Research Paper   **Open Access**

Construct Validity of Parental Autonomy Support: A Second Order Confirmatory Factor Analysis of Parental Autonomy Support in Senior High School Students

Rima Wilantika[1], Nurul Hidayah[2], Purwadi[3]
[1]Master in Psychology Ahmad Dahlan University
[2]Master in Psychology Ahmad Dahlan University
[3]Master in Psychology Ahmad Dahlan University
Corresponding author:[1] Rima Wilantika

ABSTRACT: The present study aims to examine the construct validity and construct reliability of parental autonomy support to find indicators that shape parental autonomy support. Parental autonomy support was measured using the domains of physical closeness, thinking, and decision-making. This study utilized a smart PLS 3.0 program with a reflective construct through 2nd Order CFA. Data were taken from 80 senior high school students using google form. The results show that the item statements were valid and reliable. The validity of parental autonomy support was 0.724, physical closeness was 0.614, thinking was 0.889, and decision making was 0.768. The reliability of autonomy support was 0.968, physical closeness was 0.858, thinking was 0.976, and decision making was 0.907. The parental autonomy support demonstrated good validity and construct conditions. The dominant domain that influenced the construction of parental autonomy support was thinking.

Keywords: Parental autonomy support, physical closeness, thinking, decision-making.

I.   INTRODUCTION

Adolescence is a period of transition from childhood to adulthood that entails a number of biological, cognitive, and socio-emotional changes (Santrock, 2011). The transition from childhood to adolescence begins with the onset of maturity through puberty, while the transition from adolescence to adulthood is determined by cultural and experiential standards (Arnett, 2007). The transition between adolescence and adulthood can take considerably time as adolescents develop more effective skills to become full members of society (Nayak, Stuart-Hamilton & White, 2006).

Adolescence is a juncture to gain autonomy and responsibility. Most parents anticipate that their teenagers will have difficulties adjusting to changes during their adolescence. However, few anticipate, imagine, and predict the strong desire of adolescents to spend their time with peers, in addition to them wanting to show that they are responsible for their own failures and successes as opposed to their parents (Santrock, 2007). Many adolescents find themselves still dependent upon their parents, especially for emotional and social support (Guan & Fuligni, 2015). Notably, gender affects the provision of autonomy, whereby boys are commonly given more independence than girls (Bumpus, Crouter, & McHale, 2001). Parental involvement is always associated with children's development (Smokowski, Bacallao, Cotter & Evan, 2015). Parents face the challenges of having to adapt to changes in their adolescents' developments as well as changing their parental involvement in their adolescents' lives (LeMoyne & Buchanan 2011).

Research on parental autonomy support is still limited. Especially in Indonesia, a parental autonomy support scale has yet been developed. Hence, many researchers are interested in developing this parental autonomy support scale. Previous researches that exist have examined the correlation between variables, such as the research conducted by Pratama (2019) on the role of teacher autonomy support for students' mathematics learning achievement. The research obtained a correlation of 0.241 (p = 0.002, p = <0.001), meaning that there was a correlation between teacher autonomy support with achievements in mathematics learning.

Parental autonomy support holds importance in predicting adolescent well-being and helping to increase the intrinsic motivations of adolescents (Chirkov & Ryan, 2001). Additionally, autonomy support helps to increase independence and responsibility (Zarrett & Eccles, 2006). In particular, autonomy support helps adolescents prepare for independence (Dietrich, & Salmela-Aro, 2012).

Insufficient parental autonomy support may have negative implications, in that adolescents are found to have feelings of pressure, helplessness and inability to make decisions (Deci & Ryan, 2000). Parental autonomy affects adolescent mental health (Kouros et al. 2016). Many adolescents who have low parental autonomy support indicated increased dysphoria and social anxiety (Bumpus & Crouter, & McHale, 2001).

Parental autonomy support is able to generate better mental health and lower psychopathology (Ryan & Vansteenkiste, 2016). Good autonomy support can reduce depression (Chirkov & Ryan, 2001), dysphoria and social anxiety (Bumpus, et al. 2001) in adolescents. Autonomy support can also improve welfare through the increase in an individual life satisfaction and self-esteem (Park, 2004).

Developmental researchers identify the development of autonomy in adolescence as a separation process (Soenens et al. 2007). According to this view, the development of independence of adolescents implies that they would physically and emotionally distance themselves from their parents and are responsible for themselves without depending on their parents. There are three kinds of independence, namely behavioral, cognitive and emotional (Collins, Gleason, & Sesma, 1997). Autonomy support introduces parents to aspects such as expression, thinking, and independent decision making (Silk, Morris, Kanaya, & Steinberg, 2003). The increasing demands of adolescents for independence and responsibility push parents to give freedom and independence to their adolescents (Steinberg & Silk, 2002). The explanation above explains the early formation of parental autonomy support.

Parental autonomysupport, according to Soenens and Beyers (2012), is the encouragement given by parents to their children in regards to independence where children learn to think, decide, and solve problems. Parental autonomy support is defined as a value that encourages children's independence such as problem solving and participation in decision making (Grolnick & Ryan, 1989).

Parental autonomy support is an active process that involves accepting children's point of view, supporting their independent problem solving, involving children in making rules and structures, providing choices for children to follow rules, and encouraging children to take initiative (Marbell, & Grolnick, 2013). Support for one's autonomy depends on the quality of the interpersonal environment. The interpersonal environment can support or control children's development, for instance, in cases where parents or teachers support children's decisions (Ryan and Deci, 2000).

According to Soenens (2007), there are three domains of parental autonomy support, namely: physical closeness, where parents try to provide the physical contact they want, specifically, verbal and non-verbal physical closeness such as hugging children and expressing affection for children. Thinking, which involves parents encouraging children to develop themselves, and their own ideas. Children are taught to think uniquely without being influenced by other people and therefom convey their ideas. Decision-making is where parents encourage children to make their own decisions without the advice and guidance from parents. Children are taught to be responsible for their own decisions.
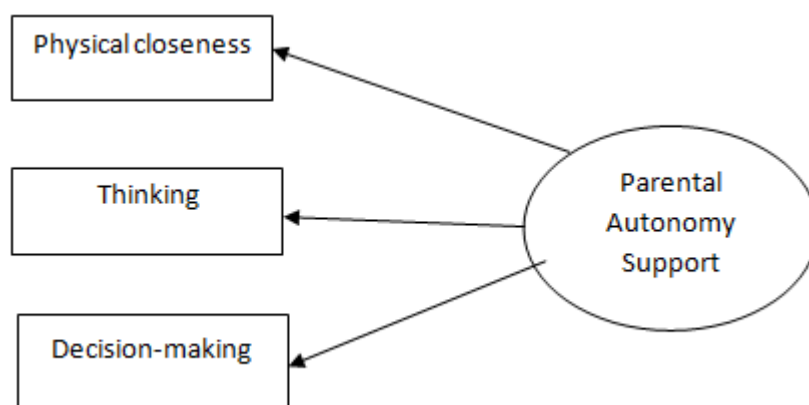

Fig 1. Parental Autonomy Support Domains Scheme

Hypothesss

Based on Figure 1 the research hypothesis formulated is as follows:

H. The domains of parental autonomy support, namely physical closeness, thinking, and decision-making, are able to form the construct for parental autonomy support.

Problem Formulation

Based on what have been explained, parental autonomy support is important for individual welfare. Given the importance of parental autonomy support, the following questions arose: 1) is the construct of parental autonomy support valid and reliable? And 2) are the indicators of physical closeness, thinking, decision-making able to form constructs or variables for parental autonomy support?

Second Order Confirmatory Factor Analysis (2nd order CFA)

One approach that can be used in testing the construct of a measuring instrument is Confirmatory Factor Analysis. Confirmatory Factor Analysis (CFA) is one of the main approaches in factor analysis. CFA can be used to test the dimensionality of a construct. This test is used to measure the model (model measurement), describing the dimensions and indicators of behavior that reflect the latent variable, namely the parental autonomy support, by looking at the loading factor of each domain that forms a construct. Confirmatory Factor Analysis (CFA) is also used to test the validity and the reliability of the constructs of the indicators (items) that form the latent construct (Latan, 2012). The CFA used in this study was second order confirmatory factor analysis (2nd Order CFA), a measurement model consisting of two levels. The first level of analysis is carried out from the latent construct dimensions to its indicators and the second analysis is carried out from the latent constructs to the dimensional constructs (Latan, 2012).

Research Aim

Based on the description above, this study aims to examine the construct validity and construct reliability of the construct of parental autonomy support based on the perspective of State and culture different from previous researches.

II.   RESEARCH METHOD

Participants

The subjects of this study were senior high school students, with a total sample of 80 students. Contacts with participants and data collection were done online or using google form.

Research design

The design in this study is semi-construction, where scale design was carried out using theoretical collaborative studies with information directly obtained from field data (Hinkin et al., 1997). Through using this semi-construction design existing theories can be strengthened and behavioral indicators can be multiplied as much as possible to obtain data (Hinkin et al., 1997). Later in this study, psychometric properties were tested, entailing the analysis of content validity, discriminating power, confirmatory factor analysis, and testing for concurrent/external validity.

Instruments

The data collection method was constructed to reveal facts on the variables to be studied. This study used the parental autonomy support scale constructed by the researchers based on the domains of Soenens et al. (2007) which includes physical closeness, thinking, and decision-making.

The number of items in the parental autonomy support scale used was 36 items consisting of 18 favorable items and 18 unfavorable items. Examples of items from the physical closeness domain are "I often get hugs from my parents", and "my parents easily express affection for me". Examples of items from the thinking domain are "parents rarely give me the opportunity to solve problems on my own", and "I often follow my parents' opinion". Examples of items from the decision-making domain are "I was given the freedom to choose schools", and "My parents taught me to be responsible for my choices". Distribution of parental autonomy support scoring scale can be seen in Table 1.

Parental autonomy support scoring scale

Table 1. Parental Autonomy support Scale Scores

No	Response Category	Favorable	Unfavorable
1.	Strongly Agree (SA)	4	1
2.	Agree (A)	3	2
3.	Disagree (D)	2	3
4.	Strongly Disagree (SD)	1	4

The arrangement of items in the scale constructed was based on three domains. The blue print of the parental autonomy support can be seen in Table 2 below.

Table 2. Parental Autonomy Support Scale Blue Print

No	Domain	Item		Amount
		Favorable	Unfavorable	
1.	Physical closeness	1,7,13,19,25,31	4,10.16,22,28,34	12
2.	Thinking	2,8,14,20,26,32	5,11,17,23,29,35	12
3.	Decision-making	3,9,15,21,27,33	6,12,18,24,30,36	12
	Total	18	18	36

Validity and Reliability

The research used the smart PLS program with the aim of testing the outer model. This measurement model was done to test the validity and reliability of the construct consisting of: convergent validity (loading factor value> 0.5) and the average variance extracted value. The discriminant validity was determined to compare the square root of average variance extracted, in which between the same aspect must have higher value than when compared to other variables.

Reliability test was carried out to show the internal consistency of the measuring instrument, namely by looking at the value of composite reliability and Cronbach's alpha, whereby higher values show better consistency of items in measuring the latent variable. According to Hair, et al., the expected composite reliability and cronbach's alpha values are > 0.7, in which the value of 0.6 is still acceptable. Furthermore, according to Cooper, the internal consistency test is fulfilled if the validity of the construct has met the criteria. Specifically, the average variance extracted (AVE) sufficiently represents internal consistency; a valid construct means a reliable construct, but a reliable construct is not necessarily a valid construct (Jogiyanto, 2011).

III.   RESULT

Based on the results of the outer model test analysis on the life satisfaction scale carried out using the Smart PLS 3.2.8 program, the results can be seen as shown in the image 2 below:
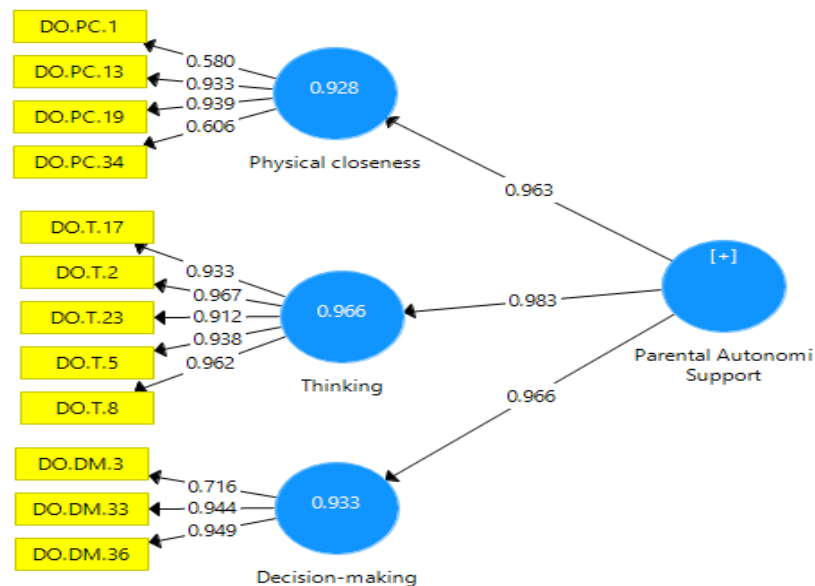

Fig. 2. The outer test model results for the parental autonomy support

Based on the Parental Autonomy Support outer model test, the following outcomes are obtained: Convergent Validity In respect to the convergent validity, the loading factor values obtained all fulfilled the requirement of > 0.5 as can be seen in the table below.

Table 3. Loading Factor Values (Variable-Aspect)

Domain	Loading Factor Value	Description
Physical closeness	0.963	Valid
Thinking	0.983	Valid
Decion-making	0.966	Valid

Based on the results of convergent validity, the factor loading values of aspect-indicator (> 0.5) can be seen in the table below:

Table 4. Loading Factor Values (Aspect -Indicator)

Domain	Factor Loading Value	Description
DO.PC.1	0.580	Valid
DO.PC.13	0.933	Valid
DO.PC.19	0.939	Valid
DO.PC.34	0.606	Valid
DO.T.17	0.933	Valid
DO.T.2	0.967	Valid
DO.T.23	0.912	Valid
DO.T.5	0.938	Valid
DO.T.8	0.962	Valid
DO.DM.3	0.716	Valid
DO.DM.33	0.944	Valid
DO.DM.36	0.949	Valid

The next convergent validity test, manifesting as average variance extracted (AVE) value, of the construct of parental autonomy support obtained a value of. The AVE value of each aspect (> 0.5) can be seen in the table below:

Table 5. Average Variance Extracted (AVE) Values

Domain	AVE value	Description
Physical closeness	0.614	Valid
Thinking	0.889	Valid
Decision-making	0.768	Valid

The discriminant values between one aspect and another fulfilled the condition needed, namely the AVE square root value between the same aspect were higher than the values obtained with other aspects. The AVE square root values can be seen in the table below:

Table 6. Average Variance Extracted (Ave) Square Root Values of Parental Autonomy Suppot Constructs

Domain	Physical closeness	Thinking	Decision-making
Physical closeness	0.784	0.913	0.919
Thinking	0.913	0.943	0.921
Decision-making	0.919	0.921	0.876

Reliability test in respect to composite reliability and Cronbach alpha values all fulfilled the requirement value of > 0.7 which can be seen in the following table:

Table 7. Composite Reliability and Cronbach Alpha Values of Parental Autonomy Support Constructs

Variable	Composite reliability	Cronbach alpha	Description
School Satisfaction	0.968	0.977	Reliable

IV.　　DISCUSSION

Based on the results of the analysis of the construct validity and the construct reliability, the domains and indicators that form parental autonomy support were able to be declared valid and reliable. This presented that all existing domains and indicators were able to reflect and support parental autonomy support.

The most dominant domain was the thinking domain with a factor loading of 0.983, in which the indicator presented that children (adolescents) are encouraged to convey ideas and children are taught to convey ideas without being influenced by others. The decision-making domain obtained a factor loading of 0.966. The indicator encourages children (adolescents) to make decisions and teaches children to be responsible for their decisions. Lastly, physical closeness domain obtained a factor loading of 0.963. The indicator presented that parents provide the needs of children (adolescents).

The present study obtained a Cronbach alpha coefficient value of 0.977 for school satisfaction. The finding presented is supported by Soenens et al. (2007) which claimed that thinking is one of the domains that forms parental autonomy support. The research used the domains of physical closeness, thinking, and decision making to measure parental autonomy support. In their research, Soenens et al (2007) used the promotion of independence scale. On this scale, there were eight items which obtained a Cronbach alpha of 0.70. The present research is also supported by Perdersen's research (2017) findings that used an autonomy support scale with six items to measure parental autonomy support, obtaining a reliable alpha value of 0.85.

Furthermore, the findings of this study are in line with the results from Manzi, Regalia, Pelucchi, and Fincham (2012). In their research, Manzi, Regalia, Pelucchi, and Fincham (2012) explored the thinking and decision-making domains. The thinking domain obtained a Cronbach alpha coefficient value of 0.72. The decision-making domain obtained a Cronbach alpha coefficient value of 0.90. The thinking domain referred to the extent to which parents give independence to children's thinking or cognitive (Silk, Morris, Kanaya, & Steinberg, 2003). Decision-making domain referred to cases where parents allow children to make decisions related to their lives (Gronick, Deci, & Ryan, 1997).

V.　　RESEARCH IMPLICATION

The results of this study are expected to provide an overview of the validity and reliability of the construct of parental autonomy support and can be used as a reference in further research related to parental autonomy support.

VI.　　CONCLUSION

Based on the results of this study, it can be concluded that the construct or variable of parental autonomy support exhibit good validity and reliability, all domains or indicator variables can significantly form variables of parental autonomy support where the dominant domain determined was the thinking domain with a factor loading of 98.3%. Thus, the findings of this study are able to provide theoretical implications in the development of the theory of parental autonomy support.

VII.　　RECOMMENDATION

1. The parental autonomy support scale shows a high reliability coefficient or composite score in addition to indicating the validity of the construct, and thus can be used as a diagnostic tool in educational planning.
2. Future research should be more careful in analyzing the data collected because there are many things that can be conveyed to the public.

Author's note: this research is part of Rima Wilantika's 2020 thesis.

REFERENCES

[1]. B. Soenens, M. Vansteenkiste, W. Lens, K. Luyckx, L. Goossents, W. Beyers, & R. M. Ryan, Conceptualizing parental autonomy support: Adolescent perceptions of promotion of independence versus promotion of volitional functioning, Developmental Psychology, 43, 2007, 633–646. doi:10.1037/0012-1649.43.3.633.

[2]. B. Soenens, & W. Beyers, The cross-cultural significance of control and autonomy in parent–adolescent relationships, Journal of adolescence, 35(2), 2012, 243-248.

[3]. C. Manzi, C. Regalia, S. Pelucchi, & F. D. Fincham), Documenting different domains of promotion of autonomy in families, Journal of Adolescence, 35(2), 2012, 289-298.

[4]. C. D. Kouros, M. M. Pruitt, N. V. Ekas, R. Kiriaki, & M. Sunderland, Helicopter parenting, autonomy support, and college students' mental health and well-being: The moderating role of sex and ethnicity. Journal of Child and Family Studies, 26(3), 2016, 939-949.

[5]. D. E. Pedersen, Parental autonomy support and college student academic outcomes. Journal of Child and Family Studies, 26(9), 2017, 2589-2601. https://doi.org/10.1007/s10826-017-0750-4

[6]. E. L. Deci, & R. M. Ryan, The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior, Psychological Inquiry, 11, 2000, 227–268.

[7]. HM. Jogiyanto, Konsep dan aplikasi structural equation modeling berbasis varian dalam penelitian bisnis, (Yogyakarta: UPP STIM YKPN 2011).

[8]. J. Dietrich, P. D. Parker, & K. Salmela-Aro, Phase-adequate engagement at the post-school transition, Developmental Psychology, 48, 2012, 1575- 1593. https://doi.org/10.1037/a0030188

[9]. J. Hartono, & W. Abdillah, Konsep dan aplikasi pls (partial least square) untuk penelitian empiris, Edisi I, BPFE, (Yogyakarta, 2009).

[10]. J.F. Hair, W.C. Black, , B.J. Babin & R.E. Anderson, Multivariate data analysis. Seventh Edition. Prentice Hall, (Upper Saddle River, New Jersey 2010).

[11]. J. J. Arnett, Emerging adulthood: What is it, and what is it good for?. Child development perspectives, 1(2), 2007, 68-73.

[12]. J. S. Silk, A. S. Morris, T. Kanaya, & L. Steinberg, Psychological control and autonomy granting: Opposite ends of a continuum or distinct constructs? Journal of Research on Adolescence, 13, 2003, 113–128.

[13]. J. W. Santrock, Perkembangan anak: Edisi 7 buku 2. (Jakarta. Erlangga, 2007).

[14]. J. W. Santrock, Masa perkembangan anak: Edisi 11 buku 2, (Jakarta. Salemba Humanika, 2013).

[15]. K. N. Marbell, & W. S. Grolnick, Correlates of parental control and autonomy support in an interdependent culture: A look at Ghana. Motivation and Emotion, 37(1), (2013, 79-92.

[16]. L. Nayak, L. Priest, I. Stuart-Hamilton & A. White, Website design attributes for retrieving health information by older adults: an application of architectural criteria. Universal Access in the Information Society, 5(2), 2006, 170-179.

[17]. L. Steinberg, & J. S. Silk, (). Parenting adolescents. In M. H. Bornstein (Ed.), Handbook of parenting: Vol. 1. Children and parenting, Mahwah, NJ: Erlbaum (2nd ed., 2002, pp. 103–133).

[18]. M. Pratama, Peran Dukungan Otonomi Guru terhadap Prestasi Belajar Matematika Siswa. Jurnal RAP (Riset Aktual Psikologi Universitas Negeri Padang), 10(2), 2019, 182-192.

[19]. M. F. Bumpus, , A. C. Crouter, & , S. M. McHale, Parental autonomy granting during adolescence: Exploring gender differences in context, Developmental Psychology, 37, 2001, 163–173. doi:10.1037//0012-1649.37.2.163.

[20]. N. Park, The role of subjective well-being in positive youth development, Annals of the American Academy of Political and Social Science, 591, 2004, 25-39. doi: 10.1177/0002716203260078

[21]. N. Zarrett, & J. Eccles, The passage to adulthood: Challenges of late adolescence, New Directions for Youth Development, 11, 2006, 13-28. doi: 10.1002/yd.179

[22]. P. R. Smokowski, M. L. Bacallao, , K. L. Cotter & C. B. R. Evans, The effects of positive and negative parenting practices on adolescent mental health outcomes in a multicultural sample of rural youth, Child Psychiatry and Human Development, 46, 2015. 333–345. doi:10.1007/s10578-014-0474-2.

[23]. R. M. Ryan, , E. L. Deci & M. Vansteenkiste, Autonomy and autonomy disturbances in self-development and psychopathology: Research on motivation, attachment, and clinical process. In D. Cicchetti (Ed.), Developmental psychopathology, 3rd Edition Cambridge, England: Cambridge University Press, 2016, (pp. 385-438).

[24]. S. S. A. Guan, & A. J. Fuligni, Changes in parent, sibling, and peer support during the transition to young adulthood, Journal of Research on Adolescence, 26, 2015, 286–299. doi:10.1111/jora.12191

[25]. T. LeMoyne, & T. Buchanan, Does "hovering" matter? Helicopter parenting and its effect on well-being., Sociological Spectrum, 31, 2011, 399–418. doi:10.1080/02732173.2011.574038.

[26]. V. I. Chirkov, & R. M. Ryan, Parent and teacher autonomysupport in Russian and U.S. adolescents common effects on wellbeing and academic motivation, Journal of Cross-Cultural Psychology, 32, 2001, 618–635. doi:10.1177/0022022101032005006.

[27]. W. A. Collins, T. Gleason, & A. Jr. Sesma, Internalization, autonomy, and relationships: Development during adolescence, In J. E. Grusec & L. Kuczynski (Eds.), Parenting and children's internalization of values: A handbook of contemporary theory, New York: Wiley, 1997, pp. 78–99.

[28]. W.S. Grolnick, & R.M. Ryan, Parent styles associated with childrent's self-regulation and competence in school. Journal of Educational Psychology, Vol. 81., No. 2, 1989, 143-154

[29]. W. S. Grolnick, E. L. Deci, & R. M. Ryan, Internalization within the family: the self-determination theory perspective. In J. E. Grusec, & L. Kuczynski (Eds.), Parenting and children's internalization of values: A handbook of contemporary theory, New York: Wiley, 1997, (pp. 135–161)..