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Empirical Research on The Relationship Between Emotional Intelligence and Workplace

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Abstract: Loneliness in the workplace is a critical issue that profoundly impacts employees and their performance within organizations. The level of loneliness experienced by an employee can lead to various problems, making it crucial to understand its implications. Similarly, emotional intelligence plays a significant role in shaping employee performance and interactions within the workplace. This research aims to investigate the relationship between emotional intelligence levels and the degree of employee loneliness in the workplace. To achieve this, the study sampled 300 employees in Morocco. In order to explore the relationship between emotional intelligence and workplace loneliness, the research focused on identifying and understanding the individual dimensions and constituents of each term. Primary data for the study was collected using a structured questionnaire, and the resulting dataset was analyzed using descriptive statistics. Additionally, a correlation analysis was conducted to establish a quantitative relationship between emotional intelligence and workplace loneliness. The findings of the study revealed a significant correlation between emotional intelligence and workplace loneliness among employees. The research provides valuable insights into the connection between these two variables, shedding light on their interplay within the organizational context. This research contributes to the existing body of knowledge on employee well-being and highlights the importance of emotional intelligence in fostering positive work environments. The implications of these findings can guide organizations in developing strategies to promote emotional intelligence and combat workplace loneliness, ultimately enhancing employee satisfaction, productivity, and overall organizational success.

Keyword: Emotional Intelligence, Workplace Loneliness, Job Performance

JEL Classification: J83

1. Introduction

In the recent years, psychological health at work has become an important issue. As early as in 1985, Simendinger and Moore, in their work on occupational health, noted that the most important factor contributing to organizational turnover was psychological

health. Since the early 1990s, the incidence of psychological health problems at work has increased alarmingly. These include burnout, depression, post-traumatic stress disorder and anxiety disorders. Those psychological health problems can affect employee's performance and behavior within the organization.

One of the main elements that directly affects employee's performance is emotion, the emotional situation of the employee's affect their motivation and their welling to accomplish their job tasks. Emotional intelligence affect employee's performance and depending on his/her level of emotional intelligence at the workplace. Several virtues have been attributed to emotional intelligence. EI is known as a new criterion for achieving well-being and an important skill for improving work performance. This is a psychological concept that has been discussed by several scientists. Initially, this concept was introduced to explain the findings of researchers who found that some people with lower intellectual quotient (IQ) achieved more success in their lives than others with higher IQ. In fact, these contradictions have opened up new horizons indicating that factors other than IQ, could be decisive for success in life. Moreover, emotional intelligence in the work place has become a cure or a tool to avoid the consequences of negative emotions on employee's performance and then helping them to manage their feelings and to improve their social skills within the organization.

There are many negatives emotions that can impact employees' performance within the company, one of those emotions is loneliness, which is the subject of this research. Loneliness is a feeling that wasn't considered for a long time and was ignored in the workplace. Although loneliness has severe consequences on both employees and the organization. Loneliness in the workplace can cause man problems within the company including turnovers and increase employees stress levels, which indicates the important of the effect of workplace loneliness on employees. This social phenomenon not only affecting employee's performance but as well as employee's team role in the work group and his/ her active commitment in direct tasks.

Not long ago workplace psychology has become an important research topic, as one of the negative emotions in the workplace, workplace loneliness can cause many other negative outcomes on both employee and organization. Therefore, finding some techniques to cope with it or reducing its intensity at work is inevitable. Here comes the importance of emotional intelligence as a valuable skill that helps improving employee's job performance and boosts social skills. However, loneliness has been linked cross-sectionally to emotional skill deficits (e.g. Zysberg, 2012), where comes the need for this

research to find out more about the relationship between emotional intelligence and workplace loneliness.

In the present study, the relationship between emotional intelligence and workplace loneliness will be explained. The purpose of this study is to find out the relationship between emotional intelligence and loneliness in the workplace and the impact of different levels of EI (high or low) on the workplace loneliness of employees. More exactly, this research aims to:

- Determine the dimensions of emotional intelligence.
- Determine the dimensions of workplace loneliness.
- Identify the relationships between the two variables (emotional intelligence and workplace loneliness).

The literature part of his study will be guided by using, previous articles, books, studies and researches. Firstly, the meaning of emotional intelligence will be explained in a detailed way, as well as its dimensions and outcomes. Secondly, workplace loneliness will be clarified. The two sub dimensions will also be analyzed in this part, as well as giving some theories related to the topic. After emotional intelligence and workplace loneliness are described, the relationship between this two terms will be illustrated based on previous theories.

Following, after analyzing data hypotheses will be formulated. And then the findings will be presented and discussed in terms of practice and theory.

2. Literature Review

Thirty years ago, emotions had no place in the world of business hence today they all have their importance, especially in the field of organizational psychology, because it has been scientifically proven that without it , the human being cannot be really rational. This interest in emotions, in the future, for the emotional intelligence is due to the upheaval of the rational management model and to the evolution of socio- economic and cultural contexts (Vilinski, 2010). Emotions used to be ignored in the workplace, and organizations tend to kill feeling at the workplace.

There are many negatives emotions that can impact employees' performance, one of those many emotions is loneliness, which is the subject of this research. Loneliness is a feeling that was not considered for a long time and was ignored in the workplace.

Although loneliness has severe consequences, which explains the importance of recognizing where it roots and causes and how to overcome or manage it (Zhou, 2018). Moreover, emotional intelligence in the work place becomes a cure or a tool to avoid the consequences of negative emotions on employee's performance and then helping them to manage their feelings and to improve their social skills (Goleman, 1998).

2.1. Emotional Intelligence

The expression of emotional intelligence, which emerged in the early 1980s, describes a person's ability to recognize and use their own emotions productively. Recognize others' emotions as well and adapt positively to change. It is both an innate talent and an ability that can be acquired and can improve our relationships and effectiveness in all aspects of our lives. For decades, researchers have observed that people with the highest intellectual quotient (IQ) often do not achieve the exceptional results one would have expected. In fact, people with lower IQ were more successful in business and in their personal relationships. Psychologists and sociologists have therefore begun to seek an explanation for this state of affairs. Research findings included "critical intelligence" and greater appreciation of the dual ability to self-managing and working with others (Salovey & Mayer, 1990).

"Emotional intelligence is the set of abilities that account for how people's emotional perception and understanding vary in their accuracy. More formally, we define emotional intelligence as the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotion, and regulate emotion in the self and others" (Mayer & Salovey, 1997).

Emotional intelligence is a type of information that helps people to perceive feelings of others and their emotions as well, it allows individuals to recognize and separate their emotions and to control it to make proper decisions. EI can be learned, an EI training can help individuals to develop their ability to use their mindfulness and sensivity to observe and deal with emotions.

Emotional intelligence has, according to the model of Mayer and Salovey (1997), four sub-dimensions which are: self-emotion appraisal, others emotion appraisal, use of emotions, and regulation of emotions.

Self-emotion appraisal (or Self-awareness) refers to one's capability of being the in the center of attention of himself/ herself (Duval & Wicklund, 1972). Individuals with high

self-awareness can manage their emotions, understand other's emotions, and can objectively evaluate themselves. Self-emotion appraisal is about:

Others emotion appraisal (or Social awareness), according to psychology today, refers to the ability of building empathy toward others, and understand their emotions. Being social aware helps to build better and stronger relationships with others (Mayer et al., 2000).

Use of emotions is defined as using your awareness of your own emotions and those of others to manage interactions successfully. Relationship management refers to the ability of communicating in an effective way and being able to manage conflicts and influencing others positively (Caruso et al., 2000).

Regulation of emotions (or Self-management,) according to psychology today, is the ability of self-control and managing one's emotions and feelings and behaviors. Individual with high self-control can manage his/ her emotions in critical situations, and can think rationally to solve the problems (Salovey et al., 2000).

EI has a very broad scope in the field of management. Several authors suggest that EI should have a positive impact on leadership (Prati et al., 2003). The empirical studies focus on the effect of EI on work performance as measured by management and employee satisfaction. Most of the results remain contradictory, but some studies show a positive effect of EI on performance (Bonnefous et al., 2009). Employees with higher emotional intelligence are more aware of their emotions and how it effect their tasks and job performance, they are aware of their feelings and the causes of their emotions such as stress, which help them use their emotions to manage and excel their job performance, as a result they show higher job satisfaction (Law et al., 2004). Studies show that there is a positive influence of emotional intelligence on employees' job performance, and that having leaders with high emotional abilities have a high profit margin of 71% higher than organizations whose leaders do not have a high emotional intelligence capacities (Mayer & Salovey, 2004). There is a positive correlation between the emotional intelligence and the professional performance of the employees.

2.2. Loneliness in the Workplace

Loneliness is a psychological state that results from deficiencies in a person's social relationships, either qualitatively or quantitatively (Peplau & Perlman, 1982).

Loneliness is a complex set of feelings that results when social and intimate needs are not met (Cacioppo et al., 2006).

Loneliness is a negative feeling that occurs when there is a gap between what an individual desires from a certain relationship connection and actual experience of it. An individual can be alone without feeling lonely, and they can feel lonely even if they are surrounded with people (Marano, 2003).

In the workplace loneliness can be defined as the distress caused by the lack of good interpersonal relationship between employees in the workplace (Wright et al., 2006). The loneliness in the workplace is not related to the quantity of social interaction with coworkers, it is about the lack of good quality relationships at work (Wright et al., 2006). Loneliness lays on two sub-dimensions; emotional deprivation and the lack of social companion.

Emotional deprivation can be defined as the lack of a certain psychological nurturance, it usually happens in the childhood. This emotional lack is a fundamental need that has not been met. Before being born, a child lived in his mother's womb for 9 months. It was wrapped, rocked and worn most naturally when desired. When he comes into the world, he can't suddenly stop needing human contact. The child, like the adult later on, therefore keeps the need to be cherished, wrapped, and cuddled. At the childhood level, if parents keep a distance, the child will be in demand, in research, in search to be taken in arms. And the need for contact, tenderness is as important as the need for warmth or food. From lack can come suffering, it is a painful situation that it is hard to manage and digest. It is difficult to define what an emotionally deficient person feels (Rogol, 2020). The lack of social companionship can be defined as the lack of a network that can be family, friends, neighbors or coworkers, that is not available in moments of need to give support (physical, financial, or psychological) (Wills, 1985).

Social support refers to the psychological and material resources provided by a social network to help the individual cope with stress. Such social support can take many forms. Sometimes it can be helping a person with a variety of daily tasks when they are sick or providing financial assistance when they need it. In other situations, it may be giving advice to a friend when faced with a difficult situation. And sometimes it's just about taking care of yourself, showing empathy and caring for loved ones in need. The lack of social companion can decrease the feeling of belongingness and increase the feeling of loneliness The social companionship is important for a person's mental health and for the sustainability of his/ her social interaction whit others (Burton et al., 2004).

Loneliness used to be described as a personal feeling that has a low correlation with the workplace or none at all. Although lonely employees have a probability to present a low exchange with the work group, which affect the whole organization. When an employee's experience the feeling of workplace loneliness it affects directly his attitude within the organization, they become less loyal to the company as they dedicate their emotions less (Lawler, 2001). The loneliness in the workplace is not related to the quantity of social interaction with coworkers, it is about the lack of good quality relationships at work (Wright et al., 2006). Loneliness is more likely to be associated with teleworking, but employees surrounded by colleagues who go to the office every day can also be affected by this feeling of loneliness, even those working in open-space. In fact, everyone can potentially feel this relational void at some point in their career. Furthermore, the absence of direct interactions have a negative impact on the well-being within the company and by extension on work performance (Hathroubi, 2020).

2.3. Emotional Intelligence and Workplace Loneliness

Workplace loneliness is not only a feeling that employees suffer from, it has more effects not only on employee's wellbeing but on the whole organization. A lonely employees has low performance and lacks social interaction with his team work.

Moreover, Employees with high EQ are better in working within a group, they are more flexible and adjust to change. Regardless of how many degrees or diplomas an individual has, it doesn't reflect high social skills, if he or she does not have some social qualities, he or she is most likely not going to succeed.

Emotional intelligence has been related to loneliness, social competence, relationship quality, and life satisfaction (Ciarrochi et al., 2000).

A recent research showed that there is a relationship between a poor emotion regulation and the high level of loneliness, emotional intelligence skills has an important role predicting the level of loneliness over the time (Nightingale et al., 2013; Vanhalst, Luyckx, Raes, & Goossens, 2012). According to a research conducted by Wols et al. (2012), about the prospective associations between loneliness and emotional intelligence. They found out that both male and females who have a low EI showed high levels of loneliness over ten months of the study. They find that emotional intelligence can help and protect from loneliness (Wols et al., 2012). At the end of that research they concluded that loneliness and emotional intelligence are associated; poor emotional skills increase loneliness.

Individuals with a high level of emotional intelligence tend to manage and understand their emotions and others' emotions in the workplace, which can help them deal with their social interactions and their relations with the coworkers within the workplace as a result they suffer less from the social companionship for this reason the show a low level of loneliness.

Each of the dimensions of emotional intelligence is related to the ones of loneliness in the workplace, which leads us to form hypostasizes for each relationship between them. From the dissection above we hypothesize that:

H1: There is a negative relationship between self-emotion appraisal and emotional deprivation.

H2: There is a negative relationship between others' emotion appraisal and emotional deprivation.

H3: There is a negative relationship between regulation of emotion and emotional deprivation.

H4: There is a negative relationship between use of emotion and emotional deprivation.

H5: There is a negative relationship between self-emotion appraisal and lack of social companionship.

H6: There is a negative relationship between others' emotion appraisal and lack of social companionship.

H7: There is a negative relationship between regulation of emotion and lack of social companionship.

H8: There is a negative relationship between use of emotion and lack of social companionship

3. Methodology

In order to work on this research we have selected a methodology for the primary data collection, this methodology includes the target population, the sampling method, and the adequate scales. For the purpose of achieving the best possible results.

This research is a survey type and in relational nature with cause effect approach. There are many researches were conducted about the effect of emotional intelligence on the workplace, either in negative correlation or a positive relation, such as stress (negative) or performance (positive). But only few has discussed the relationship between emotional intelligence and workplace loneliness of employees. This research comes to spot the lights on this subject as it affects both organizations and employees.

3.1. Data Collection Method and Variables

Our research aims to investigate and confirm the negative relationship between emotional intelligence and workplace loneliness. We conducted a quantitative study using a questionnaire comprising two parts. The first part of the questionnaire focused on collecting demographic information from the participants, including age, gender, educational background, and work experience. This information helps provide a comprehensive understanding of the participants' characteristics and their potential influence on emotional intelligence and loneliness. The second part of the questionnaire assessed the participants' emotional intelligence and level of loneliness. We measured emotional intelligence using dimensions such as self-emotion appraisal, use of emotion, regulation of emotion, and others' emotion appraisal. These dimensions capture different aspects of emotional intelligence and provide insights into participants' emotional abilities. In terms of loneliness, we focused on two dimensions: emotional deprivation and lack of social companionship. These dimensions allowed us to assess participants' subjective experiences of feeling emotionally disconnected and lacking meaningful social interactions in the workplace.

Our aim was to gather data from 300 Moroccan employees, both male and female, in order to calculate their emotional intelligence and loneliness scores. By analyzing the data, we aimed to explore the relationship between emotional intelligence and loneliness in the workplace.

3.2. Research Design

3.2.1. Variables

The independent variable is Emotional intelligence.
The dependent variable is Workplace loneliness.

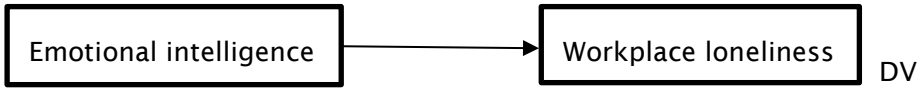

Figure1. The dependent and the independent variables of this research

3.2.2. Model

The model in this study examines the relationship between emotional intelligence and workplace loneliness. Emotional intelligence is comprised of four sub-dimensions: self-emotion appraisal, others emotion appraisal, use of emotions, and regulation of emotions. Workplace loneliness is measured through two sub-dimensions: emotional deprivation and lack of social companionship.

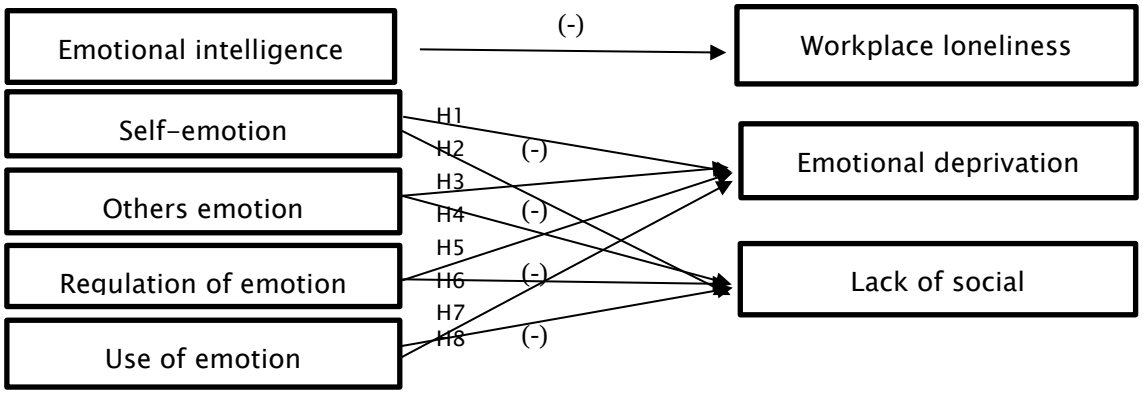

Figure 2. Representation of the research model

3.2.3. Scales

For the exact purpose of finding the appropriate scales that might be preferred to measure the variables used. The scales that have been selected in this research are the scales that have been chosen in another literatures and whose validity have been verified in different studies.

The questionnaire form used in this survey comprise three parts. The first part in the questionnaire consists of demographic questions in order to measure the demographic characteristics of the participants, such as gender, age, occupations, education, and the level of expertise of the participants.

In the second part, we measured the independent variable the level of emotional intelligence. For this end we have used the Mayer-Salovey-Caruso Emotional Intelligence scale (MSCEIT) developed Mayer et al (2002).

In order to measure EI many models where developed, one of the classic models is the MSCEIT, and it has the appropriate measurements based on each sub dimension of EI. The MSCEIT (Mayer-Salovey-Caruso Emotional Intelligence), is a 5-point liker scale, this test has as a purpose calculating Emotional intelligence score, two area scores and four branch scores. Those scores form the emotional intelligence quotients (EQs). The two areas of Mayer-Salovey-Caruso Emotional Intelligence are Experiential Emotional Intelligence (EEIQ) and Strategic Emotional intelligence (SEIQ).

In this test individuals were asked to rate each item from one of five choices: 'Never', 'Rarely', 'Sometimes', 'Usually', or 'Often'. The score of each item is summed together. Higher scores indicate greater degrees of emotional intelligence.

In the third part, in order to measure employees' workplace loneliness scale, which illustrates the dependent variable in this research, the scale that was adopted is the Loneliness At Work Scale (LAWS) which was developed by Wright et al (2006).

The Loneliness At Work Scale (LAWS) is a 5 point likert scale, it has two dimensions; the first one is emotional deprivation, and the second one is social companionship. The scale has 16 questions, the first 9 questions measures the first dimension which is emotional deprivation, the other 7 questions are used to measure the social companionship.

In this test individuals were asked to rate each item from one of five choices: 'Never', 'Rarely', 'Sometimes', 'Usually', or 'Often'. The score of each item is summed together. Higher scores indicate greater degrees of loneliness.

4. Research Findings

The findings section of the study presents the demographic characteristics of the respondents and explores the relationship between emotional intelligence and workplace loneliness among Moroccan employees. IBM SPSS Statistics software was utilized to analyze the data, including descriptive analysis to examine the characteristics of the variables and correlation analysis to assess the relationship between emotional intelligence and workplace loneliness. Additionally, regression analysis was conducted to further investigate the hypothesized relationships. The use of IBM SPSS allowed for a comprehensive examination of the data, providing valuable insights into the research objectives and supporting the findings of the study.

4.1. Demographic Characteristics

The data of demographic findings is gathered from 300 Moroccan employee from different sectors, the data was collected using Google forms.

The findings showed a wide range of age groups. 13,7% of those surveyed were aged between 18 – 25 years old, 30,7% of the participants were aged 26 – 35 years, 18.7% were aged 36 – 45 years, 15.7% were aged 46 – 55 years, and 21.3% were aged over 56 years old. There are 4,3% female participants and 57,7% male participants.
Participants' levels education were also reported in the study as fallows, 11,3% of participants have PhD degree, 42,3% undergraduate, 15,7% high school and below and 21,3% master's degree. The survey illustrates that 6,3% of respondents had been working for less than 1 year, 26,3% had been working from 1 to 5 years, 13.7% had been working from 6 to 10 years, 15% had been working for 11 to 16 years, and 38.7% had been

working more than 17 years. 41,3% of employees have been working in private sector, and 58,7% of employees have been working in public sector. Participants' levels of job experience were also reported in the survey as well.

The following table provides demographic details about participants (N=300).

Table 1. Demographic information of participants

Age	**Frequency**	**Percentage %**
18-25	41	13,7
26-35	92	30,7
36-45	56	18,7
46-55	47	15,7
56 and over	64	21,3
Gender		
Female	127	42,3
Male	173	57,7
Education level		
PhD degree	34	11,3
Undergraduate	127	42,3
High school and below	47	15,7
Master's degree	92	30,7
Years of work experience		
Less than 1 year	19	6,3
1-5 years	79	26,3
6-10 years	41	13,7
11-16 years	45	15,0

17 years or more years	116	38,7

Organization's type

Private sector	124	41,3
Public sector	176	58,7

Position within the company

Partner/senior executive	28	9,3
Other	98	32,7
Finance/accounting/purchasing	13	4,3
Marketing	17	5,7
CEO/owner	12	4,0
Professional (consultant, legal, medical, architect)	50	16,7
Sales professional	11	3,7
Office manager	39	13,0
Technical/IT professional	25	8,3

4.2. Reliability Analysis

Cronbach's alpha was utilized to assess the dependability of two scales: emotional intelligence (MSCEIT) and workplace loneliness (LAWS), as presented in the Table. Despite the fact that the scales used in the study were validated, the researcher examined their reliability and found that both scales demonstrated high reliability, with Cronbach's Alpha values exceeding 0.8 (Nunnaly & Bernstein, 1994). The emotional intelligence scale had an Alpha coefficient of 0.837, while the employee engagement scale had an Alpha coefficient of 0.851. The overall scale's Alpha coefficient was 0.851, indicating that the scales exhibited a satisfactory level of reliability.

Table 2. Reliability analysis of scales

Scale	No. of items	Cronbach's Alpha
Emotional intelligence scale	20	.837
Workplace loneliness scale	16	.866
General Reliability		.851

4.3. Factor Analysis

The tables below provides the factor loadings and variance explained for each item in the factor analysis. The factor loadings represent the strength and direction of the relationship between each item and the extracted factors. As well as the results of two important statistical tests in factor analysis: the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity.

Table 3. Factor analysis and reliability test of emotional intelligence

Items	1	2	3	4	5	Variance Ex.
OEA1	.729	.133	.147	.060	-.084	
OEA2	.684	.138	-.003	.218	.113	
SEA4	.619	.192	.072	.126	-.022	
UOE1	.516	.137	.261	-.331	.291	
ROE5	.413	.047	.194	.357	.240	
ROE2	.030	.659	.208	.016	-.146	
UOE4	.106	.639	.017	.093	.223	
UOE2	.190	.543	.045	.373	-.014	
ROE4	.175	.538	.162	.078	.008	50%
UOE3	327	.459	.319	.215	.097	
OEA3	.387	.424	.012	.056	.275	
ROE3	.114	.126	.748	.054	.009	
SEA3	.077	.011	.702	.233	.098	
ROE1	-.009	.288	.583	-.150	.011	
SEA5	.170	.054	.519	.342	-.042	
SEA2	.257	.341	.464	.041	.331	
OEA5	.047	.220	.052	.700	.025	
OEA4	.361	.001	.262	.545	.031	
UOE5	.103	.346	.094	.465	.301	
SEA1	.020	-.017	.038	.089	.862	

Kaiser-Meyer-Olkin measure of sampling adequacy	.858
Barlett's Test of Sphericity Chi Square	1210.802
df	190
Sig	.000

The table shows the factor loadings or correlations between each item (20 items) and the underlying factor(s) extracted through factor analysis. The loading represents the strength of the relationship between each item and the factor. For example, item 1 has a loading of 0.862, indicating a strong positive correlation with the underlying factor. The variance column shows the amount of variance in the item that is accounted for by the factor. For example, item 1 accounts for 50% of the variance in the factor. The KMO measure assesses the sampling adequacy for factor analysis. It ranges from 0 to 1, with higher values indicating better suitability for factor analysis. In this case, the KMO measure is 0.858, which suggests that the sample is adequate for factor analysis. It indicates that there is a moderate to high amount of common variance among the variables. This test examines whether the correlation matrix is significantly different from an identity matrix, indicating that there is sufficient correlation among the variables for factor analysis. The Chi-Square value is 1210.802 with 190 degrees of freedom, and the p-value is 0.000, indicating that the correlation matrix is significantly different from an identity matrix. Therefore, it is suitable to proceed with factor analysis.

Table 4. Factor analysis and reliability test of workplace loneliness

Items	1	2	Variance Ex.
ED3	.804	.178	53.66%
ED7	.780	.250	
ED4	.764	.145	
ED2	.750	.256	
ED8	.712	.223	
ED1	.678	.169	
ED9	.677	.153	
SC7	-.556	-.115	
SC4	.518	.176	

SC5	.072	.780	
SC1	.290	.763	
SC6	.233	.745	
ED5	.255	.685	
SC2	.017	.675	
ED6	.345	.654	
SC3	.281	.591	

Kaiser-Meyer-Olkin measure of sampling adequacy	.918
Barlett's Test of Sphericity Chi Square	2126.090
df	120
Sig	.000

The table shows the factor loadings or correlations between each item (16 item) and the underlying factor(s) extracted through factor analysis. The loading represents the strength of the relationship between each item and the factor. For example, item 1 has a loading of 0.637, indicating a moderate positive correlation with the underlying factor. The variance column shows the amount of variance in the item that is accounted for by the factor. For example, item 1 accounts for 53.66% of the variance in the factor. The KMO measure assesses the sampling adequacy for factor analysis. It ranges from 0 to 1, with higher values indicating better suitability for factor analysis. In this case, the KMO measure is 0.918, which suggests that the sample is highly suitable for factor analysis. It indicates that there is a high amount of common variance among the variables. This test examines whether the correlation matrix is significantly different from an identity matrix, indicating that there is sufficient correlation among the variables for factor analysis. The Chi-Square value is 2126.090 with 120 degrees of freedom, and the p-value is 0.000, indicating that the correlation matrix is significantly different from an identity matrix. Therefore, it is suitable to proceed with factor analysis.

In summary, the factor analysis results suggest that the items in the scales are highly related to the underlying factors. The high KMO measure indicates the strong suitability of the sample for factor analysis, and the significant result of Barlett's Test of Sphericity indicates that the variables are significantly correlated, supporting the conduct of factor analysis.

4.4. Correlation Analysis

The table below presents the results of the correlation analysis between emotional intelligence and workplace loneliness. The Pearson correlation coefficient measures the strength and direction of the relationship between two variables.

For emotional intelligence, there is a negative correlation coefficient of -0.347 with workplace loneliness. This indicates that as emotional intelligence scores increase, workplace loneliness tends to decrease. The correlation is statistically significant with a p-value of 0.000, suggesting that this relationship is unlikely to occur by chance.

Similarly, for workplace loneliness, there is also a negative correlation coefficient of -0.347 with emotional intelligence. This implies that as workplace loneliness increases, emotional intelligence scores tend to decrease. Again, the correlation is statistically significant with a p-value of 0.000.

The significance level at the 0.01 level (2-tailed) indicates that the observed correlations are highly unlikely to be due to random chance. Therefore, we can conclude that there is a significant negative relationship between emotional intelligence and workplace loneliness. In other words, individuals with higher emotional intelligence are less likely to experience workplace loneliness, and vice versa.

Table 5. Correlations for variables

		Emotional intelligence	Workplace loneliness
Emotional intelligence	Pearson Correlation	1	-.347*
	Sig. (2-tailed)		.000
	N	300	300
Workplace loneliness	Pearson Correlation	-.347*	1
	Sig. (2-tailed)	.000	
	N	300	300

*Note: *. Correlation is significant at the 0.01 level (2-tailed).*

4.5. Regression Analysis

The table below provides detailed information on the regression analysis for the dependent variable Workplace loneliness.

Table 6. Regression statistics

Multiple R	.347
R Square	.121

Adjusted R Square	.118
Standard Error	.57715
Observations	300

Table 7. ANOVA [a] (Simple linear regression model output)

	Sum of Squares	df	Mean Square	F	Sig.
Regression	13.605	1	13.605	40.845	.000
Residual	99.265	298	.333		
Total	112.870	299			

Note: a.Dependent variable: Workplace loneliness

Table 8. Coefficients [a] (Simple linear regression model output)

	Coefficients	Standard Error	t Stat	P-value
Intercept		.249	15.564	.000
Emotional intelligence	-.347	.068	-6.391	.000

Note: a. Dependent variable: Workplace loneliness

The multiple correlation coefficient (R) represents the strength and direction of the linear relationship between the independent variable(s) and the dependent variable. In this case, the multiple R value is 0.347, indicating a moderate positive correlation.The coefficient of determination (R Square) measures the proportion of variance in the dependent variable that can be explained by the independent variable(s). Here, R Square is 0.121, meaning that approximately 12.1% of the variance in workplace loneliness can be explained by the independent variable(s) included in the analysis.The adjusted R Square accounts for the number of predictors in the model and adjusts the R Square value accordingly. It helps prevent overfitting by penalizing the addition of unnecessary predictors. The adjusted R Square in this case is 0.The standard error represents the average difference between the observed values of the dependent variable and the predicted values from the regression model. Here, the standard error is 0.57715.

The second part of the table focuses on the regression coefficients.The coefficient represents the estimated change in the dependent variable associated with a one-unit change in the independent variable. Since the dependent variable is "Workplace loneliness," the coefficients describe the relationship between the independent variable(s) and workplace loneliness. The regression model is statistically significant ($p < 0.001$) as indicated by the F-value. It suggests that the independent variable(s)

included in the model explain a significant amount of the variability in the dependent variable.

In the third table the intercept represents the value of the dependent variable (Workplace loneliness) when all independent variables are zero. In this case, the intercept is 0.249. However, since the p-value is 0.000, the intercept is not statistically significant. The coefficient for the independent variable "Emotional intelligence" is -0.347. It indicates that for every unit increase in emotional intelligence, there is an expected decrease of 0.347 units in workplace loneliness. This coefficient is statistically significant ($p < 0.001$) with a t-statistic of -6.391.

Overall, these results suggest that emotional intelligence has a significant negative relationship with workplace loneliness. As emotional intelligence increases, workplace loneliness tends to decrease.

H0: There is a negative relationship between self-emotion appraisal and emotional deprivation. (**Accepted)**

4.6. Correlation and Regression Analysis for the Hypothesis

In this study, correlation and regression analyses were performed to examine and evaluate the hypotheses proposed. Correlation analysis was utilized to explore the relationships and associations between the variables under investigation. Both correlation and regression analyses were crucial in addressing the research questions and hypotheses of this study. They provided valuable insights into the interrelationships between variables and facilitated the examination of predictive relationships. By conducting these analyses, It is aimed to gain a comprehensive understanding of the relationships between variables and draw meaningful conclusions from the data.

Table 9. Correlations for independent variables and emotional deprivation

		SEA/UOE/ROE/OEA	ED
SEA	Pearson Correlation	1	-.254*
	Sig. (2-tailed)		.000
	N	300	300
ED	Pearson Correlation	-.254*	1
	Sig. (2-tailed)	.000	
	N	300	300
UOE	Pearson Correlation	1	-.277*
	Sig. (2-tailed)		.000
	N	300	300

ED	Pearson Correlation	-.277*	1
	Sig. (2-tailed)	.000	
	N	300	300
ROE	Pearson Correlation	1	-.203*
	Sig. (2-tailed)		.000
	N	300	300
ED	Pearson Correlation	-.203*	1
	Sig. (2-tailed)	.000	
	N	300	300
OEA	Pearson Correlation	1	-.091
	Sig. (2-tailed)		.117
	N	300	300
ED	Pearson Correlation	-.091	1
	Sig. (2-tailed)	.117	
	N	300	300

*Note: *. Correlation is significant at the 0.01 level (2-tailed).*

The table above shows correlation coefficients using Pearson's correlation coefficient for several pairs of variables: SEA (self-emotion appraisal) and ED (emotional deprivation), UOE (use of emotion) and ED, ROE (regulation of emotion) and ED, and OEA (others emotion appraisal) and ED. The significance level is also reported.
The correlation analysis reveals the following:
SEA and ED:

- The Pearson correlation coefficient between SEA and ED is -0.254*.
- The p-value for this correlation is 0.000, indicating statistical significance.

UOE and ED:

- The Pearson correlation coefficient between UOE and ED is -0.277*.
- The p-value for this correlation is 0.000, indicating statistical significance.

ROE and ED:

- The Pearson correlation coefficient between ROE and ED is -0.203*.
- The p-value for this correlation is 0.000, indicating statistical significance.

OEA and ED:

- The Pearson correlation coefficient between OEA and ED is -0.091.
- The p-value for this correlation is 0.117, which is greater than the conventional significance level of 0.05.

The sample size (N) for all the variables is 300.

In all cases, the correlation coefficients are negative, indicating a negative relationship between the variables. The asterisk (*) denotes statistical significance at the 0.01 level (two-tailed test), meaning the observed correlations are unlikely to have occurred by chance.

In summary, there are statistically significant negative correlations between SEA and ED, UOE and ED, and ROE and ED. However, there is no statistically significant correlation between OEA and ED.

Table 10. Correlations for independent variables and social companionship

		SEA/UOE/ROE/OEA	SC
SEA	Pearson Correlation	1	-.349*
	Sig. (2-tailed)		.000
	N	300	300
SC	Pearson Correlation	-.349*	1
	Sig. (2-tailed)	.000	
	N	300	300
UOE	Pearson Correlation	1	-.358*
	Sig. (2-tailed)		.000
	N	300	300
SC	Pearson Correlation	-.358*	1
	Sig. (2-tailed)	.000	
	N	300	300
ROE	Pearson Correlation	1	-.279*
	Sig. (2-tailed)		.000
	N	300	300
SC	Pearson Correlation	-.279*	1
	Sig. (2-tailed)	.000	
	N	300	300
OEA	Pearson Correlation	1	-.208*
	Sig. (2-tailed)		.000
	N	300	300
SC	Pearson Correlation	-.208*	1
	Sig. (2-tailed)	.000	
	N	300	300

*Note: *. Correlation is significant at the 0.01 level (2-tailed).*

The table above presents correlation coefficients using Pearson's correlation coefficient for several pairs of variables: SEA and SC (Lake of social companionship), UOE and SC, ROE and SC, and OEA and SC. The significance level is also reported.

For each pair of variables, the table shows the following information:
SEA and SC:

- The Pearson correlation coefficient between SEA and SC is -0.349*.
- The p-value for this correlation is 0.000, indicating statistical significance.

UOE and SC:

- The Pearson correlation coefficient between UOE and SC is -0.358*.
- The p-value for this correlation is 0.000, indicating statistical significance.

ROE and SC:

- The Pearson correlation coefficient between ROE and SC is -0.279*.
- The p-value for this correlation is 0.000, indicating statistical significance.

OEA and SC:

- The Pearson correlation coefficient between OEA and SC is -0.208*.
- The p-value for this correlation is 0.000, indicating statistical significance.
- The sample size (N) for both variables is 300.

In all cases, the correlation coefficients are negative, indicating a negative relationship between the variables. The asterisk (*) denotes statistical significance at the 0.01 level (two-tailed test), meaning the observed correlations are unlikely to have occurred by chance.

In summary, there are statistically significant negative correlations between SEA and SC, UOE and SC, ROE and SC, and OEA and SC.

The tables below provides an overview of the regression models, ANOVA results, and coefficients for the dependent variables ED (Emotional Deprivation) and SC (Lack of Social companionship).

Table 11. Regression statistics

Multiple R	.332a
R Square	.110
Adjusted R Square	.098
Standard Error	.71830

Note: a. Predictors: (Constant), OEA, ROE, SEA, UOE
b. Dependent variable: ED

Table 12. ANOVA (Simple linear regression model output)

	Sum of Squares	df	Mean Square	F	Sig.
Regression	18.858	4	4.714	9.137	.000 b
Residual	152.206	295	.516		
Total	171.064	299			

Note: a. Dependent variable: ED
b. Predictors: (Constant), OEA, ROE, SEA, UOE

Table 13. Coefficients (Simple linear regression model output)

	Coefficients	Standard Error	Beta	t Stat	P-value
(Constant)	3.648			11.741	.000
SEA	-.242	-.187	-.187	-2.611	.010
UOE	-.332	-.256	-.256	-3.389	.000
ROE	-.045	-.037	-.037	-.517	.606
OEA	-.212	.174	.174	-4.971	.015

Note: a Dependent variable: ED

The regression model above shows that the overall model fit is statistically significant ($F = 9.137$, $p < 0.001$), indicating that the combination of these predictors significantly contributes to explaining the variation in the dependent variable.

The coefficient of determination (R-squared) value for the model is 0.110, suggesting that approximately 11.0% of the variance in the dependent variable can be explained by the predictors included in the model. The adjusted R-squared value is 0.098, which adjusts the model's fit based on the number of predictors.

Self-emotion appraisal (SEA) shows a negative and significant relationship with the dependent variable ($\beta = -0.187$, $p = 0.010$). This implies that higher levels of self-

awareness and understanding of one's emotions are associated with lower values of the dependent variable. In other words, individuals who are better able to appraise and manage their own emotions tend to have lower scores on the dependent variable.
Similarly, use of emotion (UOE) also exhibits a negative and significant association with the dependent variable ($\beta = -0.256$, $p < 0.001$). This suggests that individuals who effectively utilize their emotions tend to have lower values of the dependent variable. Using emotions adaptively may lead to better outcomes related to the dependent variable.

On the other hand, regulation of emotion (ROE) and others' emotion appraisal (OEA) do not show significant relationships with the dependent variable in this model. This indicates that the ability to regulate emotions and understand others' emotions may not have a direct influence on the dependent variable in this particular context.

Table 11. Regression statistics

Multiple R	.409a
R Square	.168
Adjusted R Square	.156
Standard Error	.59069

Note: a. Predictors: (Constant), OEA, ROE, SEA, UOE
b. Dependent variable: SC

Table 12. ANOVA (Simple linear regression model output)

	Sum of Squares	df	Mean Square	F	Sig.
Regression	20.733	4	5.183	14.855	.000 b
Residual	102.929	295	.349		
Total	123.661	299			

Note: a. Dependent variable: SC
b. Predictors: (Constant), OEA, ROE, SEA, UOE

Table 13. Coefficients (Simple linear regression model output)

	Coefficients	Standard Error	Beta	t Stat	P-value
(Constant)	4.276	.255		16.735	.000
SEA	-.253	.076	-.231	-3.321	.001
UOE	-.384	.081	-.257	-3.516	.000
ROE	-.046	.071	-.045	-.645	.520
OEA	.086	.071	.084	1.210	.227

Note: a.Dependent variable: SC

The overall model fit is statistically significant ($F = 14.855$, $p < 0.001$), indicating that the combination of these predictors significantly contributes to explaining the variation in the level of lack of social companionship.

The coefficient of determination (R-squared) value for the model is 0.168, suggesting that approximately 16.8% of the variance in lack of social companionship can be explained by the predictors included in the model. The adjusted R-squared value is 0.156, which takes into account the number of predictors and adjusts the model's fit accordingly.

Analyzing the individual predictors, self-emotion appraisal (SEA) shows a negative and significant relationship with lack of social companionship ($\beta = -0.231$, $p = 0.001$). This implies that individuals with higher levels of self-awareness and understanding of their emotions tend to experience lower levels of perceived lack of social companionship. In other words, individuals who are better able to appraise and manage their own emotions are more likely to have fulfilling social connections.

Similarly, use of emotion (UOE) also exhibits a negative and significant association with lack of social companionship ($\beta = -0.257$, $p < 0.001$). This suggests that individuals who effectively utilize their emotions in social interactions and relationships tend to have a reduced sense of lack of social companionship. Using emotions adaptively can contribute to better social connections and a greater sense of fulfillment in social interactions.

However, regulation of emotion (ROE) and others' emotion appraisal (OEA) do not show significant relationships with lack of social companionship in this model. This indicates that the ability to regulate emotions and understand others' emotions may not directly influence the experience of lack of social companionship in this particular context.

H1: There is a negative relationship between self-emotion appraisal and emotional deprivation. (**Accepted)**

H2: There is a negative relationship between others' emotion appraisal and emotional deprivation. (**Rejected**)

H3: There is a negative relationship between regulation of emotion and emotional deprivation. (**Rejected**)

H4: There is a negative relationship between use of emotion and emotional deprivation. (**Accepted)**

H5: There is a negative relationship between self-emotion appraisal and lack of social companionship. (**Accepted)**

H6: There is a negative relationship between others' emotion appraisal and lack of social companionship. (**Rejected**)
H7: There is a negative relationship between regulation of emotion and lack of social companionship. (**Rejected**)
H8: There is a negative relationship between use of emotion and lack of social companionship. (**Accepted)**

5. Discussion and Conclusion

The initial part of the thesis focused on investigating the topic of the study, which is the correlation between emotional intelligence and workplace loneliness among employees. The research objectives were outlined, and an overview of previous studies related to the research topic was provided. This section discussed emotional intelligence and workplace loneliness, including their types and influencing factors.

The subsequent section of the thesis delved into a detailed discussion of the research methodology. This included an examination of the theoretical framework, the research model, and the main hypotheses. Additionally, the section specified the data collection method, statistical techniques employed in the research, sample selection process, and the scales utilized in the study.

The third section of the thesis involved the evaluation of the research findings and results. It encompassed a comprehensive analysis of all the findings and the primary conclusion pertaining to the relationship between emotional intelligence and workplace loneliness variables. The research hypotheses were formulated based on the expected connection between emotional intelligence and workplace loneliness. These hypotheses were then tested using appropriate statistical analyses with data obtained from Moroccan employees. A summary of these findings is provided below.

The participant demographics revealed that the majority of the participants were males (57.7%). Regarding age distribution, 13.7% of the respondents were aged between 18 and 25 years, 30.7% were aged 26-35 years, 18.7% were aged 36-45 years, 15.7% were aged 46-55 years, and 21.3% were aged over 56 years.

The study findings were derived through correlation and regression analyses, indicating a significant relationship between emotional intelligence and workplace loneliness. Specifically, a negative and statistically significant correlation was found between emotional intelligence and workplace loneliness ($r = -0.347$, $p < 0.05$). This suggests

that higher levels of emotional intelligence are associated with lower levels of workplace loneliness and vice versa. However, the moderate magnitude of the relationship ($r = -0.347$) suggests that additional factors may also influence workplace loneliness among employees. Further research is necessary to explore these other factors and gain a better understanding of the relationship between emotional intelligence and workplace loneliness.

Overall, emotional intelligence has a substantial impact on workplace loneliness. When employees possess higher levels of emotional intelligence, they tend to experience lower levels of loneliness in the workplace. Moreover, they are more likely to demonstrate innovation and proactivity, maintain a positive attitude towards their work and colleagues, and exhibit lower turnover intentions. Conversely, employees with lower emotional intelligence levels may become disengaged and lack motivation to perform at their best.

Hence, organizations should prioritize the development of emotional intelligence to enhance employee engagement and improve organizational performance. This can be achieved through providing opportunities for personal and professional growth, fostering a positive work environment, and offering support and recognition to employees. Ultimately, an inverse association between emotional intelligence and workplace loneliness can lead to enhanced productivity, higher employee retention rates, and overall organizational success. When emotional intelligence is higher, and workplace loneliness is lower, employees tend to be more productive and engaged in their work. Additionally, fostering emotional intelligence can create a supportive and fulfilling work environment, which in turn boosts employee satisfaction and encourages them to stay with the organization. Ultimately, organizations that prioritize emotional intelligence and address workplace loneliness are likely to achieve greater success and positive outcomes.

In conclusion, this study highlights the importance of emotional intelligence in reducing workplace loneliness among employees. By promoting emotional intelligence within the organization, companies can effectively mitigate employee loneliness in the workplace and foster a more supportive and engaging work environment.

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