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Students' anxiety: An examination of the perception of facial threat and perceived paternal and maternal parenting style

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Previous studies found that, young adolescents are very sensitive to the parental behaviours and attitudes directed towards them. This suggests that those who have a negative perception towards their parents might also have a negative emotion and perception towards another person's appearance. The study investigates the relationship between anxiety and threat perception and how it is related to perceived parenting style. A total of 105 school students age between 16 to 19 years old have been recruited to answer a set of questionnaire of parenting style and anxiety. They are also required to identify the facial expression to explore the threat perceptions by looking at images of facial expression in 2 and 3 dimensions. These images are able to be transformed into 5 levels of anger using the *FaceGen Modeller 3.5*. Results demonstrate that (a) anxiety is positively related to perceived father and mother authoritative parenting styles, but negatively related to perceived father and mother permissive parenting styles; (b) perceived threat from anger expression is significantly and uniquely related to perceived parenting styles; and (c) perceived threat from facial emotion, is positively correlated with trait anxiety and no correlation is found with state anxiety. Thus, angry faces are perceived as threatening among students, and play a significant role in students' emotional well-being and students-teacher interaction.

Keywords: Facial threat, facial emotion, paternal parenting style, maternal parental style

Introduction and research background

Many educators are unaware of what anxiety is and how it affects their students. Students with anxiety often have a negative view about their ability and unable to cope with the stressful academic situations. There are many different kinds of anxiety that can be identified among schools' student. Sometimes, anxiety is easy to be identified and sometimes, it is very difficult to identify as anxiety may look like something else. In the school setting, anxiety is defined

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as an excessive student experience and uncontrollable worry about future and past events, excessive concern about performing competently and significant self-consciousness (Cowden, 2009). Research by Eisenberg (2012) indicated that the everyday school experience had given an intense negative emotions such as anxiety and fear of examination and therefore, effect students' emotional state, academic performance and learning (D'Mello & Graesser, 2013; Strain, Azavedo & D'Mello, 2013).

Students projected their feeling of anxiety in many different ways depending on what they are feeling anxious about. If we do not carefully examine the causes of their anxiety, we might treat them with inappropriate way. For example, when students do not go to school, it might look like a truancy problem. What we may not realize is the cause behind the school drop-off. Probably, the school, the teacher or even the parents are the reasons of truancy problem when they are all become the source of anxiety. Based on research by Mokshein, Wong & Ibrahim (2016), among the major factors that cause school drop-off were lack of interest in schooling and parents' attitude. Example from one of the cases, along with multiple factors, at least one of the students reported that her teachers were angry at her and she refused to go to the school. In other cases, when students cannot pay attention and cannot focus on their lesson, look restless or even showing disruptive behaviour, we tend to think that this is an ADHD problem, or learning disorders. What we do not aware of, those students might worry about something and this thinking has overtaken their brain. Foxman (2004) found that anxious students might ask a lot of questions because they are feeling worried and want some assurance from the teacher. For whatever reasons that trigger students 'anxiety, it will give the students a hard time focusing on the lesson and prevent them from effectively participate in class activities because the worried thought has overtaken their brain.

There are countless of studies that have focused on the causes of anxious feeling experienced by students. Anxiety can be caused by different factors such as biological and psychological factors that are intertwined in a complicated ways. Examination, test, pressure of school work, changing school, family problems or parents divorcing can all be difficult events for students and can be a sources of anxiety for them. However, to our knowledge, what does not seem to have been investigated is the influence of parents on students' anxiety, particularly, how parenting style and parents' appearance, particularly the facial expression can be a source of their children's anxiety. Based on previous research (Blossom & Ginsburg et. al, 2013; Creswell et al., 2011; Mofrad, Abdullah & Abu Samah, 2009; Yazdkhasti & Harizuka, 2006; Oldehinkel et. al., 2006), as the first agents of socialization, parents play a key role in the development and identification of anxiety in young adolescents.

Gadeyne, Ghesquiere & Onghena (2004) have suggested that children and young adolescents are very sensitive to the parental behaviours and attitudes directed towards them. Perhaps, the way the parent's threat their children may therefore impact on children and adolescents' emotional state and attitudes towards others. Each parent develops an individual way of interacting and dealing with their child. Parenting styles across different interactional contexts differ from parent to parent (LaBillois, 2003). For example, a research by Blossom, Ginsburg, Birmaher, Walkup, Kendall, Keeton, Langley, Piacentini, Sakolsky and Albano (2013) found that parent and family factors appeared to be the influence on the development and maintenance of threat bias of children's anxiety. Furthermore, research by Reitman and Asseff (2010) had discovered that parental rejection and hostility will increase the anxiety of their children and anxious children were likely to perceive their parents as less accepting or less warmth. However, the mothers have been perceived as more accepting, caring and protective than fathers. This finding had supported by Yazdkhasti & Harizuka (2006) which revealed that children's perceptions of rejection of their parents were found to be a greater predictor of anxiety and are also related to more emotional/ behavioural control problems among high activity arousal children. Whereas, Mofrad, Abdullah & Abu Samah (2009) have

explored the role of perceived parental rearing style in Separation Anxiety Disorder (SAD) and found that the SAD children perceived their mother as being overprotection.

The quality of childhood relationships with their parents will develop a kind of prototype or guide in later social interactions and perceptions of people around them. Any experience and perceptions that are built during the childhood are self-perpetuating and tend to persist into adulthood. For example, research by Paula et al. (2010) has found that the unique association between negative emotionality and reactive aggression (i.e., Depression and anxiety) during 16 years of age has been associated with depression that persists into adulthood. The studies mentioned above, thus far provide evidence that children who are consistently exposed to poor parenting practice will develop a negative perception of their parents and contribute to the development of anxiety in young adults.

We assumed that the anxious students might perceive daily situations in a school setting as threatening to them. Thus, they tend to perceived event, situation, words or even facial expression around them in a negative way. The neutral facial expression is not threatening but may be interpreted by high anxiety students as a sign of threat and danger in the school environment. A lot of previous research has found that anxiety significantly correlated with threat perception. Face perception has long been an interesting field of study with research ambiguous stimuli such as stories, faces, animals or threat related situation. As for this current research, we were focusing on the influence of facial emotional expression as triggers to the anxious feeling among students. For example, Daleiden, Lu & Lu (2007) have evaluated the relationship between threat perception bias and anxiety among children and adolescents age between 9 to 19 years. The finding showed that higher levels of anxiety were related to higher frequencies of threat perception and interpretation, lower thresholds to detect threat and more negative feelings and cognitions. On the other hand, Vaish, Grossmann & Woodward (2008), found that adults can quickly detect stimuli with a negative valence, such as negative words, phrases and facial expressions than positive or neutral valences. Whereas, LoBue (2009) even found that individual with high anxiety, perceived and classified the non-threatening stimuli as negative stimuli.

In more recent studies, Jenness et al. (2014) have investigated whether currently depressed, versus remitted depressed and never depressed youth (age between 7 to 16 years old) demonstrated a general or specific processing bias in their sensitivity to identify emotional expressions and whether they exhibited biased misclassification of particular types of emotion, especially misperceptions of negative emotions. The results demonstrated that currently depressed youth were more likely than remitted and never depressed youth to misclassify happy and sad facial expressions as angry across all morphs levels.

Inspiring by all those evidences, we are predicting that young adults would experience an anxious feeling, especially if they associated with certain conditions specifically style of family discipline and threatening stimuli from ambiguous facial expression. By taking these three constructs into account, we hypothesized that there is a significant correlation between anxiety, perceived parenting style and threat perception, in a way that students with perceived poor parenting style (authoritarian) will positively correlate to anxiety and will readily recognize angry expression than students with perceived authoritative and permissive parenting styles. We also predict that there is a positive correlation between anxiety and threat perception. The additional purpose of this study is to examine the differences between gender in perceiving parents' parenting style and anxiety.

Methodology

The study has been conducted by using experimental methods. The questionnaires were used as measures to obtain data about parenting styles and anxiety. The data were collected from both questionnaires and face perception experiment.

Participants

Participants were selected among students from three different secondary schools in Selangor area. The schools were selected because of the availability of form 4 and form 6 students that are consistent with the study's model background that targeted young adult participants, age between 15 to 19 years old. All subjects were from form four and form six (predominantly 16 and 18 years old) in order to conform to the restrictions imposed by the Ministry of Education regarding involvement of exam year students (which inadvertently excluded Form Three and Five students). We were helped by school teachers and counsellor in choosing a sample, preparing the room for the tests and gathering other information needed for this study.

Measure

All participants completed the demographic questionnaires, Parenting Authority Questionnaire (PAQ J.J Buri, 1991) and State Trait Anxiety Inventory (STAI-state & trait, C. D. Spielberger, 1983). The selected questionnaires were used for a specific purpose. The first instrument that we have used for this study is the Parental Authority Questionnaire (PAQ). It was developed by Buri (1991) and has 30-items consisted of three 10-item scales representing authoritative, authoritarian, and permissive parenting styles. This instrument was originally constructed based on Baumrind's descriptions of the parenting style prototypes and then subjected to multi-disciplinary expert review. It is designed to reflect the three basic parenting styles from a child's point of view (Buri, 1991). The PAQ has a questionnaire pertaining to mothers and an identical one for fathers. Ten items treat each of the three parenting styles and the participants are directed to respond to each item on a 5-point Likert scale (ranging from 1 = *not agree* to 5 = *agree*). Three scores are obtained reflecting the three parenting styles. The original PAQ appeared to have good internal consistency (range D: 74–87) and test-retest reliability ranged from .77 to .92. (Buri, 1988). We have officially received the approval from the original author of PAQ, Dr. J.J. Buri (1991) on January 31, 2012.

The second instrument was the 40-item self-report questionnaire of the State Trait Anxiety Inventory (STAI; Spielberger, 1998) both state and trait version. This questionnaire was used to measure participants' social anxiety level. STAI is a self-report measures that can assess how respondents "feel right now, at this moment" (y1) and how respondents "generally feel" (y2). According to Spielberger (1989), the STAI can also identify the high and low anxiety and has appeared in over 3,000 studies and has been translated into 30 languages (Gros, Antony, Simms, & McCabe, 2007).

Materials for face task

First, we selected 4 faces from previous study consist of 2 male faces and 2 females Malay faces showing neutral expressions of emotion from our previous study. Those photos of real life face showing neutral expressions of emotion were converted into virtual avatars using the "photo fit" application in the FaceGen. FaceGen is 3D face-generating software (<http://facegen.com>). We used this FaceGen Modeller software, version 3.1 because it can generate a large number of stimuli easily and the users are allowed to randomize, normalize,

generate emotional facial expression systematically and adjust certain characteristic such as race, gender, age, eye gaze and head position (Oosterhof & Todorov, 2008). The models are of medium age (25+ years old), bare hair on the external features. We then generated 4 levels of anger from each of the neutral faces using an automated procedure in FaceGen. The morphing degree was adjusted into anger expression and the intensity of emotion was added linearly started with a neutral face at 0% of anger to 25%, 50%, 75% and 100% of anger resulting in 4 morphed images from each neutral face. Thus, there were 8 sets of facial images that had been generated into 40 emotionally angry faces of male and female stimuli (8 faces x 5 level of anger emotion strength). The example of one set of the generated faces is presented in Figure 1. The face stimuli were then presented randomly in the PsychoPy program for the experiment. We presented the facial images for 2000 ms. The facial images were 400 X 400 pixel size and the images were presented in the middle of the screen with a black background.

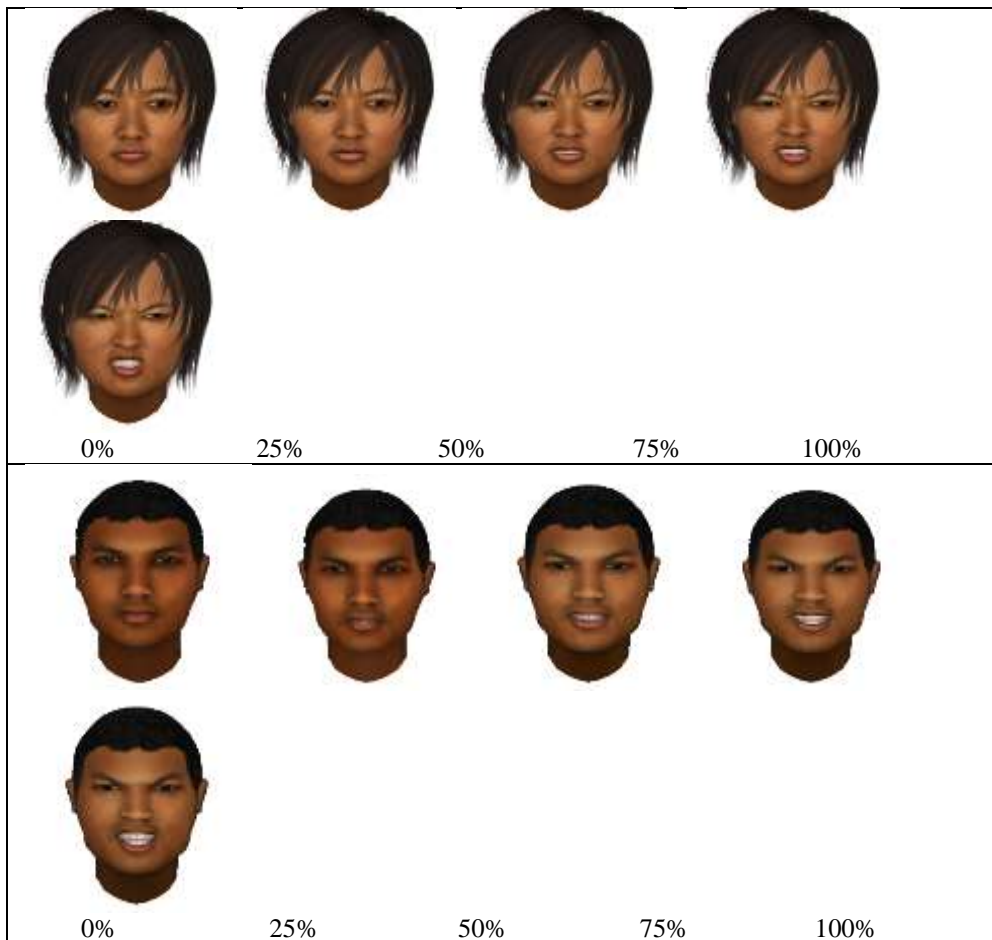


Figure 1. Set of Facial Images of unfamiliar stimuli that have been generated into 5 levels of anger (0%, 25%, 50%, 75% and 100%).

Procedure

The experiment was run using a psychoPy program and was set up on the laptop as it will be easier for us to conduct the experiment in a school setting. The face stimuli were presented

randomly and the measure of the answer is based on the proportions of “yes” responses. The study was approved by the Ethics Committee of University of Nottingham Malaysia Campus and granted permission by the Ministry of Education, Selangor State Department of Education and the respective school principal.

The nature and purpose of the study were explained to participants briefly and how the experiment will be conducted. They were then asked to complete the set of questionnaires consisting of: section 1 = Demographic Questionnaire, section2 = Parental Authority Questionnaire (PAQ), section3 = State-Trait Anxiety Inventory (STAI); and doing the experiment of face perception. Approximately 20 to 30 minutes is needed by the participants to complete the questionnaires. The questionnaires were made available in Malay Language because many of the students are not good in English language.

The facial stimuli task was administered upon completing the questionnaires. Participants were instructed about what they will see on the screen and what they have to do. Participants were presented with images of 40 faces showing facial expressions, one facial image at a time. They were presented with a fixation point (+) for 1000 ms at the centre of the screen, followed by facial image for 2000 ms. After that, the participants were asked if the facial image shows angry emotion or not angry. The task was self-paced where the question remained on the screen until the participant’s response. Participants responded by pressing the “Z” key on the keyboard which was labelled “yes” if the answer is angry and “M” key which was labelled “No” if the answer is not angry. The order of the trials was randomized for each participant. Participants were instructed to press the “yes” key or the “no” key as quickly as possible while still being accurate. RTs were recorded automatically by the computer. The average time needed to complete the task is less than 20 minutes. All the instruction given to the participants was in Malay language.

Data analysis

The Analysis was conducted using the Statistical Package for Social Sciences version 21 (SPSSv21). Initial analyses examining the relations between demographic variables and the student's self-reported anxiety included an independent t - test for categorical variables. Pearson correlation was used to explore the relations between each variable. For the face experiment, we used a standard visual search procedure in which the accuracy in identifying emotional expressions had been measured based on the proportion of 'yes' responses when the participant chooses the target emotions per level of morphs. In order to examine whether there is differences between the mean scores of identifying angry expression from five levels of anger expressions, a one-way within-group ANOVA was computed.

Results

Preliminary analysis

Table 1 displays the descriptive analysis of participants in terms of their number and percentage of race and gender and the mean and standard deviation of age of the participants.

Table 1. Number and standard deviation of race, age and gender

	Number	Percentage
Race		
Chinese	17	16.2%
Malay	75	71.4%
India	10	9.52%
Others	3	2.86%
Gender		
Female	61	58.1%
Male	44	41.9%
Age		
	Mean	SD
	17.51	1.44

Table 2 displays the mean scores and standard deviation of father and mother parenting styles and anxiety. Overall, most students have perceived their father as being authoritative (M=32.07, SD=5.82) as compared to authoritarian and permissive. However, the mother has been perceived as more permissive (M=33.35, SD=6.77) as compared to authoritative and authoritarian.

Table 2. Descriptive statistics for the mean and standard deviation of parenting styles anxiety questionnaire measures.

Perceived Parenting Styles	M	SD	Minimum (Lower limit)	Maximum (Upper limit)
Father Authoritarian	28.56	5.14	27 (20)	68 (80)
Father Authoritative	32.07	5.82	1 (0)	32 (63)
Father permissive	31.97	6.02	20 (20)	63 (80)
Mother Authoritarian	29.00	5.89	20 (20)	70 (80)
Mother Authoritative	32.04	5.53	21 (21)	61 (84)
Mother permissive	33.35	6.77	23 (21)	76 (84)
Stai-Trait	43.42	11.18	20 (20)	75 (80)
Stai-State	44.78	9.25	21 (20)	72 (80)

Primary analysis

Our main objective is to investigate the relationship between anxiety, parenting style and threat perception among Malaysian adolescent students. Prior to the correlation analysis, we first examine the effect of morph levels of the face stimuli by conducting a one-way within-group ANOVA.

Emotion recognition task

In order to examine whether the five morph levels of anger can be a potential tool to facilitate students in making judgment to identify threatening stimuli, we have a one-way within-group ANOVA was computed. There was a statistically significant difference between the score of identifying angry faces across five morph levels of angry expression, Wilks' Lambda=. 088, $F(4,101) = 262.07, p < .001$.

Since we have found a significant result for overall differences, we then computed additional paired samples t-tests to make post hoc comparisons between each level. A first paired samples t-test indicated that there was a significant difference in the scores for neutral ($M=.89$, $SD=1.37$) and 25% ($M=1.45$, $SD=1.36$) morph levels; $t(104) = -4.210$, $p < .001$. A second paired samples t-test indicated that there was a significant difference in the scores for 25% and 50% ($M=2.67$, $SD=1.35$) morph levels; $t(104) = -7.212$, $p < .001$. A third paired samples t-test indicated that there was no significant difference in the scores for 50% and 75% ($M=4.78$, $SD=1.45$) morph levels; $t(104) = -13.050$, $p > .001$ and finally, a fourth Paired Samples T-Test indicated that there was a significant difference in the scores for 75% and 100% ($M=6.23$, $SD=1.39$) morph levels; $t(104) = -8.764$, $p < .001$. Therefore, these stimuli have been showing a strong effect of all morphs levels an applicable to predict the differences in perceived threat.

Correlation between trait-state anxiety and perceived parenting styles

There was a positive, statistically significant relationship between STAI_trait anxiety scores with the father $r(103) = .198^*$, $p = .05$ and mother $r(103) = .245^*$, $p = .05$ (figure 5) of authoritative parenting styles, and also a negative, statistically significant relationship between STAI_trait anxiety scores with the father $r(103) = -.257^{**}$, $p = .01$ and mother $r(103) = -.307^{**}$, $p = .01$ (figure 5) of permissive parenting style scores. However, the correlation between STAI_trait anxiety scores with the father and mother of authoritarian parenting styles were not found. There were also no correlation between STAI-state anxiety scores with both father and mother of all types of parenting styles.

Correlation between threat perception and perceived parenting styles

There was a positive, statistically significant relationship between father authoritative $r(103) = .232^*$, $p = 0.05$ and anger perception. Meanwhile, the relationship between father permissive $r(103) = -.317^{**}$, $p = 0.01$ and mother permissive $r(103) = -.299^{**}$, $p = 0.01$ were found to be negatively correlated with anger perception. When the scores of anger perception were separated into five levels of anger, there was no correlation found of father authoritative at the all levels of anger, and there is a weak correlation between father authoritarian and 100% of anger expression $r(103) = .205^*$, $p = 0.05$. However, there were negative correlation between permissive father in neutral expression $r(103) = -.264^{**}$, $p = 0.01$, 25% of anger expression $r(103) = -.274^{**}$, $p = 0.01$ and 100% of anger expression $r(103) = -.233^*$, $p = 0.05$. The same pattern was also found in maternal parenting styles in which no correlation at all was found in authoritarian and authoritative parenting styles of all morph levels and there was a significant negative correlation found in neutral expression $r(103) = -.267^{**}$, $p = 0.01$, 25% of anger expression $r(103) = -.302^{**}$, $p = 0.01$ and 100% of anger expression $r(103) = -.366^{**}$, $p = 0.001$. The results indicated that students who perceived their father and mother as being permissive were more accurately discriminate anger expression when the face image were at neutral, 25% and 100% of anger expression.

Correlation between anxiety and threat perception

The result from analysis of the relationship between anxiety and threat perception demonstrated that there was a positive, statistically significant relationship between STAI_trait anxiety scores and the total scores of anger perception $r(103) = .279^{**}$, $p = 0.01$ (figure 5) and there no correlation between STAI_state anxiety scores and anger perception. When the scores of anger perception were separated into five levels of anger, the correlation

was found in the 0% of anger $r(103) = .194^*$, $p=0.05$, 25% of anger $r(103) = .193^*$, $p=0.05$ and 100% of anger $r(103) = .387^{**}$, $p=0.01$. No correlation was found at 50% and 75% of anger. The results indicated that students with STAI_trait anxiety were more accurately discriminate anger expression when the face image were at neutral expression and when the face images were morph into 25% and 100% of anger expression.

Table 3. Correlation between anxiety, perceived parenting style and threat perception

Parenting Style	Trait Anxiety	State Anxiety	Threat Perception
Father Authoritarian	.140	.028	.181
Father Authoritative	.198*	-.131	.236*
Father Permissive	-.257**	.141	-.314**
Mother Authoritarian	.080	-.154	.173
Mother Authoritative	.245*	.115	.126
Mother Permissive	-.307**	.036	-.286**

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

* Correlation is significant at the 0.05 level (two tailed)

Gender differences in regards to anxiety, parenting styles and threat perception

The significant gender differences were found in state anxiety $t(103) = .111$, $p<0.05$, in which female showed more anxiety ($M=46.8$, $SD=9.2$) as compared to male ($M=41.9$, $SD=8.6$), but gender differences were not found in trait anxiety $t(103) = .023$, $p=0.511$. In terms of parenting styles, only authoritarian parenting styles indicated gender differences for both paternal $t(103)=.846$, $p<0.05$, and maternal $t(103)=.049$, $p=0.05$ parenting styles. Whereas, there were no gender differences between male ($M=14.4$, $SD=4.3$) and female ($M=16.9$, $SD=3.8$) in regard to threat perception $t(103) = -1.884$, $p<0.05$.

Discussion

The primary goal of this study was to establish a predictive pathway to anxiety through parenting style and threat perception. Specifically, we have explored the association between Parenting style (Permissive, Authoritarian, and Authoritative), threat perception (Angry) and Anxiety (Trait anxiety, State anxiety).

The first hypothesis had predicted that students with poor parenting tend to show more anxiety than students whose parents display good parenting practice as many studies have supported the assumption. For examples, Markosian (1997) found that authoritarian parents seem to have children with higher and more clinical level of anxiety. On the other hand, there were studies showed that parents with authoritative styles were associated with positive outcomes such as the study by Gracia & Gracia (2009), Baumrind (1991), Nyarko (2011) and Grusec & Goodnow (1994); Pomerantz, Grolnick, & Price (2005) in Wentzel & Russell (2003).

However, a significant correlation was found between Authoritative parenting style with both state and trait anxiety. On the other hands, the authoritarian parenting style that has relatively perceived as a poor parenting style do not correlated with any of the anxiety subscales. The result could be explained by a study by Keshavarz and Baharudin (2009) which stated that authoritarian parenting styles are endorsed by the child and society as a large and locally accepted due to the nature of Malaysia as a collectivist country. Here, the children are

taught to obey their parents, behave in a socially accepted manner. We have also found a significant negative correlation between permissive parenting of father and mother parenting. Our findings had supported by many other previous studies, where parents with permissive styles were usually associated with positive outcomes, such as the study by Gracia & Gracia (2009), Baumrind (1991), Nyarko (2011); Pomerantz, Grolnick, & Price (2005) in Wentzel & Russell (2003).

The pattern is about the same between the identification of anger expression and the perceived parenting styles in which the threat perception has indicated a significant positive correlation with father authoritative, while there is a negative relationship between identification of anger expression with father permissive and mother permissive. As regards to the second hypothesis, we have predicted that there is high possibility that authoritarian parenting style correlated to the threat perception, as authoritarian was relatively assumed as poor parenting style. This is based on previous research done by several researchers that shows authoritarian parents correlated with negative outcomes (Martinez et al., 2007; Garcia & Gracia, 2009). However, to the best of our knowledge, there is no evidence from previous study that can have examine the perceived parenting style in relation to the sensitivity of facial cues from different levels anger expression. Nevertheless, this recent finding has confirmed the hypothesis 2 with the assumption that any ambiguous emotions reflected in the face of parents might indicate a direct threat to their children. The finding could explain based on study by Thomas et al (2007) that used morphing software to show the participants gradations of the emotions, it was found that adults were significantly better than both children and adolescents at detecting a facial expression of anger from neutral to angry morphs, neutral to fearful and fearful to angry morphs. Employing a different approach, Roy (2011) who had used the dynamic and static facial image as stimuli showed that trait anxiety is associated with performance and differential use of information.

The third hypotheses have investigated whether the threat perception can influence the anxious feelings among the children. The result showed that there was a positive, statistically significant relationship between STAI_trait anxiety scores and the total scores of anger perception and there were no correlation between STAI_state anxiety scores and anger perception. In more detail analysis, the results showed the correlation between anxiety and threat perception at the 0%, 25% and 100% of anger expression, but not at 50% and 75% of anger expression. The results indicated that students with STAI_trait anxiety were more accurately discriminate anger expression when the face image were at neutral expression and when the face images were morph into 25% and 100% of anger expression. These results were contradicted to previous studies by Schofield, Coles, & Gibb (2007) who explained that anxiety doesn't have any impact on the detection of negative facial expressions and a study by Philippot & Douilliez (2005) who added that anxiety are also not biases in evaluating facial expressions more negatively. Nevertheless, the results at least indicated that the anxious adolescent students were more likely to perceived threat from anger expression faces at the extreme end of the scale (neutral, 25% and 100% of anger expression) at least in Malaysia context.

Limitation

There are few limitations in our study that warrant mention. We also realized that this area of research would benefit from a more detailed look at the use of questionnaires of parenting style and anxiety and its influence on the recognition of emotional stimuli. It is important to note that, this study merely relied on the students' self-report measure. Thus, the students' perception toward their parents' parenting behaviours may not accurate and consistent with their parents' actual behaviour because it has been influenced by their own beliefs (Ang, 2006).

Moreover, the original PAQ scale that has been used in Western Countries was administered among the children, particularly children from preschool or kindergarten as well as young adolescents. Due to the children's inability to respond to the questionnaire, the author of PAQ has measured the parenting style from the children's mother or father's perception. Whereas, in this current study, we selected participants among students from secondary school in Malaysia, in which they have self-reported their perception based on their past experience with their parents. So, there may be some measurement variance between the participants from the two different backgrounds who may have interpreted the scale items and latent constructs differently.

The second limitation is that, this current study has developed a set of stimuli that have portrayed the face images which might be look unrealistic, especially when we have morphed into the emotion of anger up to 75% and 100% level of anger. The artificial look of the anger expression is found particularly in the mouth, teeth and lip area.

Additionally, we only studied one negative emotional expression, namely, angry. It remains to be seen whether other negative expressions, such as fear or sadness might yield a similar effect on threat perception. The studies that addressed this issue are actually found that social phobic participants needed less intensity to identify angry than sad expressions (Joormann & Gotlib, 2006). In relation to fear expression, anxious individuals (Roy, 2011) and high-trait anxiety participants (Surcinelli, et al., 2006) are better at recognizing negative emotions, especially fear and not anger. Similarly, Cooper, Rowe & Penton-Voak (2008) have found that participants' trait anxiety does not influence the perception of fear. Results showed that participants with anxiety recognized fear face significantly better than other facial expressions.

Future research

Due to the mentioned limitation, future studies should therefore try to:

- a) Examine the parents' parenting style by getting the data from both the students and the parents themselves.
- b) Use different software that could have a better mechanism to generate a more realistic facial expression.
- c) Include other negative emotional facial expression in comparison to the angry facial expression. By taking into account other negative facial expression, the question that whether misperceptions of negative facial expression are specific to only anger expression or it might be also found in other negative facial expressions such as fear, sadness, surprise or disgust.

Conclusion

This study is crucial to our understanding about how parents could also be a source of threat and anxious feeling of their children. Finding of parenting style in Malaysia context allows us to reconstruct our own notions about how to interpret the data in terms of culturally driven ideas about parenting. The unexpected findings are such new information which might highly useful that warrants further investigation in the next project. Overall, this present findings illustrated that there are few things need to be reviewed in terms of the instruments used (PAQ and STAI) and the combination between the survey and experimental research method.

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