

Emotional Intelligence Personal and Social Competence Scale Psychometric: Single Mother in Sabah, Malaysia

Laila Wati Binti Madlan@Endalan, Norsimah Binti Dasan, Jasmine Adela Mutang, Alfred Chan Huan Zhi, Muhammad Idris Bin Bullare, NurFarhana Ardilla Aftar, Sharon Kwan Sam Mee

Universiti Malaysia Sabah

*Corresponding author's e-mail: laila@ums.edu.my

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Abstract This study aims to identify the validity, reliability, and factor analysis of the Personal and Social Competence Scale (PCSC) in measuring emotional intelligence among single mothers in the context of Sabah, Malaysia. A total of 170 respondents were involved in this study. The Kaiser-Meyer-Olkin test showed a value of 0.716, and Bartlett's test of sphericity indicated a significant value ($p \leq 0.001$). The overall reliability of the instrument, measured using Cronbach's Alpha, was 0.960. Exploratory Factor Analysis (EFA) was conducted using the Principal Component Analysis method, and it was found that six factors were extracted based on the criterion of eigenvalues greater than 1 (Kaiser's Criterion). The first factor accounted for 33.288% of the total variance, followed by the second factor with 11.000%, the third with 9.734%, the fourth with 6.443%, the fifth with 5.372%, and the sixth with 4.980%. Cumulatively, these six factors explained 70.817% of the total variance. The findings of this study indicate that this scale has high reliability and good validity, making it suitable as a measurement tool for emotional intelligence in terms of personal and social competence among single mothers..

Kata kunci: Emotional Intelligence, Personal, Social, Single Mothers

Abstrak Kajian ini bertujuan untuk mengenal pasti kesahan, kebolehpercayaan dan analisis faktor bagi Skala Kompetensi Peribadi dan Sosial (PCSC) dalam mengukur kecerdasan emosi dalam kalangan ibu tunggal di Sabah, Malaysia. Seramai 170 responden terlibat dalam kajian ini. Ujian Kaiser-Meyer-Olkin menunjukkan nilai 0.716, dan ujian sferisiti Bartlett menunjukkan nilai yang signifikan ($p \leq 0.001$). Kebolehpercayaan keseluruhan instrumen yang diukur menggunakan Alpha Cronbach ialah 0.960. Analisis Faktor Eksploratori (EFA) dijalankan menggunakan kaedah Analisis Komponen Utama, dan didapati enam faktor diekstrak berdasarkan kriteria nilai eigen melebihi 1 (Kriteria Kaiser). Faktor pertama menyumbang 33.288% daripada jumlah varians, diikuti faktor kedua sebanyak 11.000%, faktor ketiga 9.734%, faktor keempat 6.443%, faktor kelima 5.372% dan faktor keenam 4.980%. Secara keseluruhan, enam faktor ini menjelaskan 70.817% daripada jumlah varians. Dapatan kajian ini menunjukkan bahawa skala ini mempunyai kebolehpercayaan yang tinggi dan kesahan yang baik, menjadikannya sesuai sebagai alat pengukuran kecerdasan emosi dari segi kompetensi peribadi dan sosial dalam kalangan ibu tunggal.

Kata kunci: Kecerdasan Emosi, Peribadi, Sosial, Ibu Tunggal

Introduction

Emotional intelligence (EI) refers to the ability to recognize, understand, manage, and influence one's own emotions and the emotions of others. For a single mother, having strong emotional intelligence can be particularly beneficial in managing the challenges of raising children alone, balancing responsibilities, and maintaining personal well-being. Emotional Intelligence (EI), which encompasses Interpersonal, Intrapersonal, Stress Management, Adaptation and General Mood (BarOn, 1997) is crucial for successfully addressing these challenges. Others expert of Emotional intelligence such as Goleman (1995) introduces model EQ with Personal and Social Competency. While Mayer and Salovey (1989) came with their own model namely Appraisal and Experiencing of Emotion, Regulation of Emotion and Utilization of Emotion to measuring Emotional Intelligence.

Single mothers today face a unique set of challenges, but they also demonstrate incredible resilience,

strength, and resourcefulness. The experience of being a single mother has evolved over time, especially as societal attitudes and support systems continue to change. Single parenting is not a new phenomenon. According to OECD (2015) reports, 17% of children aged 0-14 live in single parent households worldwide and approximately 88% of these households are headed by women. Globally, female headed households and single mothers are significant, with UN Women (2019) stating that in 89 countries, over 101.3 million homes are led by single mothers living alone with their children.

In Malaysia, according to the 2020 census, there are 910,091 women who fall into the definition of single mothers (Malay Mail, 2023). However, the figure officially registered with the Women's Development Department (JPW) is far lower, at 161,227 in 2020 (MAMPU, 2022), or 17.7% of single mothers in total. For many single mothers, financial stress is one of the biggest challenges. Without the financial support of a partner, managing bills, housing costs,

childcare, and other expenses can be difficult. While some single moms may receive child support or government assistance, others are left to figure it out independently, which can add extra pressure. Therefore, Identifying the level of emotional intelligence among single mothers is very important. This study will use the EI (PcSc) scale to measure the emotional intelligence of single mothers. The EI(PcSc)scale is a self-report questionnaire comprising two parts: personal competence and social competence that measures Six facets of emotional intelligence in Single Mother.

Description of the tool The EI(PcSc)scale has been designed to measure emotional intelligence with a special focus on two subscales comprising personal and social competence. Being an emotionally intelligent person means having competence in knowing and managing emotions of self and of others. Several research has also incorporated both self and social awareness of emotions while measuring total emotional intelligence. (Petrides 2009; Schutte, et al. (1998).

The EI(PcSc)scale is a 57-item self-report measure that include items such as "I am result-oriented with high drive to meet objectives and goals" and "I manage my impulsive feelings and disappointing emotions well". The scale exhibited correlations with theoretically related constructs, such as emotion expression, emotion management, impulsiveness, self-esteem, optimism, mood repair, well-being, interpersonal skills, relationship management, emotional mentoring and emotional resilience (Weisinger, 1998; Duleicz and Higgs ,1999; Schutte et al. 1998).

Self-awareness is the capacity to perceive the self in relatively objective terms. Self-awareness involves an interaction between thoughts and feelings. In the case of emotional intelligence, it implies being aware of one's positive as well as negative emotions in a particular situation or a set of circumstances. Self-motivation is the ability to do what needs to be done, without getting influenced by other people or situations. People with self-motivation can find a reason and strength to complete a task, even in challenging situations and circumstances, without giving up or needing others to encourage them. Social awareness is the ability to perceive, understand and respond to the emotions of others and feel comfortable socially. It involves knowing about others – their feelings, thinking patterns, viewpoints, accomplishments, facial expressions and other nonverbal messages. Social awareness of emotions plays a vital role in improving the interpersonal relationships of individuals.

Social skills are the ability to communicate, persuade, and interact with other members of society, without undue conflict or disharmony. It is the ability to express both positive and negative feelings in the interpersonal context. Social skills consider art of convincing and the ability to create a friendly atmosphere at work settings. It also lays emphasis on dealing with difficult people and upsetting situations tactfully.

Emotional Receptivity means accepting and encouraging the viewpoints of others by being open to their emotions. It also tries to facilitate the inflow and outflow of emotions thus enhancing the interpersonal receptiveness. Good emotional receptivity makes an individual personally and socially emotionally competent. Further, it makes the individuals empathetic and sensitive to the needs of others.

Research Objective

This study aims to evaluate the validity, reliability and factor analysis of Personal dan social Competence Scale using exploratory factor analysis (EFA). By evaluating the psychometric properties of this tool, this study seeks to shed some insight into future research in enhancing PCSC among this population.

Methodology

Instrument

Personal Competence Social Competence Scale (PCSC) used in this study consisted of 69 items. The items are theoretically categorised into six categories which are i) Self-awareness measured by 11 items, ii) self-Motivation measured by 9 items, iii) Emotion Regulation measured by 15 items, iv) Social Awareness measured by 9 items, v) Social Skills measured by 13 items and vi) Emotional Receptivity measured by 12 items. The EI (PcSc) employs a 5-point Likert scale, (1) extremely low competence, (2) low competence, (3) not sure, (4) high competence, (5) extremely high competence. The questionnaire used in dual language which are English version and also Malay to reduce potential language barriers.

Data Collection and Sampling

The study employed convenience sampling. Data were collected through a questionnaire distributed via linked to a Google Form that contain PcSc scale, specifically targeting Single Mothers who lives in Sabah.

Procedure

The first step of the data analysis is conducting the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy to determine whether the sample size was sufficient for further analysis. Next, Bartlett's Test of Sphericity was carried out to assess whether the correlations among items were sufficiently large to justify the use of Exploratory Factor Analysis (EFA).

After that, the reliability of PeSc Scale and each of the components were then evaluated. Cronbach's Alpha with value of 0.7 will be considered acceptable for internal consistency. This step ensured that the scale and its subscales were statistically robust and reliable in measuring what it's intended to. Once the validity and reliability of the data were confirmed, Exploratory Factor Analysis (EFA) was conducted in order identify the underlying factor structure of the PeSc Scale. Lastly, Principal Component Analysis (PCA) was then applied as the extraction method with Varimax rotation used to provide the interpretability of the factor loadings.

Result

Validity

Two diagnostic tests were conducted as shown in Table 1 to assess the suitability of the data for Exploratory Factor Analysis (EFA). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy yielded a value of 0.716, which exceeds the minimum threshold of 0.60 (Guad et al., 2021), indicating that the sample is sufficient to proceed with factor analysis. According to Suppian & Ahmad (2016), this value is also supported by the recommendation of Tabachnick and Fidell (2013), who state that a KMO value between 0.60 and 0.79 is considered moderately good and suitable for factor analysis. In addition, Bartlett's Test of Sphericity showed a Chi-Square value of 824.191, df = 15, and was significant at $p < .001$, indicating a significant correlation among the items in the correlation matrix. This further confirms that the data is suitable for analysis using EFA.

Table 1
Validity of Personal and Social Competence KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.716
Bartlett's Test of Sphericity	Approx. Chi.Square	824.191
	df.	15
	Sig.	.000

Reliability

The reliability of the Emotional Intelligence (EI) PcSc Scale and its six components was assessed using Cronbach's Alpha. The overall reliability was found to be high, as it exceeded the widely accepted minimum threshold of 0.7, as suggested by Darren and Mallery (2003) in a study conducted by Shuhada et al. (2023), which stated that questionnaires with a Cronbach's Alpha value above 0.7 are acceptable and usable.

To assess the internal reliability of the instrument used, the Cronbach's Alpha coefficient was calculated for each

dimension. The analysis results showed that all subscales demonstrated satisfactory reliability levels, exceeding the minimum threshold value of 0.70 as recommended by Hair et al. (2010). For Section A (Personal Competence), the recorded alpha values were: Self-Awareness (0.929), Emotion Regulation (0.755), and Self-Motivation (0.788). Meanwhile, for Section B (Social Competence), high alpha values were recorded for each dimension: Social Awareness (0.878), Social Skills (0.877), and Emotional Receptivity (0.911). Additionally, the overall alpha coefficient for the instrument was 0.868, indicating that the instrument possesses very good internal reliability. Therefore, all dimensions are deemed suitable for use in future research.

Table 2
Reliability of Personal and Social Competence Scale (PcSc)

Category		Alpha Cronbach
Part A (Personal Competence)	Self-Awareness	.929
	Emotion Regulation	.755
	Self-Motivation	.788
Part B (Social Competence)	Social Awareness	.878
	Social Competence	.877
	Emotional Receptivity	.911
Total		.868

Factor Analysis

Total variance Explained

Based on the results of the Exploratory Factor Analysis (EFA) conducted using the Principal Component Analysis method, six factors were extracted based on the criterion of eigenvalues greater than 1 (Kaiser's Criterion). The first factor accounted for 33.288% of the total variance, followed by the second factor with 11.000%, the third with 9.734%, the fourth with 6.443%, the fifth with 5.372%, and the sixth with 4.980%. Cumulatively, these six factors explained 70.817% of the total variance in the data, indicating that a substantial portion of the original data can be effectively summarized into six main components.

After rotation using the Varimax method, the variance explained by each factor became more balanced and easier to interpret, with the first and second factors each explaining around 18% of the variance, while the remaining factors explained progressively smaller percentages. These results indicate that the extracted factor structure is robust and suitable for use in the study.

Subsequently, the factors can be named based on the items that load highly on each factor, as shown in the Rotated Component Matrix. Overall, these findings reflect that the instrument used has a strong factor structure and high potential for accurately measuring the intended construct.

Table 3

Total Variance Explained

Component	Total	% Variance Explained	% Cumulative
1	22.696	33.288	33.288
2	7.590	11.000	44.288
3	6.716	9.734	54.022
4	4.446	6.443	60.465
5	3.707	5.372	65.837
6	3.436	4.980	70.817

Rotated Component Matrix

The results of the Exploratory Factor Analysis (EFA) were conducted using the Principal Component Analysis method with Varimax rotation to identify the underlying factor structure

of the questionnaire items. The analysis revealed that six main factors were extracted with eigenvalues greater than 1. Factor rotation converged after six iterations. All items subsequently showed factor loadings exceeding .40, indicating a satisfactory relationship between the items and their respective factors.

Table 4

Rotated Component Matrix for the Personal and Social Skill (PcSc Scale)

Rotated Component Matrix

	1	2	3	4	5	6
KD1				.673		
KD2				.670		
KD3			.800			
KD4			.700	.423		
KD5			.686	.616		
KD6			.785			
KD7			.835			
KD8			.751			
KD9			.639			
KD10				.734		
KD11			.789			
PE1 rev				-.512		
PE2			.662			
PE3 rev			-.420			.449
PE4		.524				
PE5		.465			.471	
PE6	.545					
PE7	.749					
PE8						
PE9 rev		-.414				.597

PE10	.650			.545
PE11_rev			.695	
PE12	.514	.489		
PE13_rev				-.501
PE14	.417			
PE15	.825			
MD1		.410	.516	
MD2_rev		-.433		.625
MD3_rev				.486
MD4_rev	-.706			.461
MD5_rev	-.724			.495
MD6	.790			
MD7	.828			
MD8_rev				-.437
MD9		.704		.415
KS1	.689		.459	
KS2	.745			
KS3_rev		.589		
KS4	.784			
KS5	.844			
KS6		.667		
KS7	.771			
KS8		.498		
KS9	.787			
SS1	.709			
SS2	.732			
SS3		.540		
SS4	.775	.429		
SS5	.539	.420		
SS6		.466	.452	
SS7		.821		
SS8		.685		
SS9	.467	.671		
SS10		.551		.601
SS11		.846		
SS12		.417		.754
SS13_rev	-.450		.417	
ER1		.772		
ER2		.845		
ER3		.873		
ER4			.545	.421
ER5		.843		
ER6		.827		
ER7		.863		
ER8		.848		
ER9				.619
ER10		.555		
ER11	.416	.661		
ER12				.802

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Discussion

The results of the Exploratory Factor Analysis (EFA) using the Principal Component Analysis method revealed that six main factors were identified based on the criterion of eigenvalues greater than 1 (Kaiser's Criterion). These six factors collectively explained 70.817% of the total variance in the data. This is a high and sufficient explanatory rate, indicating that the collected data has a clear and reliable factor structure. The highest variance was explained by the first factor, accounting for 33.288%, followed by the second factor at 11.000%, while the remaining factors contributed between 4% and 9%.

The presence of these six factors indicates that the emotional intelligence construct among single mothers is multidimensional and not limited to a single aspect. This is consistent with previous literature which states that emotional

intelligence encompasses several key components such as self-awareness, emotional regulation, empathy, social skills, and intrinsic motivation. In the context of single mothers, these six factors likely represent emotional competencies essential for coping with challenges such as heavy responsibilities, economic pressure, and emotional management within family and social relationships.

More importantly, the six-factor structure suggests that support for single mothers cannot be generalized or based on a one-size-fits-all approach. Each identified dimension of emotional intelligence may require different interventions and training. For example, the emotional regulation component may be relevant in helping single mothers manage daily life stress, while social skills and empathy are important for building support networks and positive relationships with their children and communities.

From a methodological perspective, the successful

identification of these six key factors demonstrates that the instrument developed or used in this study is appropriate and valid for measuring the emotional intelligence construct within the single mother population. These findings also contribute to the local literature, particularly in understanding how emotional intelligence plays a role in strengthening the psychological resilience of single mothers in Malaysia. Therefore, further research could be conducted to examine the relationships between these factors and aspects such as well-being, effective parenting, and social adjustment among single mothers.

Conclusion

The results of the Exploratory Factor Analysis (EFA) confirm that emotional intelligence among single mothers is a multidimensional construct, comprising six distinct but interrelated factors. The findings not only validate the use of the instrument for this target group but also highlight the complexity of emotional competencies required by single mothers in navigating daily challenges.

Importantly, the six-factor model underscores the need for targeted and differentiated interventions, as each emotional intelligence component—such as self-awareness, emotional regulation, empathy, and social skills—plays a unique role in supporting single mothers' psychological resilience, parenting effectiveness, and social integration. This study contributes valuable insights to the local context and lays the groundwork for further research into the role of emotional intelligence in improving the overall well-being and adaptability of single mothers in Malaysia.

Implications and Suggestions for Further Study

The identification of a six-factor emotional intelligence (EI) structure among single mothers has several important implications for practice and policy. Firstly, it highlights the need for targeted support programs that address specific Emotional Intelligence components—such as emotional regulation, social skills, and empathy—rather than relying on generalized approaches. This insight can guide the development of tailored training modules and mental health interventions aimed at strengthening the emotional and psychological resilience of single mothers. Additionally, the findings provide a valuable framework for policymakers to design social welfare initiatives that recognize the diverse emotional competencies required to manage the unique challenges faced by this group, including parenting pressures, financial stress, and social stigma. From a research perspective, the results open multiple avenues for further study. Future research could examine the relationship between each of the six EI factors and outcomes such as psychological well-being, parenting effectiveness, and child development. Longitudinal studies would be particularly useful in understanding how emotional intelligence evolves over time and influences long-term adaptation and resilience. Comparative studies across different cultural or socioeconomic backgrounds could also determine the generalizability of the six-factor model. Moreover, evaluating the effectiveness of specific interventions designed to enhance individual Emotional Intelligence dimensions would provide empirical evidence for best practices in supporting single mothers. Finally, extending similar research to other vulnerable populations may help broaden the understanding of emotional intelligence as a key factor in social and emotional functioning across different life circumstances.

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Acknowledgements

Any acknowledgements authors wish to make should be included in a separate headed section at the end of the manuscript but before the list of references.

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