

The Determinant of Subjective Well-Being among the adult individuals in the UAE

Hira Abdul Razzak¹, Dr. Alya Harbi², Ms. Mubarkah Jaber AlKarbi³, Dr. Amin Mohamed ElShamy⁴, Dr. Lubna Al Shaali⁵, Dr. Rasha E Salama⁶, Ms. Malaz Bakri⁷, Dr. Ahmed Alosi⁸, Ms. Amna AlDhmanie⁹

¹Health Research Specialist, Statistics and Research Center, Ministry of Health and Prevention, United Arab Emirates.

²Director, Statistics and Research Center, Ministry of Health and Prevention, United Arab Emirates.

³Head of Research, Statistics and Research Center, Ministry of Health and Prevention, United Arab Emirates.

⁴Quality of life and Sustainable Development Consultant, Ministry of Health and Prevention, United Arab Emirates.

⁵Director of Health Policies and Legislations Department, Ministry of Health and Prevention, United Arab Emirates.

⁶Consultant for Public Health; Ministry of Health and Prevention & Assist. Professor Public Health –Faculty of Medicine -Suez Canal University.

⁷Technician practitioner, Public Health Policies, Ministry of Health and Prevention, United Arab Emirates.

⁸Research Consultant, National Center for Health Research, Ministry of Health and Prevention, United Arab Emirates.

⁹Medical Practitioner - Molecular Biotechnologist, Data & Statistics Department, Emirates Healthcare Services Establishment, United Arab Emirates.

Abstract

Background: Enhancing individual wellbeing is a national priority in the United Arab Emirates. Up to date, wellbeing at the country level was measured through the national wellbeing survey that is sector specific comprising of 122 questions. The “World Health Organization 5 items (WHO-5) Well-being Index” is a reliable instrument to assess Subjective Well-Being, yet was never tested at national level in the UAE.

Aim: This study examined the association of socio-economic determinants of health with the subjective well-being (SWB) using WHO-5 Well-being Index to inform public health policy in the UAE.

Method: A cross-sectional survey from adults (aged 18+ and above) was conducted. About 10,000 individuals were randomly selected across all the seven Emirates. A total of 7367 adults (18 years and above) took part in the survey (response rate was 74%). The WHO-5 instrument is a valid screening measure as it includes only 5 items, is freely available in at least thirty-one languages, and is tremendously easy to complete, interpret and score. The social support of the respondents was evaluated by using the Multidimensional Scale of Perceived Social Support.

Results: The results of the study demonstrate that majority of the participants (79.27%) reported moderate - high (≥ 50) well-being scores showing the good quality of life/well-being, whereas, only 20.72% of the individual reported ill-being/likely depression in the future. Respondent’s age, gender, marital status, monthly income (AED- UAE dirham), employment status and reporting at least one or more morbidity were found to be significantly associated with the SWB variables ($p \leq 0.05$). A significant association was found between the comprehensive/emotional and /mental well-being and perceived social support.

Conclusion: The WHO-5 index can be used as a reliable screening tool to identify wellbeing inequalities among adult individuals based on socio-economic determinants of health in the UAE. Addressing the socio-economic determinants of health in the UAE can enhance subjective well-being (SWB) and help the UAE to achieve its strategic aspiration to make the UAE among the world leaders in quality of life.

Keywords: Subjective Well-being; Well-being; Social Support; WHO-5 Well-being index; UAE; Mental Health

Introduction

Well-being is an essential characteristic of the human experience. Without good health, a person's quality of life and experiences gets affected. The World Health Organization (WHO) defines health as a "state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (Grad, 2002). Well-being in this situation is assumed as a sustainable condition that permits a person to develop and thrive. It is mainly a consolidation of sound functioning and feeling good; experiencing positive emotions for example, contentment or happiness along with building up the potential of an individual, having control over their life, having a sense of purpose, and demonstrating positive relationships (Huppert, 2009).

One of the models for well-being comprises of Positive Emotion, Engagement, Relationships, Meaning, and Accomplishment (PERMA). Martin Seligman (Psychologist) believes that flourishing comprises of five elements- Positive Emotion, Engagement, Relationships, Meaning, and Accomplishment (Baumeister, & Leary, 2017). Previous studies suggest that it is measurable and one can improve upon it. What describes a good life for one individual does not essentially indicate a good life for another, but every element of well-being produces good results for several individuals. During the past year, most of the governments internationally have relied on objective measures, for example, diabetes prevalence, life expectancy at birth, and gross domestic product or to gauge the health and wealth of the citizens. Although such type of metrics mainly provides significant information for evaluating a person's overall well-being at the national level, but they cannot tell the complete story. Therefore, at present Subjective well-being (SWB), a self-reported measure of well-being is gradually being integrated into public health research studies (Wilson, & Cleary, 1995). Henceforth, examining some aspects of well-being provides insights beyond a single indicator. Current evidence indicates that measures of subjective well-being of a person is helpful to improve the understanding of health-related outcomes and perceived health (Sen, 2002).

Social experiences of the patients often limit the health assessment specially when a medical condition is not sensory. Thus, the researchers often caution against an over reliance on subjective or internal health examination (Sen, 2002). Another large research study recruited hypertensive patients who were suffering from coronary artery disease (CAD) demonstrated that high systolic blood pressure, that is usually not - thought-out to be a sensory ailment, is linked with a higher probability of reporting poor or fair SWB (Gong, 2009). Deaton (2008) used a larger international dataset to find the correlation between health satisfaction and life expectancy. Similarly, he acknowledged that subjective health measures signify some essential metrics of key dimensions of human experiences. Another study in which the patients suffering from coronary heart disease and hypertension were asked to rate their well-being demonstrated that subjective measure of well-being was beneficial for identifying patients having an amplified risk for adverse health outcomes (Ried, Tueth, Handberg, & Nyanteh, 2006). Additionally, current evidence from neurobiology demonstrated that a person's brain area, the amygdala plays a vital role in dealing out with social emotions while other experimental work correspondingly sheds further light on the pathways needed for deciphering psychosocial experiences into physiological perturbations (Roy, 2004).

Another model focused in this study was the social ecological model that conceptualizes health in a broad sense as well as it emphasizes on a diversity of factors that may impact the health of an individual. This model reflects multifaceted interplay between individual, community, relationship, along with societal factors. This approach to health was advanced in the 1947 constitution of the WHO which comprised of mental, physical and social well-being (WHO, 1947). The social ecological model considers the health to be affected by the interaction between the group/community, individual, and the social, physical, and political environments (Sallis, Owen, & Fisher, 2008).

A study conducted by Nabulsi (2015) indicated that social support received from the family

members is considered as the highest source of social support when compared to the social support received from either friends or significant others. Poplavskaya, & Karabchuk (2018) studied the relation between employment and happiness on 656 Emirati respondents (18 to 29 years of age). The results of the study demonstrated that being employed is positively associated with higher happiness feelings and life enjoyment for young Emiratis. However, studying while employment results in higher negative feelings such as loneliness and sadness along with less life enjoyment, but aids to deter depressive symptoms. Petkari and Ortiz-Tallo (2018) studied the influence of character strengths attributes on mental health and happiness in the multicultural context of UAE. A sample of young university students were assessed using different scales such as the GHQ-12, Global Happiness Scale, and the VIA-IS-120. The findings from this study revealed that the group of character strengths under the denomination of Transcendence in conjunction with being young was related to better mental health and higher levels of happiness (Petkari, & Ortiz-Tallo, 2018). One of the UAE National Agenda 2021 of UAE pillars includes is Cohesive Society and Preserved Identity. This pillar intends to foster a comprehensive social environment for every division in the society along with keeping an exceptional tradition, heritage in addition to culture of UAE besides strengthening family and social cohesion. The government of UAE aims to make the UAE amongst the happiest countries under this specific pillar (U.ae, 2022). The United Arab Emirates has always envisioned to promote happiness throughout its society by generating programs to safeguard the well-being of its citizen.

The rationale for undertaking this study is to offer a comprehensive evaluation of the well-being of the UAE population and the type of support UAE population needs. Having this type of baseline data is beneficial to assist development of policies as well as it is useful to mobilize and plan government initiatives. To date, quality of life related to health has been well examined by means of different tools in various sub-populations. However, to our knowledge, no studies have been undertaken in the past using the WHO-5 Well-Being Index among UAE population at a national

level. Hence, this study aims to examine the association of socio-economic determinants of health with the subjective well-being (SWB) using WHO-5 Well-being Index to inform public health policy in the UAE.

Methods

Design and Settings:

An online cross-sectional survey was conducted between December 2020 - August 2021. Well-being and its associated factors were examined in the UAE population aged 18 and above years residing in different Emirates of the United Arab Emirates.

Sample Size/ Sampling/Inclusion and Exclusion Criteria

The survey was distributed to 10,000 individuals randomly selected from across all 7 Emirates to produce representative data. Overall, 7367 adults (18 years and above) took part in the survey. A simple random was used to recruit the respondents in the study. Sample size was calculated on Epi-info based on a population size of the United Arab Emirates and previously published research studies on the similar topic with a 5% margin of error at a 95% confidence interval (CI). The recommended sample size was 10, 000 participants. Of these 7367 adults (18 years and above) participated in the study showing an overall response rate of 74%.

Data collection/ Questionnaire/Instrument:

An electronic survey was developed on mSurvey, a governmental platform for surveys generation and management and participants were sent an online link via (SMS or email). Participant were able to complete the survey anonymously online.

Demographic questions: Some demographic questions were included such as age, gender,

nationality, education, monthly income, residence, employment and marital status etc.

In this study, we used WHO-5 (World Health Organization Well-Being Index) questionnaire which is considered as an extensively used questionnaire to assess the subjective well-being in clinical settings and research. This questionnaire is translated into 30 languages and has been utilized in different research studies across the globe. The study focuses on the subjective quality of life based on positive mood (relaxation, good spirits), general interest (being interested in things), and vitality (being active and waking up fresh and rested). A score below 50 intends to show poor well-being that may be secondary to other etiology and depressive disorder and indicates further evaluation.

Comprehensive Well-being was also examined with the WHO-5 instrument (Topp, Østergaard, Søndergaard, Bech, 2015). This questionnaire was created by the European offices of WHO (World Health Organization), which measured well-being by inquiring about 5 main survey questions. Each of the question exemplifies the subjective themes of well-being existing in literature. The first question: “Over the past 2 weeks, I have felt cheerful and in good spirits,” represents the affect-based (emotional) measurement of SWB. The second question: “Over the past 2 weeks, I have felt calm and relaxed,” shows the cognitive-based (mental) measurement of SWB, mainly the capability to manage stress for a better quality of life (Topp, Østergaard, Søndergaard, Bech, 2015).

The third question: “Over the past 2 weeks, I have felt active and vigorous” shows the objective well-being dimension of welfare. An individual’s report of feeling vigorous and active is considered to be a non-invasive means to determine whether or not a person feels energetic or is capable to manage their health outcomes (i.e., vigorous and active). The fourth question, “Over the past 2 weeks, I woke up feeling rested and refreshed” shows the active well-being dimension of welfare in regards to a person’s capability to manager their energy via wellness behaviors. (If a person does not eat, sleep, and/or move at healthy levels, then they will not awaken feeling refreshed or rested).

The fifth question, “Over the past 2 weeks, my daily life has been filled with things that interest me” represents the SWB sub-domains of meaning and purpose in life and life satisfaction (Topp, Østergaard, Søndergaard, Bech, 2015).

Mental Well-being can be documented in two different types: calm mood and life satisfaction. Both of these mental well-being types can be documented by questions from the WHO-5 survey (Topp, Østergaard, Søndergaard, Bech, 2015).

Social Support can be measured using Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, Farley, 1988). This is a 12-item measure of perceived adequacy of social support from 3 sources: friends, family, & significant other; using a 5-point Likert scale (0 = strongly disagree, 5 = strongly agree). The MSPSS tends to have good reliability (with a Cronbach’s alpha of 0.85 to 0.91).

Data Analysis

The collected data was entered into a computerized system and examined using SPSS (the statistical package of the social sciences) version 18. Descriptive and Inferential statistics (Regression and correlation analysis) were used for data analysis. Frequencies (n) and Proportions (%) were reported for categorical variables.

Ethical Approval

Ethical approval was obtained from the Ethical Review Board of the Ministry of Health and Prevention, Dubai. Furthermore, the respondents were also informed regarding the anonymity and confidentiality of all information during the survey. The voluntary nature of the respondent in the study was also highlighted. A consent was also acquired from the respondents digitally prior to completing the questionnaire pledging that the

data collected would solely be utilized for scientific purpose. The participants were informed that their personal identity will remain confidential.

RESULTS

Table 1 presents the number of respondents segregated based on gender. Approximately, 7367 individuals were included in the study. The mean respondent's age was 41.37 years ($SD \pm 10.09$), with age range (18 years and above). The frequencies and distributions of the studied characteristics for the whole sample was calculated. Most of the respondents (54.26%) were between the age group 30-44 years. Most of them were males (50.1%), married (78.8%), 53.5% were locals, and had attained at least a

Bachelors degree (44.3%). Almost 77.3% of the respondents were employed and 29.8% of them had income higher than 20001 AED; whereas, only 1.5% respondents lost their job during the time of pandemic. Approximately 75.4% of the respondents said that they value working from home. Twenty percent of the surveyed individuals reported having one or more morbidity while around 73% of respondents reported to have no ongoing medical condition. (Table 1). The data represented in Table 1 shows that most (33.1%) of the respondents were from Sharjah followed by 18.5% from Dubai, 13.9% from Ras Al Khaimah, 12.6% from Fujairah, 10.5% was from Abu Dhabi, 6.7% from Ajman, and 4.7% from Umm Al Quwain. The overall prevalence of likely depression/ ill-being among this sample of respondents was 21% (Figure 2).

Table 1. Characteristics of study participants (N = 7367).

Variables	Male (n=3689) 50.1%	Females (n= 3678) 49.9%	Total (n= 7367)
	N (%)	N (%)	N (%)
Age group			
18-29 years	338 (4.6)	436 (5.9)	774 (10.51)
30-44 years	1866 (25.3)	2131 (28.9)	3997 (54.26)
45-59 years	1174 (15.9)	1065 (14.5)	2239 (30.39)
60+	311 (4.2)	46 (0.6)	357 (4.85)
Total	3689 (50.1)	3678 (49.9)	7367 (100)
Emirate of Residence			
Abu Dhabi	535 (14.5)	237 (6.4)	772 (10.5)
Dubai	777 (21.1)	588 (16.0)	1365 (18.5)
Sharjah	1100 (29.8)	1339 (36.4)	2439 (33.1)
Ajman	242 (6.6)	250 (6.8)	492 (6.7)
Umm al-Quwain	164(4.4)	183 (5.0)	347 (4.7)
Ras Al Khaimah	459(12.4)	566 (15.4)	1025 (13.9)
Fujairah	412 (11.2)	515 (14.0)	927 (12.6)
Marital Status			
Single	410 (11.1)	729(19.8)	1139 (15.5)
Married	3207 (86.9)	2600(70.7)	5807 (78.8)
Separated	15 (0.4)	54(1.5)	69 (0.9)
Divorced	52 (1.4)	216(5.9)	268 (3.6)
Widowed	5 (0.1)	79(2.1)	84 (1.1)
Education Level			
No Education	12(0.3)	3(0.1)	15 (0.2)
Primary	66(1.8)	20(0.5)	86 (1.2)
Secondary	1209(32.8)	929(25.3)	2138 (29.0)
Short-cycle tertiary education	287(7.8)	304(8.3)	591 (8.0)
Bachelors	1414(38.3)	1847(50.2)	3261(44.3)

Masters	519(14.1)	458(12.5)	977 (13.3)
Doctoral and above	161(4.4)	97(2.6)	258 (3.5)
Not elsewhere classified	21(0.6)	20(0.5)	41 (0.6)
Nationality			
Local	1802(48.8)	2138(58.1)	3940 (53.5)
Non-Local (expat)	1887(51.2)	1540(41.9)	3427 (46.5)
Monthly income (AED)			
0 -5000	398 (10.8)	455(12.4)	853 (11.6)
5001 - 10000	641(17.4)	995(27.1)	1636 (22.2)
10001 - 15000	415(11.2)	385(10.5)	800 (10.9)
15001 - 20000	589(16.0)	476(12.9)	1065 (14.5)
20001 and above	1422(38.5)	770(20.9)	2192 (29.8)
Lost Job	75(2.0)	37(1.0)	112 (1.5)
Unemployed	149(4.0)	560(15.2)	709 (9.6)
Employment status			
Not employed, Looking for work	191 (5.2)	513(13.9)	704 (9.6)
Disabled (Not able to work)	28 (0.8)	52(1.4)	80 (1.1)
Employed	3051 (82.7)	2644(71.9)	5695 (77.3)
Not employed, Not looking for work	34 (0.9)	310(8.4)	344 (4.7)
Retired	259 (7.0)	108(2.9)	367 (5.0)
Self employed	126 (3.4)	51(1.4)	177 (2.4)
Job category			
Business owner	90(2.4)	61(1.7)	151 (2.0)
Clerical or office worker	148(4.0)	207(5.6)	355 (4.8)
Construction or mining worker	22(0.6)	2(0.1)	24 (0.3)
Manager, executive, or official	767(20.8)	388(10.5)	1155 (15.7)
Manufacturing or production worker	53(1.4)	8(0.2)	61 (0.8)
Professional worker	1022(27.7)	1181(32.1)	2203 (29.9)
Sales worker	94(2.5)	44(1.2)	138(1.9)
Service worker	223(6.0)	279(7.6)	502(6.8)
Others	1007(27.3)	934(25.4)	1941 (26.3)
Skipped	263 (7.1)	574(15.6)	837 (11.4)
Value work from home			
Yes	2744(74.4)	2808(76.3)	5552(75.4)
No	945(25.6)	870(23.7)	1815(24.6)
Any ongoing medical condition			
Yes	691 (18.7)	791(21.5)	1482 (20.1)
No	2783(75.4)	2665(72.5)	5448 (74)
Don't know	215(5.8)	222(6.0)	437 (5.9)

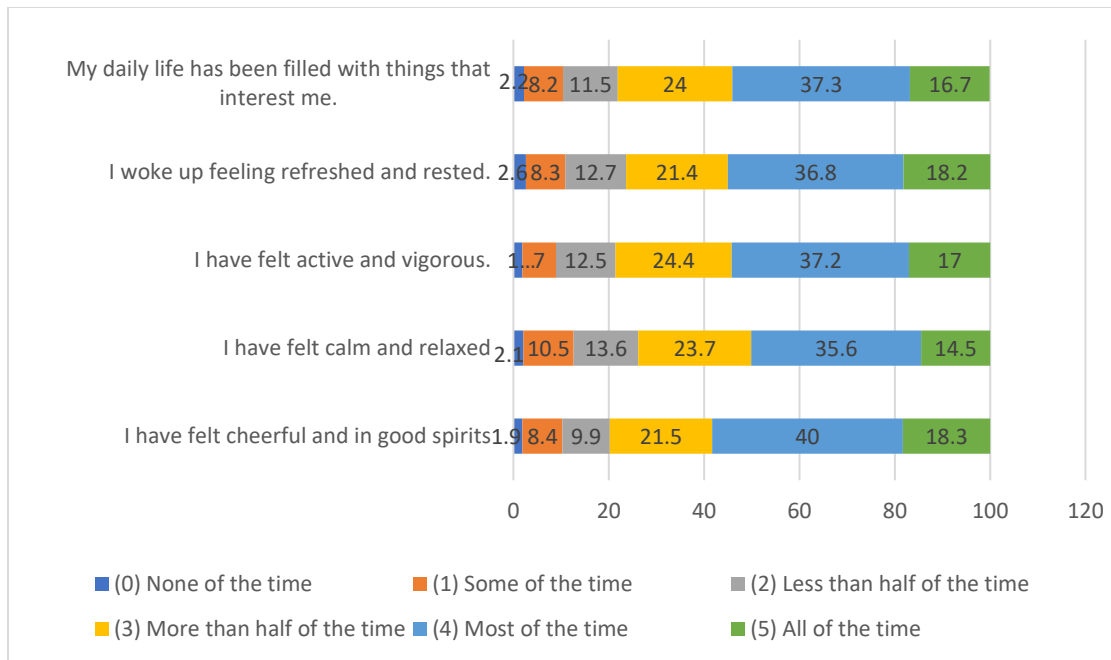


Figure 1: WHO-5 Well-Being Index

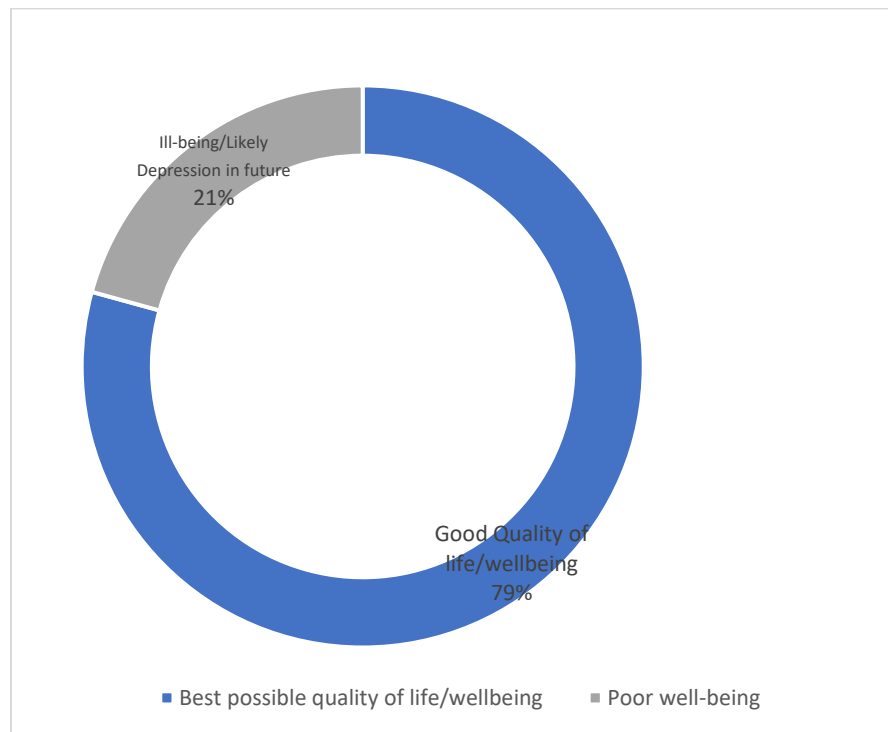


Figure 2: Total score on the WHO-5 instrument.

Approximately 79% of the women reported moderate to high (≥ 50) scores of well-being, whereas 21% reported ill-being/likely depression (Figure 2).

Table 2: Summary statistics for the items by subscales on Multidimensional Scale of Perceived Social Support.

Items	1, 2, 3 Very Strongly Disagree + Strongly Disagree +Mildly Disagree N (%)	4 Neutral N (%)	5 6 7 Mildly Agree+ Strongly Agree+ Very Strongly Agree N (%)	Not answered	Mean	SD	
There is a special person who is around when I am in need.	984 (13.4)	1075(14.6)	5168 (70.2)	140(1.9)	5.346	1.6919	Significant Other (SO).
There is a special person with whom I can share my joys and sorrows.	920(12.5)	875(11.9)	5411(73.4)	161(2.2)	5.484	1.6814	Significant Other (SO).
My family really tries to help me.	673(9.1)	577(7.8)	5951(80.8)	166(2.3)	5.847	1.5564	Family (Fam)
I get the emotional help and support I need from my family	753(10.2)	604(8.2)	5850(79.4)	160(2.2)	5.754	1.5981	Family (Fam)
I have a special person who is a real source of comfort to me.	834(11.3)	769(10.4)	5598(76.0)	166(2.3)	5.631	1.6869	Significant Other (SO).
My friends really try to help me.	1140(15.5)	1209(16.4)	4854 (65.9)	164 (2.2)	5.043	1.7226	Friends (Fri)
I can count on my friends when things go wrong.	1460(19.8)	1346(18.3)	4404 (59.8)	157(2.1)	4.758	1.8140	Friends (Fri)
I can talk about my problems with my family.	1224(16.6)	898(12.2)	5092(69.1)	153(2.1)	5.192	1.8277	Family (Fam)

I have friends with whom I can share my joys and sorrows.	1243(16.9)	1160(15.7)	4813(65.3)	151(2.0)	4.991	1.7872	Friends (Fri)
There is a special person in my life who cares about my feelings.	943(12.8)	892(12.1)	5366(72.8)	166(2.3)	5.470	1.7626	Significant Other (SO).
My family is willing to help me make decisions	862 (11.7)	890(12.1)	5458 (74.1)	157 (2.1)	5.465	1.6577	Family (Fam)
I can talk about my problems with my friends.	1821(24.7)	1366(18.5)	4026(54.6)	154(2.1)	4.510	1.8891	Friends (Fri)
				Mean score	58.76	19.69	

Table 2 represents responses received on the Multidimensional Scale of Perceived Social Support (MSPSS) scale. The scores for the subscales ranged between 4 and 28. The mean of the scores from 1 to 2.9 is considered low support; a score of 3 to 5 was taken as moderate support; and a score from 5.1 to 7 was taken as a high support. Considering the cumulative scoring of Multidimensional Scale of Perceived Social Support, 65.87% of the respondents indicated that a social support was being offered by Significant other (SO); 47.92% of the respondents demonstrated that high social support was being offered by friends (Fri) whereas, 68.60% of the respondents indicated that high social support was being offered by the family members.

Table 3 represents the classification of the respondents based on their well-being status. The proportion of respondent's well-being vary significantly by age, gender, marital status, monthly income (AED), employment status and individual who reported at least one morbidity. These factors were found to be positively associated with the Subjective psychological well-being. The proportion of participants to have likely depression in future was significantly higher among those who were 30-44 years (921 individuals), and those who were married (1161 respondents).

Table 3: Comparison of socioeconomic status, and health status between respondents with good and poor self-rated well-being.

Variables	Poor well-being	Good Well-being	N (%)	OR	95% (CI)	P value
Age group						

18-29 years	211 (27.3%)	563 (72.7%)	774 (10.51)	0.272	0.184 - 0.402	0.001
30-44 years	921 (23.0%)	3076 (77.0%)	3997 (54.26)	0.340	0.236 - 0.490	
45-59 years	362 (16.2%)	1877(83.8%)	2239 (30.39)	0.528	0.363 - 0.769	
60+	33 (9.2%)	324 (90.8%)	357 (4.85)	0	0	
Total	1527 (20.7%)	5840 (79.3%)	7367 (100)			
Gender						
Male	727 (19.7%)	2962 (80.2%)	3689 (50.1%)	1.133	1.012- 1.268	0.031
Female	800 (21.7%)	2878 (78.2%)	3678 (49.9%)	0	0	
Emirate of Residence						
Abu Dhabi	154 (19.9%)	618(80.1%)	772 (10.5)	1.144	.841- 1.558	0.85
Dubai	309 (22.6%)	1056 (77.4%)	1365 (18.5)	0.975	.734- 1.294	
Sharjah	523 (21.4%)	1916 (78.6%)	2439 (33.1)	1.045	.797- 1.370	
Ajman	95 (19.3%)	397 (80.7%)	492 (6.7)	1.192	.850- 1.671	
Ras Al Khaimah	181 (17.7%)	844 (82.3%)	1025 (13.9)	1.330	.985- 1.795	
Fujairah	188 (20.3%)	739 (79.7%)	927 (12.6)	1.121	.831- 1.513	
Umm al-Quwain	77 (22.2%)	270 (77.8%)	347 (4.7)	0	0	
Marital Status						
Single	288 (25.3%)	851 (74.7%)	1139 (15.5)	.492	.263-.921	0.001
Married	1161 (20.0%)	4646 (80.0%)	5807 (78.8)	.667	.361- 1.233	
Separated	19 (27.5%)	50 (72.5%)	69 (0.9)	.439	.196-.984	
Divorced	47 (17.5%)	221 (82.5%)	268 (3.6)	.784	.394- 1.558	

Widowed	12 (14.3%)	72 (85.7%)	84 (1.1)	0	0	
Education Level						
No Education	4 (26.7%)	11 (73.3%)	15 (0.2)	.382	.087-1.675	0.77
Primary	26 (30.2%)	60 (69.8%)	86 (1.2)	.321	.113-.909	
Secondary	448 (21.0%)	1690 (79.0%)	2138 (29.0)	.524	.204-1.343	
Short-cycle tertiary education	110 (18.6%)	481 (81.4%)	591 (8.0)	.607	.233-1.583	
Bachelors	693 (21.3%)	2568 (78.7%)	3261(44.3)	.515	.201-1.316	
Masters	200 (20.5%)	777 (79.5%)	977 (13.3)	.540	.209-1.393	
Doctoral and above	41 (15.9%)	217 (84.1%)	258 (3.5)	.735	.272-1.985	
Not elsewhere classified	5 (12.2%)	36 (87.8%)	41 (0.6)	0	0	
Monthly income (AED)						
0 -5000	226(26.5%)	627(73.5%)	853 (11.6)	.713	.562-.905	0.001
5001 - 10000	357(21.8%)	1279(78.2%)	1636 (22.2)	.921	.741-1.144	
10001 - 15000	159(19.9%)	641(80.1%)	800 (10.9)	1.036	.806-1.333	
15001 - 20000	211(19.8%)	854(80.2%)	1065 (14.5)	1.041	.821-1.318	
20001 and above	392(17.9%)	1800(82.1%)	2192 (29.8)	1.181	.954-1.460	
Lost Job	37(33.0%)	75(67.0%)	112 (1.5)	.521	.338-.804	
Unemployed	145(20.5%)	564(79.5%)	709 (9.6)	9		
Employment status						
Not employed, Looking for work	181(25.7%)	523 (74.3%)	704 (9.6)	.520	.334- .810	

Disabled (Not able to work)	26 (32.5%)	54 (67.5%)	80 (1.1)	.374	.201- .696	0.001
Employed	1154 (20.3%)	4541 (79.7%)	5695 (77.3)	.708	.468- 1.072	
Not employed, Not looking for work	72 (20.9%)	272 (79.1%)	344 (4.7)	.680	.419- 1.105	
Retired	67 (18.3%)	300 (81.7%)	367 (5.0)	.806	.495- 1.313	
Self employed	27 (15.3%)	150 (84.7%)	177 (2.4)	0	0	
Any ongoing medical condition						
Yes	408 (27.5%)	1074 (72.5%)	1482 (20.1)	1.280	1.017- 1.612	0.001
No	976 (17.9%)	4472 (82.1%)	5448 (74)	2.229	1.804- 2.754	
Don't Know	143 (32.7%)	294 (67.3%)	437 (5.9)	0	0	

Relationship between the subjective well-being, mental and emotional well-being with perceived social support.

The table below demonstrated a p-value < 0.05 (i.e., statistically significant i.e., 0.01) which shows that there is a significant association

between the comprehensive well-being and perceived social support; Mental Well –Being 1: Life Satisfaction and perceived social support; mental well-being: 2. calm & relaxed and perceived social support; as well as emotional well-being: cheerful mood and perceived social support (Table 4).

Table 4: Association between Perceived Social Support and well-being

	Comprehensive Well - Being	Mental Well -Being 1: Life Satisfaction	Mental Well -Being: 2. Calm & Relaxed	Emotional Well - being: Cheerful Mood
Perceived Social Support	0.001	0.001	0.001	0.001

Discussion

The WHO-5 Well-Being Index is being widely utilized in research, not solely as a generic tool for assessing the well-being of various population groups but also as a depression screening tool and a consequence measure in other clinical trials

(Topp et al., 2015). This study aimed to evaluate the well-being of the UAE population and develop future strategies to enhance well-being of the UAE population along with providing evidence-based recommendations for the policy makers. The associated risk factors using the validated WHO-5 Well-Being Instrument were further identified.

Gender, Age and Marital status

Based on what kinds of measures are being used (e.g., life satisfaction vs. cheerful mood), gender, age, and Marital status were associated with well-being. Therefore, this study suggests age, gender and marital status, as potential determinant of wellbeing in the UAE. The variance in wellbeing was more remarkable for different age groups and marital status than between the two genders. On the whole, men and women tend to possess comparable levels of well-being, which resonates with the observation by Inglehart (2002) so and so in their study about gender, aging, and subjective well-being indicating that this pattern fluctuates with age, (Inglehart, 2002) and has transformed over time (Stevenson, & Wolfers, 2009). The proportion of participants with ill-being/likely depression was significantly higher in individuals who were married (1161). Furthermore, prior research evidence shows that subordination of female by men, a phenomenon found in majority of the countries, results in a distinction between roles of women and men and their distinct obligations to public spheres. The extent of such as subordination differs by country to country, cultural or geographical patterns within countries, nevertheless, in developing countries, it is found to be most pronounced (Vlassoff, 2007).

Income, Employment status, and Education Level

Diener (1999) indicated that determining the association between income and well-being world wide requires complex models. Based on what comparisons are being made and what measures are being used, the income associates discreetly with the well-being. In contrast, unemployment was associated with the well-being levels. The educational level was not significantly associated. The findings provide support to the notion that income is a superior indicator compared to education while investigating the social determinants of well-being in the country. The previous evidence indicates that income and well-being (typically measured with regards to the life satisfaction) are stronger for individuals at lower economic levels, but previous evidences also have found effects for those at higher income levels

(Biswas-Diener, 2008). Warr (2003) states that paid employment is crucial to the well-being of people as it confers direct access to resources and fosters meaning, satisfaction and purpose for some individuals. Conversely, Argyle (1999) indicated that unemployment negatively impacts the well-being, both in the short- and long-term.

Morbidity

Morbidity or any ongoing medical condition was found to be a significant predictor of the respondents in UAE. Previously conducted studies have well demonstrated the outcome of morbidity on mental health and ratings of health as a whole (Argyle, 1999; Sprangers et al., 2000, Stewart et al., 1989). These studies were conducted in the general population and have reported that chronic conditions tend to have a negative impact on the quality of life (Nan et al., 2012) and health perceptions (Warr, 2003). The poor well-being therefore, reflects a disease burden that warrants further investigation and attention.

Relationships

There are several different aspects that tends to impact the well-being, one such aspect emerges multiple time as a precisely strong influence. The “secret” to “happiness”—such that there is one—may be high quality social relations. As it is a well-known fact that humans are primarily social animals. One may thrive and live together in neighborhoods, family groups, romantic relationships, and communities. Such relations are often assumed as a source of fun, source of support and identity. The research case for the significance of quality associations is strong. Our results demonstrated that high social support was being offered by the family members, followed by Significant other (SO) and friends (Fri). On the contrary, Diener and Seligman (2002) specified the abilities that distinguishes the less happy and happiest individuals. It was discovered that it was not socio-economic status or gender, but close friends that differentiates these 2 groups. Likewise, in another study of social support conducted in Jordan, Iran, as well as the United States, Brannan and colleagues (2013) found that social support from family members and friends

was associated to positive moods and satisfaction. Alternatively, Baumeister and Leary (1995) examines the wide-ranging indication demonstrating that humans tend to have much deep seated and innate need to have robust social bonds with others, and lack of these types of bonds often have deleterious consequences on health and well-being. Our study and the previous studies indicated that possessing supportive relationships is considered to be one of the strongest predictors of well-being, markedly having a positive effect (Dunn, 1973; Seligman, 2002).

Limitation

Although employing a valid and reliable instrument to measure the SWB in the population offers reliable results, the self-reported nature of the study makes the respondents more vulnerable to recall and information bias. Another limitation source may relate to the design and nature of the cross-sectional study characteristics since the conclusions are based on temporality or causality between the dependent and independent variables. Furthermore, the distinct nature of the UAE demographic population may somehow introduce additional limiting aspects to influencing the SWB interpretation.

Conclusion

The measures for SWB are evocative in the sense that they are capable of offering reliable and valid knowledge on how well a person or the society they live in is progressing. Different factors correlate with or be a causal factor in SWB both at country and individual level. Furthermore, SWB data can also be utilized to shape as well as appraise policy. Studies conducted in future in this area is recommended to better inspect additional causes of the low well-being levels to further support in guiding as well as planning necessary interventions.

Recommendations for the Policy Makers

The UAE government has made an outstanding progress to accomplish the well-being goals and to

provide the results that UAE citizens mostly desire in tracking the levels of well-being and recognizing the causes of fluctuations in well-being. Studies conducted in future in this area is recommended to better examine other aspects of well-being and to further support in guiding and planning required interventions. Social media marketing campaigns on the subject are being used to raise sufficient awareness across the emirates. Furthermore, quality education about well-being is also being promoted through these campaigns by the government. National programs and policy reforms that can empower or support the population are highly required. Decision and policy makers must be informed about the current situations, and shall be made aware of the serious influence of the surrounding environment on mental health to support, better plan and invest in healthcare services to promote mental well-being for the general population of the United Arab Emirates.

- The existing mental health programs that are already existing can do more to intensify the SWB of societies than any other types of policies. Mental health is thought to be a key predictor of SWB, mental disorders often go untreated, and yet there are effective treatments for most of these. Therefore, it is practical to hypothesize that improving the availability of mental health services in several different communities will meaningfully increase the well-being in the population.
- Psychologists need to be enthusiastically involved in serving policy makers and leaders to infer SWB scores.

Social Support

Socializing - receiving or offering social support are essential precursors to well-being in all age groups. When there is an absence of opportunities for social interaction, then it may lead to loneliness, that tends to have significant negative effects on the well-being and physical health of the population. Therefore, volunteer work is a fertile ground for evocative social interactions. Policies rather help in the formation of volunteer entities and promotes information about existing opportunities for individuals. Community centers enables meaningful and interactive activities to

produce social ties. Neighborhood cohesion is considerably imperative to well-being, and several different activities can help to revitalize it for example volunteerism, neighborhood watch programs, along with community festival. Close friendships and strong family ties are considered important for the wellbeing of human. Whereas, governments may help to influence the strength of such bonds. Policies that help in eradicating family abuse are required, for example obligatory arrest of the abusers. Lawmakers should be cautious not to ratify economic policies that penalize family life, marriage, or discourage strong family ties. Furthermore, marriage and parental education programs can guide individuals, predominantly those starting out and transitioning to novel life stages. It is also important to encourage Prosocial Behavior. Typically, modernized cities seem like a rat-race where everyone is competing with others. Through media programming, public service campaigns, and awards programs, societies tend to ensure that individuals become more cooperative, positive, in addition to being helpful with one another. Individuals can even be encouraged to be friendly to strangers, that can upsurge the feelings of well-being for both individuals. Moreover, attractive urban environments and green spaces, exclusively where individuals can meet, relax, or engage in social or recreational activities, upsurges social connections and well-being.

Acknowledgements

The authors would like to thank Ministry of Health and Prevention for their support.

Funding:

The publication fees of this project was funded by the Ministry of Health and Prevention. We would like to acknowledge Ministry of Health and Prevention for the financial support.

Conflict of interest:

None declared

Ethical approval:

The study was approved by the Ethical Review Board of the Ministry of Health and Prevention, Dubai (Approval Reference No: MOHAP/DXB-REC/ NNN/No. 159 /2020).

REFERENCES

- [1] Argyle, M. (1999). Causes and correlates of happiness. In: D Kahneman, E Diener, N Schwarz (Eds.) *Well-being: the foundations of hedonic psychology*. New York: Russell Sage Foundation: 307–322:353–373.
- [2] Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497-529. <https://doi.org/10.1037/0033-2909.117.3.497>
- [3] Baumeister, R. F., & Leary, M. R. (2017). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Interpersonal development*, 57-89. <https://doi.org/10.1037/0033-2909.117.3.497>
- [4] Biswas-Diener, R. (2008). Material wealth and subjective well-being. In M. Eid & R. J. Larsen (Eds.), *The science of subjective well-being* (pp. 307–322). Guilford Press.
- [5] Brannan, D., Biswas-Diener, R., Mohr, C. D., Mortazavi, S., & Stein, N. (2013). Friends and family: A cross-cultural investigation of social support and subjective well-being among college students. *The Journal of Positive Psychology*, 8(1), 65-75. <https://doi.org/10.1080/17439760.2012.743573>
- [6] Deaton, A. (2008). Income, health, and well-being around the world: Evidence from the Gallup World Poll. *Journal of Economic perspectives*, 22(2), 53-72. DOI: 10.1257/jep.22.2.53
- [7] Diener, E., & Seligman, M. E. P. (2002). Very happy people. *Psychological Science*, 13(1), 81-84. <https://doi.org/10.1111/1467-9280.00415>
- [8] Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*,

- 125(2), 276–302.
<https://doi.org/10.1037/0033-2909.125.2.276>
- [9] Dunn HL. (1973). High level wellness. R.W. Beatty, Ltd: Arlington.
- [10] Gong, Y., Handberg, E. M., Gerhard, T., Cooper-DeHoff, R. M., Ried, L. D., Johnson, J. A., & Pepine, C. J. (2009). Systolic blood pressure and subjective well-being in patients with coronary artery disease. *Clinical Cardiology: An International Indexed and Peer-Reviewed Journal for Advances in the Treatment of Cardiovascular Disease*, 32(11), 627-632. DOI: 10.1002/clc.20501
- [11] Grad, F. P. (2002). The preamble of the constitution of the World Health Organization. *Bulletin of the World Health Organization*, 80, 981-981. <https://apps.who.int/iris/handle/10665/268691>
- [12] Huppert, F. A. (2009). Psychological well-being: Evidence regarding its causes and consequences. *Applied psychology: health and well-being*, 1(2), 137-164. <https://doi.org/10.1111/j.1758-0854.2009.01008.x>
- [13] Inglehart, R. (2002). Gender, aging, and subjective well-being. *International Journal of Comparative Sociology*, 43(3-5), 391-408. <https://doi.org/10.1177/002071520204300309>
- [14] Nabulsi, S. E. (2015). Predicting subjective well-being using social support and mindfulness for United Arab Emirates University students. DOI: 10.13140/RG.2.1.2534.7286
- [15] Nan, H., Lee, P. H., McDowell, I., Ni, M. Y., Stewart, S. M., & Lam, T. H. (2012). Depressive symptoms in people with chronic physical conditions: prevalence and risk factors in a Hong Kong community sample. *BMC psychiatry*, 12(1), 1-11. DOI: 10.1186/1471-244X-12-198
- [16] Petkari, E., & Ortiz-Tallo, M. (2018). Towards youth happiness and mental health in the United Arab Emirates: The path of character strengths in a multicultural population. *Journal of Happiness Studies*, 19(2), 333-350. DOI: 10.1007/s10902-016-9820-3
- [17] Poplavskaya, A., & Karabchuk, T. (2018). The Subjective Wellbeing of Emirati Youth: Does Work Really Matter?. *Middle East Journal of Positive Psychology*, 4, 126-141.
- [18] Ried, L. D., Tueth, M. J., Handberg, E., & Nyanteh, H. (2006). Validating a self-report measure of global subjective well-being to predict adverse clinical outcomes. *Quality of Life Research*, 15(4), 675-686. DOI: 10.1007/s11136-005-3515-2
- [19] Roy, J. P. (2004). Socioeconomic status and health: a neurobiological perspective. *Medical Hypotheses*, 62(2), 222-227. DOI: 10.1016/S0306-9877(03)00315-3
- [20] Sallis JF, Owen N, Fisher EB. (2008). Ecological models of health behavior. In: Glanz K, Rimer BK, Viswanath K (editors). *Health behavior and health education* (4th ed., pp. 465-485). San Francisco: John Wiley & Sons.
- [21] Seligman, M. E. P. (2002). *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment*. New York: Free Press.
- [22] Sen, A. (2002). Health: perception versus observation: self reported morbidity has severe limitations and can be extremely misleading. *BMJ*, 324(7342), 860-861. doi: [10.1136/bmj.324.7342.860](https://doi.org/10.1136/bmj.324.7342.860)
- [23] Sprangers, M.A.; de Regt, E.B.; Andries, F.; van Agt, H.M.; Bijl, R.V.; de Boer, J.B.; Foets, M.; Hoeymans, N.; Jacobs, A.E.; Kempen, G.I. (2000). Which chronic conditions are associated with better or poorer quality of life? *J. Clin. Epidemiol.*: 53, 895–907. doi: 10.1016/s0895-4356(00)00204-3.
- [24] Stevenson, B., & Wolfers, J. (2009). The paradox of declining female happiness. *American Economic Journal: Economic Policy*, 1(2), 190-225. DOI: 10.1257/pol.1.2.190
- [25] Stewart, A.L.; Greenfield, S.; Hays, R.D.; Wells, K.; Rogers, W.H.; Berry, S.D.; McGlynn, E.A.; Ware, J.E.(1989). Functional status and well-being of patients with chronic conditions: Results from the Medical Outcomes Study. *JAMA*: 262, 907–913
- [26] Topp, C. W., Østergaard, S. D., Søndergaard, S., & Bech, P. (2015). The WHO-5 Well-

- Being Index: a systematic review of the literature. *Psychotherapy and psychosomatics*, 84(3), 167-176. DOI: 10.1159/000376585
- [27] U.ae. (2022). National Strategy for Well-being 2031. Retrieved from <https://u.ae/en/about-the-uae/strategies-initiatives-and-awards/federal-governments-strategies-and-plans/national-strategy-for-well-being-2031> (Accessed 22nd July 2020).
- [28] Vlassoff, C. (2007). Gender differences in determinants and consequences of health and illness. *Journal of health, population, and nutrition*, 25(1), 47.
- [29] Warr P. (2003). Well-being in the workplace. In: D Kahneman , E Diener, N Schwarz (eds.) *Well-Being: The foundations of hedonic psychology*. New York: Russell Sage Foundation Publications; 392–412.
- [30] WHO (1947). World Health Organization. Constitution. New York.
- [31] Wilson, I. B., & Cleary, P. D. (1995). Linking clinical variables with health-related quality of life: a conceptual model of patient outcomes. *JAMA*, 273(1), 59-65.
- [32] Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of personality assessment*, 52(1), 30-41. DOI: 10.1207/s15327752jpa5201_2