

# Mediating Effect of Perceived Social Support in the Relationship Between Resilience and Self-Esteem Among Parents of Children with Autism Spectrum Disorder

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**Abstract**— Literatures suggested that self-esteem is an imperative factor of a successful parenting. However, parents of children with autism spectrum disorder (ASD) tend to develop lower self-esteem, despite showing averagely higher resilience compared to other parents. To gain a deeper understanding on the relationship between self-esteem and resilience, this study aimed to investigate whether perceived social support mediates the association of resilience and self-esteem among parents of children with ASD. One hundred and fifty-three (153) parents from a state in Malaysia were chosen through purposive sampling as participants in this study to provide their responses in three questionnaires, namely Connor–Davidson Resilience Scale, Two-Dimensional Model of Self-Esteem Scale, and Multidimensional Scale of Perceived Social Support. The results of multiple regression suggested that perceived social support partially mediates the link between resilience and self-esteem. Furthermore, the findings also suggested that perceived social support is predicted by the participants' resilience, instead of predicting it. It was also indicated that self-worth dimension of self-esteem received stronger contribution from both resilience and perceived social support when compared to the self-competence dimension. In conclusion, findings of this study indicated that perceived social support partially explained the link between resilience and self-esteem, hence suggested other factors might contribute to the self-esteem of the PCA apart from resilience and perceived social supports.

**Keywords:** *perceived social support, resilience, self-esteem, autism spectrum*

## I. INTRODUCTION

Parents of children with autism (PCA) face significantly higher adversity than other parents [1]. PCA were reported to have high levels of anxiety [2] due to the daily adversity in parenting children with Autism Syndrome Disorders (ASD), including daily stress, financial struggle, and the child's functionality[3][4]. As the child grows older, unexpectedness of what coming next puts the PCA into more challenging life[5]. Stressful challenges such as the child's poor expression of affections, little interest in people, and younger sibling contributed to increased stress levels, up to the point where they need professional help [6]

The challenges in the daily lives of PCA might negatively contribute to their psychological well-being,

especially on how they value themselves, or also known as self-esteem. Self-esteem, along with optimism, is considered an important factor of happiness among Asians [7][8]. Therefore, inadequate level of self-esteem among PCA might also mean that they live with lack of happiness and optimism as well as closer to a depressed state of mind. The importance of self-esteem indicated the prevalence of resilience, which, for the purpose of this current study, defined as a person's capacity to rebound from difficult conditions[9], that positively correlates with self-esteem[10].

More adequate level of self-esteem helps PCA to perform better in parenting and social life, while PCA with inadequate self-esteem tend to believe that they are less accepted by the society for having children with ASD [11][12][13]. Furthermore, many studies have shown that inadequate self-esteem is related to psychopathology, including anxiety, depression and eating pathology [14][15] which when they happen, not only will they jeopardize their children, but also their marriage, jobs, financial situation, and life in general. In other words, PCA's self-esteem is a significant attribute to concern about, because PCA with positive self-esteem would likely to be motivated to strive for higher parenting achievements, and in return, higher parenting achievements would likely to boost their self-esteem.

Ferkany in 2008 argues that self-esteem is important as motivation that individuals need in order to be successful in general [16]; however, parenting children with ASD can be devastating to self-esteem due to the children's expression to social environment which tend to draw less positive reaction from other adults [12]. However, such condition has been reported to be more likely to develop resilience when compared to parents without ASD children [17]; some studies have reported that individuals who have thrived on adversity were reported to develop resilience[18]. Therefore, resilience is an important factor among PCA due to its capability to affect their self-esteem in a positive way.

It is suggested that resilience levels among PCA are averagely higher than parents of children without ASD, because they have to face daily difficult conditions with increasing intensity[9]. Resilience has also been known as coping behavior in facing adversity, because individual with

higher resilience can even face near death moment with significantly less stress and anxiety. [19] In the context of PCA, resilience plays the role as a coping mechanism to their daily stress and adversity in raising their children with ASD.

Resilience refers to the human capacity to adapt, thrive, and to maintain relatively stable, healthy levels of psychological functioning in response to potentially traumatic or challenging situation [20]. Resilience is also one of the dominant factors which develop positive self-appraisal [21]. In the context of this current study, there is no appalling single major event included; instead it is the ongoing pressure of raising children with ASD. Individuals who faced prejudice-based sanction would find difficulties to exemplify oneself, because their self-concept continually rejected by the society[22]; PCA are discriminated and socially segregated due to the way the society apprehends their child with ASD (for instance as being ‘annoyingly noisy’, ‘naughty’, or ‘do not belong here’). Such discrimination might lead to inadequate self-esteem and failure to parent their ASD children without having tendency to blame the society.

One of the factors that might explain the resilience among PCA and its contribution to self-esteem is the presence of social support[9], and this statement is supported by studies in different contexts, for instance, social support is considered as a factor that increases family resilience in a study among foster families in Spain[23]. Social support has also contributed to the resilience among people living with HIV in the United States [24]. While it is evident that the existence of an accessible social support helps PCA to survive another day, it takes certain level of resilience to seek and to perceive the support [20][21]. In other words, PCA needs to be resilient enough to perceive the availability of the social support.

Social support is composed of both comprehensive and complex processes; it also differs depending on who provides the support, what support is being provided, the situation through which support is provided, as well as features and psychological characteristic of the providers and recipients of support [25]. Social support can be obtained through a network of social relationship[26]. One of the intrinsic worth of social support lies in its ability to prevent one from getting negative effect from stressful situations[27]; it also moderates the pressures of life and disease, also protect individuals from psychological stress [28][29]. In general, the existence of the support from significant others will protect PCA from the negative effect of having children with ASD.

Numerous private non-profit organizations in Malaysia have been established to deliver a range of support for PCA and their children[30]. Most of them aim to help younger children towards a possible transition to normal stream education while teaching them to acquire basic life skills such as food preparation, laundry, housekeeping services, sewing, handcrafts, data entry services and card making. A

study in Malaysian context by Roffi et al. (2015) examined types of social support messages exchanged between parents and/or caregivers of children with ASD who communicate via Facebook; it studied two autism support groups: Autism Malaysia (AM) and Autism Children Club (ACA) [31]. They reported that the highest percentage of messages offered dealt with Informational support (30.7%) followed by Emotional support (27.8%). Network and Esteem support messages were responsible for 20.97% and 20.2%, respectively. Tangible Assistance was the least frequent category (0.4%). A majority of these messages discussed and addressed challenges and difficulties associated with caring and raising children with ASD, as well as issues such as children’s social lives and self-care routines. It indicated that the PCA had developed enough resilience to seek for information support rather than emotional support.

A. Hypothetical Model

In order to test the hypotheses, this study started by investigating how resilience predicts the self-esteem, how resilience predicts the perceived social support, how perceived social support predicts the self-esteem levels, and how the perceived social supports mediates the influence of resilience on self-esteem adequacy.

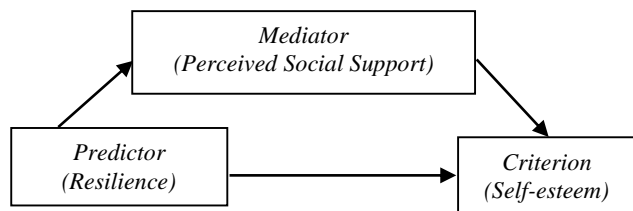


Fig1. The conceptual framework of this study

II. METHOD

Data were obtained from 153 of PCA in Kuala Lumpur, Malaysia. These participants were registered under NASOM, who has been supporting this current study all along. The data collection was conducted during a member gathering of NASOM, and the PCA were given about 30 minutes to fulfill the entire questionnaires. This current study adopted the Connor–Davidson Resilience Scale (CD-RISC-25) [32] in order to measure the level of resilience. The CD-RISC has been used by several studies to assess the levels of resilience of individuals [32][33]. Self-esteem of the PCA was measured by the Two-dimensional model self-esteem scale (2DMSS) by Mruk (2006) [22]. This scale was chosen because of its ability to identify the self-esteem style of the PCA which can be observed instead of just their levels. Multidimensional Scale of Perceived Social Support (MSPSS) [34] was utilized to measure the perceived social support among the PCA. The internal consistency of CD-RISC25, 2DMSS and MSPSS are .762, .751, and .832 respectively.

III. RESULT

Table 1 indicates that the average score of resilience among PCA was considered high at 92.52 over 100, it could also be perceived that they receive high social support,

because their average score of PSS was at 47.51 over 60 (or equal to 79%). Their self-esteem types were considered worthiness-based self-esteem[22], because their average self-worth dimension was higher at 32.02 over 48 (or equal to 67%) than their average self-competence dimension, which was 26.72 over 48 (or equal to 56%). In other words, their above average self-esteem was 58.74 over 96 (or equal to 61%) which consisted more of the feeling of being liked instead of being competent.

TABLE I. LEVELS OF EACH MEASURED VARIABLES AMONG THE PCA PARTICIPANTS

Variable	Average Score	Maximum Score	Percentage (%)
Resilience	92.52	100	0.93
Perceived social support	47.51	60	0.79
Self-competence dimension of self-esteem	26.72	48	0.56
Self-worth dimension of self-esteem	32.02	48	0.67
Self-esteem	58.74	96	0.61

Tables 2 to 4 show that resilience has significant positive contribution on self-competence dimension of the participants' self-esteem [F(1,151)= 34.902, p<.001]. One-point increment of resilience predicted 0.43 points increase of participants' self-competence ( $\beta = .433$ ), and such prediction occurred to 18.2% of the population (Adjusted R<sup>2</sup>= .182). In other words, when their resilience is higher, the more the participants believe that they are competent in being a parent of children with autism.

TABLE II. MODEL SUMMARY OF RESILIENCE ON SELF-COMPETENCE

Model	R	R Square	Adjusted R Square	Std of the Estimate
1	.433 <sup>a</sup>	.188	.182	3.97605

a. Predictors: (Constant), RESILIENCE  
b. Dependent Variable: SELF-COMPETENCE

TABLE III. ANOVA OF RESILIENCE ON SELF-COMPETENCE

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	551.762	1	551.762	34.902	.000b
	Residual	2387.153	151	15.809		
	Total	2938.915	152			

a. Predictors: (Constant), RESILIENCE  
b. Dependent Variable: SELF-COMPETENCE

TABLE IV. . REGRESSION COEFFICIENT OF RESILIENCE ON SELF-COMPETENCE

Model	Unstandardized Coefficients		Standardized coefficients		t	Sig.
	B	Std. Error	Beta			
1	(Constant)	14.446	2.102		6.872	.000
	RES	.133	.022	.433	5.908	.000

a. Dependent Variable: SELF-COMPETENCE

The next analysis was conducted in order to test whether resilience predicts the self-worthiness dimension of the self-esteem. Tables 5 to 7 suggest that resilience has significant positive prediction on self-worthiness the participants [F(1,151)= 67.730, p<.001]. One-point increase of resilience predicted 0.56 points increase of participants' self-competence ( $\beta = .556$ ), and the prediction occurs to 30.5% of the population (Adjusted R<sup>2</sup>= .305). In other words, when their resilience is higher, the more the PCA believe that they are likeable, or positively acknowledged by their social environment.

TABLE V. MODEL SUMMARY OF RESILIENCE AND SELF-WORTH

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.556 <sup>a</sup>	.310	.305	5.53825

a. Predictors: (Constant), RESILIENCE  
b. Dependent Variable: SELF-WORTH

TABLE VI. ANOVA OF RESILIENCE AND SELF-WORTH

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	2077.435	1	2077.435	67.730	.000b
	Residual	4631.506	151	30.672		
	Total	6708.941	152			

a. Predictors: (Constant), RESILIENCE  
b. Dependent Variable: SELF-WORTH

TABLE VII. COEFFICIENT OF RESILIENCE AND SELF-WORTH

Model	Unstandardized Coefficients		Standardized coefficients		t	Sig.
	B	Std. Error	Beta			
1	(Constant)	8.205	2.928		2.802	.006
	RES	.257	.031	.556	8.230	.000

a. Predictors: (Constant), RESILIENCE  
b. Dependent Variable: SELF-WORTH

Tables 8 to 10 indicates that resilience had significant positive prediction towards the general self-esteem of the participants [F(1,151)= 76.967, p<.001]. An increment of resilience point predicted 0.58 points increase of participants' self-esteem ( $\beta = .581$ ), and the contribution happened to 33% of the population (Adjusted R<sup>2</sup>= .333). In other words, when their resilience is higher, the more the PCA develop positive attitude towards them-selves.

The series of analyses shows that resilience positively and significantly contributed to self-esteem of the participants. In other words, the first null hypothesis, there is no significant influence of resilience on self-esteem among PCA, is rejected. Another implication of this finding is that the first condition of mediation relationship among the three studied variables, the predictor should contribute to the mediator (path a) was achieved. This context will be discussed further in the next chapter of this study.

TABLE VIII. MODEL SUMMARY OF RESILIENCE AND SELF-ESTEEM

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.581 <sup>a</sup>	.338	.333	7.87278

TABLE IX. ANOVA OF RESILIENCE AND SELF-ESTEEM

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	4770.459	1	4770.459	76.967	.000 <sup>b</sup>
	Residual	9359.084	151	61.981		
	Total	14129.542	152			

a. Predictors: (Constant), RESILIENCE  
 b. Dependent Variable: SELF-ESTEEM

TABLE X. REGRESSION COEFFICIENT OF RESILIENCE AND SELF-ESTEEM

Model		Unstandardized Coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	22.650	4.162		5.442	.000
	RES	.390	.044	.581	8.773	.000

a. Dependent Variable: SELF-ESTEEM

**A. Prediction of resilience on perceived social supports among PCA**

As shown in the Tables 11 to 13, resilience significantly contributed to the increment of the participants' PSS [F(1,151)= 47.776, p<.001]. The  $\beta = .490$  indicated that one-point increment of resilience might explain the 0.49 points increase of PSS, while the adjusted  $R^2 = .235$  indicated that resilience can explain 23.5% of the changes in PSS. It can also be said that the higher the resilience of a PCA, the more he or she feels supported by the society. Therefore, the second null hypothesis that resilience does not predict PSS is rejected, and at the same time, the second condition of mediation by Baron and Kenny (1986) [35] that the predictor should contribute to the mediator is fulfilled.

TABLE XI. MODEL SUMMARY OF RESILIENCE AND PSS

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.490 <sup>a</sup>	.240	.235	6.11803

a. Predictors: (Constant), RESILIENCE  
 b. Dependent Variable: PSS

TABLE XII. ANOVA OF RESILIENCE AND PSS

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	1788.264	1	1788.264	47.776	.000 <sup>b</sup>
	Residual	5651.971	151	37.430		
	Total	7440.235	152			

a. Predictors: (Constant), RESILIENCE  
 b. Dependent Variable: Perceived Social Support

TABLE XIII. REGRESSION COEFFICIENT OF RESILIENCE AND PSS

Model		Unstandardized Coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	25.414	3.235		7.857	.000
	PSS	.239	.035	.490	6.912	.000

a. Dependent Variable: PSS Perceived Social Support

**B. Prediction of perceived social supports on self-esteem among PCA**

Table 14, 15, and 16 show the results of the hypothesis testing of whether PSS contributes to self-competence of the participants. As shown in the Tables 14 to 16, One-point increment of PSS predicted 0.23 points increase of participants' self-competence ( $\beta = .228$ ), and it explained 4.6% of the increment of self-competence of the participants (Adjusted  $R^2 = .046$ ), and PSS significantly predicted the self-competence dimension of the participants' self-esteem [F(1,151)= 8.276, p=.005].

TABLE XIV. MODEL SUMMARY OF PSS AND SELF-COMPETENCE

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.228 <sup>a</sup>	.052	.046	4.29554

a. Predictors: (Constant), PSS  
 b. Dependent Variable: SELF-COMPETENCE

TABLE XV. ANOVA OF PERCEIVED SOCIAL SUPPORT AND SELF-COMPETENCE

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	152.709	1	152.709	8.276	.005 <sup>b</sup>
	Residual	2786.206	151	18.452		
	Total	2938.915	152			

a. Predictors: (Constant), PSS Perceived Social Support  
 b. Dependent Variable: SELF-COMPETENCE

TABLE XVI. REGRESSION COEFFICIENT OF PSS AND SELF-COMPETENCE

Model		Unstandardized Coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.912	2.391		8.327	.000
	PSS	.143	.050	.228	2.877	.005

a. Dependent Variable: SELF-COMPETENCE

The next subsection is about test whether PSS predicts the self-worthiness dimension of the self-esteem. As suggested by Tables 17 to 19, PSS significantly contributed to the increment of the participants' self-esteem [F(1,151)=19.892, p<.001]. One-point increment of PSS predicted 0.56 points increase of participants' self-worth dimension of self-esteem ( $\beta = .556$ ), and 11% of the increment of self-worth of the

participants could be explained by the predictor (Adjusted  $R^2=.111$ ). In other words, the participants' perception that they are socially supported, significantly give them a feeling that they are worthy and liked.

TABLE XVII. MODEL SUMMARY OF PSS AND SELF-WORTH

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.341a	.116	.111	6.26564

Predictors: (Constant), PSS Perceived Social Support

TABLE XVIII. ANOVA OF PSS AND SELF-WORTH

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	780.939	1	780.939	19.892	.000 <sup>b</sup>
	Residual	5928.002	151	39.258		
	Total	6708.941	152			

a. Predictors: (Constant), PSS Perceived Social Support

b. Dependent Variable: SELF-WORTH

TABLE XIX. REGRESSION COEFFICIENT OF PSS AND SELF-WORTH

Model		Unstandardized Coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.205	2.928		2.802	.006
	PSS	.257	.031	.556	8.230	.000

a. Dependent Variable: SELF-WORTH

The next subsection is about the test whether PSS predicts the general self-esteem. As depicted in Table 20, 21, and 22, PSS significantly contributed to general self-esteem of the participants [ $F(1,151)= 19.611, p<.001$ ]. One-point increment of PSS could explain 0.64 points increase of participants' self-esteem ( $\beta= .641$ ) among 11.2% of the population (Adjusted  $R^2=.112$ ). In other words, PCA tend to evaluate them-selves more positively when they feel they are supported by their society.

TABLE XX. MODEL SUMMARY OF PSS AND SELF-ESTEEM

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.339a	.115	.112	7.57278

TABLE XXI. ANOVA OF PSS AND SELF-ESTEEM

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4770.459	1	4770.459	19.611	.000 <sup>b</sup>
	Residual	9359.084	151	61.981		
	Total	14129.542	152			

a. Predictors: (Constant), PSS Perceived Social Support

b. Dependent Variable: SELF-ESTEEM

TABLE XXII. REGRESSION COEFFICIENT OF PSS AND SELF-ESTEEM

Model		Unstandardized Coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	22.650	4.162		5.442	.000
	RES	.390	.044	.641	8.773	.000

a. Dependent Variable: SELF-ESTEEM

The aforementioned results suggested that PSS predicted the general self-esteem among PCA significantly and positively. It can be summarized that despite the perception of being supported provides PCA with the belief that they are competent enough, led them to feel accepted, liked, and evaluated positively.

Because the results suggested significant positive contribution of PSS on general self-esteem, the third null hypothesis that PSS does not predict general self-esteem is rejected. Therefore, the third condition of mediation by Baron and Kenny (1986) [35], that the mediator should be linked to the criterion is fulfilled.

C. Mediation Analyses

Analyses of the mediation hypothesis testing is presented in this section. As reported in the previous subsections, the first three conditions of mediation have been fulfilled, the last condition to be tested is whether there is a change in the significance (p value) and regression coefficient ( $\beta$  value) of the predictor when controlling for the mediator[35]. The following Table 23, 24, and 25 depict the mediation role of PSS on the link between resilience and all dimension and model of the self-esteem.

TABLE XXIII. ANOVA OF THE REGRESSION BETWEEN RESILIENCE AS A MODEL AND WHEN CONTROLLING PSS ON SELF-COMPETENCE

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	551.762	1	551.762	34.902	.000 <sup>b</sup>
	Residual	2387.153	151	15.809		
	Total	2938.915	152			
2	Regression	552.695	2	276.347	17.371	.000 <sup>c</sup>
	Residual	2386.220	150	15.908		
	Total	2938.915	152			

a. Predictors: (Constant), RESILIENCE

b. Predictors: (Constant), RESILIENCE, PSS Perceived Social Support

c. Dependent Variable: SELF-COMPETENCE

TABLE XXIV. COEFFICIENT OF THE REGRESSION BETWEEN RESILIENCE AS A MODEL AND WHEN CONTROLLING PSS ON SELF-COMPETENCE

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14.446	2.102		6.872	.000
	RES	.133	.022	.433	5.908	.000
2	(Constant)	14.119	2.503		5.641	.000
	RES	.130	.026	.423	5.014	.000
	PSS	.013	.053	.020	.242	.809

a. Dependent Variable: SELF-COMPETENCE

Table 23 and 24 indicates the difference between model of resilience (mixed of resilience and PSS) and resilience when controlling for PSS (or can be said as resilience alone) in terms of regression coefficient. One-point increment of model of resilience significantly affected 0.43 increment of self-competence ( $\beta=.433$ ), yet when controlling for PSS, its  $\beta$  value changed into .423. However, the contribution of resilience on self-competence was still significant in both equations, which means that PSS only partially mediates the link. The next analysis to be done is related to the mediation role of PSS on the link between resilience and self-worth; the results are depicted in Table 25 and 26

**TABLE XXV. ANOVA OF THE REGRESSION BETWEEN RESILIENCE AS A MODEL AND WHEN CONTROLLING PSS ON SELF-WORTHINESS**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2077.435	1	2077.435	67.730	.000 <sup>b</sup>
	Residual	4631.506	151	30.672		
	Total	6708.941	152			
2	Regression	2118.717	2	1059.358	34.618	.000 <sup>c</sup>
	Residual	4590.224	150	30.601		
	Total	6708.941	152			

- a. Predictors: (Constant), RESILIENCE
- b. Predictors: (Constant), RESILIENCE, PSS Perceived Social Support
- c. Dependent Variable: SELF-WORTH

**TABLE XXVI. COEFFICIENT OF THE REGRESSION BETWEEN RESILIENCE MODEL AND WHEN CONTROLLING PSS ON SELF-WORTHINESS**

Model		Unstandardized Coefficients			Standardized Coefficients	Sig.
		B	Std. Error	Beta	t	
1	(Constant)	8.205	2.928		2.802	.006
	RES	.257	.031	.556	8.230	.000
2	(Constant)	6.033	3.472		1.738	.084
	RES	.237	.036	.512	6.612	.000
	PSS	.085	.074	.090	1.161	.247

- a. Dependent Variable: SELF-WORTH

Table 25 and 26 suggest that PSS partially mediated the link between resilience and self-worth. Model of resilience showed the  $\beta$  value of .556 and  $p<.000$ , and when controlling for PSS, the  $\beta$  value was .512 and  $p<.000$ . It means that the 'pure' contribution of one-point resilience increment was 0.56 point of self-worth improvement, because the contribution was mediated by PSS. Nevertheless, resilience was still significant in both equation, which means that PSS only partially mediates the connection. The next analysis presented is about the mediation role of PSS on the link between resilience and the self-esteem in general; the results are depicted in Table 27 and 28.

**TABLE XXVII. ANOVA OF THE REGRESSION BETWEEN RESILIENCE MODEL AND WHEN CONTROLLING PSS ON SELF-ESTEEM**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression					.000 <sup>b</sup>
	Residual					
	Total	14129.542	152			
2	Regression	4825.082	2	2412.541	38.893	.000 <sup>c</sup>
	Residual	9304.461	150	62.030		
	Total	14129.542	152			

- a. Predictors: (Constant), RESILIENCE
- b. Predictors: (Constant), RESILIENCE, PSS Perceived Social Support
- c. Variable: SELF-ESTEEM

**TABLE XXVIII. COEFFICIENT OF THE REGRESSION BETWEEN RESILIENCE MODEL AND WHEN CONTROLLING PSS ON SELF-ESTEEM**

Model		Unstandardized Coefficients		Coefficients	t	Sig
		B	Std. Error	Beta		
1	(Constant)	22.650	4.162		5.442	.000
	RES	.390	.044	.581	8.773	.000
2	(Constant)	20.152	4.943		4.077	.000
	RES	.367	.051	.546	7.183	.000
	PSS	.098	.105	.071	.938	.350

- a. Dependent Variable: SELF-ESTEEM

Results shown in Table 4.27 and 4.28 supported the rejection of the last and main hypothesis, whether there is no mediation effect of PSS on the causal relationship between resilience and self-esteem among PCA. Differences in terms of  $\beta$  value are shown, where the model of resilience showed  $\beta = .581$ , and after controlling for PSS, the  $\beta$  changed into .546. This means that the 0.58 points increment of self-esteem was not predicted solely by the resilience, but mediated by the PSS. However, the contribution of resilience was still considered significant because the p value remained smaller than .00. Thus PSS partially mediates the relationship between resilience and self-esteem among PCA.

**IV. DISCUSSION**

This study has achieved its objective in investigating whether perceived social support can explain the relationship between resilience and self-esteem among PCA. Mediation effect of the perceived support system indicated that resilience works better in improving the self-esteem among the PCA when they are aware that they receive social supports. Nevertheless, because the mediation was only partial, the contribution of resilience was still significant despite controlling for perceived social support, and it was also indicated that the participants reported high level of resilience, high level of perceived social support and moderate level of self-esteem.

The discovery of high levels of resilience among PCA in this current study is consistent with the work of Cappe, et al. (2011), Dale et al. (2006) and Duarte et al. (2005) [5][1][12] who advocated that parenting children with ASD is considered challenging and it is getting more challenging when the child grows up; the unbearable challenges might lead to higher level of resilience among PCA. The finding is

also in line with the statement that PCA developed higher stress level than parents with no ASD child [13], and it led to higher level of resilience. In relation to self-esteem, findings of this current study is not consistent with the work of Higgins et al. (2005) [13], that PCA have averagely high self-esteem. Inconsistency between the findings of this current study and the one of Higgins and colleagues did could be caused by the difference in sample size and demography; Higgins and colleague recruited 53 participants from rural area, while 153 of participants from urban area were recruited for this current study. These differences might lead to further difference in the variants of data due to different sample size and the amount of confounding variables that might affect the self-esteem due to different demography.

Referring to the two-dimensional model of self-esteem [36][22], findings of this current study suggest that PCA fell into the worthiness-based self-esteem because their average score of self-worth was higher than their average score of self-competence. In other words, they evaluated themselves as positive and likeable in the context of having children with ASD, however, they did not perceive themselves as competent enough. This finding might be caused by the data collection procedure, where all of the participants were recruited with the support of NASOM, which could be the reason for them to feel liked as well as supported, and eventually develop positive self-worth, while the adversity of having children with ASD keeps their self-esteem at moderate levels.

Results of the data analyses in this current study suggest that the level of perceived social support is considerably high among the participants, in other words, they perceived that they got enough social support. This finding is consistent with another study which stated that the functionality of their children will not set PCA to be different from each other in perceiving that they receive meaningful social support. [37] Contextually, as the data was collected from a support organization (NASOM), it was to be expected that most PCA under the organization perceived that they received adequate formal social support in crisis situations [38]. Despite the high level of perceived social support from the participants of this current study, not all PCA in Malaysia are able to access this kind of support, especially those who are not reachable by NASOM or any other support organization. Therefore, this finding is somehow limited by the demography of the participants, and a further study with more various participants should be conducted before generalizing that most of PCA in Malaysia possess high levels of perceived social support.

Finding of this study suggests that resilience has significant positive prediction towards the general self-esteem of the participants, and the contribution is considered strong. This finding is consistent to previous studies in different context, for instance, Bonanno et al (2005) [20], who reported that those with stronger levels of resilience developed better evaluation towards themselves compared to their counterparts with lower resilience levels.

However, there is an inconsistency between the findings of this study and the work of Duarte et al. (2005) [12], who suggested that there is no significant difference between PCA and parents without children with ASD in term of self-esteem. Difference in the results could be due to confounding variables such as the functionality of the children; there is a negative association between the functionality of the children with ASD and their parents' stress level [3]. In other words, PCA with high functioning children might have less stress than parents of children without ASD in the study of Duarte et al. (2005) [12], who might have more stressors apart from having children with ASD.

While it seems that the statement that PCA experience increases daily stress that leads to higher resilience and self-esteem level is arguable, findings of this study also suggest that the two dimensions of self-esteem are predicted differently by resilience; it predicts self-worth more significantly than self-competence. Studies that reported no significant link between resilience and self-esteem among PAC (i.e., Duarte et al., 2005 and Higgins et al., 2005) [12][13] measured self-esteem by self-worth-based scales, such as the one developed by Bonanno et. al. (2005) [20] These differences in measurement, apart from some possible demographic differences, might also explain the difference in findings.

#### *Limitations of the Study*

This finding suggests that other variables, such as social economic status, educational levels of the PCA, and levels of functionality of the children should be investigated in order to obtain deeper understanding of the phenomenon.

Another limitation of this current study is that all of the participants were recruited from one support institution. This situation might result to homogeneity of the participants in terms of their perception of social support, because they receive their support from the same institution. It is suggested for future studies to involve PCA under various support organizations or those who do not have any access to any support organization. Having that in mind, the duration of receiving formal social support should also be investigated in relation to their resilience and self-esteem levels in order to obtain an insight of the incubation period required for the perceived social support to increase the PCA's self-esteem levels.

#### V. CONCLUSION

Findings of this current study indicate that perceived social support can only partially explain the link between resilience and self-esteem. Statistical evidences indicate that resilience as a model can explain about 33% of the self-esteem increment among the participants, while perceived social support as a model can only explain about 11% of the self-esteem increment among the participant. In other words, there are other factors that contribute to the self-esteem of the PCA apart from resilience and perceived social supports.

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