The International Journal of Indian Psychology
ISSN 2348-5396 (Online) | ISSN: 2349-3429 (Print)
Volume 10, Issue 1, January- March, 2022
DIP: 18.01.104.20221001, DOI: 10.25215/1001.104
https://www.ijip.in

Research Paper

Is Gender Disparity Still Existent in Numerical and Verbal Aptitude among Adolescents during the Covid-19 Pandemic: A Quantitative Analysis

Vikram Soni[1]*, Jitin Chawla[2], Nishtha Grover[3]

ABSTRACT

The covid-19 pandemic severely impacted numerous facets of life, one such facet was an individual's ability to perform different tasks, in other words, the covid-19 pandemic has serious influences on an individual's aptitude and learning. The present study aims to explore the relationship between the two prominent forms of aptitude, i.e., numerical and verbal aptitude with general aptitude, in addition to authenticating gender disparity between male and female adolescents in terms of numerical and verbal aptitude. For the purpose of the study, the exploratory and descriptive research design has opted; under which primary research with primary data collection was done. A sample of 200 adolescents from senior secondary school, administered an aptitude test based on Cattell-Horn-Carroll Abilities Theory. The data collected through aptitude test administration was then subjected to descriptive statics, Independent T-test, and Pearson moment correlation for data analysis. The results of the study revealed significant findings related to gender disparity in numerical and verbal aptitudes, and the relationship between numerical and verbal aptitudes with general aptitude among adolescents.

Keywords: *Adolescents, Aptitude, Numerical Aptitude, Verbal Aptitude, Vocational and Academic Learning.*

The world has progressed enormously with the advancement in technology, science, education, and vocations. The emergence of the modern world has created vast modifications and enhancements in people around the world. Individuals' have imbibed progression in themselves with time, which is mostly reflected in their competencies, skills, and abilities.

These competencies and abilities when talked about in terms of learning and vocational practices are commonly referred to as aptitude of individuals. Aptitude, as stated by Freeman (1971), is "An aptitude is a combination of characteristics indicative of an

[1]Vice President
[2]Director
[3]Child and Adolescent Psychologist
*Corresponding Author

Received: January 13, 2022; Revision Received: March 18, 2022; Accepted: March 24, 2022

individual's capacity to acquire (with training) some specific knowledge skill, or a set of organized responses, such as the ability to speak a language, to become a musician, to do a mechanical work" (Pyari, Mishra, & Dua, 2016).

The general aptitude is a combination of different forms of abilities, or aptitudes, for instance, numerical, verbal, and spatial, etc. In this study, numerical and verbal aptitudes are predominantly focused on, which is explored for the purpose of the study. The study is formalized to explore the existence of gender disparity among male and female adolescents in relation to their numerical and verbal aptitudes, in addition to the existing link between numerical aptitude with general aptitude, and verbal aptitude and general aptitude, specifically researched on due to severe implications on adolescents' educational and learning, after the impact of Covid-19 on individual's competencies, aptitudes and learning experiences.

LITERATURE REVIEW

The present study proposes to study a few relevant titles in the current scenario. The covid-19 pandemic has exerted immense strain on diverse domains of economic, social, financial, psychological aspects of society. One such aspect is the educational and learning area of students' development which has been observed to hamper their overall competency and aptitude regarding the educational categories. Hence, the present study explores the listed factors to assess the prevailing conditions underlying the relationship between numerical and verbal aptitude with the overall aptitude among adolescents during the covid-19 pandemic period.

Aptitude

Aptitude is one of the most commonly used terms in vocational and career development. Many scholars have regarded aptitude as an inherent, acquired, as well as learned competency constituent of knowledge, comprehension, as well as of attitude towards any task at a particular degree (Toplis, 1991; Carr, 2004). It is the characteristic feature of aptitude to breakdown mental abilities into different categories, which may or may not exist independently, a few commonly known mental abilities or forms of aptitude are numerical aptitudes, verbal aptitude, mechanical and spatial aptitude, abstract aptitude, and a few others (Olatoye, & Aderogba, 2011). Aptitude and its relation with adolescents life have been a long-standing one, aptitude is known to have a significant effect on students' performance in academics, learning capability, and also overall student development. (Conard, 2006). Moreover, aptitude significant association has been found with numerical and verbal abilities on more than one occasion (Olatoye, & Aderogba, 2011), which suggests that on increasing the individuals' competency in numerical and verbal aptitude/ability there is more likely an increase in overall aptitude performance, which is also reflected in the adolescents academic/educational and learning performance (Barmola, 2013).

Numerical Aptitude

One of the most popularly known forms of aptitude is numerical aptitude, which is the competency of an individual to work with numbers; numerical aptitude is the comprehensive ability to solve mathematical operations quickly and accurately (Gundoyo, 2020). As the debate goes the disparity between gender, i.e., between male and female numerical aptitude has lasted more than a decade. Where a few academicians favour it, by suggesting there is a significant difference between male and female gender in terms of numerical aptitude (Mau, & Lynn, 2001), while others oppose it by stating that there is no significant difference

between male and female gender in terms of numerical aptitude (Afrida, Kardena, Medika, & Yusri, 2019), stating that no gender has superior competency in numerical aptitude, and the difference in numerical aptitude mainly results due to individualistic and cultural factors.

Verbal Aptitude

Verbal aptitude is the competency of an individual to make use of vocabulary correctly, it is the tendency of an individual to be skillful at putting their ideas and thoughts into words, both in spoken as well as in written forms (Andrew, Cobb, & Giampietro, 2005). In other words, verbal aptitude is the competency for universal lexical skills, comprehension of words, in addition to effective use of them (Afrida, Kardena, Medika, & Yusri, 2019). Similar to numerical aptitude, the debate of gender disparity in verbal aptitude is still existent in the field of vocational and educational learning. Verbal aptitude has been found to have an extraordinary impact on academic performance, and general aptitude competency of individuals (Corengia, Pita, Mesurado, & Centeno, 2013), but the existence of gender disparity in verbal aptitude is still a huge dilemma.

Covid-19 and Education/Learning

The covid-19 pandemic spread like wildfire across different nations in the world. The disastrous impact of Covid-19 was seen in numerous facets of life, majorly on the health of individuals (Aristovnik, Keržič, et al., 2020) and several factors including the economy of nations and society (Cao, Fang, Hou, et al., 2020; Rajkumar, 2020), social life, emotional, and work-related domains (Aristovnik, Keržič, et al., 2020). Among these facets, covid-19 has also severely impacted the lives of adolescents, in terms of their educational, academic, and learning experiences. Covid-19 pandemic has resulted in a substantial decline in education at the global level, adolescents from different corners of the world faced tremendous hurdles in acquiring knowledge, learning, and developing new competencies for their academic, and work-life (Kamarianos, Adamopoulou, Lambropoulos, & Stamelos, 2020).

Aptitude and Education/Learning

The intertwining of aptitude and educational and learning experiences of individuals has been explored by several scholars, who are interested in knowing the connection between an individual's aptitude and educational or learning outcomes, whose dynamic nature has been the most interesting aspect of this relationship. This relationship has been established in numerous studies, for instance, according to Ma, Yao, & Zhang (2018), students' perceived language interaction has a consistent relationship with the aptitude, which suggested that vocabulary learning, including learning a new language is significantly enhanced with increased aptitude level, suggesting a positive relationship between learning and aptitude. Moreover, the impact of aptitude on educational development, and academic performance of students have been found significant, revealing that enhanced aptitude influences individuals' ability to perform better in educational or learning settings (Pyari, Mishra, & Dua, 2016).

METHODOLOGY

Aim

The aim of the current study is to determine gender disparity between male and female adolescents in terms of numerical and verbal aptitude. Further, the study aims to identify the relationship between numerical and verbal aptitude and the overall aptitude of adolescents during the covid-19 pandemic.

Research Questions

- Is gender disparity between males and females numerical aptitude, a myth or reality in the current 21st century?
- Is gender disparity between males' and females' verbal aptitude, a myth or reality in the current 21st century?
- Will numerical aptitude hold any substantial relationship with general aptitude among adolescents during the Covid-19 pandemic?
- Will verbal aptitude hold any substantial relationship with general aptitude among adolescents during the Covid-19 pandemic?

Objectives

- To identify gender disparity in males and females numerical aptitude among adolescents.
- To identify gender disparity in males' and females' verbal aptitude among adolescents.
- To recognize the relationship between numerical aptitude and general aptitude among adolescents during the Covid-19 pandemic.
- To recognize the relationship between verbal aptitude and general aptitude among adolescents during the Covid-19 pandemic.

Hypotheses

$H1_o$: There is no significant gender disparity between male and female adolescents in terms of numerical aptitude.
$H1_A$: There is a significant gender disparity between male and female adolescents in terms of numerical aptitude.

$H2_o$: There is no significant gender disparity between male and female adolescents in terms of verbal aptitude.
$H2_A$: There is a significant gender disparity between male and female adolescents in terms of verbal aptitude.

$H3_o$: There is no significant correlation between numerical aptitude and general aptitude among adolescents during the covid-19 pandemic.
$H3_A$: There is a significant correlation between numerical aptitude and general aptitude among adolescents during the covid-19 pandemic.

$H4_o$: There is no significant correlation between verbal aptitude and general aptitude among adolescents during the covid-19 pandemic.
$H4_A$: There is a significant correlation between verbal aptitude and general aptitude among adolescents during the covid-19 pandemic.

Research Design

Research design is a constituent sketch of how the research would be conducted. The present study followed an exploratory and descriptive research design. Under the exploratory design, the study proposed to explain the fundamental patterns existing under the variables studied in the research through existing literature and secondary research. Whereas via descriptive design, primary research was conducted, facts were collected, coded, and

analyzed with the help of descriptive and inferential statistics to identify patterns and findings relevant for future implications.

Sample and Sampling Technique

The sampling technique opted for the current study was purposive sampling, which signifies collecting sample participants based on the criteria established for the study. the inclusion criteria for the sample consisted of participants being an adolescent and is currently studying in Senior secondary education, i.e., 11th and 12th grade in the Indian education system. The sample for the study included 200 adolescent participants, including 100 males, and 100 female participants.

Data Collection

The current study was directed to collect data through primary data collection. The primary data collection signifies collecting the data firsthand from the sample registered for the study. The sample collected was asked to fill out a psychometric testing questionnaire for aptitude based on Cattell-Horn-Carroll Abilities Theory (Keith, & Reynolds, 2010). The administered test was then coded and scored to assemble the data for the study.

Tools Used

The tool used for the current research was the aptitude testing questionnaire established on the abilities theory, called Cattell-Horn-Carroll Abilities theory proposed by Raymond, B. Cattell, John, L. Horn, and John, B. Carroll in the 1990s' ((Keith, & Reynolds, 2010), testing individuals' abilities to perform specific tasks that demonstrate their competency in those tasks, commonly called as aptitude. The aptitude test administered evaluated the sample's numerical aptitude, verbal aptitude, mechanical aptitude, reasoning aptitude, and spatial aptitude, whose combined score results in the general aptitude of an individual.

Variables

The current study had three variables to fulfill the objective of the study. The three variables in the study were numerical aptitude, verbal aptitude, and the general aptitude of adolescents.

ANALYSIS AND RESULTS

Description of Dataset

The current study was steered in the direction of identification of the existing truth of gender disparity between numerical and verbal aptitude among adolescents in the present era of the 21st century. In earlier days the popularity of gender differences existing between male and female students dominated the aptitude studies, but in current times there has been a shift in this ideology, and the current study proposes to find substantial evidence to suggest whether there is an existing difference between genders in terms of numerical and verbal aptitude. Moreover, the present study also proposed to identify the link between numerical and verbal aptitude of adolescents with their overall aptitude during the ongoing covid-19 pandemic. The description of the data collected through sampling is stated as follows.

4.1a. Numerical Aptitude among Adolescents

Table 4.1.a Descriptive Statistics for Numerical Aptitude among Male and Female Adolescents

Descriptors	Numerical Aptitude (Female)	Numerical Aptitude (Male)
Mean	5.77	5.79
Standard Error	0.19738	0.2011
Median	6	6
Mode	4	4
Standard Deviation	1.9738	2.0115
Sample Variance	3.8960	4.0463
Kurtosis	-0.8373	-.0.7726
Skewness	-0.1308	-0.0705
Range	7	8
Minimum	2	1
Maximum	9	9
Sum	577	579
Count	100	100
Confidence level (95.0%)	0.3916	0.3991

The data for the numerical aptitude of 200 adolescents studying in the 11^{th} and 12^{th} standard was collected and analysed via descriptive statistics. The data were divided into two groups based on the gender, first one being numerical aptitude for female adolescents, and the second one for the numerical aptitude for male adolescents. The numerical aptitude for females accounted for a mean score of 5.77, and a standard deviation of 1.9738, whereas for male adolescents mean score calculated was 5.79, and the standard deviation was 2.0115. According to the mean score and standard deviation, the two groups' numerical aptitude seems to be similar, which will be further tested by an independent T-test for verification of any difference between male and female adolescents' numerical aptitude.

4.1. b. Verbal Aptitude among Adolescents

Table 4.1.b. Descriptive Statistics for Verbal Aptitude among Male and Female Adolescents

Descriptors	Verbal Aptitude (Female)	Verbal Aptitude (Male)
Mean	6.61	6.56
Standard Error	0.1434	0.1532
Median	7	7
Mode	7	7
Standard Deviation	1.434	1.5329
Sample Variance	2.0584	2.3498
Kurtosis	0.6554	-.0.4417
Skewness	-0.6234	-0.3216
Range	7	6
Minimum	2	3
Maximum	9	9
Sum	661	656
Count	100	100
Confidence level (95.0%)	0.2846	0.3041

The data for the verbal aptitude of 200 adolescents studying in the 11th and 12th standard was collected and analysed via descriptive statistics. The data were divided into two groups based on gender, the first one being verbal aptitude for female adolescents, and the second one for verbal aptitude for male adolescents. The verbal aptitude for females resulted in a mean score of 6.61, and a standard deviation of 1.434, whereas for male adolescents mean score resulted in 6.56, and a standard deviation of 1.5329. According to the mean score and standard deviation, the two groups of verbal aptitude seem to be similar, which will be further verified via an independent T-test for substantiation of any difference between male and female adolescents' verbal aptitude.

4.1. c. Aptitude among Adolescents

Table 4.1.c. Descriptive Statistics for Aptitude among Adolescents

Descriptors	Aptitude
Mean	53.155
Standard Error	0.6878
Median	54
Mode	50
Standard Deviation	9.7274
Sample Variance	94.6240
Kurtosis	-0.1412
Skewness	-0.3796
Range	49
Minimum	24
Maximum	73
Sum	10631
Count	200
Confidence level (95.0%)	1.3563

The data for the aptitude of 200 adolescents studying in 11th and 12th standard was composed and analysed by means of descriptive statistics. The data subjected to descriptive statistics resulted in a mean score of 53.155 overall aptitudes of the sample, and a standard deviation of 9.7274, for the collected sample at a confidence level of 95%.

Gender Disparity in Numerical Aptitude among Adolescents

$H1_o$: There is no significant gender disparity between male and female adolescents in terms of numerical aptitude.

$H1_A$: There is a significant gender disparity between male and female adolescents in terms of numerical aptitude.

Table 4.2 Independent Samples T-test between Male and Female Adolescents for Numerical Aptitude

	Female Numerical Aptitude	Male Numerical Aptitude
Mean	5.77	5.79
Variance	3.896060606	4.046363636
Observations	100	100
Hypothesized Mean Difference	0	
df	198	

t Stat	-0.070966511
P(T<=t) one-tail	0.471748018
t Critical one-tail	1.652585784
P(T<=t) two-tail	0.943496036
t Critical two-tail	1.972017432

The current study proposed to identify the existence of gender disparity between male and female adolescents in terms of numerical aptitude. In earlier days, it was suggested that one gender predominantly had dominance over the other in relation to numerical aptitude, but with evolution and growth in individuals' mental abilities, skills, and competency, this notion is controversial at best. Hence, the current study aimed to identify any existence of a significant difference between males' numerical aptitude and females' numerical aptitude among the adolescent age group.

The results are stated above in Table 4.2. Signifying the gender disparity in numerical aptitude at **t (198) = -0.0709, p = 0.9434** was found not significant as **p>0.05**, which **fails to reject $H1_0$,** stating **there is no significant gender disparity between males and female adolescents in terms of numerical aptitude.**

Gender Disparity in Verbal Aptitude among Adolescents

$H2_0$: There is no significant gender disparity between male and female adolescents in terms of verbal aptitude.

$H2_A$: There is a significant gender disparity between male and female adolescents in terms of verbal aptitude.

Table 4.3 Independent Samples T-test between Male and Female Adolescents for Verbal Aptitude

	Female Verbal Aptitude	**Male Verbal Aptitude**
Mean	6.61	6.56
Variance	2.058484848	2.34989899
Observations	100	100
Hypothesized Mean Difference	0	
Df	197	
t Stat	0.238138878	
P(T<=t) one-tail	0.406010447	
t Critical one-tail	1.65262522	
P(T<=t) two-tail	0.812020894	
t Critical two-tail	1.972078988	

Similar to the controversy of numerical aptitude, verbal aptitude also has a few pre-existing assumptions attached to it regarding the gender difference, and dominance of one gender over the other. As the world has progressed in the 21st century, these assumptions seemed more of a myth than reality, which was purported to be determined in the current study.

According to the results stated in Table 4.3 signifying gender disparity in verbal aptitude at **t (197) = 0.2381, p = 0.8120** was found not significant as **p>0.05**, **failing to reject $H2_0$**, stating **there is no significant gender disparity between males and females adolescent in terms of verbal aptitude.**

Relationship Between Numerical Aptitude and Overall Aptitude among Adolescents

$H3_o$: There is no significant correlation between numerical aptitude and general aptitude among adolescents during the covid-19 pandemic.

$H3_A$: There is a significant correlation between numerical aptitude and general aptitude among adolescents during the covid-19 pandemic.

Table 4.4 Correlation between Numerical Aptitude and Overall Aptitude among Adolescents

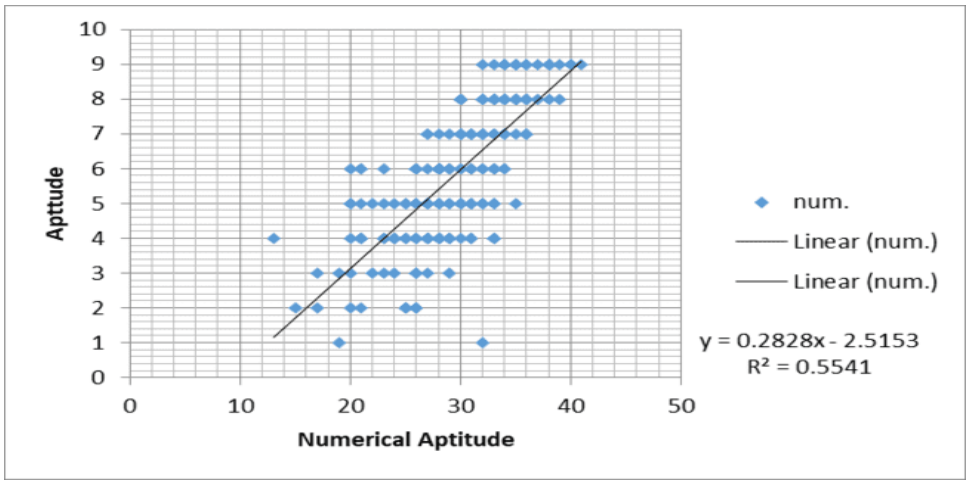
		Aptitude	Numerical Aptitude
Aptitude	Pearson Correlation	1	0.7443**
	Sig (2-tailed)		.00001
	N	200	200
Numerical Aptitude	Pearson Correlation	0.7443**	1
	Sig (2-tailed)	.00001	
	N	200	200

***Correlation is significant at the 0.005 level (2-tailed)*

The current study also aimed to determine any significant relationship between numerical aptitude and general aptitude among adolescents, to assess whether the association between the variables may impact the lives of adolescents during the ongoing covid-19 pandemic.

According to the results stated in Table 4.4, the study revealed that a **strong and positively significant correlation** exists between numerical aptitude and general aptitude, **r (198) = .7443, p= <0.00001, at p <0.05**, signifying a significant correlation between numerical aptitude and general aptitude, rejecting the $H3_o$, and **retaining the $H3_A$**, stating **there is a significant correlation between numerical aptitude and general aptitude among adolescents during the covid-19 pandemic.**

The results found in Table 4.4 are also supported with the graphical representation of a scatter plot between numerical aptitude and general aptitude in Graph 4.4, which demonstrates a linear positive relationship between numerical aptitude and general aptitude among adolescents.



Graph 4.4 Scatter Plot for Relationship between Numerical Aptitude and Aptitude among Adolescents

Relationship Between Verbal Aptitude and Overall Aptitude among Adolescents

$H4_o$: There is no significant correlation between verbal aptitude and general aptitude among adolescents during the covid-19 pandemic.

$H4_A$: There is a significant correlation between verbal aptitude and general aptitude among adolescents during the covid-19 pandemic.

Table 4.5 Correlation between Verbal Aptitude and Overall Aptitude among Adolescents

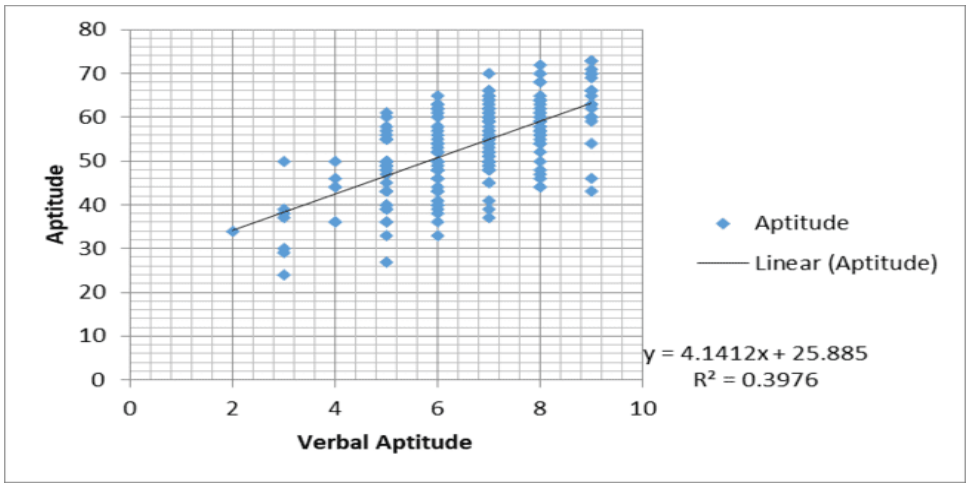
		Aptitude	Verbal Aptitude
Aptitude	Pearson Correlation	1	0.6305**
	Sig (2-tailed)		.00001
	N	200	200
Verbal Aptitude	Pearson Correlation	0.6305**	1
	Sig (2-tailed)	.00001	
	N	200	200

***Correlation is significant at the 0.005 level (2-tailed)*

In addition to the relationship between numerical aptitude and general aptitude among adolescents, the current study objectified to verify any significant relationship between verbal aptitude and general aptitude among adolescents, to assess whether the association between the variables may impact on the lives of adolescents during the ongoing covid-19 pandemic.

According to the results stated in Table 4.5, the study revealed a **strong and positively significant correlation** exists between verbal aptitude and general aptitude, **r (198) =.6305, p= <0.00001, at p <0.05**, signifying a significant correlation between verbal aptitude and general aptitude, rejecting the $H4_o$, and **retaining the $H4_A$**, stating **there is a significant correlation between verbal aptitude and general aptitude among adolescents during the covid-19 pandemic.**

The results found in Table 4.5 are also supported with the graphical representation of a scatter plot between verbal aptitude and general aptitude in Graph 4.5, which demonstrates a linear positive relationship between verbal aptitude and general aptitude among adolescents.



Graph 4.5 Scatter Plot for Relationship between Verbal Aptitude and Aptitude among Adolescents.

DISCUSSION

The current study aimed at determining the gender disparity between male and female adolescents in terms of numerical and verbal aptitude, in addition to verifying the significance of the relationship between numerical aptitude and general aptitude, and verbal aptitude and general aptitude in current times.

According to the literature reviews, in earlier days a popularly known notion prevailed in the vocational and educational related studies suggesting a dominance of one gender over the other in relation to numerical and verbal aptitude. Scholars commonly suggested that females were better in verbal aptitude, while males had dominance on numerical aptitude (Zeidner, 1987), which seemed more of a myth than reality in the modern world.

The evolution and technological advancement have impacted individuals' competency and abilities to perform tasks, commonly referred to as aptitude. The impact of growth and development in society has resulted in the enhancement of an individual's general aptitudes and also its different forms including numerical and verbal aptitude. Hence, the current study aimed to verify, whether the gender disparity is significant in numerical and verbal aptitude.

According to the results stated above it was revealed that there is no significant gender disparity between male and female adolescents in terms of numerical and verbal aptitude. This finding reveals that gender disparity is a myth in current times, no one specific gender has dominance over the other in their numerical and verbal aptitude. These findings were supported by the findings of Afrida, Kardena, Medika, & Yusri (2019), which stated "there is no significant difference between male and female students' performances in verbal ability, numerical ability, and general aptitude tests".

Furthermore, the study also proposes that with the spread of the Covid-19 pandemic, adolescents' skills and competency has been severely affected owing to the disastrous impact of covid-29 on the education system and learning experiences (Department of Education (U.S.A), 2021), which was observed across every nation in the world, including India (Rajkumar, 2020). Therefore, the current study was purported to identify links between general aptitude and numerical and verbal aptitude to suggest necessary changes in the two forms of aptitude among adolescents in the current Covid-19 condition that will more or less likely to enhance adolescents' aptitude, which has been closely and highly related to academic performance, work-life, learning, cognitive enhancement, and a few other positive enhancements in life (Fatuhrahmah, Darusmin, & Widiana, 2020).

The finding of the study revealed that there is a significant positive and strong correlation between numerical aptitude and general aptitude, and verbal aptitude and general aptitude, which suggests that with enhancement in numerical and verbal aptitude, the general aptitude is likely to be increased.

This finding was similar to the findings suggested by Afrida, Kardena, Medika, & Yusri (2019), and Olatoye, & Aderogba (2011), stating that aptitude tests have a strong and positive correlation with both numerical and verbal abilities/aptitude.

This finding verifies the concept that increasing an adolescent's verbal and numerical aptitude will likely enhance general aptitude, which is a pertinent solution for enhancing

individuals' competency in the current covid-19 situation, where overall competency of individuals have severely impacted and is resulting in poor educational and learning performances.

Implications of the Study

Aptitude is one of the pertinent concepts in the vocational and learning development of individuals. The current study was steered in the direction of verifying the relationship between numerical and verbal aptitude with the general aptitude and authenticating gender differences in numerical and verbal aptitude for future benefits in counseling settings. The findings of the results can be implied in educational setups, career counseling of students, vocational training of individuals in organizations, and also in counseling areas that help individuals to make decisions related to their career choices and paths based on their respective aptitudes towards different career choices.

The present study also benefits in enhancing the general aptitude of individuals after the disastrous impact of the covid-19 pandemic on an individual's competency and abilities. Individuals may work on their individualistic numerical and verbal abilities to upsurge their general aptitude.

CONCLUSION

The findings of the study concluded that gender dominance and disparity between males and females in numerical and verbal aptitude is non-existent and is a myth in current times. Individual's numerical and verbal aptitude is based on their competency in performing operations, and tasks, learning, and other factors, but not on gender per se. Moreover, numerical and verbal aptitude has a strong and positively significant correlation with general aptitude among adolescents, which can be used as an added perk in educational and vocational areas, especially after the hit of the Covid-19 pandemic to increase individuals' general aptitude by working on their numerical and verbal abilities.

REFERENCES

Afrida, Y., Kardena, A., Medika, G. H., & Yusri, F. (2019). An Analysis of Verbal Numerical Aptitude: An Untold Story of Students in West Sumatera.

Andrew, M. D., Cobb, C. D., & Giampietro, P. J. (2005). Verbal ability and teacher effectiveness. *Journal of teacher education*, *56*(4), 343-354.

Aristovnik, A., Keržič, D., Ravšelj, D., Tomaževič, N., & Umek, L. (2020). Impacts of the COVID-19 pandemic on life of higher education students: A global perspective. *Sustainability*, *12*(20), 8438.

Barmola, K. C. (2013). Aptitude and academic performance of adolescents. *International Journal of Research in Social Sciences*, *3*(4), 372.

Carr, H.O. (2004). Education Psychology, New York: McGraw Hill Ltd.

Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry research*, *287*, 112934.

Conard, M. A. (2006). Aptitude is not enough: How personality and behavior predict academic performance. *Journal of research in personality*, *40*(3), 339-346.

Corengia, Á. V., Pita, M., Mesurado, M. B., & Centeno, A. (2013). Predicting academic performance and attrition in undergraduate students.

Department of Education (U.S.A). (2021). *Education in a Pandemic: The Disparate Impacts of COVID-19 on America's Students OFFICE FOR CIVIL RIGHTS*. https://www2.ed.gov/about/offices/list/ocr/docs/20210608-impacts-of-covid19.pdf

Fatuhrahmah, U., Darusmin, D. F., & Widiana, H. S. (2020). The intertwining of vocational aptitude and interest: A study among university students in Indonesia. *Psychology, Evaluation, and Technology in Educational Research*, *3*(1), 44-52.

Gundoyo, W. (2020). Ultimate IQ Test Book by Philip Charter & Ken Russel. *Www.academia.edu*. https://www.academia.edu/43410775/Ultimate_IQ_Test_Book_by_Philip_Charter_and_Ken_Russel

Kamarianos, I., Adamopoulou, A., Lambropoulos, H., & Stamelos, G. (2020). Towards An Understanding of University Students'response in Times of Pandemic Crisis (Covid-19). *European Journal of Education Studies*, *7*(7).

Keith, T. Z., & Reynolds, M. R. (2010). Cattell-Horn-Carroll abilities and cognitive tests: What we've learned from 20 years of research. *Psychology in the Schools*, n/a-n/a. https://doi.org/10.1002/pits.20496

Ma, D., Yao, T., & Zhang, H. (2018). The effect of third language learning on language aptitude among English-major students in China. *Journal of multilingual and multicultural development*, *39*(7), 590-601.

Mau, W.-C., & Lynn, R. (2001). Gender Differences on the Scholastic Aptitude Test, the American College Test and College Grades. *Educational Psychology*, *21*(2), 133–136. https://doi.org/10.1080/01443410020043832

Olatoye, R. A., & Aderogba, A. A. (2011). Performance of senior secondary school science students in aptitude test: The role of student verbal and numerical abilities. *Journal of Emerging Trends in Educational Research and Policy Studies*, *2*(6), 431-435.

Pyari, P., Mishra, K., & Dua, B. (2016). A Study of Impact of Aptitude in Mathematics as Stream Selection at Higher Secondary Level.

Rajkumar, R. P. (2020). COVID-19 and mental health: A review of the existing literature. *Asian journal of psychiatry*, *52*, 102066.

Toplis, K. (1991). Behavioural Modification Techniques, New York: Prentice Hall Publishers.

Zeidner, M. (1987). Gender and culture interaction effects on scholastic aptitude test performance: Some Israeli findings. *International journal of psychology*, *22*(1), 111-119.

Acknowledgement

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Soni V., Chawla J. & Grover N. (2022). Is Gender Disparity Still Existent in Numerical and Verbal Aptitude among Adolescents during the Covid-19 Pandemic: A Quantitative Analysis. *International Journal of Indian Psychology*, *10*(1), 1037-1049. DIP:18.01.104.20221001, DOI:10.25215/1001.104