

Depressive Symptoms as Potential Moderator and Mediator:
Rejection Sensitivity and Emotional Recognition of Facial
Expression in Adults who are Pursuing Tertiary Education

by

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ABSTRACT

Everyone experiences social interaction with human beings at any point of life. Social interaction may lead to social rejection and considered normal to be experienced at any point of relationship. Different people tend to have different level of rejection sensitivity level. Much of the rejection sensitivity research conducted within Western countries and not Asian countries. Previous research found a relationship between rejection sensitivity level and depression (Kraines & Wells , 2017). Previous research shows there is a positive relationship between depression and rejection sensitivity level (Kraines & Wells , 2017). Relationship between depression and emotion recognition were also found in previous studies (Byrne, Norris, & Worthy, 2016). Previous research shows that there is a negative relationship between depression and emotion recognition (Byrne, Norris, & Worthy, 2016). This research investigates whether research findings collected within Western population is in line with Asian Population. Based on the relationship found in previous research studies, I further tested if there is a relationship between rejection sensitivity and emotional recognition of facial expression with depressive symptoms as a potential moderator and mediator of the relationship.

A total of 85 participants covering male and female adults who are pursuing tertiary education in Malaysia have participated in this correlational study by completing a 30 minutes face to face session. All participants completed 2 self – report questionnaires and 1 computerized test in a single session. The difference of rejection sensitivity level between male and female adults who are pursuing tertiary education was explored using independent t – test. Results show there were no significant difference between male and female adults in rejection sensitivity level. The relationship of rejection sensitivity level and emotional recognition of facial expression was also explored using correlation. There was no significant relationship found between rejection

sensitivity level and emotional recognition. Lastly, PROCESS in SPSS was used to analyze if depressive symptom moderates or mediates the relationship of rejection sensitivity level and emotional recognition. Depressive symptom was found to be not significant in moderating or mediating the strength of relationship between rejection sensitivity level and emotional recognition of facial expression.

Keywords: Rejection sensitivity, emotional recognition, depressive symptoms, tertiary education

ABSTRAK

Setiap manusia dalam muka bumi ini akan berpengalaman menjalinkan hubungan sesama manusia dengan orang sekeliling mereka dalam satu tempoh masa. Hubungan sesama manusia ini mampu membawa kepada terjadinya penolakan sosial yang dianggap sebagai biasa dan pasti akan dirasai setiap manusia dalam segelintir hubungan. Setiap individu mempunyai tahap kepekaan terhadap penolakan yang berbeza dari individu lain. Kebanyakan kajian yang dijalankan dalam bidang kepekaan terhadap penolakan ini telah dijalankan di negara – negara barat dan tidak di negara negara Asia. Kajian dahulu menjumpai hubungan antara tahap kepekaan terhadap penolakan dan kemurungan (Kraines & Wells , 2017). Terdapat juga hubungan negatif yang dijumpai antara kemurungan dan keupayaan mengenal emosi dalam kajian yang lalu (Byrne, Norris, & Worthy, 2016). Kajian terdahulu mendapati terdapat hubungan negative antara kemurungan dan keupayaan menenal emosi (Byrne, Norris, & Worthy, 2016). Kajian ini mengkaji sama ada hubungan yang dijumpai dalam populasi Barat sama dengan populasi Asia. Berdasarkan hubungan yang telah dijumpai dalam kajian yang lalu, saya mengkaji sama ada terdapat hubungan antara kepekaan terhadap penolakan dan keupayaan mengenal jenis jenis emosi melalui raut wajah dengan simptom kemurungan sebagai pemboleh ubah penyederhana dan pengantara dalam hubungan tersebut.

Seramai 85 peserta yang terdiri daripada lelaki dan wanita dewasa yang sedang menyambung pelajaran di pusat pengajian tinggi telah mengambil bahagian dalam kajian kolerasi ini dengan melengkapkan 30 minit sesi bersemuka. Setiap peserta dikehendaki melengkapkan 2 boang soal selidik yang dilaporkan sendiri dan 1 ujian berkomputer dalam satu sesi bersemeuka dalam kajian ini. Perbezaan tahap kepekaan terhadap penolakan antara lelaki dan wanita dewasa yang sedang menyambung pengajian dalam pusat pengajian tinggi dikaji

menggunakan ujian – t tidak bersandar. Keputusan menunjukkan tidak ada hubungan statistik yang ketara antara lelaki dan wanita dewasa dalam tahap kepekaan terhadap penolakan. Hubungan antara kepekaan terhadap penolakan dan keupayaan mengenal pasti jenis – jenis emosi pada raut wajah diteroka menggunakan kolerasi. Keputusan menunjukkan tiada hubungan statistik yang ketara antara kepekaan terhadap penolakan dan keupayaan mengenal pasti jenis – jenis emosi pada raut wajah. Akhir sekali, PROCESS dalam SPSS telah digunakan untuk menerokai potensi simptom kemurungan sebagai pemboleh ubah penyederhana dan pengantara dalam hubungan antara kepekaan terhadap penolakan dan keupayaan mengenal jenis – jenis emosi pada raut wajah. Keputusan menunjukkan tiada hubungan statistik yang ketara apabila melihat pada potensi simptom kemurungan sebagai pemboleh ubah penyederhana dan pengantara dalam hubungan antara kepekaan terhadap penolakan dan keupayaan mengenal jenis – jenis emosi pada raut wajah.

Kata kunci: Kepekaan terhadap penolakan, keupayaan mengenal pasti jenis – jenis emosi, simptom kemurungan, pusat pengajian tinggi

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LIST OF ABBREVIATIONS

ARSQ	Adults Rejection Sensitivity Questionnaire
BDI – II	Beck Depression Inventory, 2 nd Edition
COVID – 19	Corona Virus Disease 2019
ERT	Emotional Recognition Task
HUSM	Hospital Universiti Sains Malaysia
USM	University Sains Malaysia
UPSI	Universiti Pendidikan Sultan Idris

LIST OF SYMBOLS

-	minus
=	equal
<	less than
>	more than
*	asterisks; indicates statistical significance
%	percentage
df	degree of freedom
μ	mean
SD	standard deviation
SE	standard error
N	total number of cases
α	Alpha
D	cohen's d; indicates effect size
F	F-distribution test statistic
P	probability value
r	estimate of pearson product-moment
T	T t-test statistic

CHAPTER 1

INTRODUCTION

1.1 Background

Human beings are born to be socially connected animals with one another. It is our human nature that we will form a social connection and create a community with the people around us. Even when individuals prefer to be in a state of solitary, there will be moments that they crave some kind of human interaction (Ateca-Amestoy, Cortés Aguilar, & Moro-Egido, 2014). Research shows that social connections correlates strongly with life satisfaction (Ateca-Amestoy, Cortés Aguilar, & Moro-Egido, 2014). In trying to connect with other human beings and form healthy social connection, there are a few variables that are not contributing much to a healthy interpersonal relationship. One of the many possible variables is the feeling of being rejected or also known as rejection sensitivity.

Rejection sensitivity is defined as the fear of rejection and increased distress when experiencing rejection(Kraines, Kelberer & Wells, 2017). Rejection sensitivity is also considered as a personality trait in individuals (Rowe , Gembeck , Rudolph, & Nesdale, 2015). The level of rejection sensitivity can fluctuate and differs across individuals. Findings show that high rejection sensitivity people reported greater feelings of rejection than low rejection-sensitive

people(Downey & Feldman,1996). Someone who has a high level of rejection sensitivity are more likely to expect, perceive and overreact to social rejection than someone who has a low level of rejection sensitivity(Downey & Feldman, 1996). In certain situations, individual with a high level of rejection sensitivity might also perceive a neutral social interaction as some kind of rejection due to hyper-alertness to the social reactions of others(Downey & Feldman, 1996). The high level or rejection sensitivity in an individual can make them difficult to stay in social relationship because they tend to react negatively to social interactions and rejections. Previous research shows significant relationships between rejection sensitivity and a range of psychological difficulties during adulthood covering depression, anxiety and others (Bowker, Thomas, Norman, & Spencer, 2011). However, there is lack research investigating environmental and lifestyle influence of adults to rejection sensitivity level.

While rejection sensitivity can lead to negative consequences on the quality of interpersonal relationship, there may be factors that could ameliorate the negative effect of the rejection sensitivity and emotional recognition may be such a factor. Emotional recognition is described as the ability and capacity in individuals to notice, recognize and accurately identify specific emotions in other human beings through physiological and biological process (Connolly, Lefevreb , Youngc, & Lewisa, 2020). The experience of having and feeling certain emotions is very close to each and everyone's heart as people start to engage with personal emotion beginning from birth (Bornstein , et al., 2012). Research shows that interaction of infants with mothers indicates that babies are able to experience and recognize emotions as they are able to map their mothers' emotions in daily conversations and interactions (Bornstein , et al., 2012). Even in situations when individuals are having brain injury or impairment that is affecting emotional processing, in most cases there are still specific emotion that they are still able to

experience as they are not fully disconnected from certain kinds of emotional exposure (Lamberts, Fasotti, D H E Boelen, J M Spikman, Boelen, & J M, 2017). Thus, emotional recognition in individuals can come in handy to understand personal emotion and other people's emotion. Research shows emotional recognition provides insights to other people's thoughts, beliefs and intentions in which the ability to do so helps humans to maintain good social relationship (Hunnikin & van Goozena, 2019).

Good emotional recognition in individuals provide benefits by accurately understanding people's emotion and allow individual to expect and react to social interaction (Connolly, Lefevreb , Youngc, & Lewisa, 2020). However, people might at times failed to recognize emotions displayed by other people correctly and this situation can spark confusion and misunderstanding between individuals. One of the many instruments that can be used to measure individuals' ability of emotional recognition is CANTAB Emotion Recognition Task. This instrument has been used widely across the world especially in the field of research and clinical setting (Rodriguez-Toscano , et al., 2020). However, there is no normative data within Malaysian population yet for this instrument.

Therefore, the present research will seek to explore the relationship of rejection sensitivity level and emotional recognition of facial expression with depressive symptoms act as a moderator and mediator variable within the adults population in Malaysia. The main reason depressive symptoms is chosen as the moderator and mediator variable is because several previous research found a significant negative relationship between rejection sensitivity level and depressive symptoms (Ehnvall, Mitchell, Hadzi-Pavlovic, Malhi, & Parker, 2009; Kraines & Wells , 2017; Meehan, Cain, Roche, & Panfilis, 2018). In previous research, rejection sensitivity was linked to a relative increase in depressive and anxiety symptoms even when other variables

in research are within the same level (Marston, Hare, & Allen, 2010). Thus, if results show significant relationship between rejection sensitivity level and emotional recognition of facial expression, this research is interested to examine if depressive symptom plays a role in moderating or mediating the relationship between the independent and dependent variable.

1.2 Problem Statement

Firstly, there is a number of rejection sensitivity studies that have been conducted previously but all the studies were conducted in western countries. To this date, there is no rejection sensitivity study that is conducted within Asian population and most specifically within Malaysian populations. Although studies found significant results but results portrayed in previous research might not best represent populations outside of western countries due to cultural, ethnicity and beliefs factor. Western and Asian countries practice different culture and beliefs as their lifestyle. Western countries are known to practice individualistic culture in daily life while Asian countries practice collectivistic culture from day to day.

Secondly, there are several previous research studies that have been conducted on rejection sensitivity and interpersonal relationship. Research studies investigated how individuals' rejection sensitivity level impact their relationship with others. However, there is a lack of studies that have been conducted to examine how rejection sensitivity relates to individuals processing independently. A lot of previous research investigate the relationship of rejection sensitivity and interpersonal relationship. Meanwhile, a failure to accurately identify others' emotion might be a precursor to problematic relationship. Thus, this research aims to investigate the relationship of rejection sensitivity level and emotional recognition in individual

as an effort to study the impact of rejection sensitivity on individual processing on its own without involving interpersonal relationship.

Thirdly, a computerized test named the Emotion Recognition Task is a well-known neuropsychological instrument that is used to measure emotional recognition in individuals. The usage of this instrument is widely used across western countries for the purpose of research and even instruments that aid the process of diagnosing certain disease and disorder in clinical setting. However, as for now, the instrument is not yet tested within populations in Malaysia. The absence of previous research conducted using this instrument within Malaysian population leads to no access of normative data that in a case the instrument is needed in the future.

1.3 Research Objective

1. To examine if there is a difference in rejection sensitivity level between male and female adults who are currently pursuing tertiary education.
2. To examine the relationship of rejection sensitivity level and emotional recognition of facial expression.
3. To examine if depressive symptoms moderate the relationship of rejection sensitivity level and emotional recognition of facial expression.
4. To examine if depressive symptoms mediate the relationship of rejection sensitivity level and emotional recognition in facial expression.

1.4 Research Question

- Is there a difference in rejection sensitivity level between male and female adults who are currently pursuing tertiary education?
- Is there a relationship between rejection sensitivity level and emotional recognition of facial expression?
- Is depressive symptoms affecting the strength of the relationship between rejection sensitivity level and emotional recognition of facial expression?
- Is depressive symptoms causes mediation in emotional recognition of facial expression and rejection sensitivity level?

1.5 Significance of Studies

The significance of the study is to address the cultural gap in previous research studies of rejection sensitivity. As to this date, there is no study conducted within Asian countries as all research were conducted in western countries. A study on rejection sensitivity in Malaysian population might help to understand the differences of rejection sensitivity level between individualistic countries and collectivistic countries as the cultural, beliefs and ethnicity are different in the 2 regions. The results of rejection sensitivity study within Malaysian population might be a source of information for other collectivistic countries to refer to in relation to rejection sensitivity level in individual.

Moreover, this study aims to provide more information on how rejection sensitivity level relates to people's internal processing such as ability to identify human emotion. There are research studies that have been conducted in the past but there is still a lack in the number of

research in this area. A lot more research on rejection sensitivity level aim to examine the relationship or rejection sensitivity level in interpersonal relationship.

Lastly, the significance of this study is to provide a normative data for the CANTAB Emotion Recognition Task within Malaysian population. The computerized test is neuropsychological tool that is widely used in research and clinical setting and even act as a diagnostic instrument of certain disease and disorder. Thus, in a case when the instrument needs to be used for the benefit of Malaysian population in the future, the normative data from this study might act as a data to be referred to for future research and clinical setting.

1.6 Variables Definition

The independent variables of this study are (i) rejection sensitivity level (3 levels: high, moderate and low rejection sensitivity); (ii) gender (2 groups: male, female). The dependent variable of this study is emotional recognition of facial expression. The moderator variable of this study is depressive symptoms. The mediator variable of this study is depressive symptoms.

1.7 Proposed Hypothesis

For Objective 1 (Hypothesis 1):

H0: There is no significant difference in rejection sensitivity level between male and female adults who are still studying in tertiary education.

H1: There is a significant difference in rejection sensitivity level between male and female adults who are still studying in tertiary education.

For Objective 2 (Hypothesis 2):

H0: There is no significant relationship between rejection sensitivity level and emotional recognition of facial expression.

H1: There is a significant relationship between rejection sensitivity level and emotional recognition of facial expression.

For Objective 3 (Hypotheses 3):

H0: The relationship of rejection sensitivity level and emotional recognition of facial expression is not moderated by depressive symptoms.

H1: The relationship of rejection sensitivity level and emotional recognition of facial expression is moderated by depressive symptoms.

For Objective 4 (Hypothesis 4):

H0: The relationship of rejection sensitivity level and emotional recognition of facial expression is not mediated by depressive symptoms.

H1: The relationship of rejection sensitivity level and emotional recognition of facial expression is mediated by depressive symptoms.

CHAPTER 2

LITERATURE REVIEW

This chapter will present a review of literature that aims to provide an overview and summarization of previous research on chosen research variables. The 3 main variables that will be discussed thoroughly in this literature review are rejection sensitivity, depressive symptoms and emotional recognition. This paper introduces each variable by covering multiple aspects starting from defining each variable in depth, fundamental concepts discussed in relation to variable as the topic and findings from previous research studies over recent years. This literature review covers a number of different research articles discussing on different topics in relation to the either rejection sensitivity, depression or emotional recognition that mostly range within the past 10 years.

The critical analyzation of chosen topics in this literature review aim to gather, scope out and compile important concepts, data and scientific findings that can be utilized as solid fundamentals to conduct this research. It is crucial to familiarize, have a sense of perspective and build a deep understanding of specific topics through existing research prior to developing and conducting new ones. The process of identifying relevant work serves a few purpose such as allowing data collection and findings from previous related research which can be use as tools and implicitly provide a sense direction for possible future research.