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EARLY-LATE ONSET CONDUCT PROBLEMS

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***ABSTRACT**--Age is always an important criterion in judging behavior, especially towards the development of healthy and deviant behaviors. As such, the age norms would serve as developmental standards, to evaluate the likelihood of young people, especially adolescents, to engage in various conduct problems. Therefore, it is aimed to study age differences (early-late onset) in protective factors, executive dysfunction, and symptoms of problem behaviors and its role in the manifestation of conduct problems in adolescence. Respondents of the study consisted of 404 delinquents of different conduct problems such as armed robbery, drug trafficking, and drug use, gang fights, rape, homicide, and out of control behaviors. Three different instruments were employed in the study, namely, Developmental Assets Questionnaire-Malaysian Version (DAQ-MV), Behavior Rating Inventory of Executive Function- Self Report (BRIEF-SR) and Achenbach System of Empirical Behavior Assessment- Youth Self-Report (ASEBA-YSR). The results based on the one-way ANOVA showed that there were no age differences neither in early nor late onset in the protective factors, executive dysfunction, and symptoms of problem behaviors. Further study and investigation are required in determining an exhibition and consequence of conduct problems either in its early or late-onset. However, the study contributed to the theoretical foundation and psychological ground in developmental psychology and the study of at-risk children and youth.*

***Keywords**-- problem behaviors, age of onset, at-risk, adolescent development*

I INTRODUCTION

The conduct problems engaged by young people, especially children, and adolescents, involved a broad range of developmental stages. For instance, some cases of conduct problems included children as young as seven years old and adolescents of 18 years old. Besides, different categories of conduct problems emerged and are associated at various developmental stages, such as late childhood and early adolescence [1]. For instance, at the beginning of

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childhood, the most common conduct problems are non-compliance, oppositional, and temper tantrums [2]. In middle childhood, conduct problems cover both overt and covert antisocial behaviors and relational aggression. While in adolescence, more severe conduct problems arise, such as delinquency, substance use, and high-risk sexual behaviors [3]. Thus, from the above example, age is often used as a criterion to determine and decide some occurrences and types of conduct problems throughout the lifespan developmental trajectory, especially in childhood and adolescence.

The question of what constitutes conduct problem is very complicated. Conduct problem behaviors displayed by adolescents result from transactions of different variables such as the structure of biological functioning, the transmission of genetic, emotional stability and response, cognitive processes, personality, social interaction, and other numerous aspects of the immediate environment where adolescents live [2]. The interaction of different factors such as cognitive processes, social interaction, and emotional stability can lead to mixed results, especially in constraining or displaying different psychological and behavioral outcomes. Further, [4] emphasized two significant concerns of conduct problem behaviors to comprehend the nature of problem behaviors. Firstly, to place the attention of conduct problem behaviors entirely within an individual adolescent's personality and cognitive processes, thus, discarding other social-environmental influences [2]; [4]. Secondly, the emphasis on the risk and protective factors from the environmental stressors such as family, school, and immediate intact of the community as a whole in the contributing factors of conduct problem behaviors [2]; [4].

The above concerns of conductproblem behaviors lie in either environment and social context or individuals [2]; [4]. However, it cannot disregard the roles of social-environmental and cultural contexts as children and adolescents are intricately tiedto those functions [5]. It is also undeniable that young lives are entrenched and surrounded by a circle of social interactions and environmental influences such as family, peer, school, and neighborhood, societal, and cultural circumstances [5]. Still, young people, especially children, and adolescents are much affected by different individual factors such as personal attributes, characters, temperaments, and cognitive states [6]; [7]. These various factors interact with circumstances and influences from other young people from various sources such as friendships, family interactions, poverty, educational opportunity, ethnicity and race, gender, and cultural values [6]; [7]. Indeed, all came in contact and tied firmly. Therefore, the meaningful analysis of problem behaviors requires a more profound and thorough understanding and incorporation of contextual features embedded in one's living environment [8]; [9]; [10].

Many theories could be used to explain the occurrence of conduct problems in childhood and adolescence. One of the theories is Behavior Problem Theory (PBT) proposed by Richard Jessor [11]. The PBT is encompassing four different domains or systems that are reflecting both the person and their social environment, including the sociocultural system, the socialization system, the personality system, and the behavior system [12]. According to the theory, variation of problem behaviors in adolescence is an inter-function of all domains or systems. Either separately or together. The PBT composed of three central psychosocial systems; the personality system, the perceived-environment system, and the behavior system, in which each system consists of variables that serve either

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as instigations or provocation for engaging in problem behaviors or controls against involvement in problem behavior. These three systems regulated by a dynamic state called proneness [12]. The proneness itself specifies the likelihood of the occurrence of problem behaviors [13]. It is the balance between instigations or provocations and controls that determine the degree of proneness for problem behaviors within each system.

Thus, the level of psychosocial conventionality-unconventionality is based on the proneness level across all their systems of problem behaviors [11]; [12]. As mentioned above, the personality system, the perceived-environment system, and the behavior system are representing instigations or provocations toward and ability to controls against any engagement of problem behaviors among adolescents. However, the PBT did not explain in detail the transaction of different components in an environment, including the emphasis on individual elements such as age, gender, and even cognitive capability.

Therefore, the study is aimed to identify age differences (early-late onset) in protective factors, executive dysfunction, and symptoms of problem behaviors and its role in the manifestation of conduct problems in adolescence. Four hypotheses were formed to test the objective of this study. *H1: There are age differences in internal protective factors; H2: There are age differences in external protective factors; H3: There are age differences in executive dysfunction; H4: There are age differences in symptoms of problem behaviors.*

II METHODOLOGY

2.1 Research Design and Sampling

The study used a cross-sectional design with a survey method. Stratified random sampling was used among 404 respondents, which comprise of 280 male and 124 female adolescents. The unequal sample size of each stratum was required to the population size of the stratum. The results were analyzed by using one-way ANOVA analysis to measure the age differences between protective factors, executive dysfunction, and symptoms of problem behaviors. The respondents were from correctional institutions in Malaysia, Tunas Bakti school, Kajang prison, and Henry Gurney school. Respondents' ages ranged from 13-year-olds to 18-year-olds. The respondents were among juvenile offenses with diverse conduct problems such as stealing, drug use, fighting, murder, rape, and out of control behaviors.

2.2 Instruments

2.2.1 Developmental Assets Questionnaire-Malaysian Version (DAQ-MV)

The Developmental Assets Questionnaire-Malaysian Version (DAQ-MV) consists of two domains, which are internal assets and external assets. Internal assets comprise of 12 constructs (54 items); achievement motivation, school engagement, caring/positive value, integrity, planning and decision making, interpersonal competence, resistance skill/resilience, self-esteem, a sense of purpose, positive view of personal future, morality/religiosity, and positive feeling [14]; [15]. While, external assets comprise nine constructs, including family support, positive family communication, other adult relationship, family boundaries, a caring neighborhood, hopes and expectations,

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positive peer influence, religious community, physical, emotional, and social safety. It is to measure an individual child's protective factors and risk factors [14]; [15]. The Developmental Assets Questionnaire-Malaysian Version (DAQ-MV) showed relatively higher values ranged between 0.87 Cronbach's Alphas to 0.88 Cronbach's Alpha [14]; [15].

2.2.2 Behavior Rating Inventory of Executive Function-Self Report (BRIEF-SR)

The Behavior Rating Inventory of Executive Function-Self Report (BRIEF-SR) is used to measure an executive function/dysfunction behavior for children and adolescents ages 5–18 [16]. It consists of 86 items. It has high test-retest reliability (rs - .88 for teachers, .82 for parents), internal consistency (alphas - .80 - .98), and moderate correlations between parent and teacher ratings (rs - .32 - .34) [16]. Its usage includes evaluating children and adolescents with a variety of disorders and disabilities such as traumatic brain injury, low birth weight baby, pervasive developmental disorders, high-functioning autism, learning disabilities, and Tourette syndrome [16].

2.2.3 Achenbach System of Empirical Behavior Assessment-Youth Self Report (ASEBA-YSR)

Achenbach System of Empirical Behavior Assessment (ASEBA-YSR) is used as an assessment to rate a child's problem behaviors and competencies [17]. It has 140 items. The ASEBA-YSR construct measured several domains, such as hyperactivity, conduct problems, aggression, bullying, violence, and defiance behaviours [17]. The test-retest value is 0.95 to 1.00, inter-rater reliability value is 0.93 to 0.96, and internal consistency value is 0.78 to 0.97 [17].

III RESULT AND DISCUSSION

3.1 Differences in Internal Protective Factors by Age

H1: There are age differences in internal protective factors.

H2: There are age differences in external protective factors.

One-way ANOVA was employed to measure age differences in adolescence stage; early, middle and late. Table 1 represented the results of one-way ANOVA of internal protective factors by age. The results showed that there were no significant differences in all internal protective factors; school engagement ($F = 1.21$, $p > 0.05$), caring/positive ($F = 0.71$, $p > 0.05$), integrity ($F = 1.36$, $p > 0.05$), planning/decision making ($F = 0.26$, $p > 0.05$), resistance skill/resilience ($F = 0.35$, $p > 0.05$), and morality/religiosity ($F = 0.83$, $p > 0.05$). Thus, post hoc Turkey HSD test was not employed further to analyze age differences in internal protective factors. Therefore, hypothesis 1is rejected.

Table 1: Results of one-way ANOVA of internal protective factors by age

Variables	Age	df	Mean Square	Sum of Square	F

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	Between groups	2	15.24	30.48	
School Engagement					1.21
	Within groups	401	12.57	5039.47	
	Between groups	2	8.68	13.37	
Caring/Positive Value					0.71
	Within groups	401	12.23	4903.16	
	Between groups	2	22.32	44.65	
Integrity					1.36
	Within groups	401	16.42	6583.13	
	Between groups	2	3.79	7.58	
Planning/ Decision Making					0.26
	Within groups	401	14.76	5918.37	
	Between groups	2	7.01	14.01	
Resistance Skill/ Resilience					0.35
	Within groups	401	19.99	8014.53	
	Between groups	2	15.44	30.87	
Morality/ Religiosity					0.83
	Within groups	401	21.47	8609.13	

3.2 Differences in External Protective Factors by Age

One-way ANOVA was employed to measure age differences in adolescence stage; early, middle, and late. Table 2 represented the results of one-way ANOVA of external protective factors by age. The results showed that there were no significant differences in all external protective factors; family support ($F = 0.08$, $p > 0.05$), positive family communication ($F = 0.08$, $p > 0.05$). While, family boundaries ($F = 0.13$, $p > 0.05$), positive peer influence ($F = 0.93$, $p > 0.05$), and religious community ($F = 0.77$, $p > 0.05$).Thus, the post hoc Turkey HSD test was not employed further to analyze age differences in external protective factors. Therefore, hypothesis 2is rejected.

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Table 2: Results of one-way ANOVA of external protective factors by age

Variables	Age	df	Mean Square	Sum of Square	F
Family Support	Between groups	2	1.44	2.88	0.08
	Within groups	401	17.73	7108.90	
Positive Family Communication	Between groups	2	1.73	3.46	0.08
	Within groups	401	22.24	8917.91	
Family Boundaries	Between groups	2	2.09	4.18	0.13
	Within groups	401	16.38	6569.27	
Positive Peer Influence	Between groups	2	22.20	44.39	0.93
	Within groups	401	23.79	9539.65	
Religious Community	Between groups	2	12.45	24.89	0.77
	Within groups	401	16.20	6497.77	

3.3 Differences in Executive Dysfunction by Age

H3: There are age differences in executive dysfunction.

One-way ANOVA was employed to measure age differences in adolescence stage; early, middle, and late. Table 3 represented the results of one-way ANOVA of executive dysfunction by age. The results showed that there were no significant differences in executive dysfunction of inhibitory control deficit ($F = 0.15$, $p > 0.05$) and emotional control deficit ($F = 2.66$, $p > 0.05$). Thus, the post hoc Turkey HSD test was not employed to analyze age differences in executive dysfunction further. Therefore, hypothesis 3is rejected.

Table 3: Results of one-way ANOVA of executive dysfunction by age

Variables	Age	df	Mean	Sum of	F

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			Square	Square	
Inhibitory Control Deficit	Between groups	2	1.85	3.70	0.15
	Within groups	401	12.61	5043.01	
Emotional Control Deficit	Between groups	2	35.52	71.04	2.66
	Within groups	401	13.34	5349.20	

3.4 Differences in Symptoms of Problem Behaviors by Age

H4: There are age differences in symptoms of problem behaviors.

One-way ANOVA was employed to measure age differences in adolescence stage; early, middle, and late. Table 4 represented the results of one-way ANOVA of symptoms of problem behaviors by age. The results also showed that there were no significant differences in symptoms of problem behaviors; rule-breaking behavior ($F = 0.23$, $p > 0.05$), aggressive behavior ($F = 0.20$, $p > 0.05$). Thus, the post hoc Turkey HSD test was not employed further to analyze age differences in symptoms of problem behaviors. Therefore, hypothesis 4is rejected.

Table 4: Results of one-way ANOVA of symptoms of problem behaviors by age

Variables	Age	df	Mean Square	Sum of Square	F
Rule-Breaking Behavior	Between groups	2	6.14	12.29	0.23
	Within groups	401	26.81	10749.70	
Aggressive Behavior	Between groups	2	7.04	14.09	0.20
	Within groups	401	34.78	13946.59	

Additionally, there is another factor to explain the above findings, such as the individual's executive function of growing adolescents. Since the respondents recruited from the delinquent category such as armed robbery, gang fighting, and out of control behavior. Thus, this could be the primary reason why there are insignificant age

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differences in protective factors, executive dysfunction, and symptoms of problem behaviors, as suggested by the present study. The juvenile delinquents might have been negatively socialized learning new skills or some undesirable behaviors throughout the detention years in the prison and rehabilitation center [18]. Indeed, the immature cognitive processes would immerse the negative influences, thus worsens the delinquency acts. Besides, the executive dysfunction might befall in a situation of under pressure by individuals' major life adversities and psychological weaknesses [19]. For instance, the major life adversities include incarceration and faulty accusation, while psychological weaknesses include the absence of resistance or resilience skill, low self-esteem, low self-adaptation, and reduced cognitive skill. These conditions might reflect delinquents' problematic overt behaviors that are driven by high sensation seeking and impulsivity as a way to gratify their needs. Thus, when these factors combine, the more severe negative outcome of delinquency might arise as the reflection of misfortunes and environmental adversities.

In regards to the high sensation seeking and impulsivity during adolescence, many healthy adolescents exhibit the same characteristics as incarcerated adolescents. Early adolescence usually heightened a sense of invulnerability with limited capacity to anticipate and foresee the danger and long-term negative consequences [20]. However, this capability becomes better with age maturity, especially the onset of puberty, in which the physical maturation, cognitive processes, social-emotional stability become well. These conditions are very actual among the general population of adolescents [21]. As compared to the present study, it does show that incarcerated delinquent adolescents are losing control of inhibiting a particularly negative response and emotionally uncontrolled themselves from high-risk behaviors. Thus, the offshoot of these potentiating factors may increase delinquent adolescents' experimentation and involvement in various problem behaviors such as gang fighting, alcohol, and drug use/abuse, early sexual activity, teenage pregnancy, and armed robbery.

The adolescence years early, middle, or late are times of highest probability for the emergence of risk-taking behaviors. Including either harm to self or others. However, this perspective only limited to a small percentage of adolescents, which always portrays them as a period of storm and stress [18]; [22] (Hall, 1904). Adolescence is a period of engagement in various unhealthy activities such as antisocial behavior, rule-breaking, aggression, and criminal acts, especially among male adolescents [23]. This view, however, supported by research [22] that adolescence is a period of semi-criminality, especially for male adolescents. From the present study, overexposure to poor integrity value, poor resistance skill/resilience, poor planning/decision making, low morality/religiosity, inadequate family supports and boundaries, the absence of positive peer influence, and religious community can be the contributing factors towards delinquency acts. Therefore, in the absence of understanding the consequences of life-threatening conditions, adolescents of any stages of development are more likely to view experimentation and exploration of the surrounding as a sense of self-integration [20]. Therefore, there is a reason why there are no age differences found in the present study among juvenile delinquents.

On the contrary, other studies claimed that there are existences of age differences, especially among high-risk and at-risk respondents [24]; [25]; [26]. For instance, there are age differences in relational aggression, in which

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aggression typically decreased in late adolescence. However, the decrement of aggressive behavior in adolescence is due to the maturity level and better cognitive skills in later development [27]. Besides, [28] found that indirect revenge in aggressive encounters behavior became more common among 12 years old adolescents than younger children. However, in the present findings, there are no significant age differences in aggressive and rule-breaking behaviors. In other words, both genders of juvenile delinquents are prone to exhibit both symptoms of problem behaviors. Again, this might be due to the environmental exposure of negative socialization with other juvenile delinquents during the retention periods [18].

Moreover, this is somehow reflecting the juvenile delinquents are learning new sort of tricky skills and knowledge through their environmental and social interaction, subsequently, worsens their problem behaviors. It is the reciprocal interaction between the individual (micro) delinquent with their mesosystems, exosystems, macrosystems, and chronosystems, which provides stability and maintenance of their delinquency acts. Thus, the longer they are in the deleterious environment (prison, rehabilitation school/center), the more severe they will become.

Although in the literature, it is clearly stated and argued that early adolescence prone to involve in various problem behaviors than late adolescence due to the executive function maturity level, however, this does not occur in the present study. The executive dysfunction level among juvenile delinquents in the present study is similar across ages; early, middle, and late. Thus, there are no age differences recorded on the executive dysfunction, protective factors, and symptoms of problem behaviors, yet contradicting to the existing literature [27]. A series of studies revealed that inverted u-shaped executive function of age-related also has been recorded [29]. The inverted u-shaped capture different aspects of executive functioning concerning adolescence developmental period such as coordination of executive function, the habitual response of inhibition tendency, task switching, initiation, and stopping task. The u-shaped functions specify an increment of intellectual ability during childhood and gradually decline during the aging stage [30]; [31]. Thus, the executive function maturity level among juvenile delinquents requires appropriate activation and maintenance over time to inhibit certain action tendencies.

Another reason to explain the present findings, by which the inhibition of response tendencies among juvenile delinquents may, depends on the optimum activation of the current working memory contents of incarcerated adolescents [32]; [27]. Because of the ability of delinquent adolescents to inhibit irrelevant task-information and to maintain as well as manipulate task-relevant information attributed to the prefrontal functioning and dorsolateral prefrontal. These two regions are among the last parts of the brain to mature in adolescence. However, these two regions also are among the first to deteriorate in the aging stage. It may be true among juvenile delinquents that the maturity level of executive functioning does not occur as expected of healthy development. Therefore, age-related changes in executive functioning in adolescence are associated explicitly with age-related changes in the frontal lobes of cognitive maturity processes [33]; [34]; [29].

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Besides, the Problem Behavior Theory (PBT) can be employed to explain the present findings. According to the theory, the problem behaviors in adolescence much related to age-norms and age-related expectations [13]. Thus, the exhibition of various problem behaviors, including rule-breaking and aggressive behaviors, much relies on the timing of their transitions, either early-onset or late-onset. When several symptoms of problem behaviors occur at the beginning of adolescence, the problem behaviors usually considered against the age norms that usually appropriate behavior for a certain age [35]. The majority of adolescents are aware of the consensual agreement of the age-norms for certain behaviors. At the same time, delinquent adolescents believe that habitation of a more mature and higher status characterized by engaging in an adult-like behavior such as smoking and alcohol consumption [13]. Thus, delinquent adolescents' engagement in problem behaviors is reflecting a transition of lower status to higher status or from younger to older [13]. However, among juvenile delinquents or incarcerated adolescents, the age-norms and age-status seem does not enough to explain their problem behaviors. The interpretation for transitional proneness[35] that related to age-graded, norm-departing, and transition-marking behaviors can predicts which individually is more likely to change behavioral status [12]. Even though, in the present, it is hard to distinguish age differences among juvenile delinquents for further identification of the transitions, especially in early and late transitions.

In conclusion, age differences are not significantly different, especially among juvenile delinquents or incarcerated adolescents, as their significant conduct problem not differed at many ages of development. Although they may show different symptoms of problem behaviors, once severely exposures to low protective factors and lousy experience from environmental adversities, as well as reduced cognitive regulation, their behaviors are indistinguishable neither in early, middle, nor late developmental stage. Thus, the socialization during the detention periods in the prison or rehabilitation school/center is the most crucial aspect among any incarcerated adolescents. Because, this deleterious socialization may serve as a convenience and complacent zone to intermingle and learning new sort of bad ideas, inadequate knowledge, and tricky skills either from the elders or the younger one.

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