

THE ASSOCIATION BETWEEN SOCIODEMOGRAPHIC FACTORS AND TEACHERS' GUIDANCE TOWARDS STUDENTS' ADVERSITY QUOTIENT

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Abstract

This paper aims to report results of research on the association between sociodemographic indicators and teachers' efforts to help students cope with problems and help build students' Adversity Quotient. A questionnaire in the form of self-report inventory was distributed to 102 fourth, fifth, and sixth grade students of A- and C-accredited primary schools in Bantul Regency, Yogyakarta, Indonesia. The population was selected considering the high rates of suicide in the Regency for the past few years. Multiple regression and inductive reasoning were used for analysis. FGDs with teachers were conducted in order to explore teachers' efforts in helping improve students' adversity quotient. Research results showed that students who were middle child had significantly lower AQ compared to those of first-born or earlier-born child, while sixth-graders had significantly higher AQ scores compared to fourth graders, and children whose fathers were skilled workers had greater odds of having high AQ. Teachers had already done some LEAD sequence, but had not guided students to explore and analyze the problem by themselves. The results have some implications for the education policy to integrate religious teachings into the curriculum that can facilitate the improvement of students' Adversity Quotient.

Keywords: adversity quotient; primary school students; sociodemographic variables; CO₂RE, LEAD sequence

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INTRODUCTION

Advances in technology and socio-economic development affect children's growth. Every child is required to adapt to those developments and advancements. Thus, in his or her family life, a child should be gradually introduced to the environment, from the immediate to a bigger environment, in accordance with his/her developmental age. Debriefing children to enter the society needs to be done early. Social competence is associated with reduced risk of maladjustment in schools, especially for children of poor family (Hosokawa & Katsura, 2017). When children do not understand and are not prepared for the changes that occur in their lives, they will find it difficult to overcome problems by themselves, and the difficulty worsens if there is no guidance from parents or teachers.

The chairman of the National Commission for Child Protection in Indonesia revealed that suicide in Indonesia has continued to increase. In fact, in this country, 89 children committed suicide in 2014, and 10% of these children were at the age of primary school. Based on data collected from the Indonesian Police Department, Bantul Regency was reported to have a high suicide rate. There were 19 cases in 2015

and the number rose to 22 cases in 2016 (Hadi, 2017). Those cases involved teenagers and adults and in general were caused by social and economic factors (Syambudi, 2016). According to Rozaki (2012), economic stress, low education, and the condition of living in rural areas were not the only reasons for the suicide phenomenon in Indonesia. The suicide phenomenon among teenagers has also started to increase in urban areas, including among teenagers from rich and educated families. The common denominator was that they all felt frustrated and gave up on their problem. These cases indicate that Indonesian children's Adversity Quotient (AQ) capacity may be lower than what is needed to cope with their problems (Ridho, 2015). According to Stoltz (in Shen, 2014) people with lower AQ will feel frustrated and lost, complain about everything, lack creativity, have lower self-esteem, give up halfway in everything, and finally get nothing.

AQ, first proposed by Stoltz (1997), is "the capacity of a person to deal with and respond to the adversities of life such as stress, difficulty, and problems" (Olila, 2012, p. 13). This concept was initiated in the corporate field of management. Since

the advent of the AQ concept, business organizations have paid more attention to its application, taking seriously the notion that the little time it takes to acquire tools to overcome difficulties can provide rich dividends in terms of better employee relations and work output (Crawford & Teo, 2000). But, the need to increase AQ capacity is not only important for people in business and industry. It can also be a potential tool to prevent suicide in Indonesian children and adolescents.

Based on data from the Central Bureau of Statistics (Indonesian BPS, 2014) Indonesia will soon have a demographic bonus and will have a surplus of human capital at productive age by 2030. Since 2012, Indonesia's dependency ratio has been around 50, indicating that every 2 productive citizens have to bear 1 person of non-productive age and the ratio has continued to decline. Human capital, the most important capital in modern economies, refers to the knowledge, information, ideas, skills, and health of individuals (Becker, 2002). National economies and the economic successes of individuals depend on how extensively and effectively people invest in themselves, including the capacity to cope with problems. Improving AQ is thus crucial not only to prevent suicide but also to achieve a high-quality human capital with special skills to overcome problems or difficulties.

The components of AQ include CO₂RE (Shen, 2014). With this concept of AQ, a person can understand and improve his/her AQ as a capacity to deal with adversity. CO₂RE refers to Control-Origin and Ownership-Reach-Endurance. Each component can be defined as follows:

1. Control: The extent to which a person considers himself/herself able to overcome any problems or difficulties. This capability can be developed during their upbringing by parents and teachers who develop the feeling of self-confidence, being valued, cared for, and being heard in children.
2. The origin of the problem (Origin) and the power of a person to resolve the problem (Ownership): The extent to which a person is able to discover the cause of his/her problem and move to address the problem. This capability is developed through parental guidance in discovering the source of the problem.
3. Reach is the extent to which a person has the ability to limit the problem and consider the problem as a challenge, not an obstacle. With this capability, children learn the extent of the problem so it does not impact other aspects of life. This is developed through the guidance of parents and teachers.
4. Endurance or durability refers to how long the adversity will last, how long a person is able to survive the adversities in their life. This ability can be improved through parenting by always motivating children to take immediate action to resolve the problem so that the problems they experienced are not protracted (the belief that the problem will be fleeting). (Shen, 2014, p. 24)

These components indicate that we can make the measurement to determine the ability of a person to

handle adversity. Stoltz (in Olila, 2012) said that one can respond to adverse situations and rise above adversity. Life is like mountain climbing. People are born to ascend, meaning that one moves toward his/her purpose, no matter what the goal is. Therefore, AQ is the underlying factor that determines the ability of a person to ascend.

In his research on primary school students' Adversity Quotient, Olila (2012) distributed a 30-item questionnaire addressing six aspects of AQ: : (i) understanding one's ability to overcome problems, (ii) understanding what problem are faced and the causes of problems encountered, (iii) giving response to the problem and take actions, (iv) understanding the limitation of the problem and be able to limit the problem, (v) optimistic that the problem will quickly be elapsed and (vi) enthusiastic, optimistic, active, and have a strong interest. The students were offered with a situation and had to choose one of two different responses offered by two students in the case presented. The results demonstrate that the students' AQ was considered high.

In harmony with that notion, Niemiec, Ryan, and Deci (2006) in the theory of self-determination stated that a person has the urge (within himself) to strive, to improve personality and self-regulation capacity, and to integrate values to guide behavior. This is related to the first of CO₂RE components that a person should have the ability to control his/her impulse and emotions in order to be able to respond positively to any adversity. A person needs encouragement from within him/herself, knowledge as motivation and a positive experience to improve achievement and well-being. According to Bandura and Zimmerman (in Astutik, Wismanto, & Goeritno, 2012) self-regulation is the ability to control behavior to improve one's performance. In addition, positive social relationships are important to improve the self-regulation of a person. So to be able to ascend, a person needs encouragement and self-regulation to govern their behavior and personality, AQ capacity, and social support. Not less important is the guidance of one's religion, which provides the best direction s/he takes in life.

AQ as a measure of the capacity to deal with problems in life can be improved through education. Education is very important to enable someone to take advantage of opportunities and cope with any changes in the environment (Shultz, 2002, p.x). The instilling of AQ capacity through education will be better started at an early age, as its impact will be experienced all the way into productive age and thus helps achieve high-quality human capital for Indonesia.

A previous study found that students in the accredited A schools had better perception of their AQ and parenting of teachers and parents than students in the accredited C schools. Parenting of teachers was not significantly associated with students' AQ, and why this happened should be studied. AQ of students in the district of Bantul was better than that of students in Bone Bolango (Listiawati, 2016). There might be some factors in demographic aspect which influence students' AQ that have not been studied (Center for Policy Research on Education and Culture, 2016). Another study found that social support is very important for children to develop their AQ optimally

(Ahyani, 2016) and another reported a positive relationship between student's AQ, social support, and task commitment (Bela, 2016). As can be seen from the previous studies, social support from the teachers is very important for children in school, but there are limited studies that discuss the effect of teachers' guidance on improving students' AQ.

This research, therefore, aimed to investigate: (i) Parenting style of teachers in two primary schools in Bantul, a regency in the Special Region of Yogyakarta that has a high ratio of suicide in teenagers and adults, and (ii) sociodemographic factors associated with student's AQ.

METHOD

Respondents of this research were 102 students from two primary schools in the District of Bantul, Yogyakarta, Indonesia. The primary schools were purposively selected with one school representing A-accredited schools and another school representing C-accredited schools in the area. All children attending grade 4, 5, and 6 were selected as samples. If there were more than one class for each grade, one class was selected at random. Therefore, the 102 students in the samples were from a total of 6 different classes. Respondents' age was around 10 – 14 years old. WHO defines ages 10-14 as the beginning of adolescence, whereas ParentFurther (2017) defines ages 10 – 14 to be in the same group as young teens. Thus, respondents were young teens or at the beginning of adolescence. The students in grade 4, 5, 6 was selected considering that in that age group, they are progressing from concrete logical operations to acquiring the ability to analyze, understand a complex concept, and think reflectively (Manning, 2002 in Caskey & Anfara, 2014). With that capacity, they would be able to assess their AQ and the parenting of their parents and teachers.

Questionnaires were administered to students in the form of a Self-report Inventory. Self-report is a form of personality test in which respondents provide information about themselves by answering a number of questions or statements. Self-report used to measure aspects of emotion, motivation, and attitude. This is known as a self-report inventory because the measurement results are derived from respondents' answers about themselves (Cohen & Swerdlik in Ciptadi, 2010). Students' perception of the parenting of their parents and teachers in developing their AQ was measured using inventory method, in which students had to choose yes or no to the situation related to LEAD variables. Cronbach's Alpha of the questionnaire was 0.81, indicating a good reliability (Kline, 2000;

George & Mallery, 2003). Meanwhile, the score of total corrected items was >0.03 indicating a good validity (Azwar, 2000).

Focus group discussion (FGD) with teachers was also conducted to obtain information on how teachers knew if their students were in trouble and how teachers reacted when students faced adversities. The selection of teachers as key informants in the Focus Group Discussion (FGD) was done by the corresponding school principals. One school sent one teacher of grade 4, 5, or 6. Ten schools were invited to attend the FGD, including those selected for student survey. All representative schools were present at the FGD. Data collection was done between from 9 – 11 June 2016.

Variables

In this research, the dependent variable is AQ and the independent variables are demographic variables. According to Burns in Kaur (2013, p.37), "demographic variables are characteristics or attributes of subjects that are collected to describe the sample."

Adversity Quotient (AQ) is defined as the capacity of a person to deal with and respond to the adversities of life such as stress, difficulties, and problems. Stoltz states (in Crawford & Teo, 2000) that AQ takes three forms. First, AQ is a conceptual framework for understanding a problem and improving all our potential to overcome it. Second, AQ is a measure of how a person responds to adversity as an unconscious pattern of behavior, which can be understood and changed. Third, AQ is a set of tools for modifying how a person responds to adversity and, as a result, increases overall personal and professional effectiveness. The combination of these three elements is a complete package to understand and improve a person's self-control in the face of adversity.

Teachers' responses to students and their problems were measured using LEAD (Stoltz in Crawford & Teo, 2000). L stands for listening to one's response to adversity, which covers responses such as listening, providing peace, motivation, and passion to a child to solve problems, forget about the problems, and move forward. E stands for guiding a child to explore all origins of the adversity, accepting appropriate blame for causing the adverse situation, and guiding a child to be responsible for and accountable in dealing with the adversity and to improve. A stands for guiding a child to analyze the problems and limits the impact on other facets of a child's life. D stands for guiding a child to do something to strengthen the child's resistance/endurance based on critical thought.

Table 1. AQ, parenting, and students' demographic dimensions and definition

Dimensions	Variables	Operational definition
Teachers' attempts to improve students' AQ	LEAD Sequence	This is an effort to raise students AQ by Listening; guiding students to Explore the origin of adversity and take responsibility to solve it; guiding students to Analyze and limit the problems, and guiding students to Do Something to solve them.
Parents' Condition	Father's occupation	Gov. employee, Indonesian national army/policeman, a private employee, entrepreneur, professional worker, skillful worker, farmer/breeder/fisher, blue collar worker, unemployment
Demographic variables	Gender	Gender of the students
	Birth order	Oldest, middle, youngest, only child
	Grade in Education	4 - 6 grade of primary school

The sociodemographic variables of interest here are gender, birth order, grade, father's and mother's occupation. Gender was defined as boys and girls; birth order was categorized into oldest, middle, youngest, and only child; grade was children's level of education at the time of the interview.

Data Analysis

AQ was categorized into high (equal to or above median score) and low (below median score). Logistic regression was used to analyze the association between demographic factors and AQ category using Stata 14. Information from FGD was analyzed using an inductive reasoning approach. This approach was used to describe the problems based on the facts. This approach analyses from specific information to broader generalizations and theories (Burney, 2008).

RESULTS

Most students responded to all of the questions. There were almost as many girls as boys in the samples. Most children were either the first or the youngest child and at sixth grade. . Most of the respondents also had skilled fathers.

The demographic data of the respondents are presented in detail in Table 2.

Table 2. Distribution of Adversity Quotient

Category	n	%	High AQ (%)
<i>Gender</i>			
girls	50	49.5	74.0
Boys	51	50.5	64.7
<i>Birth order</i>			
oldest	36	35.6	72.22
middle	15	14.9	40
youngest	36	35.6	83.33
only child	14	13.9	57.14
<i>Grade</i>			
4 th	16	15.8	43.75
5 th	40	39.6	62.5
6 th	45	44.6	84.44
<i>Father's occupation</i>			
unskilled	39	38.6	48.72
skilled	62	61.4	82.26
<i>Mother's occupation</i>			
unskilled	53	52.5	66.04
skilled	48	47.5	72.92

The association between demographic variables and student AQ

Univariate analysis showed that there was no difference in the odds of having high AQ between boys and girls. The middle child had significantly lower AQ compared to the oldest child and they remained to have lower AQ scores compared to the oldest child after adjustment for grades and parent's occupation (Adj OR=0.22, 95%CI: 0.05 – 0.91, p=0.04). Children at sixth grade had significantly higher AQ. After adjustment for other covariates, children at sixth grade had nearly 5 times more odds of having higher AQ scores compared to children at 4th grade (Adj OR=4.82; 95%CI: 1.05 - 22.04, p=0.04). Having a father with a skilled job was also associated with more than 6 times higher odds of having AQ scores after adjustment (Adj OR: 6.26; 95%CI: 1.84 – 21.27, p<0.0001). There was no association between mother's occupation and AQ score (Table 3).

Table 3. Association between demographic factors and adversity quotient

Demographic factors	UNIVARIATE				MULTIVARIATE			
	OR	95% Confidence Interval		p value	Adj OR	95% Confidence Interval		p value
<i>Gender</i>								
girls	Reference							
boys	0.64	0.27	- 1.51	0.31				
<i>Birth order</i>								
oldest	Reference					Reference		
middle	0.26	0.07	- 0.91	0.04	0.22	0.05	- 0.91	0.04
youngest	1.92	0.61	- 6.01	0.26	2.72	0.72	- 10.34	0.14
only child	0.51	0.14	- 1.85	0.31	0.50	0.11	- 2.24	0.36
<i>Grade</i>								
4 th	Reference					Reference		
5 th	2.14	0.66	- 6.95	0.20	1.44	0.29	- 7.13	0.66
6 th	6.98	1.95	- 24.98	0.00	4.82	1.05	- 22.04	0.04
<i>Father's occupation</i>								
unskilled	Reference					Reference		
skilled	4.88	1.97	- 12.06	0.00	6.26	1.84	- 21.27	0.00
<i>Mother's occupation</i>								
Unskilled	Reference							
Skilled	1.38	0.59	- 3.25	0.46				

Teachers' effort to raise the students' AQ

As stated before, there were 10 teachers from 10 schools that were invited. Based on the FGDs with teachers, when there was a student who faced adversity, teachers' efforts were: 1) Investigating the cause of student's problems by visiting student's home, asking friends and neighbors; 2) Approaching the parents and ask them to motivate their child to study and ensure the child to be confident. Child's self-confidence is very important. This can be a starting point for the children to share about themselves with others; 3) Often asking students about their condition at home and school to make them feel the teacher was 'Listening' to them; 4) Giving appreciation for students' potential; and 5) Supporting students who have problems by helping them find solutions and cooperating with other teachers.

One of the teachers said this regarding students' character: "students' characters are very diverse; some are quiet, some are very active, etc.; therefore, a different approach for each one is needed. A teacher has to know how students' lives are at home, for example, by understanding their parents' characters."

Another teacher said regarding students' difficulties in learning and relationship with their family: "In the learning process, children who experience learning difficulties are usually less active. A family has an important role in a child's learning. If the family is harmonious, the learning process at home is also conducive. If a child has parents who are too busy working or s/he comes from a broken home family, s/he cannot study at home or study less at home, and so s/he must have learning difficulties at school." Besides parents' attempt to motivate children to learn and do their homework, the atmosphere in and around the house should be conducive for children to learn and do their learning activities. Quarrels between parents are sometimes needed for children to understand that there are conflicts in life. The important thing is how the conflicts are resolved and not protracted. As Cummings says, "Conflict is a normal part of everyday experience, so it's not whether

parents fight that is important. It's how the conflict is expressed and resolved, and especially how it makes children feel that has important consequences for children" (as cited in Divecha, 2014, par. 3).

Regarding child delinquency, a teacher reported that s/he appointed selected students to become agents and report their peers' actions that are considered disadvantageous, such as disturbing their friends while learning, being noisy while learning takes place, or tampering with CCTV screen while their teacher is not around to lock the monitoring although this is only an example since there are not many schools that have CCTV available. Another action is to get students to help overcome a problem of their friends in the classroom, or teacher stops the learning process momentarily until the atmosphere becomes conducive to continue. This way is often successful.

DISCUSSION

The study found that middle child had significantly lower AQ compared to the oldest child, while children at higher grade levels and children whose fathers were skilled workers had significantly greater AQ. Teachers also have done some LEAD sequence to help students cope with their problems. Detailed discussion of the findings is presented below.

The Association between Demographic Variables and Students' AQ

The lack of significant association between gender and AQ in our study was in line with a study of workers in Taiwan that showed psychological tests cannot simply be determined by gender and should better be conformed to contemporary environments (Shen, 2014). This was also in line with the research of Cornista and Macasaet (2013) on the adversity quotient and achievement motivation that gender did not affect the AQ of third and fourth-year psychology students. The lack of significant association between gender and AQ in Indonesian primary school students can partly be explained by the high access to education for Indonesian girls. The numbers of boys

and girls in our samples were balanced. Balanced numbers of the enrolment rate of female and male students in primary schools in Indonesia were also reported in 2016 (the Central Bureau of Statistics, 2016).

The odds for having low AQ in middle children may be due to the fact that culturally the youngest and oldest children as well as an only child in Indonesia usually get more attention and affection from their parents and other family members. This enhances self-esteem and makes students believe that they are more confident in doing things. The experience of a youngest child is similar to that of an oldest child. Their presence in this world is expected by the parents and the whole family, especially if they are the first grandchildren of a large family. They get affection and support to meet various kinds of needs. Meanwhile, a middle child is usually more succumbing to and more accepting of what they have been given. This condition can decrease middle children's motivation and spirit, and it can decrease their self-esteem as well.

A higher AQ score in children with a higher level of education shows that the experience and habituation of children who are in school longer affect their ability to adapt and face a variety of problems which are commonly experienced in school. This is in accordance with Shen's (2014) research on AQ in workers which found that when workers do the same job for a longer period of time, their ability to face adversity at work can be gradually trained. Therefore, experience has a significant effect on AQ.

The greater odds of having high AQ in children whose fathers work as skilled worker shows that AQ is associated with the socioeconomic status of the family. Skilled workers have higher education and thus may be more prepared to be parents. Beside their knowledge of how to maintain children's well-being, parents with higher education have many resources to give good parenting to their children, which is in contrast with low skilled worker parents. Low skilled workers have higher stress at work compared to the skilled worker. Research of Heinrich (2014) described that ongoing stress at work made parents more easily offended and "parents feel pressured by external demands to work for pay, such as financial uncertainty, welfare requirements, or the rising cost of goods that are thought to benefit children. . . These demands, in turn, may affect parents' job satisfaction, physical and mental health, coping resources and ability to provide socio-emotional support for their children" (p. 125). Beside parental characteristics, students' safety, comfort, and self-esteem also affect students' AQ. The safer, more comfortable, and more confident students feel, the higher the probability of their AQ to improve. This study, however, did not assess these variables.

Teacher's Efforts to Increase Students' AQ

Teachers' effort will be insignificant without coordination and cooperation with parents as the statistic result tells us that all the independent variables of parents' and teachers' LEAD were significantly associated with AQ score if they were combined together (Listiawati, 2016). Data about teachers' efforts did not include challenges that teachers give to students and the students' ability or competence to respond to adversity. However, teachers already gave

some support using LEAD sequence, such as listening and exploring. However, exploration was only done by teachers by investigating the cause of students' problems. Teachers did not teach students to explore their own problem, limit the scope of their problems, and give guidance into analyzing the problem. Teachers knew that students had problems and they wanted to help them to solve the problems. Unfortunately, they were unaware that students needed guidance to solve problems by themselves. Problems, as well as challenges, are needed to make someone capable and strong enough to face life. Regarding this, Hetzel & Stranske (2007) stated that teachers have to challenge their students appropriately and regularly, orchestrate disequilibrium to promote task persistence, and teach students to frame failures and welcome challenge.

As AQ can be raised through habituation and learning, success is the destination of a trip that is decorated with various obstacles. If a person has the experience to overcome an obstacle, s/he will have a technique to overcome other obstacles and change his/her thoughts from focusing on obstacles to chances. Teachers should be able to make students continue doing something even if it is difficult. Children should not give up if faced with difficulties. As Pintrich et al. (in Ulstad et al, 2018) noted, regulation helps students to reach their study goals by focusing on completing the task even if they do not like the assignment or see them as interesting. Sometimes students are not interested in something because they have never tried it or they never do or engage in such activities. Sometimes, failures are important as not to make someone arrogant. Teachers should be able to make students see failures as a challenge and not slumped by failure.

Implications for education policy

Our study shows the need for the government to train teachers the LEAD sequence, especially in guiding students to explore and analyze their own problems. It can be a difficult undertaking as internal exploration and analysis of students' own problems, although the efforts have been instilled in the current 2013 school curriculum. Unfortunately, teacher trainings so far have only been held to transfer knowledge, while the practice seems to be beyond reach. Apart from that, learning materials for students have not supported the instillation of AQ in their activities (Center for Policy Research in Education and Culture, 2018).

Indonesian people are devoted to religious teaching. Islam and Christianity, two major religions in Indonesia, prohibit self-harms and suicides (Ali, 1999; Got Questions Org., 2017). This is potentially a strong foundation for helping children improve their AQ. However, the government will need to translate those religious teachings into general educational curriculum in preparing children for life adversities. The Strengthening of Character Education program that is currently compulsory in all schools can be a vehicle for this AQ building. Further studies need to create a set of indicators of AQ that are compulsory to be measured in conjunction with student exam in all Indonesian schools.

CONCLUSIONS AND RECOMMENDATIONS

AQ is the ability of a person to change adversity into a challenging life situation, and it should be improved from time to time. It is the basic need in human capital to succeed in life. Education can improve one's AQ; therefore, guidance from teachers is needed. Teachers as subjects in this research proved to have already done some LEAD sequence but had not guided students to explore and analyze problems by themselves. Hence, in the teaching and learning process, teachers need to promote task persistence and give more challenges to students.

The study also revealed groups of children to focus on. The study showed that students who were middle child had significantly lower AQ compared to those of oldest and youngest child, while sixth-grader had significantly higher AQ scores compared to 4th and 5th grader and children whose fathers were skilled workers had greater odds of having high AQ. Therefore, the awareness of improving children's AQ from early childhood must be raised especially for the benefit of the groups of vulnerable children. Government should: (i) consider AQ as one of the key values in strengthening character education; (ii) provide dissemination and coaching to parents about the importance of AQ for children through the Directorate for Parenting Education; and (iii) provide guidance for teachers to implement LEAD to students in order to improve students' AQ. Further research needs to assess the influence of students' safety, comfort, and self-esteem on AQ.

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