

The Role of Virtue on Authentic Leadership with Adversity Quotient as a Mediator: Study among Millennial Leaders

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Abstract This study examines the role of anchor virtues towards authentic leadership with adversity quotient as the mediator among 125 millenials who have assumed leadership positions, such as chief in their startups, leader of organizations, and awardee of leadership scholarships. The measurement used Riyono's (2020) Anchor Personality Inventory to measure the strength of virtues orientation, Stoltz' (1997) Adversity Response Profile to measure Adversity Quotient, and self-rating of Authentic Leadership Questionnaire (Walumbwa et al., 2008) to measure authentic leadership. It is hypothesized that virtue, adversity quotient, and authentic leadership have significant correlation and adversity quotient can mediate the relationships among virtue and authentic leadership. The result corresponds with the hypothesis. However, for the future research, it will be more comprehensive if the measurement of authentic leadership was using both self-assessment and followers-assessment.

Keywords: adversity quotient, authentic leadership, leadership, virtue.

Introduction

According to Ernst & Young Global Survey (2015), millennial generation is projected to be dominating the global workforce in 2025. This generation, who was born during year of 1980-2000 (Badan Pusat Statistik, 2018) or in the age of 19-39 by 2019, will be driving the future of business as leaders as well (Forbes, 2019). Therefore, it is crucial for millennial generation to have these skills and competences to contend in the global workforce as they are the asset for driving the future workforce. World Economic Forum (2018) stated that human skills such as creativity, originality, initiative, critical thinking, resilience, complex problem solving, emotional intelligence, and especially leadership become more valuable since it could not be replaced by technologies or artificial intelligence yet. Moreover, leadership is also one of the requirements to produce positive outcomes and a future of a good work (World Economic Forum, 2018). Those who have this skill can influence others to work willingly and enthusiastically to achieve planned-goal by shaping beliefs, desires, and priorities of their followers (Bisen & Priya, 2010; Haslam, Reicher, and Platow, 2011).

One of the new areas of leadership is authentic leadership (Northouse, 2010). This type of leadership is

known as effective since it promotes positive psychological capacities and a positive ethical climate (Walumbwa et al., 2008). Authentic leaders tend to emphasize their life experiences and their core values to drive their actions and make decision, yet also listen, support, and motivate their followers (Pinelli et al., 2018). This can produce greater self-awareness and self-regulated positive behaviours and turns a foster continuous, positive self-development among their followers, as well as sustained workforce performance (Avolio & Luthans, 2006).

There are four factors of authentic leadership; self-awareness, relational transparency, balanced processing, and internalized moral perspective (Avolio, Walumbwa, & Weber, 2009). Self-awareness examines how individuals understand their strength and weakness, and how they impact other people. Relational transparency refers to how individuals present their true authentic self, which involves open sharing, promoting trust, and expressing appropriate emotions. Then, balanced processing demonstrates analyzation and data oriented before creating judgement or decision, and internalized moral perspective is related to self-regulation expressed decision making and behaviour that is consistent with their internalized values (Walumbwa et al., 2008).

Authentic leadership is formed from the process that draws upon an individual's life course, psychological capital, moral perspective, and a highly developed supporting organizational climate (Avolio and Luthans, 2006). According to self-based model of authentic leader

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and follower developed by Gardner, Avolio, Luthans, May, & Walumbwa (2005), authentic leadership is built when the individual has positive psychological capacities and moral reasoning, then

the individual faced a critical life events that cause them have those four factors of authentic leaders (see Figure 1):

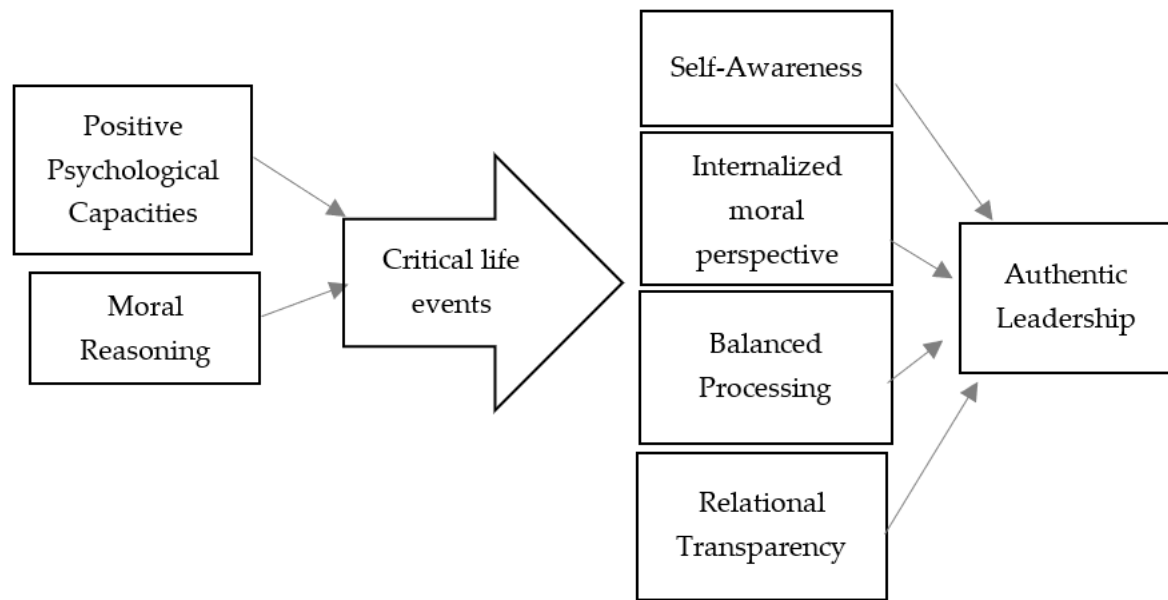


Figure 1. Authentic Leadership Model (Gardner et al., 2005)

Meanwhile, the goodness of moral reasoning can be referred to virtue (Cameron, Bright, & Caza, 2004), and the definition stated virtue as high moral standard (Virtue, 2019). It can also be defined as consciously doing the right things or action based on reason in the right way, and believing that “you are what you do” (Newstead, Macklin, Dawkins, & Martin, 2018). The concept of leadership defined as the people who influence others based on reason and ennobling moral (Newstead, Dawkins, Macklin, & Martin, 2019) and literature review conducted by Pinelli et al (2018) found that to be an effective leader requires authentic self and action that is based on virtues.

Anchor virtues is also one of the layers in Riyono, Himam, & Subandi (2012) Anchor Personality (see Figure 2). Layers of anchor personality explain that one can rely on in facing the uncertainty. There are four anchors in anchor personality theory; materials, self, others, and virtues. If people were oriented by “materials”, they tend to consider every action they make with materials related, while if the anchor is “self”, the individuals will be too independent and selfish. Moreover, if people choose “others” as their anchor, they will be too dependent to other people and not having firm self-determination (Riyono, Himam, & Subandi, 2012). However, people who choose “virtues” as their anchor orientation are relying on

their high moral values in every action they make and it will guide them into God and make them able to tolerance the uncertainty. Even though these orientations of anchor personality can be changed during the individual’s lifetime, yet the ideal model is shown in the Figure 2. Figure 2 shows that virtue is in the highest position, meaning that it is the highest priority for the individual. This means that the individuals consider themselves and other people are in the same level as human, and set aside the material. Therefore, in anchor personality theory virtue is the ideal priority in compared to other anchors (Riyono, Himam, & Subandi, 2012). The ideal model of personality based on the Anchor personality theory is shown in the Figure 2 below:

Since anchor personality explains the dependency of individuals in facing the uncertainty and the ideal layer of anchor is virtue, if the individuals are virtue-oriented, they will be able to face uncertainty including the adversities in life (Riyono, Himam, & Subandi, 2012). In the Figure 1, it shows that critical life events also the variable that can influence authentic leadership. Thus, if moral reasoning can be implied by virtue, then it influences people to respond and make ethical decision in critical life events. According to American Psychological Association (2019), critical life events are defined as events in life

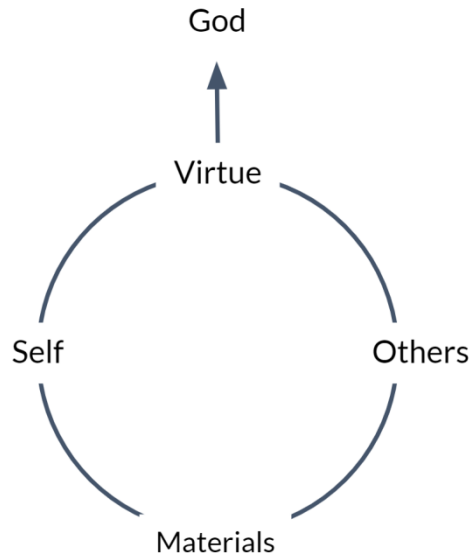


Figure 2. Ideal Model of Anchor Personality (Riyono et al., 2012)

that require major adjustment and adaptive behaviour, which may involve adversities or difficult-unpleasant situation (Adversity, 2019). The ability to well-adapt in facing adversities can be measured with the score of Adversity Quotient or AQ, since it has been used to find out how people behave in difficult situation (Stoltz, 1997).

Adversity Quotient has four dimension which called as “CO2RE”. It stands for Control, Origin, Ownership, Reach, and Endurance. ‘Control’ informs to what extend a person perceives to have control over adverse situation. ‘Origin’ tells how a person analyse where or what was the origin of the problem, and ‘Ownership’ is related to how the individual consider owning the outcome of adversity. Low ‘O2’ score indicates that the individuals tend to blame themselves when bad things happen, and run away from responsibility, while high score indicates reasonable thinking by considering their role and other sources that cause adverse situation. Meanwhile, ‘Reach’ measures how well the person is able to limit the effect of adversities. Then, ‘Endurance’ refers to whether the person is able to think the best possible thing that will happen even though there is adversity (Phoolka, 2012).

Individuals with high level of AQ score are usually not giving up easily, constantly move forward, and consider the challenge as their opportunities to grow. In contrast, individuals with low level of AQ, tend to feel helpless and easily give up in difficult situation (Stoltz, 1997; Cura & Gozum, 2011). Celik, Akgemci, and Akyazi (2016) found that authentic leaders are not

easily deceived by disinformation, and able to evaluate the options more objectively in crisis events. Even though previous studies did not specifically mention the relationship between Adversity Quotient and authentic leadership, it had relationship with the effectiveness of leadership styles (Bautista et al., 2019).

However, previous studies did not specifically mention about the relevance between authentic leadership, virtues, and Aversity Quotient (Bautista, Pascua, Tiu, & Vela, 2016; Okorji & Epetuku, 2019; Riyono, 2012). Therefore, this study is aimed to examine the relationship between virtue, adversity quotient, and authentic leadership. Since based on those findings, it can be assumed that authentic leader responds and act based on virtues when facing adversities, which then, later can be assumed those people have higher level of Adversity Quotient (Gardner et al., 2005; Kim et al., 2017; Newstead, Dawkins, Macklin, & Martin, 2019). Thus, it is hypothesized that the anchor has a role on authentic leadership, and Adversity Quotient is their mediator among millennial generation who are assumed to have leadership position.

Method

Variable Identification

The independent variable (IV) was virtue, the outcome variable or dependent variable (DV) was authentic leadership, and the predicted mediation variable (M) was adversity quotient. The conceptual framework is shown in the Figure 3 below:

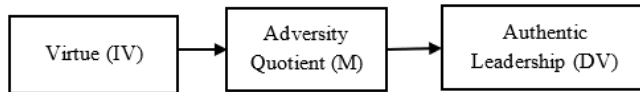


Figure 3. Conceptual Framework

Research Subject

The subjects of this study were 125 millennial generation in the age of 19-35 years old who were assumed leadership positions since this study focused on authentic leadership as the outcome; such as C-level of startups (n=31, 24.8%), leaders of an organization (n=28, 22.4%), awardee of leadership scholarship (n=23, 18.4%), and both leaders and awardee of scholarship program (n=43, 34.4%). Data collected within this group because they are assumed to have leadership experiences which may have bigger potential in authentic leadership, as C-level of startup and leaders of organization have role as leaders in their business or their organization, while leadership scholarship awardee has received leadership development program in their scholarship. The participants consisted of 69 (55.2%) females and 56 (44.8%) males.

Instruments

Authentic Leadership Questionnaire (ALQ)

Self-assessment Authentic Leadership Questionnaire (ALQ) that was created by Walumbwa, Avolio, Gardner, Wernsing, and Peterson (2008) was translated into Bahasa and used to measure the authentic leadership. The researcher asked the permission from copyright owner (mindgarden.com) through email. ALQ consists of 16 items that have 4 aspects of Authentic Leadership; self-awareness (item 1,5,9,13), Internalized moral perspective (item 2,6,10,14), Balanced processing (item 3,7,11,15), and Relational Transparency (4,8,12,16). The item used Likert's Scale, ranging from 1 to 5; 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strong Agree (Appendix 1). The researcher conducted content validity test by using expert judgement. The alpha cronbach of ALQ in this study was 0.775. According to Azwar (2015), if the alpha cronbach approximates 1.00, the instrument reliability is more adequate. The researcher then calculated the total score of ALQ by summing the raw score. High score indicates higher potential of authentic leadership, while low score indicates otherwise. The blueprint of self-assessment ALQ explains in Table 1.

Table 1. Blueprint of Self-Assessment Authentic Leadership Questionnaire (Walumbwa et al., 2008)

Aspects	Item Number	Σ
	F	
Self-Awareness	1, 5, 9, 13.	4
Internalized Moral Perspective	2, 6, 10, 14.	4
Balanced processing	3, 7, 11, 15.	4
Relational transparency	4, 8, 12, 16.	4
		16

F: Favorable Items

Adversity Response Profile (ARP)

Adversity Response Profile (ARP) by Stoltz (1997) of the PEAK Learning, has been translated into Bahasa and has received permission by the copyright owners (PEAK Learning) to be used to measure the Adversity Quotient of the participants. It originally consists of 60 items within 30 events, but 20 items (10 events) were unfavourable item, which then researcher only put 40 favourable items (20 events) in order to simplify. The scale used summated rating from 1-5. The validity test was conducted using Aiken's v and received 0.6-1 validity score, while the alpha cronbach of ARP in this study was 0.769.

Table 2. Blueprint of Adversity Response Profile (Stoltz, 1997)

Aspects	Item Number	Σ
	F	
Control	1, 7, 11, 13, 23, 25, 27, 35, 37, 39.	10
Origin	2, 12, 24, 28, 40.	5
Ownership	8, 14, 26, 37, 38.	5
Reach	3, 5, 9, 15, 17, 19, 21, 29, 31, 33.	10
Endurance	4, 6, 10, 16, 18, 20, 22, 30, 32, 34	10
		40

F: Favorable Items

This instrument measures CO2RE, as the four dimensions of AQ. 'C' for Control (item no. 1, 7, 11, 13, 23, 25, 27, 35, 37, and 39), 'O2' for Origin and Ownership (item no. 2, 12, 24, 28, 40, 8, 14, 26, 37,

and 38), 'R' for Reach (item no. 3, 5, 9, 15, 17, 19, 21, 29, 31, and 33), and 'E' for Endurance (item no. 4, 6, 10, 16, 18, 20, 22, 30, 32, 34). After receiving data from the participants, researcher was conducting scoring to find out the level of AQ that is owned by the participants. AQ score was produced from the summation of score in each dimension. The blueprint of Adversity Response Profile shown in the Table 2 above.

Anchor Personality Inventory

Riyono (2020) ten items of anchor personality inventory was used to investigate the frequency of each layer of anchor among participants. There were ten items, and each item had four choices that represented each layers of anchor; Materials, Self, Other, and Virtue. Therefore, the instrument was in a form of multiple questions with single answer. The researcher calculated the number of answers that has been chose by the participants. The choices represented each layers of anchors in which A represents materials, B represents self, C represents others, and D represents virtues (see Appendix B.2). Therefore, the maximum score that each participant gained will be ten that can be spread in those four orientations of anchor. Each participant may gained seven score in virtues, and three score in self and zero score in both materials and others. This instrument was received expert judgment as its content validity. Table 3. below explains the blueprint of Anchor Personality Inventory:

Table 2. Blueprint of Anchor Personality Inventory (Riyono, 2012).

Anchor	Item Number	Option	Σ
Materials	1-10	A	10
Self	1-10	B	10
Others	1-10	C	10
Virtues	1-10	D	10

The study used cross-sectional design, and the sample method was purposeful sampling. The scales were administered using online questionnaire in the link: ugm.id/skalaprestasi for millennials who were the leader of an organization and awardees of leadership scholarship and ugm.id/skalapemimpin for the Startup's C-Level. The survey was distributed by email and personal contact through social media (e.g., Whatsapp, Line, Linked In). The completion of this

questionnaire took 15-20 minutes, and it was conducted for a month (October 2019 – November 2019). The participants received E-Book titled "7 Habits of Highly Effective People" written by Dr. Sean Covey and four lucky participants received GO-PAY money for 25.000 rupiah.

This study used quantitative approach to test the hypothesis. The data analysis technique was descriptive statistics, correlation analysis, and mediation analysis using IBM SPSS Statistics version 25.0. The descriptive statistics was using Azwar's (2012) guideline to measure the categories for low, medium, and high score of virtues and authentic leadership that explained in the Table 4 below:

Table 3. Categories for Virtues, Adversity Quotient, and Authentic Leadership (Azwar, 2012)

Low	$X < M - 1SD$
Medium	$M - 1SD \leq X < M + 1SD$
High	$M + 1SD \leq X$

Meanwhile, the mediation analysis was using Baron and Kenny (1986) as the guideline.

Findings

Descriptive Statistics

Table 5 indicates that there was a very small number of participants who had high score neither in "material" and "others", even zero number in "self". On the contrary, most of the participants were low in materials, self, and others. Meanwhile the numbers of participant who were low in virtues are merely 19 (15.2%), which makes the total numbers of participant who have medium to high score in virtues dominated, which were 104 (83.2%) participants in total.

Meanwhile, the result of Adversity Quotient indicates that most of the participants who in the medium to high score in adversity quotient were 111 (88.8%), and there were only 14 (11.2%) participants who possess low score. In the other hand, the authentic leadership score of the participants were mostly in the level of medium as well (95, 76%). The total number of participants who had medium to high level of authentic leadership is 114 (91%). The participants who had low level of authentic leadership were merely 11 or almost 9%.

Correlation Analysis

After calculated the score in each variable, the researcher conducted correlation analysis. This analysis was aimed to investigate the correlation

correlation between the variables, and which one of the layers of anchor that had positive significant correlation with adversity quotient and authentic leadership. It was also aimed to find out whether or not there is a positive significant correlation

between virtue, adversity quotient, and authentic leadership to continue the analysis into mediation analysis. Table 6 below explains the result of correlation analysis.

Table 4. Variables Descriptive Result (N=125)

Variables		N	Percentage (%)
Virtues	Low	19	15.2
	Medium	66	52.8
	High	40	32
Materials	Low	115	92
	Medium	9	7.2
	High	1	.8
Self	Low	76	60.8
	Medium	47	37.6
	High	2	1.6
Others	Low	86	68.8
	Medium	39	31.2
	High	-	-
Adversity Quotient	Low	14	11.2
	Medium	91	72.8
	High	20	16.0
Authentic Leadership	Low	11	8.8
	Medium	95	76.0
	High	19	15.2

Table 6. Bivariate correlations among variables, means, and standard deviations for total respondents (N=125)

	1	2	3	4	5	6
1-Authentic Leadership	-	.308**	.218*	-.191*	-.119	-.070
2-Adversity Quotient		-	.212*	-.030	-.183*	-.127
3-Virtue			-	-.563**	-.490**	-.625*
4-Materials				-	.032	-.124
5-Others					-	-.167
6-Self						-
M	63.74	141.51	5.10	.82	1.90	2.18
SD	6.44	13.75	2.47	1.23	1.52	1.64

** p < 0.01 ; * p < 0.05

Table 6 indicates that virtues had negative significant correlation with all of the other layers of anchor; materials, others, and self, yet it had positive significant correlation with adversity quotient and authentic leadership. Meanwhile, materials, self, and others were all negatively correlated with adversity quotient and authentic leadership. Both self and others were not significant, while materials had significant negative correlation. Therefore, if virtues score was high, both of the score of adversity quotient and authentic leadership will be high as well. In contrast with materials score, if it was high, the authentic leadership and adversity quotient will be low. In addition, for the correlation between both self and others to adversity quotient and authentic leadership, the study did not statistically find significant differences in the score of self and others in adversity quotient and authentic leadership. Thus, the researcher was merely focusing on virtues as the layer of anchor that have positive and significant correlation with adversity quotient and authentic leadership.

Mediation Analysis

Since those three variables (virtues, adversity quotient, and authentic leadership) were significantly correlated, the researcher then conducted mediation analysis to find out whether or not adversity quotient is a mediator between the role of virtue and authentic leadership using Baron and Kenny (1986) approach. It was found that virtue is a significant predictor of adversity quotient, since the path a from virtue to adversity quotient was positive and statistically significant ($B=0.21$, $p=.02$). Next, the path b or adversity quotient to authentic leadership was positive and significant ($B=0.31$, $p<.01$). Then, the path c or virtue to authentic leadership was positive and significant ($B=0.22$, $p=.01$, and the path c' (direct effect) that demonstrates the effect of virtue to authentic leadership after controlling for adversity quotient remains significant ($B=0.15$, $p=.07$). The indirect effect from virtue to authentic leadership according to Baron & Kenny (1986) can be calculated by multiplying the standardized coefficient score of path a and path b, which can produce 0.0651. Then, the total effect (path c) can be obtained from the summation of direct effect and indirect effect which produce $B=0.215$. Thus, the total effect of virtue to authentic leadership is 21%. The mediation framework is summarized in Figure 4 below.

According to Baron and Kenny (1986), mediation is supported if the effect of M (adversity quotient) remains significant after controlling for X (virtue), and if both X and M significantly predict Y (authentic leadership), then the finding supports partial

mediation. Therefore, the hypothesis of this study is accepted, in which adversity quotient is partially mediating the relationship between virtue and authentic leadership. This model can explain 10.5% of the shared variances since the Adj. R^2 was 0.105. The summary of mediation analysis explained in the Table 7 below.

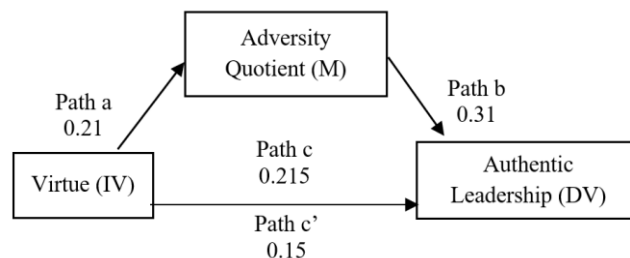


Figure 4. Result of Mediation Framework.

	Item	<i>B</i>	<i>t</i>	<i>P</i>
Path a	Virtue to Adversity Quotient	0.21	2.40	.02
Path b	Adversity Quotient to Authentic Leadership	0.31	3.16	.00
Path c	Virtue to Authentic Leadership	0.22	2.47	.01
Path c'	Virtue to Authentic Leadership when controlling for Adversity Quotient	0.15	1.83	.07
Model Summary		R^2	$Adj-R^2$	<i>P</i>
		0.11	0.05	.009

Discussion

This study was aimed to investigate the relationships between virtue, adversity quotient, and authentic leadership. It was hypothesized that adversity quotient mediates the relationship between virtue and authentic leadership, which is supported by the result of the research. The relationship showed that there was a significant correlation between virtue, adversity

authentic leadership, and adversity quotient has a role as partial mediator between virtue and authentic leadership. This finding suggests that millennials who tend to choose virtue as their anchor have higher degree of adversity quotient, which then impact their authentic leadership. Therefore, this may also suggest that millennials are able to overcome difficult situation by being virtue-oriented, which then help them become authentic leaders.

The participants of this study were millennials who possess to have leadership position within different categories. Some of the participants were having position as C-level of startups, such as CEO (Chief Operation Officer), CFO (Chief Financial Officer), COO (Chief Operation Officer), CTO (Chief Technology Officer), and CMO (Chief Marketing Officer) while some of the other become the leader of their organization in the university and faculty level, and some of them received leadership scholarship in Indonesia; such as Djarum Beasiswa, XL Future Leaders, and Rumah Kepemimpinan.

Referring to the participants who were leaders of their organization in university and faculty level, according to research article written by Rosch & Collins (2017), student organizations have significance to leadership development. It has integral role in shaping student leaders since it contributes in the ability to practice behaviours that associated with effective leaders. The activities in student organization are mostly have mission to create positive impact within their communities while they still have to take responsibility as active students in their university, and the works were voluntarily. Thus, the millennials who become the leader of their organization are more engaged to make decision for themselves which formed higher responsibility. It also motivates them to lead as their leadership skills developed (Rosch & Collins, 2017).

Moreover, participants who receive scholarship in leadership program were assumed to have leadership potential since they are not merely receiving scholarship in a form of materials yet also workshop and development program regarding to leadership. For instances, XL Future Leaders, which is Corporate Social Responsibility (CSR) program from XL Axiata, Djarum Beasiswa from Djarum Company, and Rumah Kepemimpinan. According to these scholarship program official websites, the scholarships are for college students, and they provide leadership development program which aimed to develop leaders for Indonesia. The college students that are selected to receive these scholarships have to pass several challenging steps

such as General Management Aptitude Test, English Test, Focus Group Discussion, and Interview. They also need to put their Grade Point Average (GPA) transcript and have to fulfil minimum standard.

Therefore, either millennials who become C-level of startups, leader of organization, and awardee of leadership scholarship may have potential in leadership and it shown in the result of the study that presents most of the participants have medium to high level of authentic leadership. In the other hand, they mostly were also in the medium to high level of adversity quotient and the layers of anchors that dominated in medium to high score is virtue rather than materials, self, and others. It indicates that the result of the study is corresponding with the theory of self-based model of authentic leader and follower developed by Gardner et. al (2005) (see Figure 1).

Gardner et. al (2005) explains that the influence of the leader's and follower's personal histories and trigger events are considered as antecedents of authentic leadership and followership. Adversity quotient assessed in this study may imply the trigger events. Further, Avolio & Luthans (2006) stated that one of the elements of authentic leaders is moral perspective, and high moral standard is defined by virtue. Results from this study describes the possible mechanism that through adversity, virtue can influence authentic leadership. Understanding this process is important considering authentic leadership can arguably produce inclusive, ethical caring, and strength-based organizational climate.

The literature review by Newstead et al. (2019) & Pinelli et al. (2018) defined that effective leaders are the people who influence other based on reason and ennobling moral, and shows their authentic self. It indicates of using virtues as the guidance of their action. Despite this, other studies have not studied the correlation between adversity quotient with authentic leadership (Bautista et al., 2016; Okorji & Epetuku, 2019). Thus, this study presents the additional finding that adversity quotient also has significant correlation with authentic leadership. Based on the findings, AQ is partially mediator over the relationship between virtue and authentic leadership, with the total effect of virtue to authentic leadership is 21%. This framework explains the 10.5% of shared variances ($\text{Adj } R^2 = 10.5\%$).

Even though the framework can merely explain 10.5% of shared variances, the results of this study indicate that millennials in the age of 19-35, particularly those who have assumed leadership positions were found to have medium to high virtues, adversity quotient, and authentic leadership. Those qualities may contribute to positive impact as

this generation is predicted to dominate global workforce and the future leaders of business (Ey, 2015), which will contribute to their ability in driving the workforce in the future. Hence, self-awareness, relational transparency, balanced processing, and internalized moral perspective which construct the factors of authentic leadership (Avolio, Walumbwa, & Weber, 2009), may show the capability of the individuals to give impact on other people by presenting their authentic self, and express appropriate emotions and decision that consistent with their inner values (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008; Pinelli, Sease, Nola, Kyle, Heldenbrand, Penzak, & Ginsbur, 2018; Avolio and Luthans, 2006).

Conclusion

Considering the importance of millennials have the leadership quality as they will drive the future business as the leaders, this study confirms that adversity quotient can mediate the relationship among virtue and authentic leadership, specifically in millennials in the age of 19-35 who assumed to have leadership positions. Thus, those individuals who have tendency of orienting virtue in their actions, they tend to be able facing adversities, which then impact them to become authentic leaders. Besides confirming the previous literature studies that examines the relationship between virtue, adversity quotient, and authentic leadership, and the model of authentic leadership by Gardner, et. al (2005), this study also found that Riyono's Anchor Personality Inventory (2012) can be the new measurement that can predict authentic leadership.

This current study can be recommendation both for millennials and related institution. For millennials, it can give insight of the importance of authentic leadership to be able to compete in the workforce, which can be achieved through virtues and adversities. By being involved in various activities such as becoming leader of an organization, or establish startups and become its chief, or joining leadership scholarship program can also be the alternatives for millennials to develop their leadership potentials. Thus, millennials will have the capacity and skills to be the leaders since they will drive the future business. For related institutions, this finding can suggest to provide opportunities for millennials to develop leadership potential that refers to virtue-oriented and challenging environment or adversities.

However, the result of this study did not dig deeper into the source of virtue and how specifically adversities may affect authentic leadership. It would be more beneficial if the method of this study was

mixed method, thus the researcher could take qualitative data to explore the adversities that faced by the participants, especially for those who had high adversity quotient. It might be able to help finding out the sources that made the participants oriented by virtue as well, rather than materials, others, and self.

In the other hand, there are several other recommendations for the future research. The Aiken's v test of Adversity Response Profile that has been translated into Bahasa was only conducted once, there was no second validity test after changing the words and improving the sentences. Thus, it is better if the researcher conducted sample test before conducted the actual research. Moreover, considering the measurement for authentic leadership was merely self-assessment which has quite bias, thus it would be more comprehensive if the authentic leadership measurement was both from the leader and follower perspective.

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