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AN ANALYSIS OF ADOLESCENTS' CURIOSITY AND STRENGTHS USE DURING THE COVID-19 PANDEMIC

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Abstract: Students in the adolescent stage experience a plethora of challenges as they transition from childhood to adulthood. Among students, these challenges are compounded by the abrupt shift to online classes due to the COVID-19 pandemic. There may be undesirable behavioral and social outcomes in adolescence, but it cannot be merely assumed that these outcomes raise threats; several aspects seen as challenging may turn out to stimulate positive progress. Like other positive psychology studies, this undertaking sought to appreciate the optimistic and emotionally gratifying aspects of human behavior and experiences. It describes the curiosity and strengths used by adolescents that contribute to their life, and provides information on the examined relationship between the components of curiosity (exploration and absorption) and strengths used, as well as the possible differences of the responses when grouped based on sex, grade level, academic performance, and membership in organizations. Findings showed that most adolescents use their strengths 70 percent to 80 percent of the time, albeit to a low degree. They also have a fairly large amount of motivation to seek and experience new knowledge and experiences. Furthermore, curiosity and exploration, as well as strengths use, significantly differ between adolescents in the secondary level and those in the tertiary level of education. Curiosity and strengths use do not differ in terms of sex, academic performance, and participation in co-curricular activities. More so, a significant positive relationship between curiosity and strength use was found.

Keywords: Adolescents, Curiosity, Strengths Use

INTRODUCTION

The adolescent stage is the transition stage from childhood to adulthood, which is relatively short yet very significant. This critical developmental period is conventionally understood as the years involving progression

from immaturity and social dependency of childhood into adult life (Curtis, 2015). It is when the physical and psychological changes appear between ages 10-18 (APA, 2002), although some may experience changes earlier or otherwise, as this covers the period of the onset of puberty and the establishment of social independence (Steinberg, 2014). There are challenges commonly experienced in the adolescent stage; autonomy and self-identity issues arise, as well as matters in academics and other school activities, sexuality, social relations, interests, and appearance. Adolescents experience confusion and certainly encounter new challenges that accompany these new experiences.

There may be undesirable behavioral and social outcomes in adolescence, but it cannot be merely assumed that these outcomes in the fresh lives of adolescents raise many threats. Several aspects seen as challenging may turn out to stimulate positive progress. However, the spread of COVID-19 and the accompanying countermeasures can still significantly impact the wellbeing of adolescents. There are important risk factors, such as previous psychological burden or living in a low-income family, which can affect their wellbeing (Daniunaite, 2021). In addition, restricted means to psychosocial and social assistance can impact psychosocial functioning (Fegert et al., 2020).

Hence, students in the adolescent stage need to use their abilities, knowledge, and skills in facing and addressing the challenges of the times. In so doing, they may be influenced by their peers who have a direct influence in adolescents' risk behaviors (Tome, 2012), so the peer group has an important role throughout adolescence. Like many positive psychology studies, this study sought to appreciate the optimistic and emotionally gratifying aspects of human behavior and experiences, especially among adolescents. It is about the motivations, curiosity, and strengths of adolescents that contribute to their life.

In school, curiosity compels learners to go beyond face-to-face or virtual classrooms, to connect what they have discovered with other concepts, and to finally create new items and knowledge to help address the world's problems (Vigeant et al., 2018). Curiosity is an aspect of intrinsic motivation (Pluck, 2011), and has both pleasure and anxiety components (Hays, 2018). Many studies investigated curiosity as motivation to excel in academics, such as in math performance (Jaen & Baccay, 2016), reading

comprehension (Gurning & Siregar, 2017), science (Abakpa, 2016), and a factor to improve learning (Valerio, 2012) and memory (Goldberg, 2015). Curiosity is related to personal growth (Kashdan, 2004; Mohanty, 2015), emotional intelligence (Mohanty, 2015), well-being (Litman, 2016; Jach, 2018) and possibly other positive traits.

Aside from curiosity, strengths use by adolescents at the time of pandemic is also worth delving into. When they know about their strengths, they may utilize these to have a better life (Green, 2018) by exercising their innate capacities and unique ways of thinking, feeling, and behaving (Wood, 2010). Adolescents might find strengths through their failures in discovering that they are able to get back up after falling. When they fail, and continue to try despite the failure, they show a level of resilience, diligence, and perseverance (Slivinske, 2014).

Research Objective

This study focuses on the pleasurable component of curiosity, specifically the motivation to seek and experience new knowledge, and the experiences and strengths used by adolescents in general during the COVID-19 pandemic. Specifically, it aimed to describe the respondents in terms of their sex, year level, academic performance, and participation in student organizations. The respondents' self-assessment in terms of curiosity, exploration, and strengths use was also analyzed. The study determined the differences in the respondents' assessment on curiosity and strengths use when responses are grouped according to profile variables. Lastly, the respondents' curiosity and exploration were correlated with strengths use.

The researcher hypothesized that there are differences in the respondents' self-assessments when grouped in terms of profile variables, and that curiosity and strengths use are positively correlated.

METHODOLOGY

Participants in this study were 797 adolescent students enrolled in a State University in Region IV, Philippines. They were selected through stratified random sampling technique. Respondents range from high school (Grade 7 to Grade 12) to college (first to fourth year college, with age ranging from 12 to 19 years old, which is within the adolescent stage or the period of transition from childhood to adulthood (Casey, 2010).

They were recruited in cooperation with the high school and tertiary education departments of the university.

The study utilized the descriptive correlational method and used a researcher-made questionnaire to identify the respondents' demographic profile. Two positive psychological assessment tools (Jarden, 2011) were also used to gather data: the Curiosity and Exploration Inventory-II (CEI-II) and the Strengths Use and Current Knowledge Scale (SUCK). The CEI-II developed by Kashdan et al. (2009) consisted of 10 items that assess individual differences in the recognition, pursuit, and integration of novel and challenging experiences and information. It is a scale with two factors, Stretching (5 items; 1,3,5,7,9) described as motivation to seek out knowledge and new experiences, and Embracing (5 items; 2,4,6,8,10) or willingness to embrace the novel, uncertain, and unpredictable nature of everyday life. In responding to each item, the respondents rated each statement in terms of how it reflects the way they generally feel and behave using a 5-point scale, from 1 (very slightly or not at all), 2 (a like), 3 (moderately), 4 (quite a bit), to 5 (extremely). The CEI-II has acceptable internal reliability (α=.86).

On the other hand, the SUCK is a 10-item scale developed by Govindji (2007), which asked the respondents about their strengths, or the things that they are able to do well or best using a 7-point scale from 1 (strongly disagree), 2 (disagree), 3 (slightly disagree), 4 (neither agree or disagree), 5 (slightly agree), 6 (agree) to 7 (strongly agree). It has an internal consistency of Cronbach's α = .90. All instruments were administered online since face-to-face surveys were not feasible. Data were gathered using Google Forms. The respondents agreed to participate in the study by ticking either a Yes or No response, and were assured that the information would be kept confidential before they begin to respond to each item.

Statistical methods used were weighted mean, frequency distribution, independent t-test, One-way Analysis of Variance, and Pearson's r in SPSS statistics. The one-way ANOVA was used to determine whether there are any statistically significant differences in the responses when grouped according to the respondents' sex, year level, academic performance, and participation in student organizations. Pearson's r was used to measure linear correlation between two sets of data, specifically curiosity and strength used. The confidence interval is 95 percent.

RESULTS

The study considered the demographic information of the respondents, including their sex, year level, general weighted average, and membership in student organizations.

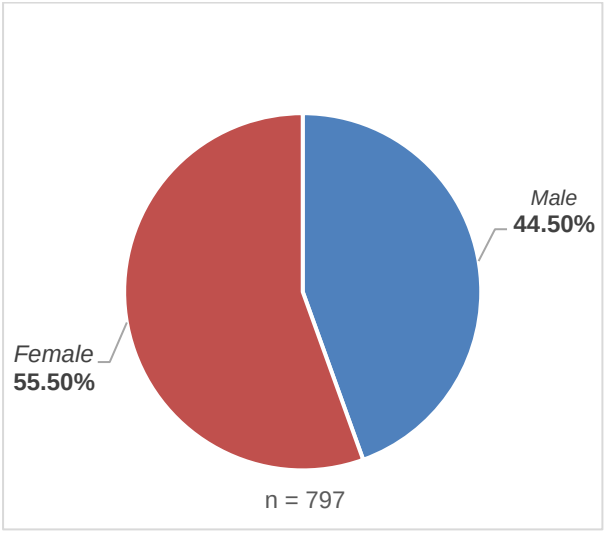

Figure 1: Percentage of Male and Female Respondents

Figure 1 shows that there are 355 male and 442 female respondents in the study. When compared to other studies, the ratio of male and female is fairly similar. In general, there are more females than males enrolled in the University in AY 2020-2021.

On the other hand, Figure 2 shows that there are more respondents from junior and senior high school (Grade 7-12) than from the College level (1st - 4th year). The greater number of respondents from high school, which is 62.6 percent, is not surprising since majority of students enter high school at 13 years of age

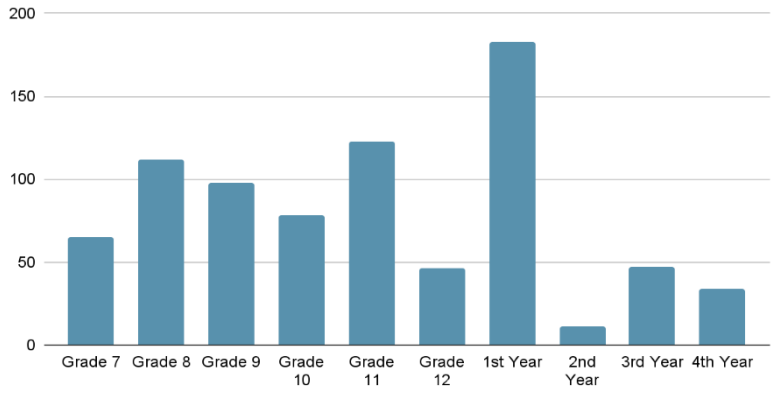

Figure 2: Respondents per Grade Level and Year Level

Although the highest number of respondents are from 1st year college (23 %), while the lowest percentage of respondents are from 2nd year (1.4%). There are fewer teens in college especially between 2nd to 4th year, which comprise 37.4 percent of the sample.

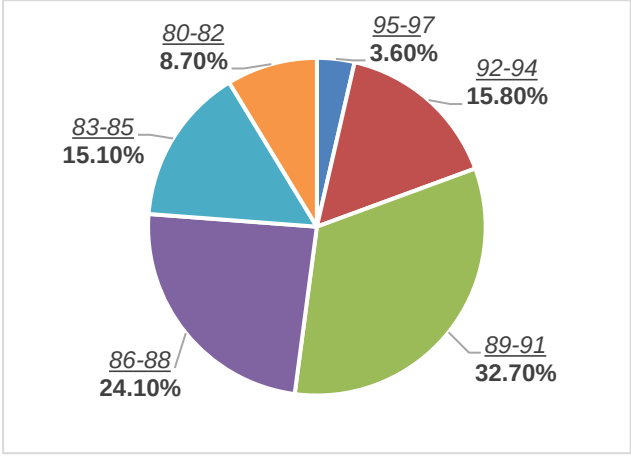

Figure 3: Respondents' General Weighted Average

The academic performance of the respondents was described based on their general weighted average (GWA). The highest frequency of students (261 out of n = 797) have a GWA of 89-91. The lowest reported number of respondents (29 out of n = 797) has a GWA of 95-97.

Figure 4: Membership in Student Organizations

Compared to the previous academic year wherein face-to-face classes were conducted, results show that the majority of the respondents (70.8 percent or 564 out of n = 797) did not join any student organization. This suggests the possibility that they were not able to participate in majority of student organization activities. Only 25 percent (202 out of n = 797) of the respondents has one organization membership, while four students have the highest number of membership (four student organizations, which comprise .5 percent of the total number).

After determining relevant information as regards the respondents' profile, the data on curiosity and exploration were analyzed. Table 1 presents the detailed results based on the Curiosity and Exploratory Inventory (CEI – II).

Table 1: Mean of Curiosity and Exploratory Inventory (CEI II)

CEI – II	Mean	Verbal Interpretation
1. I actively seek as much information as I can in new situations.	*3.53*	Quite a Bit
2. I am the type of person who really enjoys the uncertainty of everyday life.	*3.37*	Moderately
3. I am at my best when doing something that is complex or challenging.	*3.55*	Quite a Bit
4. Everywhere I go, I am out looking for new things or experiences.	*3.77*	Quite a Bit

5. I view challenging situations as an opportunity to grow and learn.	*3.85*	Quite a Bit
6. I like to do things that are a little frightening.	*3.32*	Moderately
7. I am always looking for experiences that challenge how I think about myself and the world.	*3.65*	Quite a Bit
8. I prefer jobs that are excitingly unpredictable.	*3.34*	Moderately
9. I frequently seek out opportunities to challenge myself and grow as a person.	*3.63*	Quite a Bit
10. I am the kind of person who embraces unfamiliar people, events and places.	*3.45*	Quite a Bit
Overall Mean	*3.55*	Quite a Bit

Based on the respondents' self-assessment on recognizing, pursuing, and integrating new and challenging experiences and information through a self-report measure (CEI-II), it was found out that respondents have a fairly large amount of motivation to seek and experience new knowledge and experiences, with an overall mean of 3.55.

The study analyzed the adolescents' strength use and current knowledge. The data are presented in Table 2.

Table 2: Strength Use and Current Knowledge Scale

SUCKS	**Mean**	**Verbal Interpretation**
1. I know my strengths well.	*5.27*	Slightly Agree
2. Other people see the strengths that I have.	*4.83*	Slightly Agree
3. I know the things I am good at doing.	*5.41*	Slightly Agree
4. I have to think hard about what my strengths are.	*4.98*	Slightly Agree
5. I know when I am at my best.	*5.37*	Slightly Agree
6. I always try to use my strengths.	*5.41*	Slightly Agree
7. I achieve what I want by using my strengths.	*5.24*	Slightly Agree
8. Using my strengths comes naturally to me.	*5.07*	Slightly Agree
9. I find it easy to use my strengths in the things I do	*5.16*	Slightly Agree
10. I am able to use my strengths in lots of different ways.	*5.37*	Slightly Agree
Overall Mean	*5.21*	Slightly Agree

The students' self-assessment about the things that they are able to do well or best got an overall mean of 5.21, which means that they agree to the statements in the Strength Use and Current Knowledge Scale (SUCK) to a very small degree.

The study also determined the time that the respondents spend in using their strengths, and the results are shown in Figure 5.

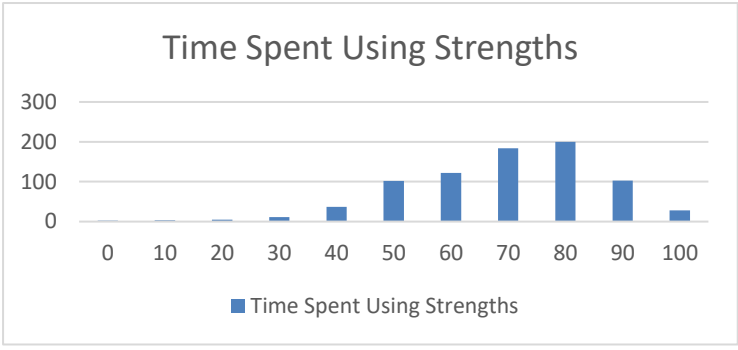

Figure 5: Time Spent in Using Strengths

The results show that the respondents' time spent in using strength 80 percent of the time got the highest frequency of 200 (n=797) with a 25.1 percentage, while 0 percent of the time got the lowest frequency of 2 (n=797) with a 0.3 percentage. Many of the respondents use their strengths 70 percent to 80 percent of the time, although in a low degree.

The study included in its analysis the differences on the responses relative to curiosity and exploration when grouped according to their profile variables. The results are shown in Table 3.

Table 3: Differences on the Responses relative to Curiosity and Exploration when grouped according to Profile Variables

CEI-II	p-Values	Decision on H_o	Verbal Interpretation
Year Level	.001	Reject	With significant difference
Student Organization	.096	Accept	No significant difference
General Weighted Average	.110	Accept	No significant difference

One-way analysis of variance revealed that the difference in terms of year level is significant (p = .001). Curiosity and exploration also differ as adolescents are grouped in grade level (7 to 12) and year level in college

(1st to 4th). ANOVA also shows that the differences in number of student organization (p= .96) and general weighted average (p=.110) were not significant. The results suggest that the adolescents' curiosity and exploration only vary significantly as they move up in grade level or year level. This could be attributed to the varied socio-academic experiences they have as they transition from one level to the next.
Table 4 presents the results of the analysis on the differences of responses relative to strengths use when grouped according to profile variables.

Table 4: Differences on the Responses relative to Strengths Use when grouped according to Profile Variables

SUCKS	p-Values	Decision on H_o	Verbal Interpretation
Year Level	.002	Reject	With significant difference
Student Organization	.152	Accept	No significant difference
General Weighted Average	.089	Accept	No significant difference

As shown in the table, the difference in terms of year level is significant (p = .002) after treating the data using one way analysis of variance. No significant differences are found for the number of student organizations (p= .152) and general weighted average (p=.089). This is consistent with the earlier presented results on curiosity and exploration. The adolescents' curiosity and strength use do not significantly differ, whether they are member or not of student organizations and regardless of academic performance.

However, the adolescents' curiosity and strength use differ significantly when compared in terms of grade/year level. Adolescents from different grade and year levels may have different perceptions in seeking new experiences or knowledge.

Table 5 presents the analysis on the differences of responses on curiosity and exploration, as well as on strengths use, when grouped according to the respondents' sex. Independent t-test was used in the analysis; hence the results are presented separately from other variables.

Table 5: Differences on the Responses when Grouped according to Sex

Assessment Tool	Mean	SD	p-Value	*t*	Decision on H_o	Verbal Interpretation
CEI - II	1.55	.497	.477	-.712	Accept	No Significant Difference

SUCK	1.55	.497	.399	-.844	Accept	No Significant Difference

The results show that there is no significant difference for sex (p=.477) despite the differences in scores of male and female responses in the curiosity and exploration inventory. Similarly, there is also no significant difference for sex (p=.399) despite the differences in scores of strengths used and knowledge of male and female respondents.

The correlation of the results based on CEI-II and SUCKS was also analyzed in this study. The data are presented in Table 6.

Table 6: Correlation of the Results of the Two Psychological Assessment Tools

Assessment Tools	**r-values**	**p-Values**	**Decision on H_o**	**Verbal Interpretation**
CEI-II	*.351*	*.000*	*Reject*	*With significant relationship*
SUCKS	*.351*	*.000*	*Reject*	*With significant relationship*

The table shows that there is a positive, significant relationship between curiosity and strength use, with a p-value of .000. This p-value is less than any reasonable significance level. Consequently, the null hypothesis is rejected and there is a significant relationship between the results of the CEI-II and SUCKS. The sample data support the notion that the relationship between curiosity and strength use exists in the population of adolescent students. Based on these findings, it can be inferred that when adolescents recognize, pursue, and integrate novel and challenging experiences and information, they are also aware of the things that they are able to do best. It supports the idea that curiosity is considered a character strength (viacharacter.org).

DISCUSSION

Overall, the data show that despite the COVID-19 pandemic, the academic performance of the respondents is average. The students maintained an average academic standing even though classes for AY 2020-2021 were conducted mostly online due to the required community quarantine to control the COVID-19 spread since March 17, 2020. Based on the University's feedback mechanism, the students primarily experienced problems in terms of connectivity, lack of communication with class facilitators, and difficulty in subject areas that involve higher order thinking skills and problem solving. Nevertheless, students performed

well and survived the first year of new normal classrooms as shown in their general academic performance.

Further, the participation of students in academic and non-academic activities were relatively limited due to lockdown and health protocols. Student organizations activities conducted in the 2nd semester of AY 2020-2021 were all conducted virtually. These activities were not mandatory but students were highly encouraged to participate. The activities that required students' attendance were also done online, such as the mandatory orientation for new students and University mission and vision awareness activities. Despite the relatively low turnout, and even when the university shifted from face-to-face to virtual platforms, student organizations were still able to come up with alternative ideas to continuously help students improve through online learning and sustain socio-emotional development activities for fellow students.

Findings also show that adolescents moderately enjoy the ambiguity of ordinary days and face situations that are slightly alarming and have work that are thrilling. They are quite active in getting facts in novel circumstances, and they do well in undertaking challenging things. They also look forward to new experiences so they can develop and acquire new skills, and are quite thrilled in facing new challenges so that they have a chance to improve themselves. They could also handle people whom they just met, embrace new events, and explore unfamiliar locations. In this time of pandemic and during the first year of online classes, the students remained positive in facing several challenges that most university students also experience.

It can be inferred from the results that adolescents are a little aware of their strengths and they think that other people see these as well. They may try activities in which they are good at to get what needs to be done. They encounter tasks where they need to seek their own strength so these can be done smoothly, and get a number of tasks done using their own capabilities. The adolescent stage is still the period of discovery and exploration. The respondents, especially those in the lower age group, still explore and discover their strengths and may only be able to tell a small number of abilities they are really good at.

In addition, the adolescent students experience more idle times during quarantine or lockdown, but when they are assigned tasks, efforts are made on their part. They utilize their strengths only when needed and if the assigned task prompted interest. Instead of 100 percent, the percentage of strengths used (70% to 80%) is considered sufficient in completing school-related tasks assigned to them. It is the overall amount of effort they give and they feel good about it. It is inferred that using strengths creates a sense of welfare. This supports Jach's (2018) claims that teenagers' strengths influence their subjective wellbeing.

The variety and frequency of new experiences of the respondents may vary per year level, since they learn to establish social independence (Steinberg, 2014) as they transition across grade or year levels. Those in the higher levels are more likely to have experienced already more novel situations and have identified their strengths in the process. On the other hand, those from the lower grade/year levels may have higher motivation to experience and seek knowledge. Since curiosity is a type of internal motivation (Freeman, et al., 2014), it is a cycle wherein once an experience or knowledge has been reached, another need would arise. Curiosity fuels knowledge seeking behavior. Students claim that as they grow and enter higher year levels, they become less curious of previously learned material from the earlier year levels and become more curious for the current courses. They also claim that curiosity and strength use differ for year level because the difficulty of tasks is also different, and they consider interest as a factor for curiosity and strength use.

The results also point to the notion that the adolescents have relatively similar experiences, perceptions, and motivation to experience new things regardless of sex, as long as they are in the same grade or year level, as revealed in the earlier results. This supports the strong influence of peers among adolescents (Tome, 2012), whether male or female, as they have similar academic experiences and therefore show a level of resilience, diligence, and perseverance (Slivinske, 2014) that they share with adolescents in the same level.

Compared with relevant studies, these results support Noronha's (2016) findings where individuals with higher scores in curiosity also have higher scores in other positive characteristics like hope, love, and social intelligence strengths. Emotional intelligence may be added to these

positive characteristics like what Mohanty (2015) found in his study. These characteristics lead to personal growth as Kashdan (2004) and Mohanty (2015) found in their studies. In terms of strength use, the adolescents' awareness of what they are good at, although to a low degree, still contributes to helping them in the period of transition. This supports the findings of Green (2018) and Wood (2010) where knowing what and how to utilize strengths leads to better life.

In contrast with previous researches, which found significant connections between curiosity and motivation to excel in academics specifically in math performance, reading comprehension, and science (Jaen & Baccay, 2016; Gurning & Siregar, 2017; Abakpa, 2016), the current findings show no significant difference in adolescents' curiosity and strength use for academic performance, using grade point average as measure. Curiosity as a contributor to do better in specific academic fields were found in several studies while there are very limited findings for general academic performance.

CONCLUSION

From the results of the self-report measure (CEI-II), it is concluded that the respondents have a large amount of motivation to seek and experience new knowledge and experiences. They also look forward to new experiences, and find the need to develop and acquire new skills that they would use in facing new challenges. They are also embracing the concept of meeting new people, events, and places. Based on the SUCK assessment tool, adolescents are a little aware of their strengths and they may try activities where they tend to excel. They seek for and use their own strengths 70 to 80 percent of the time, so they can accomplish various tasks using their own capabilities. When responses are grouped according to profile variables, only their grade or year level has significant differences, showing that the variety and frequency of new experiences of the respondents, and consequently their strength use, vary as adolescents transition to another year level. The analysis also shows positive relationship between curiosity and strength use, suggesting that as curiosity increases, strength use also increases, which is why adolescents pursue and integrate novel and challenging experiences and information.

The results of this study were only based on the respondents' self-reports. Other demographic profiles like program, age, interests, motivation and

other sophisticated tools to measure curiosity and strengths use may show different findings for the same population. The samples were from one state university in a specific province who may share similar cultural values or traits, hence could contribute to no differences in curiosity and strength use. Additional means to verify the results like face-to-face interviews were not feasible because of the required health protocols and quarantine rules in the province due to COVID-19 pandemic. Future researchers may consider or control these variables in further studies related to the variables explored in this paper.

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