

Examining the Psychometric Properties of the Schutte's Self Report Emotional Intelligences Scale (SREIS)

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Emotional intelligence is usually used in order to measure an individual's effectiveness. One of the instruments that is used to measure emotional intelligence is Schutte's Self-Report Emotional Intelligence Survey (SREIS). The main objective of this study is to evaluate the psychometric properties of SREIS. A set of SREIS was distributed to 152 undergraduate psychology students from a public university in Malaysia. Other than SREIS, Life Satisfaction Scale (LSS) by Krapu (2006) was also used in this study. In evaluating reliability, Cronbach's alpha was used, and criterion and construct validity methods were used to test its validity. Results obtained showed that Schutte's SREIS was valid to be used in Malaysia and using principle component analysis, six components were extracted with 49% variance. The SREIS also showed good criterion validity from the significant correlations with the Life Satisfaction Scale. In addition to that, the results of reliability were satisfactory with Cronbach's alpha ranging from 0.55 to 0.85 for all the dimensions.

Keywords: emotional intelligence; reliability; construct validity; criterion validity

Intelligence refers to the ability combine and separate concepts, to judge and to reason and to engage in abstract thought (Mayer & Salovey, 2000). Emotions are defined as organized response, crossing the boundaries of many psychological subsystems. This includes the physiological, cognitive, motivational and experiential systems (Salovey & Mayer, 2000). Petrides (2010) views emotional intelligence as individual's perception of emotions and can be considered as traits in a hierarchy of personality structure.

Mayer and Salovey defined emotional intelligence (EI) as the ability to perceive accurately, appraise and express emotion, the ability to access and generate feelings

when they facilitate thought. They also defined it as the ability to understand emotion and emotional knowledge, and the ability to regulate emotions to promote emotional and intellectual growth (Mayer, Salovey & Caruso, 2000). Goleman (1999) defined EI as the capacity for recognizing our own feelings and those of others for motivating ourselves and for managing emotions in ourselves and in our relationships. Bar-On defined EI as an array of non-cognitive capabilities and skills that influence one's ability to succeed in coping with environmental demands and pressures (Bar-On, 2004)

Although some researcher argued that emotional intelligence is a relatively new

concept, on the contrary, EI has been studied in various related theories before. Thorndike's (1937) social intelligence defined as the ability to understand others and to act wisely in human relations. Gardner's theory of multiple intelligence challenged people to understand the different kinds of personal intelligences. He described several intelligences covering cognitive knowledge and interpersonal and intrapersonal intelligences. The interpersonal intelligence is the ability to understand other people, what motivates them, how they work and how to work cooperatively with them, whereas, intrapersonal intelligence is the capacity to form an accurate model of oneself and to be able to use that model to operate effectively in life (Gardner, 1983).

From Gardner's work, Mayer and Salovey (2000) developed their wider concept on intelligence. They developed the term emotional intelligence, to refer to the affective dimensions of intelligence and divided it into five broad areas: knowing one's own emotions, managing one's own emotions, self-motivation, recognizing emotions of others, and handling relationships with others. Later, Mayer and Salovey redefined emotional intelligence into four branches; perception, appraisal, and expression of emotion, emotion facilitation of thinking, understanding and analyzing emotions and employing emotional knowledge, and, reflective regulation of emotions to promote emotional and intellectual growth (Wang, 2010).

Goleman (1999) described his theory of emotional intelligence and identified his theory in four dimensions; self-awareness which defines what one feels, social awareness which is defined as empathy and the ability to read nonverbal cues, self-management which refers to the ability to regulate distressing emotional responses and relationship management which refers

to the ability to understand the emotions of others.

The approach by Bar-On (2004) on emotional intelligence was perceived to be multi-factorial, measuring fifteen factors of emotional intelligence from 5 components. According to Bar-On (2004), the most important factors of emotional intelligence are, emotional self-awareness referring to one's ability to recognize and understand one's emotions, moods, and feelings, assertiveness referring to one's ability to express emotions and feelings of others, and empathy referring to one's ability to recognize, understand, and appreciate the feelings of others. Other core factors which are less essential to emotional intelligence are reality testing. This refers to the ability to validate one's feelings, thoughts and ideas by examining the correspondence between what one is subjectively experiencing and between what objectively exists in reality. Furthermore, flexibility refers to an individual's ability to adjust one's feelings, thoughts, and behaviour to changing circumstances and situations, and impulse control which refers to one's feelings, urges and impulses (Bar-On, 2004).

The core and resultant factors are dependent upon the Supporting Factors, for example, emotional self-awareness depends on self-regard which includes knowledge of oneself and of one's emotions. And assertiveness depends upon positive self-regard and independence, which includes emotional independence as well as self-directiveness. It is extremely difficult for dependent and especially non-assertive people to express their feelings to others. Furthermore, interpersonal relationship is dependent upon positive self-regard, which also include self-acceptance, and social responsibility which includes the ability to accept and respect others. In addition to feeling that one is a responsible, cooperative and contributing member in one's social group. Lastly,

additional supporting factors like optimism and stress tolerance combine with core factors, like reality testing, flexibility and impulse control, to facilitate efficient problem solving (Bar-On, 2004).

Understanding the way people think, perceive and behave are among the key emotional elements required in managing conflict. In high level conflict difficulty, it is not viable to solve the conflict without the ability to handle both parties emotionally, therefore, understanding and having to know their emotional capabilities are essential (Goleman, 1999).

Morrison (2008) studied the relationship between emotional intelligence and preferred conflict handling styles. He found that higher level of emotional intelligence is positively correlated with collaborating and negatively with accommodating. It is concluded that it is imperative to understand and develop emotional intelligence and competencies in delivering highly effective conflict management skill.

A good emotional self-management as well as overseeing others' emotional awareness evidently helped in building resilience among workers and keeping them professionally effective. Emotional self-management helped in developing choices about expressed feelings in managing stressful situations.

Emotional Intelligence Scale

In Mayer and Salovey model of emotional intelligence, there are four branches, the ability to perceive emotions in oneself and others accurately, the ability to use emotions to facilitate thinking, the ability to understand emotions, emotional language, and the signals conveyed by emotions, and the ability to manage emotions so as to attain specific goals (Mayer, Salovey and Caruso, 2000).

For each of the branches there are four sub-groups each. Sub-groups for perception, appraisal and expression of emotion are; ability to identify emotion in one's physical states, feelings and thoughts, ability to identify emotions in other people, designs, artwork, etc. through language, sound appearance and behaviour, ability to express emotions accurately, and to express needs related to those feelings, and ability to discriminate between accurate and inaccurate, or honest versus dishonest expressions of feeling.

Sub-groups for emotional facilitation of thinking are; emotions prioritise thinking by directing attention to important information, emotions are sufficiently vivid and available that they can be generated as aids to judgement and memory concerning feelings, emotional mood swings change the individual's perspective from optimistic to pessimistic, encouraging consideration of multiple points of view, and emotional states differentially encourage specific problems approaches such as when happiness facilitates inductive reason and creativity.

The third branch's sub-groups in Salovey and Mayer's emotional intelligence model are; ability to label emotions and recognise relations among the words and the emotions themselves, ability to interpret the meanings that emotions convey regarding relationships, ability to understand complex feelings, and ability to recognise likely transitions among emotions.

The last branch in Salovey and Mayer's model of emotional intelligence sub-groups are ability to stay open to feelings, ability to reflectively engage or detach from an emotion depending upon its judged informative or utility, ability to reflectively monitor emotions in relation to oneself and

others, and ability to manage emotion in oneself and other by moderating negative emotions and enhancing pleasant ones.

On the other hand, Goleman (1999) outlined a model of emotional intelligence with 5 main emotional intelligence constructs. Self-awareness, refers to the ability to know one's emotions, strengths and weaknesses, values and goals in guiding themselves in decision makings. Self-regulation refers to the individual's involvement in controlling their emotions to adapt to the changing environment and circumstances. Social skill refers to ability to manage and influence their relationships with other people in a preferred direction. Empathy refers to the ability to relate to other people's feeling specifically during decision making. Lastly, motivation, which refers to the drive to achieve something.

Another popular theory of emotional intelligence is Bar-On's emotional intelligence quotient inventory, which measures five dimensions of emotional intelligence; Intrapersonal, consists of individual's emotional self-awareness which refers to the individual's ability to recognise their own feeling, assertiveness referring to individual's ability to express their feelings, thoughts and belief, self-regard which refers to the individual's ability to practice respect and acceptance of themselves, self-actualisation which refers to the individual's ability to realise one's potential capacities and limitations, and independence which refers to the individual's ability to self-direct and control themselves on their actions to be free of emotional dependant. Interpersonal refers to the empathy which refers to individual's awareness of other's feelings, interpersonal relationship refers to individual's ability to maintain relationship with mutual give and receiving of warmth and affection, and social responsibility

refers to the ability of the individual to contribute and cooperative of their society. In adaptability, an individual will be measured in terms of their problem-solving skill, flexibility and their ability to correspond between what is experience and reality testing which refers to what is objectively experiences. In stress management dimension, an individual will be measure on their tolerance of stress, which is their ability to withstand any stressful situations, and impulse control which refers to their ability to resist temptation to act. In general mood, and individual is measured on their happiness, which is their ability to feel satisfy with their life, and optimism, which is an individual's ability to always look at the brighter side of things (Bar-On, 2004).

Problem Statement, Literature Review and Research Aim

For Schutte's emotional intelligence model, which was designed based on Salovey and Mayer's model of emotional intelligence (1990). In Schutte Self-Report Emotional Intelligence Test (SSEIT), three emotional intelligence constructs are tested; appraisal and expression of emotion, regulation of emotion, and utilisation of emotion (Schutte, 1998).

However, despite of its usage in many areas and studies in psychology and non-psychology based researches, there are not many articles reviewing the psychometric properties of this scale especially in Malaysian context. Even though this study may not be a comprehensive or systematic meta-analysis review of the scale, but it is somewhat contributing the body of knowledge in addressing the feasibility of using BDI-II in different population samples.

In 2016, Mfikwe and Pelsler (2017) studied gender differences and significance in emotional intelligence and leadership style amount 85 South African government senior leaders. Using Self Report Emotional Intelligence Scale by Schutte, the researchers reported a Cronbach alpha of 0.876 for the test in the study.

Another study using Schutte's Self-Reported Emotional Intelligence Scale was used done by Ogurlu (2016). In this study, Ogurlu studied 319 university students in Kocaeli University in Turkey. The aim of this research was to examine the relationship between the samples' cognitive intelligence, emotional intelligence and humour styles. The Cronbach alpha for SREIS in this study was 0.82, confirming a good internal consistency of the test in this study.

Ahmad and Zadeh (2016) used Schutte's Self-Reported Emotional Intelligence Scale in their study to examine the differences between emotional intelligence, creative potential and job satisfaction of managers in a multinational organisations in Pakistan. The result reported a good internal consistency for SREIS with a Cronbach alpha of 0.79.

Schutte's Self-Report Emotional Intelligence Scale was reportedly used by Yusof, Yap, Maad and Hussin (2016) to assess the level of emotional intelligence on 324 Malay undergraduate students studying in an East Coast university in Malaysia. The finding of this study has shown that the Schutte's Self-Report Emotional Intelligence Scale has a high internal consistency with Cronbach alpha score of 0.90.

Therefore, in filling in the gap of adding more literature to understand the validity

and usability of SREIS in Malaysian context this research is viewed important and crucial. The principle aim of this research is to assess the psychometric properties of Schutte's Self-Report Emotional Intelligence Scale (SREIS) in a sample of 152 undergraduate students in a local university in Malaysia. The factor structure of the scale was examine using principal factor analysis.

Materials and Method

This study used a survey method to collect data. A total of 152 respondents were selected using convenient sampling. The respondents were 2 year-students of a local university. Instruments used in this study are:

1. Schutte's Self-Report Emotional Intelligence Test (SREIT) which consists of 33 items and measure of 6 dimensions which are positive affect, emotions of others, happy emotions, own emotions, non-verbal emotions, and emotional management.
2. Life Satisfaction Survey by Krapu (2006) that has 100 items with 5-point likert scale.

Results and Discussion

Result of respondents' demographic profile is shown in Table 1. From 152 participants, 118 participants (77.6%) were Malay, whereby 20 participants (13.2%) were Chinese, and 14 participants (9.2%) were Indians and other ethnics. As for genders, 30 participants (19.8%) were male and 122 participants (80.3%) were female.

The main objective of this study was to study the construct validity of SSEIT using

Table 1

Respondents' Demographic Profile

Demographic		Frequency	Percentage
Gender	Female	122	80.2%
	Male	30	19.8%
Ethnicity	Malay	118	77.6%
	Chinese	20	13.2%
	Indian and Others	14	9.2%

principal component analysis with varimax rotation and examination of the scree plot. This method is aimed to understand deeper the factor structure of Schutte Self-Report Emotional Intelligence Test (SSEIT). Firstly, the sample of data was tested to determine its suitability for factor analysis. The result of Measurement of Sampling Adequacy (MSA) Kaiser-Meyer-Olkin (KMO) yielded a significant value of KMO = 0.78. The acceptable KMO value is 0.60, with anything higher than 1 indicates satisfactory results (Brace et. al., 2009). The result obtained proves that the sample data was adequate and factor analysis can be applied. Bartlett Sphericity test which yielded a significant result ($p < 0.01$) further strengthen that factor analysis can be done (Brace et. al., 2009).

Next, the result of principal component analysis with varimax rotation and scree plot successfully extracted six factors which contributed a total of 48% variance and yielded loadings between 0.1 to 0.7. The factors extracted replicated the similar six factors proposed by SREIT. The factors loading matrix representing this is at Table 2. The Cronbach alpha for the test was 0.82.

From Table 2, there are 6 factors identified for the scale, for factor 1, 8 items were identified, with item "I am aware of the nonverbal messages I send to others" scored the highest, and item "I compliment

others when they have done something well" scored the lowest. Loading 1 items measures the level of awareness of the surrounding, the emotions of other, how to control mood in situations, therefore, this loading is identified as the surrounding awareness.

For factor 2, 6 items were identified, with item "By looking at their facial expression, I recognised the emotions people are experiencing" scored the highest and item "When another person tells me about an important event in his or her life, I almost feel as though I have experience this event myself" scored the lowest. Loading 2 items identify more on how an individual relate or understand other people's emotions and feelings. Therefore, loading 2 is identified as relate to others.

For loading 3, 7 items were identified, with item "I expect that I will do well on most things I try" is the highest and item "I expect good things to happen" the lowest scored. Loading 3 items measures how positive an individual is, and how he or she ensure that their own perception and self are constantly happy, therefore, loading 6 is identified as measure of happiness.

For loading 4, 5 items were identified, with highest score is item "I like to share my emotions with others" and lowest is item "I easily recognise my emotions as I

Table 2

Factor loadings and communalities based on a principal components analysis with varimax rotation for 33 items from the SREIT (N = 152)

	Component					
	1	2	3	4	5	6
• I am aware of the nonverbal messages I send to others	.760					
• I present myself in a way that makes a good impression on others	.694					
• I seek out activities that make me happy	.621					
• I arrange events others enjoy	.620					
• When I am in a positive mood, solving problems is easy for me	.555					
• I am aware of the non-verbal messages other people send	.525					
• I motivate myself by imagining a good outcome of the tasks I take on	.446					
• I compliment others when they have done something well	.297					
• By looking at their facial expression, I recognised the emotions people are experiencing		.700				
• I can tell how people are feeling by listening to the tone of their voice		.692				
• I know what other people are feeling just by looking at them		.591				
• I know why emotions change		.543				

Table 2 (cont'd)

	Component					
	1	2	3	4	5	6
• When I am in a positive mood, I am able to come up with new ideas		.532				
• When another person tells me about an important event in his or her life, I almost feel as though I have experience this event myself		.404				
• I expect that I will do well on most things I try			.750			
• I help other people feel better when they are down			.612			
• I use good moods to help myself keep trying in the face of obstacles			.544			
• When I feel a change in emotion, I tend to come up with new ideas			.535			
• Other people find it easy to confide me			.480			
• When I am faced with obstacles, I remember times I faced similar obstacles and overcome them			.479			
• I expect good things to happen			.394			
• I like to share my emotions with others				.820		
• I have control over my emotions				.556		

Table 2 (cont'd)

	Component					
	1	2	3	4	5	6
• When I experience a positive emotion I know how to make it last				.500		
• I find it hard to understand the nonverbal messages of other people				.497		
• I easily recognise my emotions as I experience them				.363		
• Emotions are one of the things that make my life worth living					.686	
• Some of the major events of my life have led me to re-evaluate what is important					.612	
• I know when to speak about my personal problems to others					.531	
• When my mood changes, I see new possibilities					.526	
• I am aware of my emotions as I experience them					.452	
• When I am faced with challenges, I give up because I believe I will fail						.845
• It is difficult for me to understand why people feel the way they do						.742

experience them”. Loading 4 items measures how an individual manages or regulate his or her emotions, therefore, loading 4 is identified as emotional regulation.

For loading 5, 5 items were identified, with the highest is “Emotions are one of the things that make my life worth living” and lowest item “I am aware of my emotions as I experience them”. Loading 5 items seems to measure more on the emotional awareness of oneself, therefore, loading 5 is identified as self-emotional awareness.

And for loading 6, there were only 2 items identified, and both of them are more or less equal in strength. The items in loading 6 is viewed as measuring challenges and difficulties of the individual, therefore, loading 6 is identified as facing challenges.

Further examinations of the relationships among the six factors were done (Table 3). The result showed all dimensions significantly correlated with each dimension with highest correlation is between factor 1 and factor 2, with $r = .41$, $p < 0.01$, and lowest correlation is between factor 5 and factor 6, with $r = -.43$, $p < 0.01$.

Table 3

Component Correlation Matrix

Dimension	1	2	3	4	5	6
1						
2	.41					
3	.41	.28				
4	.32	.28	.39			
5	.28	.24	.24	.16		
6	-.13	-.09	-.11	-.17	-.43	

* $p < 0.01$

In addition to that, a correlational analysis was also done to examine the concurrent validity of the SREIT in measuring emotional intelligence by correlating it with life satisfaction survey. Result of the correlational analysis found that there were no significant correlations between life satisfaction survey and emotional intelligence with $r = .10$, $p < 0.01$. This result showed that there was no concurrent validity of SREIT in measuring emotional intelligence from the correlational analysis done.

Conclusion

This research aims to evaluate SREIT psychometric properties, this cross cultural analysis study is much needed in order to establish reliability and validity of the test when used in populations and different cultural backgrounds. This study using Malaysian samples showed that SREIT does measure emotional intelligence, however, further analysis with bigger and broader samples is needed in order to further test SREIT’s concurrent validity and internal consistency.

References

- Ahmad, S. M. and Zadeh, Z. F. (2016) Ender Differences On the Variables Of Emotional Intelligence, Creative-Potential And Job Satisfaction In Managers. *Pakistan Journal of Psychology*, 47, 2, 61-77.
- Bar-On, R. (2004). *Emotional Quotient Inventory: A measure of emotional intelligence*. US: Multi Health System Inc.
- Gardner, H. (1983). *Frames of mind: theory of multiple intelligences*. New York: Basic Books.
- Goleman, D. (1999). *Working with emotional intelligence*. US: Bantam Books
- Krapu, T. M., Meinke, L., Kramer, L., Friedman, R., & Voda, J. (2006). The life satisfaction survey (LSS): development of the instrument. *Life*, 6, 7.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2000). *Models of emotional intelligence*. In R. J. Sternberg (Ed.), *Handbook of intelligence*. Cambridge, UK: Cambridge University Press.
- Mfikwe N. M. G. and Pelsler, T. G. (2017) The Significance f Emotional Intelligence And Leadership Styles Of Senior Leaders In The South African Government. *Journal of Contemporary Management*, 22, 2, 115-126.
- Morrison, J. (2008). The relationship between emotional intelligence competencies and preferred conflict-handling styles. *Journal of Nursing Management*, 16, 8, 974-983.
- Petrides, K. V. (2010). Trait emotional intelligence theory. *Industrial and Organizational Psychology*, 3, 136-139.
- Russell, D., Peplau, L. A., & Ferguson, M. L. (1978). Developing a measure of loneliness. *Journal of Personality Assessment*, 42, 290-294.
- Salovey, P. & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9, 185-211.
- Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and individual differences*, 25(2), 167-177.
- Thorndike, E.L. (1937). An evaluation of the attempts to measure social intelligence. *Psychological Bulletin*, 34, p.275-284.
- Ogurlu, U. (2016) Relationship between Cognitive Intelligence, Emotional Intelligence and Humor Styles. *International Online Journal of Educational Sciences*, 7, 2, 15-25.
- Wang, X. (2008). The relationship between the five-factor personality and conflict management styles in a manufacturing setting. *Mental Health, Religion & Culture*, 11, 1, p. 67-84.
- Yusof, N. S. H. C., Yap, B. W., Maad, H. A. and Hussin, W. N. I. W (2016) Relationship between Emotional Intelligence and University Students' Attitude. *Pertanika Journal of Social Sciences and Humanities*, 24, 119 – 130.