

#### Design and Sample

The study analyzed data from World Values Survey (WVS) Pakistan 2018 using 1750 cases of population aged 18 - 85 years of which 931 were males and 819 were females. The complete details of WVS Pakistan 2018 including detailed methods, sampling design, and datasets can be found elsewhere (Haerpfer et al., 2022). The data is publicly available to be used by researchers so no ethical approval was required.

## Measures

#### Dependent variable

The dependent variable in the study was Subjective (self-rated) Health. The original variable in the dataset consisted of five ordinal response categories, that were, 1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Very Good. The variable, for the purpose of this study, was recoded to three response categories that were: 1 = Poor, 2 = Fair, 3 = Good. The very poor and poor categories were merged into a single response. Likewise, very good and good were merged as a single category.

#### Independent variables

The independent variables (social and demographic) used in the study were age in years, number of children, financial satisfaction measured on a scale of 1 - 10 where higher values showed higher satisfaction, autonomy (scale of 1 - 10, higher values representing higher autonomy), gender (female/male), region (Punjab/Sindh/Khyber Pakhtunkhwa/Balochistan), social organization (urban/rural), literacy (yes/no), marital status (married/divorced/separated/widowed/single), employment (full-time/part-time/self-employed/others/unemployed), chief wage earner (no/yes), saved money last year (yes/just got by/spent some savings/spent savings & borrowed), importance of family (4 ordinal response categories ranging from very important to not at all important), importance of friends (4 ordinal response categories ranging from very important to not at all important), work important than leisure (5 point likert scale ranging from strongly agree to strongly disagree), happiness (4 ordinal response categories ranging from very happy to not at all happy), general trust on people (no/yes), trust on neighborhood (4 ordinal responses from complete trust to no trust at all), and fear of unemployment (4 responses ranging from very much to not at all).

## Statistical Analysis

The data was analyzed using Statistical Package for Social Sciences (SPSS, v. 26). For the distribution and association of categorical independent variables with subjective health, cross-tabulations were done and Chi-Square Test of Association was conducted (see Table 1). For the continuous independent variables, one way ANOVA was conducted to assess mean differences with respect to self-rated health (see Table 2). To predict self-rated health with respect to independent variables, a multivariate ordinal logistic analysis was carried out (see Table 3). A 95% level of confidence was used for all inferential statistics. Frequency and percentage distributions of categorical independent variables with subjective health along with Chi-Square significance values are summarized below as Table 1. The Chi-Square Test of Association significance values are also given in the table. Gender was significantly associated with subjective health (p < .001) and of 46.8% females in the sample, 30.2% rated their health as good and 3.7% considered their health as poor compared to 39.3% men who rated their health as good and 1.7% as poor (men = 53.2% of the sample). The results further showed that 41.1% of respondents residing in Punjab considered their health to be good, 16.4% in Sindh, 7.4% in Khyber Pakhtunkhwa, and 4.5% in Balochistan. Of 32.7% respondents in urban areas, 21.7% rated their health as good and 47.7% residing in rural areas considered their health to be good. Importance of friends was also significantly associated to subjective health and 40.8% of the respondents (out of 57.5%) who considered friends to be very important in life rated their health as good compared to 1.8% (out of 3.6%) who considered friends as not very important in life. Likewise, happiness was also significantly associated with subjective health as 38.8% (of 47.7%) who were very happy rated their health as good. The remaining results are presented below as Table 1.

 Table 1. Frequency Distribution of Subjective Health with categorical independent variables,

 World Values Survey Pakistan 2018 (N = 1750)

Variables	5	Subjective Health	l		X2 p-value
	Poor	Fair	Good	Total	
	n (%)	n (%)	n (%)	N (%)	
Gender					< .001
Female	64 (3.7)	227 (13.0)	528 (30.2)	819 (46.8)	
Male	30 (1.7)	214 (12.2)	687 (39.3)	931 (53.2)	
Region					< .001
Punjab	54 (3.1)	252 (14.4)	719 (41.1)	1025 (58.6)	
Sindh	23 (1.3)	129 (7.4)	287 (16.4)	439 (25.1)	
Khyber Pakhtunkhwa	17 (1.0)	54 (3.1)	130 (7.4)	201 (11.5)	
Balochistan	0 (0.0)	06 (0.3)	79 (4.5)	85 (4.8)	
Social Organization					.112
Urban	31 (1.8)	162 (9.3)	380 (21.7)	573 (32.7)	
Rural	63 (3.6)	279 (15.9)	835 (47.7)	1177 (67.3)	
Literate					.001
Yes	53 (3.0)	321 (18.3)	895 (51.1)	1269 (72.5)	
No	41 (2.3)	120 (6.9)	320 (18.3)	481 (27.5)	
<b>Marital Status</b>					< .001
Married	75 (4.3)	376 (21.5)	1008 (57.6)	1459 (83.4)	
Divorced	0 (0.0)	05 (0.3)	02 (0.1)	07 (0.4)	
Separated	0 (0.0)	02 (0.1)	01 (0.1)	03 (0.2)	
Widowed	08 (0.5)	08 (0.5)	15 (0.9)	31 (1.8)	
Single	11 (0.6)	50 (2.9)	189 (10.8)	250 (14.3)	
<b>Employment Status</b>					< .001
<b>Full-time</b>	12 (0.7)	136 (7.8)	455 (26.0)	603 (34.5)	
Part-time	10 (0.6)	35 (2.0)	103 (5.9)	148 (8.5)	
Self-employed	04 (0.2)	40 (2.3)	138 (7.9)	182 (10.4)	
Others	59 (3.4)	212 (12.1)	472 (27.0)	743 (42.4)	
Unemployed	09 (0.5)	18 (1.0)	47 (2.7)	74 (4.2)	
Chief Wage Earner					< .001
No	66 (3.8)	227 (13.0)	573 (32.7)	866 (49.5)	
Yes	28 (1.6)	214 (12.2)	642 (36.7)	884 (50.5)	
Saved money last year					.038
Yes	07 (0.4)	58 (3.3)	197 (11.3)	262 (15.0)	
Just got by	59 (3.4)	283 (16.2)	759 (43.4)	1101 (62.9)	
Spent some savings	13 (0.7)	55 (3.1)	162 (9.3)	230 (13.1)	
Spent savings & Borrowed	15 (0.9)	45 (2.6)	97 (5.5)	157 (9.0)	
Family Important?					.268

Very important	85 (4.9)	402 (23.0)	1137 (65.0)	1624 (92.8)	
<b>Rater important</b>	08 90.5)	31 (1.8)	65 (3.7)	104 (5.9)	
Not very important	0 (0.0)	04 (0.2)	10 (0.6)	14 (0.8)	
Not at all important	1 (0.1)	04 (0.2)	03 (0.2)	08 (0.5)	
Friends Important?					< .001
Very important	41 (2.3)	252 (14.4)	714 (40.8)	1007 (57.5)	
<b>Rater important</b>	28 (1.6)	139 (7.9)	374 (21.4)	541 (30.9)	
Not very important	12 (0.7)	32 (1.8)	95 (5.4)	139 (7.9)	
Not at all important	13 (0.7)	18 (1.0)	32 (1.8)	63 (3.6)	
Work Important?					.120
Strongly Agree	55 (3.1)	253 (14.5)	717 (41.0)	1025 (58.6)	
Agree	25 (1.4)	99 (5.7)	291 (16.6)	415 (23.7)	
Neutral	06 (0.3)	44 (2.5)	111 (.3)	161 (9.2)	
Disagree	02 (0.1)	27 (1.5)	70 (4.0)	99 (5.7)	
Strongly Disagree	06 (0.3)	18 (1.0)	26 (1.5)	50 (2.9)	
Happiness					< .001
Very happy	25 (1.4)	131 (7.5)	679 (38.8)	835 (47.7)	
Quite happy	45 (2.6)	231 (13.2)	450 (25.7)	726 (41.5)	
Not very happy	14 (0.8)	64 (3.7)	67 (3.8)	145 (8.3)	
Not at all happy	10 (0.6)	15 (0.9)	19 (1.1)	44 (2.5)	
<b>General Trust</b>					.070
No	73 (4.2)	353 (20.2)	907 (51.8)	1333 (76.2)	
Yes	21 (1.2)	88 (5.0)	308 (17.6)	417 (23.8)	
Trust on Neighborhood					< .001
Completely	23 (1.3)	113 (6.5)	459 (26.2)	595 (34.0)	
Somewhat	47 (2.7)	194 (11.1)	515 (29.4)	756 (43.2)	
Not very much	15 (0.9)	68 (3.9)	150 (8.6)	233 (13.3)	
Not at all	09 (0.5)	66 (3.8)	91 (5.2)	166 (9.5)	
Unemployment fear					.625
Very much	64 (3.7)	275 (15.7)	738 (42.2)	1077 (61.5)	
A great deal	16 (0.9)	91 (5.2)	274 (15.7)	381 (21.8)	
Not very much	09 (0.5)	50 (2.9)	118 (6.7)	177 (10.1)	
Not at all	05 (0.3)	25 (1.4)	85 (4.9)	115 (6.6)	

To assess mean differences of continuous independent variables with subjective health, oneway ANOVA was conducted and the results are summarized below as Table 2. There was a significant mean difference in subjective health with respect to age, number of children, financial satisfaction, and autonomy. The results show that increase in age, higher number of children, low financial satisfaction, and lower autonomy were related to poor health. The mean and standard deviation of continuous independent variables with respect to subjective health along with their significance values are given below in Table 2.

Table 2. Mean Difference of Subjective Health with respect to continuous independent variables, World Values Survey Pakistan 2018 (N = 1750)

Variables	Subjective Health			p-value
	Poor	Fair	Good	
	Mean (SD)	Mean (SD)	Mean (SD)	
Age (18 – 85 years)	40.4 (14.5)	37.7 (12.3)	34.7 (10.6)	< .001
Number of children (0 – 12)	3.6 (2.4)	2.8 (2.1)	2.5 (2.0)	< .001
Financial satisfaction (1 – 10)	6.4 (3.0)	6.9 (2.6)	7.5 (2.4)	< .001
<b>Autonomy (1 – 10)</b>	7.1 (2.9)	7.2 (2.8)	7.9 (2.4)	< .001

The results of multivariate ordinal logistic regression analysis showed that the adjusted odds of good health statistically significantly decreased with increase in age (AOR = 0.97, 95% CI: 0.96 - 0.98, p < .001). Autonomy was also significantly associated with subjective health and the adjusted odds of good health increased with increase in autonomy (AOR = 1.07, 95% CI: 1.02 - 1.12,

p < .01). The adjusted odds of good health were significantly lower in Punjab (AOR = 0.15, 95%) CI: 0.06 – 0.37, p < .001), Sindh (AOR = 0.13, 95% CI: 0.05 – 0.32, p < .001), and Khyber Pakhtunkhwa (AOR = 0.11, 95% CI: 0.04 - 0.28, p < .001) compared to Baluchistan. The adjusted odds of good health were 0.79 times lower in urban areas (AOR = 0.79, 95% CI: 0.62 - 0.99, p < .05) compared to rural areas. With respect to employment, the adjusted odds of good health increased by 2.24 times in those who had a full-time employment compared to those who were unemployed (AOR = 2.24, 95% CI: 1.24 - 4.05, p < .01). The analysis further showed that the adjusted odds of good health were higher in respondents who considered friends to be very important (AOR = 1.86, 95% CI: 1.09 - 3.18, p < .05), rather important (AOR = 1.99, 95% CI: 1.15 - 3.44, p < .05), and not very important (AOR = 2.13, 95% CI: 1.13 - 4.02, p < .05) compared to those who considered friends to be not important at all. With respect to importance of work, the adjusted odds of good health were significantly higher in those who strongly agreed (AOR = 1.87, 95% CI: 1.00 - 3.50, p < .05), agreed (AOR = 2.09, 95% CI: 1.11 – 3.96, p < .05), and disagreed (AOR = 3.01, 95% CI: 1.42 - 6.36, p < .01) compared to those who strongly disagreed with the importance of work in lieu of leisure time. The results also revealed that the adjusted odds of good health increased in those who were very happy (AOR = 6.39, 95% CI: 3.42 - 11.9, p < .001) and quite happy (AOR = 2.49, 95% CI: 1.36 - 4.58, p < .01) compared to those who were not happy at all. The adjusted odds of good health increased in those who had a complete (AOR = 2.49, 95% CI: 1.66 - 3.73, p < .001) or some trust (AOR = 1.56, 95% CI: 1.07 - 2.27, p < .05) in neighborhood compared to those who did not trust their neighborhood at all. There was also 0.57 times lower adjusted odds of good health in those who worried about losing their job/becoming unemployed compared to those who did not have this fear at all (AOR = 0.57, 95% CI: 0.35 - 0.92, p < .05).

Table 3. Multivariate Ordinal Logistic Regression to predict Subjective Health from socio-demographic and psychological variables, World Values Survey Pakistan 2018 (N = 1750)

Variables		Subjective Health	l
	AOR	95% CI	p-value
Age	0.97	0.96 - 0.98	<.001
Number of children	0.97	0.91 - 1.04	.414
Financial satisfaction	1.01	0.96 - 1.06	.772
Autonomy	1.07	1.02 - 1.12	.004
Gender			
Female	1		
Male	1.12	0.73 - 1.73	.602
Region			
Punjab	0.15	0.06 - 0.37	<.001
Sindh	0.13	0.05 - 0.32	< .001
Khyber Pakhtunkhwa	0.11	0.04 - 0.28	< .001
Balochistan	1		
Social Organization			
Urban	0.79	0.62 - 0.99	.047
Rural	1		
Literate			
Yes	1.07	0.83 - 1.38	.600
No	1		
Marital Status			
Married	1.10	0.73 - 1.66	.664
Divorced	0.55	0.12 - 2.53	.443
Separated	0.70	0.07 - 6.62	.752
Widowed	0.94	0.39 - 2.24	.887
Single	1		
<b>Employment Status</b>			
Full-time	2.24	1.24 - 4.05	.008
Part-time	1.66	0.87 - 3.16	.127
Self-employed	1.93	0.99 - 3.80	.056
Others	1.18	0.68 - 2.05	.548
Unemployed	1		

Chief Wage Earner			
No	1		
Yes	0.91	0.63 - 1.32	.621
Saved money last year			
Yes	1.34	0.83 - 2.13	.237
Just got by	1.12	0.77 - 1.63	.568
Spent some savings	1.12	0.70 - 1.79	.628
Spent savings & Borrowed	1		
Family Important?			
Very important	2.07	0.52 - 8.21	.302
Rater important	1.73	0.41 - 7.32	.454
Not very important	3.25	0.50 - 21.2	.218
Not at all important	1		
<b>Friends Important?</b>			
Very important	1.86	1.09 - 3.18	.023
Rater important	1.99	1.15 - 3.44	.014
Not very important	2.13	1.13 - 4.02	.019
Not at all important	1		
Work Important?			
Strongly Agree	1.87	1.00 - 3.50	.049
Agree	2.09	1.11 - 3.96	.023
Neutral	1.96	0.99 - 3.91	.055
Disagree	3.01	1.42 - 6.36	.004
Strongly Disagree	1		
Happiness			
Very happy	6.39	3.42 - 11.9	< .001
Quite happy	2.49	1.36 - 4.58	.003
Not very happy	1.64	0.83 - 3.21	.152
Not at all happy	1		
General Trust			
No	1		
Yes	1.18	0.90 - 1.55	.234
Trust on Neighborhood			
Completely	2.49	1.66 - 3.73	<.001
Somewhat	1.56	1.07 - 2.27	.020
Not very much	1.35	0.87 - 2.09	.179
Not at all	1		
Unemployment fear			
Very much	0.57	0.35 - 0.92	.022
A great deal	0.80	0.48 - 1.35	.404
Not very much	0.87	0.48 - 1.55	.626
Not at all	1		

#### 4. Discussion

The current article holds particular relevance within the context of Pakistan. Pakistan health system constitutes of a diverse and complex landscape (Khan, 2019). Understanding the factors that influence people's perceptions of their own health is essential (Smith, Devine, & Preston, 2020), because the general population faces a variety of health concerns, from infectious diseases to non-communicable diseases (Mahmood et al., 2013). This study provides insight into how Pakistan's multifaceted socioeconomic gaps, restricted access to healthcare services, and cultural norms all affect self-rated health.

The role of province is important when it comes to self-reported health (Datta et al., 2019). Throughout the provinces of Pakistan, with considerable variations, the importance of provincial differences in terms of health that is self-reported is alarming (Jamal, 2018). Even though Balochistan shows a different pattern, the rest of the provinces have considerably worse health indicators.

This shows the importance that geographical circumstances play in determining the perception of people about their health (Kwan, 2012) and the observed variances could be due to a number of factors that include disparities in socioeconomic status, changes in healthcare infrastructure and differences in cultural norms.

There is an enormous economic and social division between the urban and rural population (Asghar et al., 2009). When it comes to the availability of employment possibilities along with the access to basic amenities and basic living circumstances the gap is very noticeable (World Health Organization, 2010). It also affects the outcomes of health as can be seen by the palpable distinctions between urban and rural communities. The urban population is displaying a higher health index as compared to the rural counterparts (Mushtaq et al., 2011). A variety of elements drive the variation in health status which includes the increase in healthcare services, expansion of educational possibilities and development of urban infrastructure. People who believe that their friends are important in their lives likely to have better general health(Rath& Harter, 2010). This association between the value of friendships as seen by individuals and better health outcomes emphasizes the potential influence of social relationships on wellbeing (Amati et al., 2018). The positive correlation shows that maintaining and respecting friendships might help people feel better emotionally and psychologically, which can then improve their physical health (Fox & Magnus, 2014).

People who value their employment more than other things frequently experience better health outcomes (Diener et al., 2018). The potential benefits of job satisfaction and engagement on general wellbeing are highlighted by the link between one's assessment of the importance of their work and improved health (Mróz & Kaleta, 2016). Finding significance and value in one's work can improve psychological health, reduce stress, and foster a more optimistic attitude on life (Foster et al., 2020). This correlation between the value of one's job and their health emphasizes how intricately their personal and professional lives are intertwined. An individual's likelihood of enjoying better health increases with the level of happiness they experience (De Neve et al., 2013). This link between happiness and health highlights the complex interrelationship between mental and physical health (Sabatini, 2014). Happiness is one of the positive emotions that has been demonstrated to alter immune system and physiological processes (Dockray & Steptoe, 2010), thereby improving overall health. A cheerful attitude also frequently results in healthy lifestyle decisions, such as regular physical activity, a balanced diet, and enough sleep (Zavitsanou & Drigas, 2021). This interaction of the emotional and physical spheres emphasizes how important it is to cultivate healthy emotions for overall wellbeing (Seppala et al., 2013).

An individual is more likely to enjoy better health outcomes based on the greater autonomy they experience (Teixeira et al., 2012). The level of independence and control over one's actions, decisions, and choices is referred to as autonomy (Deci & Ryan, 2012). This link between autonomy and health highlights the importance of individual freedom and empowerment in determining wellbeing (DelleFave et al., 2011). Having the flexibility to make decisions that are consistent with one's values and preferences may reduce stress, improve psychological well-being, and provide one a sense of control over one's life (Fava & Guidi, 2020). Furthermore, people are more inclined to make decisions that prioritize their health when they have greater liberty, which leads to healthier lifestyle choices (Vancampfort et al., 2015).

People are more likely to have better health outcomes if they have a higher level of trust in their neighborhood (Hanibuchi et al., 2012). The link between having faith in one's neighborhood and better health emphasizes how important social cohesiveness and a sense of belonging are to overall wellbeing (Cramm & Nieboer, 2013). People feel safe and appreciated in a supportive atmosphere when neighbors and their community are trusted by the individual (Cramm & Nieboer, 2015). This welcoming social environment can help people feel less stressed, have better mental health, and feel more secure. Furthermore, more trusting relationships frequently result in stronger social networks, which in turn can offer moral support and useful aid when needed (Siedlecki et al., 2014).

An individual is more likely to face adverse health consequences depending on how much concern they have about losing their jobs (Anaf et al., 2013). This link between fear of losing your job and health underlines the significant negative effects that economic uncertainty can have on general wellbeing (Ridley et al., 2020). The stress and uncertainty brought on by a potential job loss can cause anxiety to increase, stress levels to rise, and both mental and physical health to suffer (Goldman-Mellor et al., 2010). Furthermore, a persistent worry of unemployment may set off a chain reaction of negative behaviors, such as improper coping strategies and fewer self-care rituals (Carr, 2014). The significance of taking into account not just economic concerns, but also mental and emotional dimensions, when thinking about individual health is highlighted by the recognition of this relationship.

Ageing is another important component. Older people may perceive themselves to be in worse health because of the increased likelihood of certain health issues and illnesses that are frequently linked to ageing (Coyle & Dugan, 2012). A number of variables, including genetics, lifestyle

decisions, socioeconomic status, and access to healthcare, affect the relationship between ageing and health (Annear et al., 2014). Through consistent exercise, a healthy diet, and preventive healthcare practices, some older persons maintain their independence in daily life and good health (Izquierdo et al., 2021).

### 5. Conclusions

This study has presented important insights into the determinants of self-rated health in Pakistan, highlighting several vital factors that appear to considerably influence individuals' perceptions of their well-being. The findings emphasize the intricate interplay of socio-demographic, sociocultural, and psychological factors in shaping self-rated health. The significant relationship between full-time employment and subjective health suggests the potential benefits of secure economic opportunities on overall well-being. Trust in neighbors also emerged as a central factor emphasizing the importance of social networking and solidarity in enhancing health outcomes. The relation between happiness and self-rated health underscores the function of positive psychology and mental well-being in overall health assessments. The study has opened avenues for exploring the mechanisms and processes through which these factors affect subjective health. Prospective researchers should focus on using longitudinal data to get insights into causal relationships between self-rated health and the variables used in this study.

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## References

- Ali, K., Bajracharya, R. M., Sitaula, B. K., Raut, N., & Koirala, H. L. (2017). Morphometric analysis of Gilgit river basin in mountainous region of Gilgit-Baltistan Province, Northern Pakistan. Journal of Geoscience and Environment Protection, 5(07), 70.
- Althubaiti, A. (2016). Information bias in health research: definition, pitfalls, and adjustment methods. *Journal of multidisciplinary healthcare*, 211-217.
- Amati, V., Meggiolaro, S., Rivellini, G., &Zaccarin, S. (2018). Social relations and life satisfaction: The role of friends. Genus, 74, 1-18.
- Anaf, J., Baum, F., Newman, L., Ziersch, A., & Jolley, G. (2013). The interplay between structure and agency in shaping the mental health consequences of job loss. *BMC Public Health*, 13, 1-12.
- Annear, M., Keeling, S., Wilkinson, T. I. M., Cushman, G., Gidlow, B. O. B., & Hopkins, H. (2014). Environmental influences on healthy and active ageing: A systematic review. Ageing & Society, 34(4), 590-622.
- Asghar, Z., Attique, N., & Urooj, A. (2009). Measuring impact of education and socio-economic factors on health for Pakistan. *The Pakistan Development Review*, 48(4), 653-674.
- Asif, M. F., & Pervaiz, Z. (2019). Socio-demographic determinants of unmet need for family planning among married women in Pakistan. BMC public health, 19(1), 1-8.
- Benyamini, Y. (2011). Why does self-rated health predict mortality? An update on current knowledge and a research agenda for psychologists. *Psychology & health*, 26(11), 1407-1413.
- Bjorner, J. B., Kristensen, T. S., Orth-Gomér, K., Tibblin, G., Sullivan, M., & Westerholm, P. (1996). Self-rated health-a useful concept in research, prevention and clinical medicine.
- Bożek, A., Nowak, P. F., & Blukacz, M. (2020). The relationship between spirituality, health-related behavior, and psychological well-being. Frontiers in Psychology, 11, 1997.
- Callan, M. J., Kim, H., & Matthews, W. J. (2015). Predicting self-rated mental and physical health: The contributions of subjective socioeconomic status and personal relative deprivation. Frontiers in psychology, 6, 1415.

Carr, D. (2014). Worried sick: How stress hurts us and how to bounce back. Rutgers University Press.

- Chen, B., Vansteenkiste, M., Beyers, W., Boone, L., Deci, E. L., Van der Kaap-Deeder, J., ... & Verstuyf, J. (2015). Basic psychological need satisfaction, need frustration, and need strength across four cultures. *Motivation and emotion*, *39*, 216-236.
- Coyle, C. E., & Dugan, E. (2012). Social isolation, loneliness and health among older adults. Journal of aging and health, 24(8), 1346-1363.
- Cramm, J. M., & Nieboer, A. P. (2013). Relationships between frailty, neighborhood security, social cohesion and sense of belonging among community-dwelling older people. *Geriatrics & gerontology international*, 13(3), 759-763.
- Cramm, J. M., & Nieboer, A. P. (2015). Social cohesion and belonging predict the well-being of community-dwelling older people. *BMC geriatrics*, 15(1), 1-10.
- Datta, B. K., Husain, M. J., &Asma, S. (2019). Assessing the relationship between out-of-pocket spending on blood pressure and diabetes medication and household catastrophic health expenditure: evidence from Pakistan. *International journal for equity in health*, 18(1), 1-12.

De Neve, J. E., Diener, E., Tay, L., & Xuereb, C. (2013). The objective benefits of subjective well-being. World happiness report.

- Deci, E. L., & Ryan, R. M. (2012). Self-determination theory in health care and its relations to motivational interviewing: a few comments. *International Journal of Behavioral Nutrition and Physical Activity*, 9, 1-6.
- DelleFave, A., Massimini, F., &Bassi, M. (2011). Psychological selection and optimal experience across cultures: Social empowerment through personal growth (Vol. 2). Springer Science & Business Media.
- Diener, E., Oishi, S., & Tay, L. (2018). Advances in subjective well-being research. Nature Human Behaviour, 2(4), 253-260.
- Dockray, S., & Steptoe, A. (2010). Positive affect and psychobiological processes. *Neuroscience & Biobehavioral Reviews*, 35(1), 69-75.
- Fava, G. A., & Guidi, J. (2020). The pursuit of euthymia. World Psychiatry, 19(1), 40-50.
- Foster, K., Roche, M., Giandinoto, J. A., & Furness, T. (2020). Workplace stressors, psychological well-being, resilience, and caring behaviours of mental health nurses: A descriptive correlational study. *International journal of mental health nursing*, 29(1), 56-68.
- Fox, K. R., & Magnus, L. (2014). Self-esteem and self-perceptions in sport and exercise. In *Routledge companion to sport and exercise psychology* (pp. 34-48). Routledge.
- Goldman-Mellor, S. J., Saxton, K. B., & Catalano, R. C. (2010). Economic contraction and mental health: A review of the evidence, 1990-2009. International Journal of Mental Health, 39(2), 6-31.
- Greenhalgh, T. (2016). Cultural contexts of health: the use of narrative research in the health sector. World Health Organization. Regional Office for Europe.
- Haerpfer, C., Inglehart, R., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano J., M. Lagos, P. Norris, E. Ponarin & B. Puranen (eds.). 2022. World Values Survey: Round Seven - Country-Pooled Datafile Version 5.0. Madrid, Spain & Vienna, Austria: JD Systems Institute & WVSA Secretariat. <u>doi:10.14281/18241.20</u>
- Hanibuchi, T., Kondo, K., Nakaya, T., Shirai, K., Hirai, H., &Kawachi, I. (2012). Does walkable mean sociable? Neighborhood determinants of social capital among older adults in Japan. *Health & place*, *18*(2), 229-239.
- Hussain, S., Shair, W., Mir, S. A., & Aleemuddin, S. (2023). Public Health Care Services in Pakistan: An Empirical Analysis of Drivers of Utilisation. *Journal of Economic Impact*, 5(2), 155-161.
- Izquierdo, M., Merchant, R. A., Morley, J. E., Anker, S. D., Aprahamian, I., Arai, H., ... & Singh, M. F. (2021). International exercise recommendations in older adults (ICFSR): expert consensus guidelines. *The journal of nutrition, health & aging*, 25(7), 824-853.
- Jamal, H. (2018). The Exploration of Subjective Well-being in the Context of Pakistan.
- Khan, S. A. (2019). Situation analysis of health care system of Pakistan: post 18 amendments. *Health Care Current Reviews*, 7(3), 244.
- Kleinman, A. (2020). Concepts and a model for the comparison of medical systems as cultural systems. In *Concepts of health, illness and disease* (pp. 27-47). Routledge.
- Kolotkin, R. L., & Andersen, J. R. (2017). A systematic review of reviews: exploring the relationship between obesity, weight loss and healthrelated quality of life. *Clinical obesity*, 7(5), 273-289.
- Kolotkin, R. L., & Andersen, J. R. (2017). A systematic review of reviews: exploring the relationship between obesity, weight loss and healthrelated quality of life. *Clinical obesity*, 7(5), 273-289.
- Kubzansky, L. D., Huffman, J. C., Boehm, J. K., Hernandez, R., Kim, E. S., Koga, H. K., ... & Labarthe, D. R. (2018). Positive psychological well-being and cardiovascular disease: JACC health promotion series. *Journal of the American College of Cardiology*, 72(12), 1382-1396.
   Kwan, M. P. (2012). The uncertain geographic context problem. *Annals of the Association of American Geographers*, 102(5), 958-968.
- Liang, X., Xiong, F., & Xie, F. (2022). The effect of smartphones on the self-rated health levels of the elderly. *BMC Public Health*, 22(1), 1-12.
- Mahmood, S. A. I., Ali, S., & Islam, R. (2013). Shifting from infectious diseases to non-communicable diseases: A double burden of diseases in Bangladesh. J Public Health Epidemiol, 5(11), 424-434.
- Mróz, J., & Kaleta, K. (2016). Relationships between personality, emotional labor, work engagement and job satisfaction in service professions. International journal of occupational medicine and environmental health, 29(5), 767-782.
- Mushtaq, M. U., Shahid, U., Abdullah, H. M., Saeed, A., Omer, F., Shad, M. A., ...&Akram, J. (2011). Urban-rural inequities in knowledge, attitudes and practices regarding tuberculosis in two districts of Pakistan's Punjab province. *International journal for Equity in Health*, 10, 1-9.
- Ocampo, J. M. (2010). Self-rated health: Importance of use in elderly adults. Colombia Médica, 41(3), 275-289.
- Purnell, L. D. (2016). The Purnell model for cultural competence. In Intervention in mental health-substance use (pp. 57-78). CRC Press.
- Raphael, D. (2016). Social determinants of health: Canadian perspectives. Canadian Scholars' Press.
- Rath, T., & Harter, J. K. (2010). Wellbeing: The five essential elements. Simon and Schuster.
- Ridley, M., Rao, G., Schilbach, F., & Patel, V. (2020). Poverty, depression, and anxiety: Causal evidence and mechanisms. *Science*, 370(6522), eaay0214.
- Rogers, A., & Pilgrim, D. (2021). A Sociology of Mental Health and Illness 6e. McGraw-Hill Education (UK).
- Ruggeri, K., Garcia-Garzon, E., Maguire, A., Matz, S., & Huppert, F. A. (2020). Well-being is more than happiness and life satisfaction: a multidimensional analysis of 21 countries. *Health and quality of life outcomes*, 18(1), 1-16.
- Salomon, J. A., Tandon, A., & Murray, C. J. (2004). Comparability of self rated health: cross sectional multi-country survey using anchoring vignettes. *Bmj*, 328(7434), 258.
- Seppala, E., Rossomando, T., & Doty, J. R. (2013). Social connection and compassion: Important predictors of health and well-being. Social Research: An International Quarterly, 80(2), 411-430.
- Shadbolt, B. (1997). Some correlates of self-rated health for Australian women. American Journal of Public Health, 87(6), 951-956.
- Siedlecki, K. L., Salthouse, T. A., Oishi, S., & Jeswani, S. (2014). The relationship between social support and subjective well-being across age. *Social indicators research*, *117*, 561-576.
- Smith, R. L., Devine, S., & Preston, R. (2020). Recommended methodologies to determine Australian Indigenous community members' perceptions of their health needs: a literature review. Australian Journal of Primary Health, 26(2), 95-103.
- Sundaresan, J. P., & Sharma, C. B. (2021). Exploring different facets of subjective well-being-A conceptual review. *Turkish Online Journal of Qualitative Inquiry*, 12(7).
- Teixeira, P. J., Carraça, E. V., Markland, D., Silva, M. N., & Ryan, R. M. (2012). Exercise, physical activity, and self-determination theory: a systematic review. *International journal of behavioral nutrition and physical activity*, 9(1), 1-30.
- Trudel-Fitzgerald, C., Millstein, R. A., Von Hippel, C., Howe, C. J., Tomasso, L. P., Wagner, G. R., &VanderWeele, T. J. (2019). Psychological well-being as part of the public health debate? Insight into dimensions, interventions, and policy. *BMC public health*, 19(1), 1-11.
- Vancampfort, D., Madou, T., Moens, H., De Backer, T., Vanhalst, P., Helon, C., ...& Probst, M. (2015). Could autonomous motivation hold the key to successfully implementing lifestyle changes in affective disorders? A multicentre cross sectional study. *Psychiatry research*, 228(1), 100-106.

Zhang, L., Ding, D., Neubeck, L., & Gallagher, R. (2020). Health literacy as a predictor of emergency department visits and self-rated health among Chinese immigrants: findings from an Australian survey. *Patient Education and Courseling*, 103(11), 2353-2360.

Zuzanek, J., & Hilbrecht, M. (2019). Enforced leisure: Time use and its well-being implications. Time & Society, 28(2), 657-679.