

Impact of Individuals' Emotional Intelligence on Subjective Wellbeing during COVID-19 Pandemic

¹Dr. Shama Kadadi, ²Dr. Surekha Kadadi, ³Dr. Smita Chakote, ⁴Mrs. Rushali Ligade,

¹Assistant Professor, 1Department of Management Studies, Hirachand Nemchand College of Commerce, Solapur

²Associate Professor, Department of Pathology, Ashwini Rural Medical College, Hospital & Research Centre, Kumbhari, Solapur.

³Professor, MIMSR Medical College, Latur

⁴HR Manager, Dr. M. S. Sheshagiri College of Engineering and Technology, Belagavi

Abstract

Background – COVID-19 has resulted in increased psychological stress and depression all over the world. Various factors like contagion risks, containment, financial loss, job insecurity etc emergent COVID-19 pandemic has affected the subjective wellbeing of people.

Purpose – This research studies the association between emotional intelligence and three dimensions of subjective well-being during COVID-19 pandemic. In addition, it also examined the predictive ability of emotional intelligence for subjective wellbeing during COVID-19 pandemic.

Design/methodology/approach - The estimate of overall association is studied on 368 participants included of different ages and gender. A descriptive cross-sectional survey design was adopted for data collection. Emotional intelligence was measured using Wong and Law emotional intelligence scale. Subjective wellbeing comprised of three dimensions: Life satisfaction was assessed through satisfaction with life scale and positive and negative affect assessed with negative and positive affect scale.

Findings – Results show positive and significant association between dimensions of emotional intelligence and dimensions of subjective wellbeing. Structural equation modelling demonstrated that individuals' emotional intelligence has significant positive impact on subjective wellbeing.

Practical implications – The findings of the present research can be enormous help to individuals to understand and regulate own and others' emotions to uphold the wellbeing during unexpected human crisis like COVID-19 pandemic.

Keywords: COVID-19 pandemic, Emotional intelligence, Subjective well-being, Life satisfaction, Positive affect and Negative affect.

INTRODUCTION

People experienced negative mental health (Long, 2021); perceived threat; future anxiety (Paredes et al., 2020); worry (Zysberg & Zisberg, 2020) and low life satisfaction (Cheng et al., 2020) during and post- pandemic uncertainty like COVID-19. It disturbed normal life of people and restricted the movement to avoid the spread of virus led to reduced level of wellbeing (Cheng et al., 2020). It brought an unexpected setting to the people: working from home, online learning of children, temporary unemployment and lack of contact with other family members, friends and colleagues. There is necessity that people must take care of their physical and mental health (WHO, Mental Health & COVID-19, 2020). The World Economic Forum also suggested methods to manage wellbeing during COVID-19. Individuals' being isolated in safe environment and suggested ways to access required resources to ensure wellbeing.

Managing the mental wellbeing of people has become a significant challenge in post COVID-19 pandemic. Health organizations in different countries adopted various measures to ensure wellbeing of their citizens. In India, several initiatives are spearheaded by National Institute of Mental Health and Neurosciences (NIMHANS) in association with Ministry of Health and Family Welfare to ensure mental wellbeing. It framed various guidelines for effective mental health management. The effectiveness of these initiatives needs to be explored and schemes need to be continuously improved. Towards this end, the impact of these initiatives needs to be measured. There is an increasing research interest on metrics to study effectiveness of various initiatives adopted for improving mental wellbeing and the suitability of these metrics post COVID-19 pandemic. This work explores the suitability of

emotional intelligence (EI) as a metric to model the subjective wellbeing of an individual during COVID-19 pandemic.

EI is the capability of an individual to understand and regulate his/her emotion. It has been defined as an individual's ability to identify and manage their own emotions in addition, understanding and regulating others' emotions (Mayer and Salovey, 1997; Goleman, 1998 & Bar-On, 2006). A more positive mood is experienced by person with higher EI (Fernandez-Berrocal & Extremera, 2006). EI is being seen as the essential skill to manage the stressful conditions in during COVID-19 pandemic (Abdel-Fattah HMM, 2020). EI has four dimensions and the influence of each dimension over wellbeing is varied.

Subjective wellbeing is the measure of how an individual believes his life is going well. Subjective wellbeing brings improved health, productivity and better social relationships (Maccagnan et al., 2019). The subjective wellbeing takes in to consideration one's own assessment of how well his life is going on and getting what he requires and not thinking much about significance of requirements (Tov, 2018). It is considered as best available proxy for a broader, more canonical form of wellbeing. It has three dimensions - life satisfaction, positive affect and negative affect.

Researchers noted the worth of EI in operationalizing adaptive emotional functioning and its outcomes (Schutte et al., 2010). EI has caught attention of numerous researchers and research studies examined the role of EI in predicting the positive outcomes (Austin et al., 2004; Extremera & Fernandez-Berrocal, 2005; Avsec et al., 2009; Bar-On, 2012; Krishnaveni & Deepa, 2013; Chen et al., 2016; Extremera et al., 2020; Soto-Rubio et al., 2020, Zysberg & Zisberg, 2020 & Barbe et al., 2021). This study explored the association between the EI and the different dimensions of subjective wellbeing. The purpose of this work is stated as below

1. To examine the degree of association between four dimensions of EI and three dimensions of subjective wellbeing during COVID-19 pandemic.
2. To study the predictive ability of EI for subjective wellbeing during COVID-19 pandemic.

LITERATURE REVIEW

EI & COVID-19 pandemic

Drigas & Chara (2020) studied the factors of EI and how they moderate the stress of people in everyday life during Covid crisis. Authors unveiled the advantage of conscious use of EI resources; emotional awareness, self-control and empathy in bringing back the emotional balance. In addition, they recommended EI being included in the curricula of all educational levels as well as in the workplace training programs.

Soto-Rubio et al., (2020) made a cross sectional study on EI among Spanish nurses during COVID-19 pandemic. The study found a positive effect of EI on job satisfaction. The work highlighted the role of EI as input for developing interventions programs on health and wellbeing of nurses.

Ana et al. (2021) made a cross sectional study to analyze the variables that predicts resilience during complex situations. The study was conducted among 3436 Spanish professionals. The results revealed a higher-level resilience among professionals with better EI skills. The higher level of emotional wellbeing was associated with higher level of resilience.

Moron & Biolik-Moron (2021) worked on association between EI and negative emotions during COVID-19 pandemic outbreak in Poland. They found a limited association between EI and experiencing negative emotions. EI enables an individual to gain secure social support, manage emotions and reduce the worry about COVID-19 pandemic.

EI & Wellbeing

Carmeli et al., (2009) found a stronger association between EI and well-being at psychological level. The study also found a stronger relationship between EI and individual's wellbeing at work. People

having emotional deficit may experience lower psychological wellbeing. EI was found to be an important predictor for life satisfaction and self-esteem in the work.

Bar-On (2012) studied the influence of EI on physical and mental wellbeing. EI competencies can be learnt and taught, they are teachable like other skills. It is a simple educational method in a short period of time. Authors stated that EI can be improved in different settings namely home, school, work as well as at the clinical setting. Better health and wellbeing can be achieved by enhanced EI skills. Parents, educators and healthcare people can consider increasing EI abilities of their children, students and patients to attain physical health and well-being. Some situations act as preventive measure in healthcare for counselling the patients as well as suggesting them to increase their EI competencies.

Ahmadi et al., (2014) demonstrated a positive impact of EI on psychological wellbeing of bank employees. The study recommended manager to focus on improving the EI abilities of employees to increase employee wellbeing.

Fernandez-Abascal & Martin Diaz (2015) claimed EI as a better predictor for mental health than the physical health. They used two scales to measure emotional intelligence: Trait Meta Mood Scale (TMMS) and Trait Emotional Intelligence Questionnaire (TEIQue). The work explored different dimensions of EI and their capability to predict physical and mental health.

Di Fabio & Kenny (2016) examined the predictive ability of ability based and self-report measure of emotional intelligence for wellbeing of future workers.

Number of researches were conducted with the purpose to encourage adolescents to develop emotional intelligence skills to experience wellbeing (Guerra-Bustamante et al., 2019). The studies found a positive relationship between adolescents' EI and his psychological wellbeing (Guerra-Bustamante et al., 2019). Furthermore, they examined the importance of developing emotional intelligence abilities of adolescents which contributes to wellbeing components (happiness).

Extremera et al., (2020) studied the role of cognitive regulation strategies in improving EI. Previous studies have proved the positive impact of EI on quality-of-life indicators. Besides that, this study examined the key role of cognitive emotional intelligence strategies adopted by emotionally intelligent person and the contribution of adaptive emotion regulation strategies in attaining wellbeing.

A summary of some of the prominent works on EI and subjective wellbeing is presented in Table 1.

Table 1: Review on studies relating EI and subjective wellbeing

Authors	Scale	Outcome
Elizabeth J. et al (2004)	The Temporal Satisfaction with Life Scale (TSWLS) for life satisfaction. Modified Schutte EIS scale & Short form Bar-On EQ-I for EI	Study found a positive association between EI & life satisfaction.
Jose M Augusto-Londa et al (2010)	Trait Meta Mood Scale for EI and Ryff's psychological wellbeing scale for wellbeing	Study found a positive and significant association between components of EI and psychological wellbeing.
Constance A. et al (2010)	EI was assessed through Trait Meta Mood Scale (TMMS) & wellbeing was measured using Satisfaction with Life Scale (SWLS)	There was a positive and significant association between EI and wellbeing.

Schutte et al (2010)	Schutte Assessing Emotions Scale for EI. PANAS scale for positive and negative affect Satisfaction with life scale for life satisfaction.	Study found that higher EI is related with higher positive affect, lower negative and greater life satisfaction.
Nicola S.Schutte et al (2011)		Higher levels of emotional intelligence were related with greater positive affect and lower negative affect as well as life satisfaction.
Reuven Bar-On (2012)	EI was measured using EQ-i & wellbeing was measured through Subjective Wellbeing (SWB), Psychological Well-being (SPH)	The study found that EI influences both physical and mental wellbeing.
R Krishnaveni et al (2013)	Wellbeing was measured through General Well-Being Scale (National Centre for Health Statistics, 1970), EI was measured using Deepa Krishnaveni Emotional Intelligence Test (DKEIT)	There was a positive and significant correlation between EI and well-being.
Sanchez-Alvarez (2016)	It examined a total of 25 studies with 77 effect sizes and a combined sample of 8520 participants	Study found a higher correlation between EI and subjective wellbeing
Joan Guerra-(2019)	EI was assessed using Trait Meta Mood Scale (TMMS) & wellbeing was assessed through Oxford Happiness Questionnaire (OHQ).	EI and wellbeing are positively associated with each other.

Though numerous studies were carried out to examine the correlation between EI and subjective wellbeing (Schutte et al., 2012; Di Fabio & Kenny, 2016 & Wang et al., 2019), few numbers of studies tested the predictive ability of EI for subjective wellbeing during COVID-19 pandemic. This motivates to study the predictive ability of EI on subjective wellbeing during pandemic in this work.

To summarise, the research question of the current study is stated as

Research Question 1: What is a degree of association between EI and subjective wellbeing of an individual during COVID-19 pandemic?

Research Question 2: What is a predictive ability of EI for subjective wellbeing of an individual during COVID-19 pandemic?

Conceptual Framework

The current study adopts the EI construct developed by Wong & Law (2002) which was developed based on definition of Mayer and Salovey (1997). EI has four dimensions: Self-Emotions Appraisal (SEA): It describes the incidence of an individual's awareness about self-perceived emotions and considers an expression of emotions in a suitable manner. Others' Emotions Appraisal (IEA): It is an individual's competence to recognize others emotional expressions which are put across in verbal and non-verbal communication. Use of emotion (UOE): It considers pertinent information of own emotions in decision making. It helps in utilization of one's own emotions for productive activities and achieving excellence in performance. Regulation of Emotions (ROE): It presents an individual's ability to regulate

their own strong emotions appropriately. It describes about the process of controlling emotions which are reactive in nature. The key focus is on a regulation of emotional hardships.

The present study conceptualised wellbeing by means of three key indicators: life satisfaction; positive affect and negative affect. Life satisfaction determines the satisfaction of a life as a whole rather than life domains such as health or finances. Positive affect and negative affect were determined by single dimension. The theoretical model of the work is presented in Figure 1.

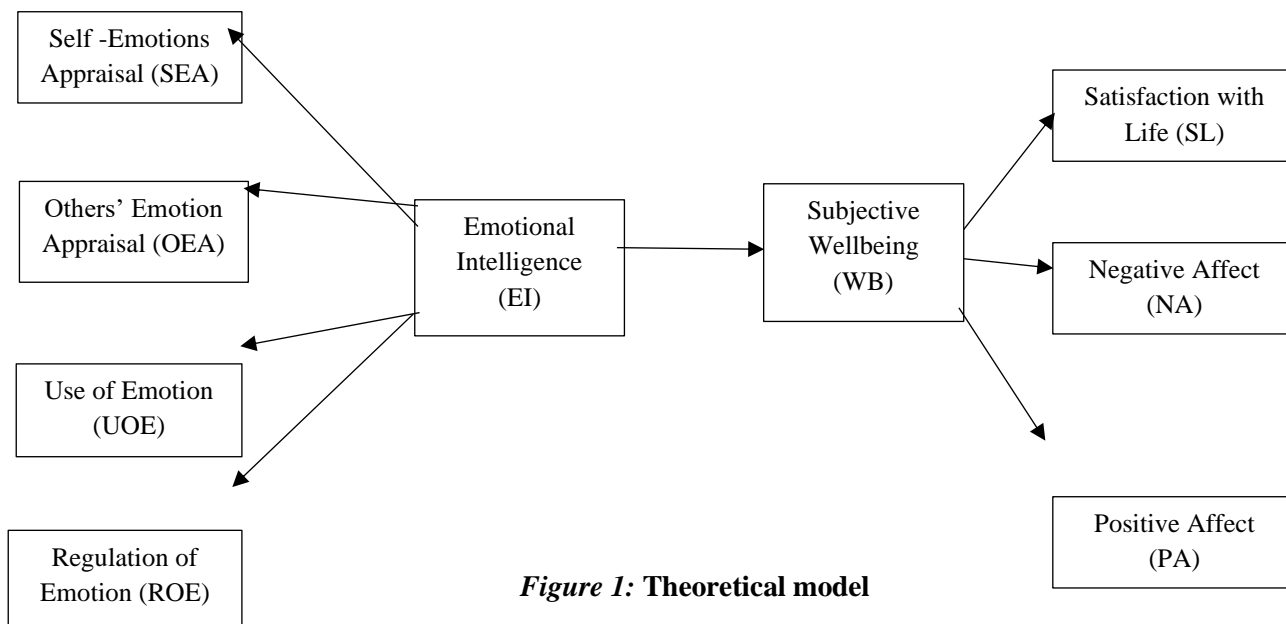


Figure 1: Theoretical model

METHOD

Participants: The study was conducted among 368 individuals in the age group of 18-69 and nearly equal number of male (46.7%) and female (53.3%) have participated across Maharashtra, India.

Table 2: Population characteristics

	Groups	<i>n</i>	%
Gender	Male	196	46.7
	Female	172	53.3
Age	21-30	244	66.3
	31-40	49	13.3
	41-50	57	15.5
	51-60	13	3.5
	61-70	5	1.4

Measures

This study involved two variables wellbeing (dependent variable) and emotional intelligence (independent variable). Four measures were used to measure both independent and dependent variable.

EI (Independent variable)

Wong and Law Emotional Intelligence Scale (WLEIS) - According to Wong & Law (2002) it's a better measure in predicting criterion variable specifically life satisfaction. It is a 16-item scale with each scale scored on a 7-point Likert scale. In the current study, lower correlation of 0.3 was observed for one item thus that item was excluded during reliability test. Scale reliability of EI measurement was $\alpha = 0.83$ which is over and above thumb rule ($\alpha \geq 0.70$). The first order model of EI consists of four constructs: self-emotions appraisal, others' emotions appraisal, use of emotions and regulation of emotions showed a good fit with the data ($\chi^2(80) = 116.86$; $\chi^2/df = 1.46$; $p \leq .00$; CFI = 0.98; GFI = 0.96; RMSEA = 0.04).

Subjective wellbeing (Dependent variable)

Satisfaction with Life: Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) - It is a five-item scale with each scale scored on a 7-point Likert scale. The value of score ranges from 5 to 35. Higher score is an indication of higher life satisfaction. This measurement is largely used to assess the wellbeing of individuals (Petrides et al., 2007, Schutte et al., 2010, Mara et al., 2010). It is a valid and reliable instrument which suits for range of age groups. It is recommended as it measures an individual's conscious judgement of their life by using a person's own criteria. The satisfaction with life scale showed reliability of $\alpha = 0.74$. The latent construct satisfaction with life showed a very good fit with the data ($\chi^2(4) = 8.28$; $\chi^2/df = 1.46$; $p = 0.08$; CFI = 0.99; GFI = 0.99; RMSEA = 0.05).

Negative and Positive Affect Scale (Mroczek & Kolarz, 2016) - This is a 12-item scale 1-6 item are related to negative affect and 7-12 are related to positive affect. Each scale is scored using a Likert 5-point scale. This scale presents good psychometric qualities. Lower correlation of 0.3 was observed for one item of negative affect and thus that item was excluded during reliability test. Five items of negative affect scale showed a reliability of $\alpha = 0.81$. The latent construct negative affect showed a very good fit with the data ($\chi^2(4) = 3.79$; $\chi^2/df = 0.95$; $p = 0.43$; CFI = 0.99; GFI = 1.00; RMSEA = 0.00). Correspondingly, for positive affect scale showed a reliability of $\alpha = 0.85$. The latent construct positive affect showed a very good fit with the data ($\chi^2(7) = 6.5$; $\chi^2/df = 0.93$; $p = 0.48$; CFI = 1.00; GFI = 0.99; RMSEA = 0.00).

Statistical Analysis

Statistical analysis was made using IBM SPSS AMOS 26 and IBM SPSS Statistics 26. Reliability tests were carried out for the EI scale, Satisfaction With Life scale and Negative and Positive affect Scale using IBM SPSS Statistics 26. Karl Pearson's co-efficient of correlation was run to identify the significant association between EI and wellbeing through IBM SPSS Statistics 26. Correlation model and Structural Equation Modelling (SEM) were developed for EI and subjective wellbeing through IBM SPSS AMOS 26.

RESULTS

Research Question 1: What is a degree of association between EI and subjective wellbeing of an individual during COVID-19 pandemic?

Table 3: Descriptive statistics and inter-construct correlations (n = 368)

	1	2	3	4	5	6	7	8
1. SEA	-							
2. OEA	0.32**	-						
3. UOE	0.34**	0.27**	-					

4. ROE	0.43**	0.29**	0.41**	-				
5. EI Total	0.71**	0.59**	0.70**	0.82**	-			
6. SL	0.22*	0.26**	0.39**	0.38**	0.45**	-		
7. NA	-0.20**	-0.03**	-0.21**	-0.18**	-0.21**	-0.27**	-	
8. PA	0.22**	0.14**	0.31**	0.33**	0.36**	0.55**	-0.44**	-
Mean	23.75	16.90	23.86	20.81	85.31	24.61	11.23	19.38
SD	3.12	2.73	3.42	4.95	10.30	5.54	3.79	4.36

**p<.001, SEA - Self -Emotions Appraisal, OEA - Others’ Emotion Appraisal, UOE - Use of Emotion, ROE - Regulation of Emotions, SL - Satisfaction with Life, NA - Negative Affect, PA - Positive Affect

The correlation analysis results reveal a positive association between dimensions of EI: self-emotions appraisal ($r = .22, p < .01$); others’ emotions appraisal ($r = .26, p < .01$); use of emotions ($r = .39, p < .01$) and regulation of emotions ($r = .38, p < .01$) with life satisfaction. Similarly, there was a positive and significant association between dimensions of EI: self-emotions appraisal ($r = .22, p < .01$); others’ emotions appraisal ($r = .14, p < .01$); use of emotions ($r = .31, p < .01$) and regulation of emotions ($r = .33, p < .01$) with positive affect. Conversely, the results demonstrated a negative and significant association between dimensions of EI: self-emotions appraisal ($r = -.20, p < .01$); others’ emotions appraisal ($r = -.03, p < .01$); use of emotions ($r = -.21, p < .01$) and regulation of emotions ($r = -.18, p < .01$) with negative affect.

There was a positive and significant association between total EI ($r = .45, p < .01$) and life satisfaction as well as EI ($r = .36, p < .01$) and positive affect. There was negative and significant association between total EI ($r = -.21, p < .01$) and negative affect.

Research Question 2: What is a predictive ability of EI for subjective wellbeing of an individual during COVID-19 pandemic?

Table 4: Model fit-indices

	χ^2	df	P	χ^2/df	CFI	GFI	RMSEA
Structural Model-1	652.98	418	0.00	1.56	0.94	0.90	0.04
Structural Model-2	471.35	285	0.00	1.65	0.94	0.91	0.04
EI (First order Model)	116.86	80	0.00	1.46	0.98	0.96	0.04
Subjective wellbeing (First Order Model-1)	157.12	97	0.00	1.62	0.97	0.95	0.04
Satisfaction with life	8.24	4	0.08	1.46	0.99	0.99	0.05
Positive affect	6.5	7	0.48	0.93	1.00	0.99	0.00
Negative affect	3.79	4	0.43	0.95	0.99	1.00	0.00

The research question that EI can predict subjective wellbeing is tested using SEM. Theoretical model (Fig. 1) was also compared with reality (Fig. 2) using SEM. Covariance matrices were analysed and maximum likelihood method was used for estimation of dimensions of subjective wellbeing. Overall fit of the model was determined through absolute fit indices: Chi-square value; Comparative Fit Index (CFI); Goodness of Fit (GFI) and RMSEA (Root Mean Square Error of Approximation). (Hooper et al., 2008; Byrne 2010 & Hair et al.,2015). The fit indices (CFI & GFI) values greater than 0.90 are generally considered as good fitting model (Hair et al., 2015) and RMSEA values below 0.08 is considered as well-fitting model (Hooper et al., 2008 & Hair et al., 2015).

Results for goodness of fit of SEM over the data from the 368 participants is given in Table 4. Chi-square for EI, subjective wellbeing (first order model) model and structural models were significant ($p \leq 0.001$) and for three dimensions of subjective wellbeing (satisfaction with life; negative affect & positive affect) were non-significant ($p \geq 0.05$). Hopper et al., (2008) suggests that other fit indices (CFI, GFI, NFI, TLI) are also significant to make decision regarding well-fit of the model (Wheaton, 1978). The other fit indices were at par with expected values. The structural model was considered as the acceptable model.

Results for goodness of fit for final structural model correlating the EI and subjective wellbeing are given in Table 4. Four dimensions of emotional intelligence measurement model (Table 4) results reveal that observed fit indices $\chi^2(80) = 116.86$; $\chi^2/df = 1.46$; $p \leq 0.01$; $CFI = 0.98$; $GFI = 0.96$; $RMSEA = 0.04$ are good fit to the data.

Similarly, three dimensions of subjective wellbeing measurement model results (Table 4) reveal that observed fit indices $\chi^2(97) = 157.12$; $p \leq 0.04$; $CFI = 0.95$; $GFI = 0.97$; $RMSEA = 0.05$ are good fit to the data. Results of the structural model indicates that observed fit indices are well-fit to the data $\chi^2(418) = 652.98$; $\chi^2/df = 1.56$; $p \leq 0.01$; $CFI = 0.94$; $GFI = 0.90$; $RMSEA = 0.04$ (structural model-1 which includes negative affect of subjective wellbeing). In addition, structural model results showed that observed fit indices are well-fit to the data $\chi^2(285) = 471.35$; $\chi^2/df = 1.65$; $p \leq 0.01$; $CFI = 0.94$; $GFI = 0.91$; $RMSEA = 0.04$ (structural model-2 which excludes negative affect of subjective wellbeing).

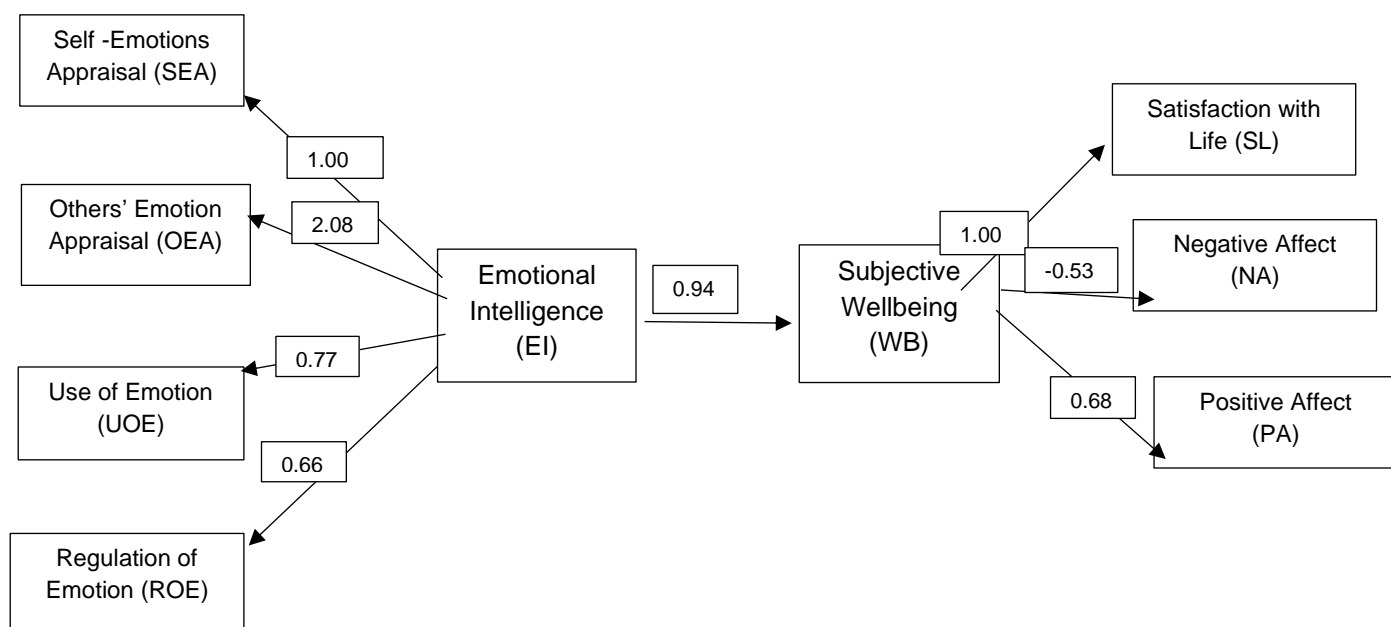


Figure 2: Best fitting Structural Model-1

Notes: n = 368. The results represent the unstandardized path coefficients of the structural model

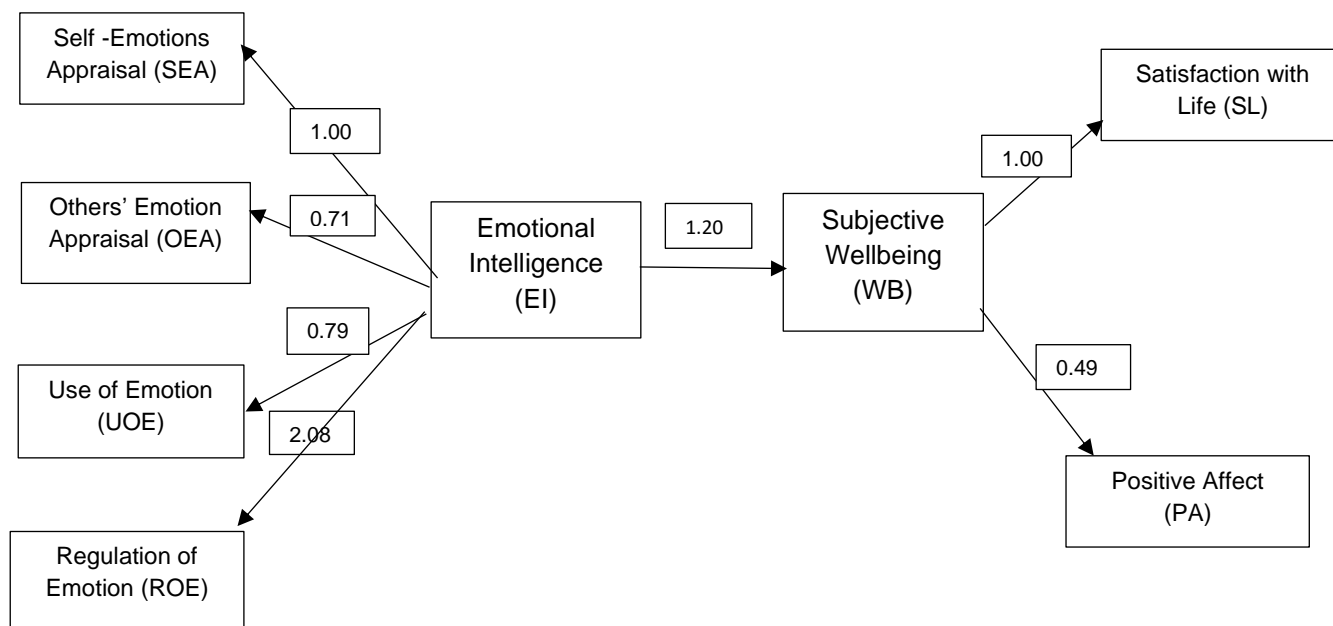


Figure 3: Best fitting Structural Model-1

Notes: n = 368. The results represent the unstandardized path coefficients of the structural mode

Table 5: Scale reliability and validity

		Model-1		Model-2		Standardized Loadings	
		CR	AVE	CR	AVE	Model-1	Model-2
EI	0.83	0.77	0.46	0.77	0.46	0.70	0.69
						0.50	0.52
						0.73	0.75
						0.75	0.74
Subjective Wellbeing	-----	0.57	0.48	0.82	0.70	0.81	0.94
						0.85	0.72
						-0.57	-----
SEA	0.68	0.69	0.36	0.69	0.36	0.59	0.59
						0.65	0.65
						0.62	0.62
						0.55	0.55
OEA	0.67	0.68	0.41	0.68	0.41	0.85	0.59
						0.72	0.71
						0.63	0.63
UOE	0.73	0.72	0.40	0.72	0.40	0.52	0.51
						0.70	0.69
						0.65	0.65
						0.65	0.65
ROE	0.81	0.84	0.57	0.84	0.57	0.87	0.86
						0.64	0.64
						0.78	0.78
						0.73	0.73
						0.57	0.59

<i>SL</i>	0.74	0.76	0.40	0.76	0.85	0.77	0.76
						0.77	0.76
						0.63	0.64
						0.33	0.33
<i>PA</i>	0.85	0.85	0.48	0.85	0.48	0.60	0.60
						0.68	0.68
						0.75	0.75
						0.67	0.67
						0.77	0.77
						0.66	0.67
<i>NA</i>	0.81	0.80	0.45	-----	-----	0.68	-----
						0.74	
						0.65	
						0.67	
						0.60	

EI – Emotional Intelligence, SEA - Self -Emotions Appraisal, OEA - Others’ Emotion Appraisal, UOE - Use of Emotion, ROE - Regulation of Emotions, SL - Satisfaction with Life, NA - Negative Affect, PA - Positive Affect

Notes- Model-1: Comprises of three dimensions of subjective wellbeing (Satisfaction with life, negative affect & positive affect); Model-2: Comprises of two dimensions of subjective wellbeing (Satisfaction with life & positive affect); CR- Composite reliability; AVE – Average Variance Extracted

Model fit indices of both model-1 and model-2 are quite similar. However, in case of composite reliability and validity of the subjective wellbeing model, there is a noticeable increase in the values of model-2 that of model-1(CR- from 0.57 to 0.82 & AVE- from 0.48 to 0.70).

The structural model-1 included three dimensions of subjective wellbeing, it showed lower scores for composite reliability and average variance extracted. The standardized estimates of structural model are shown in table 5. The results indicate that all factors’ loadings of EI and wellbeing are represented by their respective indicators and significant ($p \leq .01$). Hair et al., suggests that standardized loadings should be at least 0.5 and ideally 0.7 or greater; average variance extracted (AVE) of each latent construct should be 0.5 or greater; composite reliability (CR) estimates 0.7 or greater and also 0.6 to 0.7 acceptable if, other indicators of model construct are good and the AVE estimates should be greater than squared correlation estimates of any two constructs.

The standardized loadings of almost all the dimensions are 0.5 and higher. AVE of all the latent constructs is close to 0.5 and some are greater than 0.5 in case of subjective wellbeing (0.70, Model-2), satisfaction with life (0.76 in Model-1 & 0.85 in Model-II) and regulation of emotion (0.57). CR of almost all the constructs is higher than 0.70 and some are very close to 0.7 and both structural models (model-1 & 2) shows AVE (0.46 & 0.57) greater than squared correlation estimate.

Table 6: Discriminant validity

	<i>Model-1</i>		<i>Model-2</i>	
	<i>EI</i>	<i>Subjective wellbeing</i>	<i>EI</i>	<i>Subjective wellbeing</i>
<i>EI</i>	0.46 (AVE)	0.37 (SCE)	0.46 (AVE)	0.41 (SCE)

Subjective wellbeing	0.61 (r)	0.57 (AVE)	0.64 (r)	0.57 (AVE)
-----------------------------	-------------	---------------	-------------	---------------

Note: AVE-average variance extracted, SCE-squared correlation estimate, r-correlation
Results of structural equation model fit indices are very close to well-fitting model. It proves a satisfactory fit by structural model to the data. The results from structural equation model demonstrate that emotional intelligence could predict the dimensions of subjective wellbeing.

DISCUSSION

The current study found that higher EI is associated with higher life satisfaction and higher characteristics of positive affect during COVID-19 pandemic. Structural models (model-1 & 2) demonstrate good convergent and discriminant validity.

On the contrary, higher EI is associated with lower characteristics of negative affect during COVID pandemic. The findings of the current study are in line with previous researches (Schutte et al., 2001; Carmeli et al., 2009; Schutte et al., 2010; Extremera et al., 2020; Chen et al., 2016; Bar-On, 2012; Wang et al., 2019). In comparison to the work by Elizabeth et al (2004), Constanc et al., (2010), the proposed work was more detailed as it involved multiple dimensions of EI and wellbeing while as Elizabeth et al., (2004) and Constanc et al., (2010) restricted EI and wellbeing to one dimension.

Different from work by Londa et al., (2010), the proposed work also showed a negative association between EI and negative affect of subjective wellbeing, while Londa et al., (2010) explored only the positive affect of psychological wellbeing. Different from Schutte et al., (2010), the proposed solution used better scales for EI and wellbeing to analyze the correlation between EI and wellbeing during COVID pandemic. Schutte et al., (2010) used only experimental and rational reasoning for EI impacts and did not consider the dimensions of EI, but the proposed work considered all four dimensions of EI. Bar-On's (2012) work on impact of EI on wellbeing considered subjective wellbeing only from perspective of self-perceived health, the proposed work considered three dimensions of subjective wellbeing.

Compared to work of Sanchez et al., (2016), the proposed work was conducted only for limited population (368 participants), while Sanchez conducted analysis on 8520 participants. Due to COVID lockdowns mobility became difficult and thus the proposed work could not be done on larger population. Geng (2018) study conducted on undergraduates showed that EI has indirect effect on subjective wellbeing. Similarly, Eldeleklioglu & Yildiz (2020) study also showed that expressing emotions has indirect effect on subjective wellbeing of university students, then the proposed work demonstrated EI has direct effect on subjective wellbeing.

Sumargo & Novalia (2018) work highlighted on contribution of emotional social health on subjective wellbeing of poor children in bad environment, similarly proposed study made an attempt to express EI has significant bearing on subjective wellbeing during health crisis (Pandemic COVID-19). Different from Joan et al., (2019) proposed work used three different scales for measurement of subjective wellbeing while Joan et al., (2019) used only Oxford Happiness Questionnaire.

Realizing a positive and stronger association between EI and subjective wellbeing, the study recommends more initiatives to improve EI through social and mass media during COVID-19 times. The negative spread affecting the EI, through social and mass media must be regulated to improve the EI and ensure subjective wellbeing of citizens.

CONCLUSION

Improving EI is seen as the most prospective solution to improve the subjective wellbeing during the challenging times of COVID-19 pandemic. This work studied the correlation and SEM between different factors of EI and different dimensions of subjective wellbeing. Through correlation and SEM analysis, the study found a positive significant association between EI and life satisfaction, positive significant association between EI and positive affect. It also found negative significant association between EI and negative effect. The observation from the study reinforced the need for more EI focussed initiatives to improve the subjective wellbeing during COVID-19 pandemic.

References

1. Augusto-Landa, J. M., Pulido-Martos, M., & Lopez-Zafra, E. (2011). Does Perceived Emotional Intelligence and Optimism/ pessimism Predict Psychological Well-being? *J Happiness Stud*, 12, 463-474, <https://doi.org/10.1007/s10902-010-9209-7>
2. Austin, E. J., Saklofske, D. H., & Egan, V. (2004). Personality, well-being and health correlates of trait emotional intelligence. *Personality and Individual Differences*, 38(3), 547-558, <https://doi.org/10.1016/j.paid.2004.05.009>
3. Barbe, A. D., Pérez Viejo, J. M., Rodríguez-Brioso, M. M., & Gallardo-Peralta, L. P., (2021). Emotional well-being and resilience during the COVID-19 pandemic: Guidelines for social work practice. *International Social Work*, 64(2), 279–284, <https://doi.org/10.1177/0020872820970622>
4. Bar-On, R., (2012), The Impact of Emotional Intelligence on Health and Wellbeing. *Emotional Intelligence - New Perspectives and Applications*. DOI:10.5772/32468 ·
5. Byrne, B. M., (2010). Structural Equation Modelling with AMOS. (2nd ed.), Routledge Taylor & Francis Group
6. Carmeli, A., Yitzhak-Halevy, M., & Weisberg, J. (2009). The relationship between emotional intelligence and psychological wellbeing (Abstract). *Journal of Managerial Psychology*, 24(1), 66-78, <https://doi.org/10.1108/02683940910922546>
7. Chen, Y., Peng, Y., & Fang, P. (2016). Emotional Intelligence Mediates the Relationship between Age and Subjective Well-Being. *Int J Aging Hum Dev*, 83(2), 91–107. doi:10.1177/0091415016648705
8. Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, G. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, 49, 71–75.
9. Extremera, N., Sanchez-Alvarez, N., & Rey, Lourdes. (2020). Pathways between Ability Emotional Intelligence and Subjective Well-Being: Bridging Links through Cognitive Emotion Regulation Strategies. *sustainability*, 12(5), 2111, doi:10.3390/su12052111
10. Fernandez-Berrocal, P., & Extremera, N. (2006). Emotional intelligence: a theoretical and empirical review of its first 15 years of history. *Psicothema*, 18(Suppl), 7-12.
11. Geng, Y. (2018). Gratitude mediates the effect of emotional intelligence on subjective well-being: A structural equation modeling analysis. *J Health Psychol*. 23(10), 1378-1386. doi: 10.1177/1359105316677295
12. Guerra-Bustamante, J., Leon-Del-Barco, B., Yuste-Tosina, R., Lopez-Ramos, V. M., & Mendo-Lazaro, S. (2019). Emotional Intelligence and Psychological Well-Being in Adolescents. *International journal of environmental research and public health*, 16(10), 1720. <https://doi.org/10.3390/ijerph16101720>
13. Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural Equation Modelling: Guidelines for Determining Model Fit. *The Electronic Journal of Business Research Methods*, 6(1), 53 – 60.

14. Krishnaveni, R., & Deepa, R. (2013). Controlling Common Method Variance while Measuring the Impact of Emotional Intelligence on Well-being. *Vikalpa*, 38(1), 41-47, <https://doi.org/10.1177/0256090920130104>
15. Maccagnan, A., Wren-Lewis, S., Brown, H., & Taylor, T., (2019). Wellbeing and Society: Towards Quantification of the Co-benefits of Wellbeing. *Soc Indic Res* 141, 217–243. <https://doi.org/10.1007/s11205-017-1826-7>
16. Mayer, J. D., Salovey, P., & Caruso, D.R., (2008). Emotional intelligence: New ability or eclectic traits? *American Psychologist*, 63 (6), 503–517. <https://doi.org/10.1037/0003-066X.63.6.503>
17. Mayer, J. D., Roberts, R. D., & Barsade, S. D., (2008), Human Abilities: Emotional Intelligence. *Annu. Rev. Psychol.* 59, 507–536, DOI: 10.1146/annurev.psych.59.103006.093646
18. Moroń, M., & Biolik-Moroń, M. (2021). Trait emotional intelligence and emotional experiences during the COVID-19 pandemic outbreak in Poland: A daily diary study. *Personality and individual differences*, 168, 110348. <https://doi.org/10.1016/j.paid.2020.110348>
19. Proctor C. (2014). Subjective Well-Being (SWB). In: Michalos A.C. (eds) Encyclopedia of Quality of Life and Well-Being Research. *Springer, Dordrecht*. https://doi.org/10.1007/978-94-007-0753-5_2905
20. Schutte, N. S., Thorsteinsson, E. B., Hine, D. W., Foster, R., Cauchi, A., & Binns, C. (2010). Experiential and rational processing styles, emotional intelligence and wellbeing. *Australian Journal of Psychology*, 62(1), 14–19. <https://doi.org/10.1080/00049530903312865>
21. Seyed Ali A. A., Hossein K, A., Mohammad N, S., & Morteza, N. (2014). Relationship between Emotional Intelligence and Psychological Well Being. *International Journal of Research in Organizational Behavior and Human Resource Management*, 2(1), 123-144.
22. Soto-Rubio, A., Giménez-Espert, M., & Prado-Gascó, V. (2020). Effect of Emotional Intelligence and Psychosocial Risks on Burnout, Job Satisfaction, and Nurses' Health during the COVID-19 Pandemic. *International journal of environmental research and public health*, 17(21), 7998. <https://doi.org/10.3390/ijerph17217998>
23. Sumargo, B., & Novalia, T. (2018). Structural Equation Modelling for Determining Subjective Well-Being Factors of the Poor Children in Bad Environment. *Procedia Computer Science*, 135, 113-119. <https://doi.org/10.1016/j.procs.2018.08.156>.
24. Tov, W. (2018). Well-being concepts and components. In E. Diener, S. Oishi, & L. Tay (Eds.), *Handbook of well-being*. Salt Lake City, UT: DEF Publishers. DOI:nobascholar.com
25. Wang, M., Zou, H., Zhang, Wenjuan, Z., & Ke H. (2019) Emotional Intelligence and Subjective Well-Being in Chinese University Students: The Role of Humor Styles. *J Happiness Stud*, 20(4), 1163–1178 <https://doi.org/10.1007/s10902-018-9982-2>
26. Zysberg. L., & Zisberg. A. (2020). Days of worry: Emotional intelligence and social support mediate worry in the COVID-19 pandemic. *Journal of Health Psychology*, 18, 1–10, doi:10.1177/1359105320949935