Statistical Analysis of Factors Affecting the Employee Wellbeing in Indian IT Industries

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Abstract: Information technology **(**IT) industries play significant role in economic and overall growth of India as they provide employment to large number of Indian people. Employee well-being (EWB) has consistently been found to be objectively relevant to all types of industries and employees and has evolved a broad area of research in the current scenario. Theoretically and scientifically, a significant amount of attention with several limitations has been devoted to statistically measuring the EWB. Therefore, for the first time, this paper provides an exploratory and confirmatory analysis (EFA and CFA) based scale to measure the EWB of IT employees. For this purpose, based on the literature and discussion with experts, a questionnaire containing 45 EWB scales items was developed and relevancy of each EWB scale item was asked to 121 respondents. Based on the content validity ratio (CVR), 33 EWB scale items were shortlisted for further factor analysis. Then, EFA was conducted in SPSS software with data collected from 384 respondents of Indian IT industries. Through EFA, these 33 EWB scale items were categorized into four major groups, i.e., psychological well-being, social well-being, workplace well-being, and subjective well-being. Afterward, using CFA technique in SPSS AMOS software, the 33 EWB scale items in above four groups were confirmed based on various indices. The practical contributions and applications of the study is then discussed in view of EWB of Indian IT employees.

Keywords: Employee well-being, IT industries, EFA and CFA, Questionnaire survey.

JEL code: M14

1. Introduction

Business is now more interconnected, uncertain and complex than in the past. Globalization has now created intense competition in the global market due to the volatile environment, unpredictability, complexity and ambiguity in the market. The growth of India's economy has recently been determined by the service sector, which accounts for about 61 percent of India's GDP. Information Technology (IT) is the primary service sector in India, which provides employment to a large number of Indian people. In recent years, the IT sector has seen an increase in equity inflows from foreign direct investment (FDI). India has an edge over other nations due to its large pool of young, educated potential, which is strengthened by the arrival of more than 3.5 million new talent each year (Agarwal, 2014). It is noteworthy to mention that the income obtained from the export of services is used to address the about 50% of current account deficit of India.

The IT industries have been considered as service- and knowledge-oriented industry. To be successful in IT industries, the people need to be flexible in their thinking, be persistent and think out of the box (Malhotra & Mukherjee, 2004; Panda & Rath, 2017). These circumstances lead to extremely demanding, adaptable, productive, multitasking, and stressful job positions. Professionals in the IT industries frequently experience job burnout as a result of emotional depletion (Bakker et al., 2005). The basic problem of IT industries is that the rapid advancement of technology has made talents outdated at an even quicker rate (Currie, 2001). Employees must work extremely long hours to keep up with the changes and remain competitive in order to handle these changes (Grawitch et al., 2006). The results of a recent study also show a strong correlation between organisational efficiency and employee well-being (EWB) (Panda & Rath, 2017). Therefore, in today's businesses, there is an essential requirement to comprehend and carefully research the phenomenon of EWB.

According to Cox, Edwards, and Palmer (2005), dual-earner families are becoming more widespread, and this has resulted in a new set of difficulties in juggling work and family obligations (Agarwal, 2014). Such circumstances have caused a variety of problems and challenges at work, including the separation of employees due to health-related issues, extremely high levels of occupational stress, and mental illnesses (Bevan, 2010). IT industries are becoming aware of the need to monitor how individuals are handling pressure and changing in order to keep their finest personnel (Budhwar, 2000). IT industries are also becoming aware of the need to broaden their scope to consider factors such as identity, significance, goal, self-expression, and artistic output. The solution to all of these issues is to improve the EWB.

Current organizational studies researches have emphasized over the relationship between EWB of employees and their ability to do their jobs (Kersley et al., 2006; Warr, 2002). As per the study of Tehrani et al., (2007), as more companies begin to see the benefits of implementing employee wellness and health policies, the relevance of employee wellness on the corporate agenda has gradually increased. Some of the policies adopted by legislators to address employee health issues include excellent service practises, work-life balance methods, employee support programmes, restoration techniques, and various training strategies (Department for Work and Pensions, 2006). Additionally, it has become crucial for the IT sector to address the problems encountered by its workers by putting an emphasis on their well-being and striking a balance between employees and company expectations. From this context, the present study aims to advance the knowledge of the structural aspects of EWB and provide an absolute scale to objectively assess the EWB of employees working in the Indian IT industries. The present presented is divided into three sections: the literature review and the significance of the development of an EWB scale are covered in the next section, and the subsequent section provides a clear understanding of the scale's development

process in relation to all empirical analyses, scale setup and verification. The last section of the paper discusses the conclusion of research along with limitations and future scope and significance of the study.

2. Review of Literature

Employee Well-being (EWB)

Organizational studies have a rich history of research on employee well-being. However, complete comprehension, conceptual elucidation, and the definition of EWB continue to be substantially ambiguous and unresolved (Seligman 2011, Zheng, Zhu, Zhao, and Zhang, 2015). The definition of "well-being" in the New Oxford Advanced Learner's Dictionary is "a state of comfort, health, and happiness". In this context, EWB refers to the comfort and happiness of employees as well as their physical, psychological and emotional health. Employee well-being is generally understood to represent their overall experience and performance in both physical and psychological terms (Warr, 1999). Ryan and Deci (2000) noted that self-indulgence, which is concerned with enjoyment, and chivalry, which is concerned with reaching human potential, are the two main philosophical approaches to well-being. As per the World Health Organization (2013), EWB is "the condition in which each employee is able to develop his or her own potential, manage the typical demands of life, work efficiently, and make a contribution to his or her community." This exhaustive description of EWB aims to encapsulate the common thread resonating throughout all of the preceding definitions. It is difficult to understand this from literature research because there are so many definitions of "employee well-being", which create different approaches. For instance, Sirgy et al., (2001) and Van Laar et al., (2007) refer to EWB as quality of work life or job-related quality of life, while Page and Vella-Brodrick (2009) discussed on employee mental health and workplace wellbeing. In the research, Wright and Cropenzano (2006) state

psychological well-being (PWB) as the global well-being of an employee. Interestingly, Sirgy (2012) accounts the thought of EWB by several terms in the literature, including "quality of working life" and "work well-being," and so on.

Elements of EWB

According to the earlier studies, a person's general well-being is not a reliable indicator of their employees' well-being. It is multifaceted, subjective and dynamic (Juniper et al., 2011; Zheng et al., 2015). Warr (1999, 2002) carried out one of the most significant research projects on the factors affecting the EWB. He gave a definition of EWB that took into account both features of the person's employment and their experiences in general. The two distinct aspects of wellbeing are domain- or job-specific wellbeing and context-free wellbeing. The context-free well-being focuses on individuals' overall feelings of well-being across all areas of existence (e.g, life satisfaction, happiness). However, domain-specific well-being is concerned with how people feel about a particular area of their lives. Domain-specific well-being, a subclass of job-specific well-being, describes people's feelings of well-being in relation to their occupations, such as salary or happiness with coworkers. Additionally, Warr (1999, 2002) has proposed three opposing dimensions: (a) discomfort and pleasure, (b) anxiety and ease, and (c) dejection and elation. They claim that most studies on well-being use these characteristics as dependent variables. One of the emotional aspects that is commonly associated with positive and negative work-related emotions is unhappiness/happiness. While both comfort and anxiety involve a moderate sense of pleasure, they are different from one another in terms of the amount of mental stimulation they require, with anxiety requiring high levels of mental stimulation and comfort requiring moderate levels. The third dimension, which deals with excitement and despair, encompasses both extremes of happiness and misery.

Researchers have recently turned to the multiple-measure technique to understand how employee well-being is measured. A multidimensional model was presented by Ryff and Keyes (1995) after doing research on well-being dimensions. Their model emphasizes PWB, social well-being (SWB) and emotional well-being as the three main elements of well-being. Additionally, it has been argued that EWB must be regarded as equally work- and non-work-associated psychological practices, as well as a state of health (Zheng et al., 2015). Page and Vela-Brodrick (2009) argued that EWB should be quantified in terms of (a) PWB, (b) workplace well-being (WWB), and (c) subjective well-being (SBB). PWB comprises crucial elements including self-acceptance, a sense of purpose in life, environmental mastery, good interpersonal relationships, autonomy, and personal development. High positive affect, low negative affect, and a cognitive assessment of one's level of life satisfaction are the classic three components of SBB. In addition, many researches on job satisfaction and work-associated affect have been focused on these two key aspects of workplace wellbeing. Work-associated affects are the emotions that people frequently feel at work, whether they are directly or indirectly related to their jobs. There are positive and negative approaches to EWB that have been addressed by some other academicians (Huhtla & Parjefall, 2007).

Although the importance of both mental health and positive well-being has long been acknowledged, many studies have concentrated on employees' "un-well-being," such as work stress. The multifaceted aspect of the idea of EWB is acknowledged in all of the aforementioned conceptualizations. Feeling good and performing well are its two most important components, despite the fact that well-being is today seen as a multifaceted notion. A pleasant experience in one's life is characterized by happiness, satisfaction, enjoyment, interest, and involvement. Important characteristics of well-being include having a sense of direction in life, having satisfying connections with others, and having some measure of control over one's circumstances (Ryff & Keyes, 1995). A few studies have also

demonstrated that EWB extends beyond people's physical and mental health to encompass growth opportunities, managerial decisions, and workplace design factors (Juniper et al., 2011). According to Sirgi (2012), satisfaction in job, environment at work and nature of assigned work are the key items of EWB. Moreover, Zheng et al. (2015) recently claimed that the EWB consists of three primary components such as life well-being, WWB and PWBs.

Importance of EWB

According to the literature, IT industries as well as the entire service sector should be concerned about the well-being of their employees. It has a substantial impact on how well firms function and remain viable by altering expenditures associated with health care and disease (Grawitch et al., 2006), absenteeism, turnover (Spector, 1997), and employee productivity (Wright, 2006).

Arguably, an employee's well-being influences decisions such as whether or not to leave their current employment. Additionally, it affects an employee's job commitment (Harter et al., 2002; Wright, 2006), employee engagement, and job satisfaction (Pradhan et al., 2017). Furthermore, a person's capacity to handle stress is greatly influenced by their level of well-being (Folkman, 1997; Wright, 2006), as well as their general pleasure in their personal and professional lives (Carver, Scheier, & Segerstrom, 2010) (Diener, 2000). The success of a business depends heavily on the wellbeing of its employees, which is critical for each individual. Organizations that put a strong emphasis on employee welfare have been proven to have a sustainable competitive advantage (Wright, 2006). EWB has a variety of advantages for both individuals and companies, as the personal resources are increasing more quickly (Wright, 2006). Employees that participate in PWB report feeling happier overall. As a result, one develops a more imaginative, gregarious, charitable, and optimistic attitude. Additionally, positivity encourages workers to develop their intangible assets, including their physical, emotional, intellectual, and social resources. As a result, an employee may experience

increased job performance and participation because to this happiness. The employee experiences less effort, and there is greater loyalty to the company, which decrease the attendance of employee at work.

Requirement of a measurement tool

The overall health of an organization's employees is essential to its success and growth on a global scale (Spreitzer & Porath, 2012). In this sense, organisational behaviour and allied sciences have made EWB a significant study area. Despite the fact that there are many studies evaluating the employees' job satisfaction (Dimotakis et al., 2011), work attitude (Leavitt et al., 2011), negative affect (Vandenberghe et al., 2011), or flow (Ceja & Navarro, 2011), the importance of the employees' overall well-being has never been emphasised. While comparing the needs of IT industries, there are smaller number of researches related to the well-being of employees.

The current situation has made work the most important aspect of a person's life since it directly affects the well-being, development, performance, and output of employees. Since the contexts of the workplace and daily life are significantly different, it is imperative to draw a distinction between the concepts of EWB and general well-being. In actuality, however, studies have not yet been able to agree on what constitutes the EWB (Page & Vella-Brodrick, 2009). To illustrate the general EWB, job satisfaction, PWB, and the SWB are still used interchangeably. It is yet unknown how well these represent the well-being of employees in IT industries.

Based on the assessment of the literature, it can be concluded that the theoretical model of EWB developed by Page and Vella-Brodrick (2009) includes a section on mental health and well-being. They addressed the PWB and SWB as the primary well-being criteria in their concept. Two components were added to the original model to give it a deeper organisational

context (Page & Vella-Brodrick, 2013). The two novel constructs were (a) job satisfaction and (b) work-related positive and negative impacts. Additionally, it was recommended that the life satisfaction scale (Diener, Suh, et al., 1999), positive and negative affect schedule (Watson, Clark, & Tellegen, 1998), WWB, affective well-being scale (Daniels, 2000), and PWB need to be taken into account in order to measure EWB in its entirety. According to the available studies in literature, no other similar scale or instrument has been created to date to evaluate the EWB, especially with reference to IT industries of India (Zheng et al., 2015). Additionally, models that take into account the combined impact of many factors on WWB must be developed and tested (Grawitch et al., 2006). Because there is a huge research gap in the literature on EWB and there are no suitable instruments for measuring it, academician must move quickly to create a scale to assess the EWB in Indian IT Industries.

3. Development of EWB Measuring Scale

The core objective of the current study is to deliver a suitable scale to measure the EWB of employees of the Indian IT industries. The step-by-step procedure to measure the EWB is described as follows;

Step-1) Identification of EWB Items: Firstly, based on the literature review, a questionnaire containing the EWB related 45 items is developed for the purpose of validation. These 45 items were categorized into four major groups i.e., 1) Psychological well-being (PWB), 2) Social well-being (SWB), 3) Workplace well-being (WBW), and 4) Subjective well-being (SBB). Including respondents from service industries like IT and various academicians, a total of 121 responses were collected in this questionnaire survey. Each respondent was asked to indicate the relevancy of each item using 3-point scale (3-very relevant, 2-quite relevant and 1-not relevant). Based on the collected responses, the content validity ratio (CVR) was

calculated which validate that whether the items accurately measure the EWB of employees of Indian IT industries. The CVR can be calculated as follows (Lawshe, 1975);

$$CVR = \frac{n_e - \frac{N}{2}}{\frac{N}{2}} \quad (1)$$

Where, N denotes the total number respondents, and n_e represents the total number of respondents indicating the particular item as very relevant. Thus, the CVR value for each of 45 EWB items was calculated using Eq. (1). The value of CVR varies from -1 to +1, that is, non-relevant (-1) to perfectly relevant (+1). In this study, items having CVR value less than 0.5 were rejected. Consequently, 12 items were rejected and 33 items were retained to measure the EWB of Indian IT industries.

Step-2) Exploratory Factor Analysis: In order to elicit the information about shortlisted 33 EWB scale items, a questionnaire survey is conducted using 5-point agreement scale (5-strongly agree, 4-agree, 3-neither agree nor disagree, 2-disagree and 1-strongly disagree). With 95 % confidence interval, 0.5 degree of variability and 5 % sampling error, the sample size *(n_o)* was determined using Cocharn's formula as given as Eq. (2):

$$n_o = \frac{z^2 pq}{e^2} \quad (2)$$

Where, z (1.96) is standard normal deviation set at 95 % confidence level, e (0.05) is sampling error (5 %), p is degree of variability which can be considered as 0.5 for maximum variability and q = 1-p, that is, 0.5. Thus, the sample size was determined as 384 and these 384 responses were collected from the employees of Indian IT industries. In the current study, the convenience sampling technique is used and responses were collected through google survey form. The demographic profile of respondents, reliability of EWB groups and descriptive statistics, and intercorrelation matrix among the EWB groups are presented in Table 1, Table 2 and Table 3, respectively.

Table 1 Demographic profile of respondents

Demographic Details	Particulars	Frequency	Percent

1. Age	A. 20 to 30 years	236	61.5
	B. 30 to 40 years	127	33.1
	C. 40 to 50 years	14	3.6
	D. Greater than 50 years	7	1.8
2. Educational Qualification	A. Undergraduate	205	53.4
	B. Postgraduate	171	44.5
	C. Doctorate	8	2.1
3. Working Experience in Current Position	A. 0-5 years	270	70.3
	B. 5-10 years	71	18.5
	C. 10-15 years	21	5.5
	D. 15-20 years	7	1.8
	E. >20 years'	15	3.9
4. Total Working Experience	A. 0 to 5 years	213	55.5
	B. 5 to 10 years	93	24.2
	C. 10 to 15 years	49	12.8
	D. 15 to 20 years	7	1.8
	E. More than 20 years	22	5.7
5. Income Group	A. 30000-40000/- per month	92	24.0
	B. 40000-50000/- per month	28	7.3
	C. 50000-60000/- per month	21	5.5
	D. 60000-70000/- per month	7	1.8
	E. > 70000/- per month	236	61.5
6. Salary Satisfaction	A. Yes	193	50.3
	B. No	191	49.7

As shown in Table 1, most of the respondents were in 20-30 years age group, undergraduate, having 0-5 years working experience in current company, having 0-5 years total working experience, in 30000-40000/- per month income group. However, only about 50 % respondents were satisfied with their salary.

Table 2 Reliability of EWB groups and descriptive statistics

					Skewness		**Kurtosis**	
EWB Groups	**Total Number of Items**	**Mean**	**SD**	**Cronbach's' Alpha**	**Statistics**	**Standard Error**	**Statistics**	**Standard Error**
PWB	10	3.55	0.91	0.93	0.562	0.149	-0.123	0.221
SWB	10	3.89	0.82	0.91	-0.234	0.149	-0.135	0.221
WWB	9	3.82	0.94	0.85	-0.475	0.149	0.672	0.221
SBB	4	3.97	0.89	0.87	0.243	0.149	0.331	0.221

As per the Table 2, the estimated Cronbach's' Alpha value is more than 0.8, therefore, the collected data can be assumed reliable for analysis. Values of other important statistics parameters are also shown in Table 2.

Table 3 Intercorrelation matrix among the EWB groups

EWB Groups	PWB	SWB	WWB	SBB
PWB	1			
SWB	0.123*	1		
WWB	0.315*	0.352*	1	
SBB	0.267*	0.269*	0.321*	1

**P-value is estimated as less than 0.05, which means that the correlation is significant.*

As per the Table 3, among four EWB groups, the P-values are found as less than 0.05 and correlation values are found as positive. Therefore, it can be stated that there is significant positive correlation among EWB groups.

In the current study, SPSS 26 software is used to conduct the EFA which facilitates the principal component extraction and varimax rotation. Since the higher factor loading indicates strong correlation between factor and item, items having more than 0.50 loadings were moved to additional analysis.

With the principal component analysis (PCA) based dimensional reduction technique, the EFA study was conducted in which the rotated component matrix was determined and investigated systematically. As shown in Figure 1, The PCA of EWB items was performed for 4 factors having eigen values more than 1. The Kaiser-Meyer-Olkin (KMO) value measuring the sampling adequacy, was calculated as 0.921 which justified that the collected data is suitable for factor analysis. Items having more than 0.50 loadings were moved. Four factors were captured while retaining the 82.625 percent of the total variance of the data set. Thus, based on the EFA, four groups with a total of 33 items for EWB were established. Furthermore, the Cronbach's' alpha values were calculated as more than 0.8 for all four EWB groups which shows that the collected data can be considered to be acceptable and reliable for statistical analysis. The final results of EFA along with EWB groups and factor loading of 33 related items are presented in Table 4.

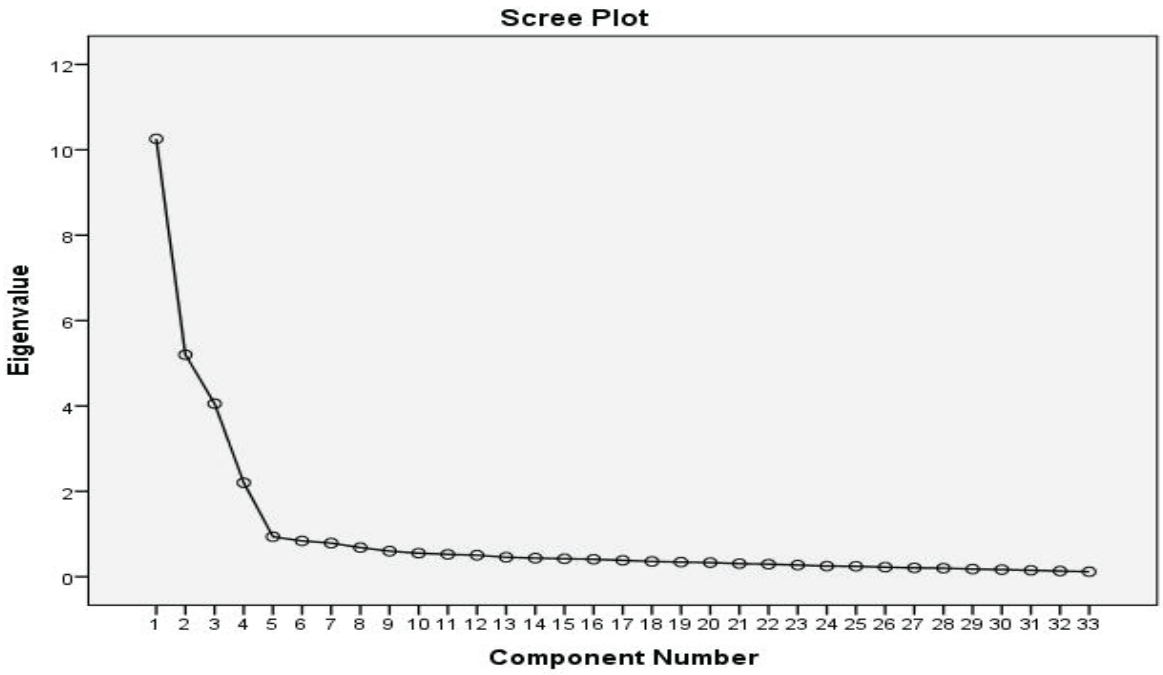


Figure 1 Screen plot of EWB items with Eigen values

Table 4 Rotated Component Matrix of EWB

EWB Groups and their items	**Factor Loading**			
1. Psychological Wellbeing	**PWB**	**SWB**	**WWB**	**SBB**
PWB 1: I can readily adjust to the daily changes in my life and effectively handle my responsibilities.	0.951			
PWB 2: I care about things that are important to me, not others.	0.892			
PWB 3: I feel that I am a sensible person.	0.822			
PWB 4: I am a flexible person.	0.812			
PWB 5: I am well aware of what is expected of me.	0.803			
PWB 6: I believe that I am able to make decisions.	0.787			
PWB 7: I feel depressed by the stress and demands of daily life.	0.771			
PWB 8: I believe that my life has a purpose and direction.	0.764			
PWB 9: I believe that learning is a continuous process in life.	0.723			
PWB 10: I am self-confident person.	0.719			
2. Social Wellbeing				
SWB 1: I play a significant role in my group/team and organization**.**		0.889		
SWB 2: In my team, people are trustworthy.		0.864		
SWB 3: I am very close to my team members.		0.827		
SWB 4: My team is a great source of social support.		0.815		
SWB 5: My opinions are well acknowledged by my team members.		0.806		
SWB 6: Members of my team help each other in difficult times.		0.786		
SWB 7: I actively participate in each decision-making activity of my team.		0.743		
SWB 8: I enjoy spending time with my team members.		0.725		

SWB 9: I am able to openly discuss my problems with my team members.		0.711		
SWB 10: My daily activities contribute towards the benefits ofmy team.		0.701		
3. Workplace Wellbeing				
WWB 1: I am highly satisfied with my job.			0.864	
WWB 2: I enjoy meaningful works			0.834	
WW3: I give paramount importance to my work.			0.821	
WWB 4: My professional successes serve as a constant source of inspiration.			0.804	
WWB 5: My workplace is very encouraging.			0.792	
WWB 6: My work has several opportunities for career advancement.			0.781	
WWB 7: I used to strike a balance between my work and personal life.			0.765	
WWB 8: My employer takes great care of his employees.			0.732	
WWB 9: My job presents opportunities for skill development.			0.712	
4. Subjective Wellbeing				
SBW 1: I am usually happy.				0.842
SBW 2: I am a very optimistic person.				0.804
SBW 3: I have positive feelings about myself.				0.782
SBW 4: Most of the time, my life is sorrowful.				0.765
Total variance retained	82.625 %			

Step-3) Analysis of Data Collected Through Questionnaire Survey: Responses collected during the questionnaire survey were unified and relative agreement index (RAI) was calculated for each EWB scale item. The RAI can be calculated using following formula;

$$\boldsymbol{RAI = \frac{\sum W}{A \times N}} \quad \textbf{(2)}$$

Where, ∑W = sum of responses, that is, sum of rating of a scale item given by respondents, A = maximum value of rating which is 5 and N = total number of respondents. The RAI represents the level of agreement for a particular EWB scale item. Higher the value of RAI, higher the level of agreement for EWB scale item. The possible ranges of RAI and corresponding level of agreement is presented in Table 5.

Table 5: RAI ranges and corresponding level of agreement

Range	Level of agreement
0	No Agreement
0-0.20	Strongly Disagree
0.20-0.40	Disagree
0.40-0.60	Neither Agree nor Disagree
0.60-0.80	Agree

0.80-1	Strongly Agree

The calculated RAI values along with corresponding level of agreement for EWB scale items are presented in Table 6.

Table 6: RAI value for each EWB item and corresponding level of agreement

EWB Groups and Respective Items	RAI	Level of Agreement
1. Psychological Wellbeing (PWB)		
PWB 1	0.697	Agree
PWB 2	0.649	Agree
PWB 3	0.743	Agree
PWB 4	0.786	Agree
PWB 5:	0.776	Agree
PWB 6	0.792	Agree
PWB 7	0.553	Neither Agree nor Disagree
PWB 8	0.735	Agree
PWB 9	0.857	Agree
PWB 10	0.807	Agree
2. Social Wellbeing (SWB)		
SWB 1	0.792	Agree
SWB 2.	0.723	Agree
SWB 3	0.684	Agree
SWB 4.	0.663	Agree
SWB 5	0.761	Agree
SWB 6	0.752	Agree
SWB 7	0.755	Agree
SWB 8	0.706	Agree
SWB 9	0.626	Agree
SWB 10	0.752	Agree
3. Workplace Wellbeing (WWB)		
WWB 1	0.673	Agree
WWB 2	0.760	Agree
WWB 3	0.765	Agree
WWB 4	0.777	Agree
WWB 5	0.704	Agree
WWB 6	0.699	Agree
WWB 7	0.718	Agree
WWB 8	0.673	Agree
WWB 9	0.717	Agree
4. Subjective Wellbeing (SBB)		
SBW 1	0.715	Agree
SBW 2	0.769	Agree
SBW 3	0.782	Agree
SBW 4	0.670	Agree

As shown in Table 6, except for PWB 7, the RAI values for each EWB scale item are found to be in the range of 0.60 to 0.80, which indicates an "agree" level of agreement. Thus, it can also be that the most of the respondents chose the "agree" option for each EWB scale item.

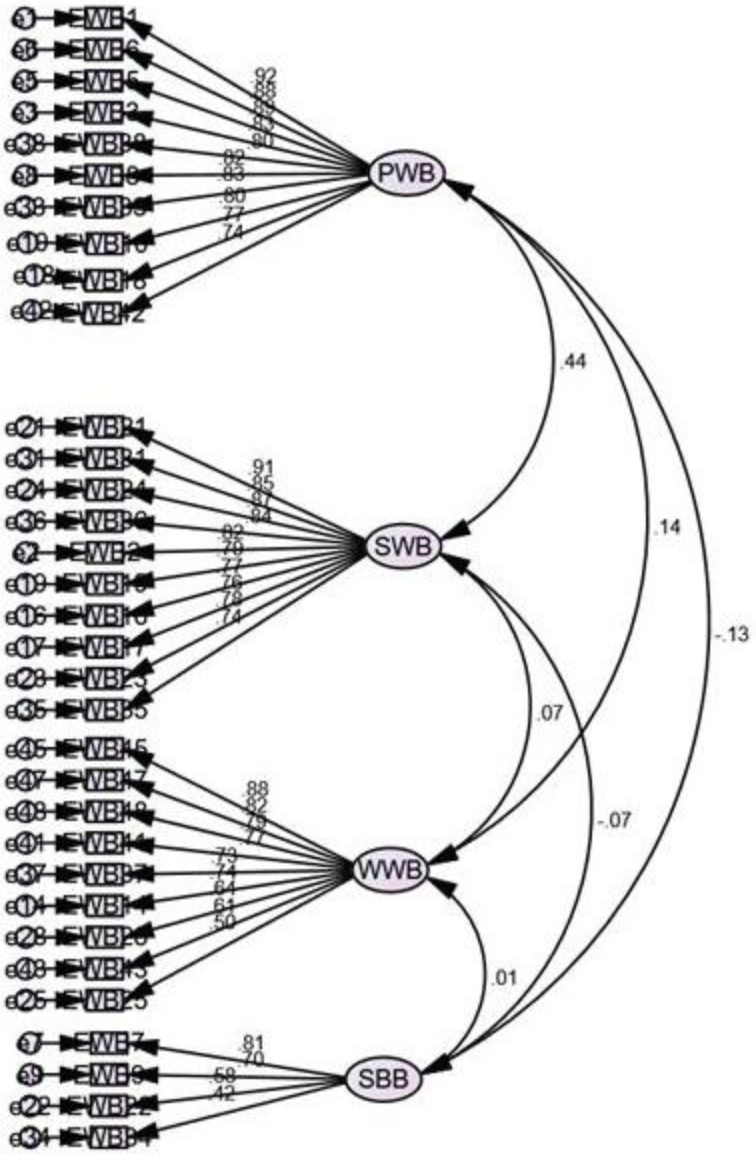
Step-4) Confirmatory Factor Analysis (CFA): The CFA analysis was performed in SPSS AMOS software using the results of EFA. To examine the structural models, the CFA is considered as a multivariate statistical technique to evaluate the multiple and different complex interrelated relationships associated with the model. In CFA, the model is estimated based on overall goodness of fit statistical significance of the estimates of model parameter. The absolute goodness of fit of model can be estimated using indices such as; i) the goodness-of-fit statistics, ii) root mean square error of approximation (RMSEA), iii) comparative fit index (CFI), iv) goodness-of-fit index (GFI), v) Tucker-Lewis index (TLI), vi) adjusted goodness-of-fit index (AGFI) and vii) normed-fit-index (NFI).

Despite chi-square's ability to measure model fitness, the above explained indices such as RMESA, CFI, GFI, and TLI are used in CFA to measure the model fitness. Based on the literature studies (Kline, 2011), the model can be believed good when the RMSEA is found to be close to 0, and the values of GFI, AGFI, NFI, CFI and TLI are found to be greater than 0.80.

EWB consists of four major groups, namely, PWB, SWB, WWB and SBB. The constructed CFA for 33 EWB items is shown in Figure 2. Results of goodness-of-fit are presented in Table 7. The calculated values of indices (χ^2 = 721.12, χ^2/df = 1.49, GFI = 0.902, AGFI = 0.913, TLI = 0.962, CFI = 0.926, NFI = 0.916 and RMSEA = 0.02) explains the adequate and satisfactory results for a well-fitting model. Thus, the CFA confirms the 33 EWB items under the above four major groups. Reliability and validity testing were carried to further support these results.

Table 7 Results of goodness-of-fit

Model EWB	Goodness-of-Fit Results								
	χ^2	χ^2/df	df	GFI	AGFI	NFI	CFI	TLI	RMSEA
CFA	770.02	1.533	502	0.902	0.913	0.962	0.926	0.916	0.02



Reliability and Validity Testing

Test-retest reliability testing: This test of reliability is used to check whether is there is any significant difference between the previous responses and responses collected second time. For this purpose, data for 33 items of EWB was collected twice with the same respondents (T1 and T2) at an interval of 40 days. To check the internal consistency of the data, Cronbach's alpha for T1 and T2 was found to be satisfactory as 0.93 and 0.94, respectively.

The mean values of the data were found to be 4.21 and 4.18 for T1 and T2, respectively. Whereas, the standard deviation values of the data were found to be 0.92 and 0.88 for T1 and T2, respectively. Moreover, the correlation between the data collected at T1 and T2 time was found to be significant and positive ($r = 0.778$, $p < 0.02$). Thus, the results of the study explain the well performance in test-retest reliability, which will be very beneficial for further researches.

Construct Validity Analysis: This analysis is used to test whether the EWB items actually reflect the theoretical latent construct that those items are supposed to measure. In this study, the construct validity of EWB items is measured by convergent and discriminant validity. Convergent validity of EWB items is confirmed by average variance explained (AVE) and composite reliability (CR) of each EWB group. Noteworthy, for the better results, the AVE and CR values should be greater than 0.5 and .70, respectively. As shown in Table 8, AVE value for each of the EWB groups is found as more than .50 (PWB = 0.621, SWB = 0.732, WWB = 0.682 and SBB = 0.782), and CR value for each of the EWB groups is found as more than .70 (PWB = 0.881, SWB = 0.832, WWB = 0.791 and SBB = 0.785). Thus, it can now be justified that the EWB scale consists of 4 major groups with a total 33 EWB items.

In this study, discriminant validity refers to how well the test measures the EWB items, for which it was intended to measure. Broadly, there are two methods for establishing the discriminant validity of a scale. First, the average shared variance extracted (ASVE) of EWB groups should be greater than the square of correlation (r^2) between EWB groups (Hair et al., 2010). Second, the values of maximum shared variance (MSV) and average shared variance (ASV) should be less than the average variance extracted (AVE). Results shown in Table 8 evidently demonstrate that both conditions of discriminant validity have been established

Table 8 Convergent and Discriminant validity Results

EWB Groups	AVE	CR	MSV	ASV	r^2				ASVE			
					SWB	PWB	WWB	SBB	SWB	PWB	WWB	SBB
SWB	0.621	0.881	0.123	0.526	1				1			
PWB	0.732	0.832	0.132	0.492	0.112	1			0.471	1		
WWB	0.682	0.791	0.129	0.354	0.082	0.092	1		0.543	0.453	1	
SBB	0.782	0.785	0.135	0.432	0.092	0.078	0.094	1	0.634	0.567	0.564	1

Discussion

In terms of practice, the studies have a variety of results. First, the EWB scale can be used as a tool for analysis that enables IT employees to keep track of their well-being, achieve it, and improve the job performance. Besides being important to an IT company, improving performance at work paves the way for both individual and collective advancement. Despite the fact that certain studies have discovered a connection between EWB and performance (Meyer, Stanley, Herskovich, & Topolnitsky, 2002), it is expected that the further studies will soon reveal the predictive utility of current tools. Employees may be able to obtain a philosophically intuitive awareness of their own personal wellbeing and make the required adjustments to improve it with the help of the recently developed EWB scale. Also, employees may therefore be able to achieve larger levels in output, for e.g., performance, dedication, intention to stay, and so forth.

This research also offers a novel perspective and a precise assessment tool for IT industries to be used while conducting EWB workshops or any wellness workshops in the industry. According to the results of presented paper, apart from job satisfaction, the EWB also includes subjective well-being, workplace well-being, social well-being, and psychological well-being. It would be necessary for managers to adjust their methods in order to provide employees' mental health, work-life balance, satisfaction with their families, emotional fitness, and personal development the attention they need.

4. Conclusion

From the literature studies, it is clear that the EWB is an extremely important topic for the researchers and IT like service industries also. Despite of many methods available in literature to explore the EWB, no statistically systematic EWB measurement method exists in literature that can be accepted by all. In order to fill this gap, statistical techniques (EFA and CFA) based model is developed to explore the EWB of Indian IT industries. Through EFA and CFA, a scale measuring the 33 items in four groups is developed and validated, which also facilitates the future researchers for further researches.

This research has added a lot of new perspectives for EWB studies in India. Primarily, the construction of presented EWB measurement tool as a component of the study contributes to the improvement of Indian society's existing conceptualization of organisational behaviour of Indian IT industries. A large number of past study publications focused on the causes and effects of EWB, and each of them used a different scale to quantify EWB. Unfortunately, no agreement has yet been achieved on the definition, its components, and the entities that make up the EWB. As per the theoretical model of EWB developed by the Page and Vella-Brodrick (2009), both qualitative and quantitative methodologies have been utilised in this work to examine the structural aspects of the same. As per the presented study, PWB, SWB, WWB, and SBB are the four components that make up the EWB.

Second, this research has also aided in the creation of a brand-new scale of scientific measurement that is valid and trustworthy and may be used in any future studies on indigenous Indian organisational behaviour.

Third, based on the calculated RAI values, it was discovered that the most of the respondents chose the "agree" option for each EWB scale item. Based on the correlation coefficient and P-values, it can be stated that there is significant positive correlation among EWB groups.

Finally, this research has aided in leveraging the Western knowledge of EWB and broadening its scope to incorporate Eastern results. Although Page and Vella-Brodrick (2009) theorized the existence of a three-dimensional EWB structure, no empirical investigation has investigated or experimentally tested the theory's feasibility. The current study has been aimed to investigate, extend and improve the understanding of ideas and studies of EWB published in the past.

Data availability statement

Data is available from authors based on reasonable request.

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