

THE CORRELATION BETWEEN VERBAL-LINGUISTIC APTITUDE AND INVESTIGATIVE INTEREST AMONG ADOLESCENTS WITH AUTISTIC SPECTRUM DISORDER AT SPECIAL EDUCATION SCHOOLS IN SOLO RAYA

Atalya Dheaputri Wibowo^{1*}, Erma Kumala Sari², Tias Martika³

¹²³Universitas Sebelas Maret, Surakarta, Indonesia

*Corresponding Email: dhea.atalya27@gmail.com

Abstract

This research was conducted to discover the correlation between verbal-linguistic aptitude and investigative interest among adolescents with Autistic Spectrum Disorder (ASD) at Special Education Schools in Solo Raya. The total sample consisted of 16 adolescents with ASD in the age group of 10 - 21 years. The sampling technique conducted for this research is purposive sampling. To meet the objective of the research, multiple intelligences aptitude and the vocational interest psychological scale by Yulianti (2022) were used. The data was analyzed by using descriptive analysis and a Kendall's Tau statistical correlation type in SPSS 25. This research reveals a correlation coefficient of 0.310 with $p = 0.124$ ($p > 0.05$), indicating that there is no correlation between verbal-linguistic aptitude and investigative interest among adolescents with ASD in Special Education Schools in Solo Raya.

Keywords: adolescents with ASD; aptitude; interest; investigative; verbal-linguistic

Abstrak

Penelitian ini dilakukan untuk mengetahui hubungan antara bakat verbal-linguistik dan minat Investigative pada remaja dengan Gangguan Spektrum Autis (GSA) di SLB wilayah Solo Raya. Total sampel pada penelitian ini adalah 16 remaja dengan GSA pada rentang usia 10-21 tahun. Teknik pengambilan sampel yang digunakan adalah purposive sampling. Pengambilan data dilakukan dengan menggunakan instrumen penelitian skala identifikasi bakat dan skala identifikasi minat oleh Yulianti (2022). Analisis data dilakukan dengan menggunakan analisis deskriptif dan uji hipotesis Kendall's Tau pada SPSS Statistic 25. Penelitian ini menunjukkan koefisien korelasi sebesar 0.310 dengan $p = 0.124$ ($p > 0.05$), yang diartikan bahwa tidak terdapat hubungan antara bakat verbal-linguistik dan minat Investigative pada remaja dengan GSA di SLB wilayah Solo Raya.

Kata kunci: bakat; investigative; minat, remaja dengan GSA; verbal-linguistik

How to Cite: Wibowo, A.D., Sari, E.K., & Martika, T. (2025). The correlation between verbal-linguistic aptitude and investigative interest among adolescents with autistic spectrum disorder at special education schools in Solo Raya. *Journal of Disability*, 5(1), 41 - 47. <https://doi.org/10.20961/jod.v5i1.106729>.

INTRODUCTION

Education is a fundamental human need essential for holistic human development and cannot be replaced by other needs (Maslow, 1943). Quality education provides opportunities for individuals to learn, grow, and reach their full potential. The United Nations Convention on the Rights of Persons with Disabilities (2007) affirms the right to education for all, including adolescents with special needs such

as those with Autism Spectrum Disorder (ASD), a condition marked by communication, behavioral, and social hindrances.

According to Gardner (2011), every individual has the potential for intelligence, which he defines as the capacity to solve problems and generate new knowledge. His theory of multiple intelligences includes verbal-linguistic, logical-mathematical, visual-spatial, musical, kinesthetic, interpersonal, intrapersonal, and naturalistic intelligences. Verbal-linguistic intelligence, in particular, relates to understanding and interpreting language through speech, writing, gestures, or signs (Gardner, 2011). However, adolescents with ASD often experience deficits in this area, affecting their classroom learning (Fatihah, 2024). A case study by Rahma & Salsabila (2024) on a 13-year-old with ASD in Lebak Bulus revealed phonological, comprehension, and syntactic language disorders that limited effective communication.

Although national education policy and international frameworks—including provisions recognized by the United Nations Convention on the Rights of Persons with Disabilities—emphasize the right of learners with disabilities to receive appropriate and adaptive educational support, implementation challenges remain evident in instructional practice. Educational interventions for adolescents with ASD often prioritize general behavioral or communication outcomes, while targeted strategies that systematically develop verbal-linguistic competence remain underexplored. Consequently, a critical research issue emerges regarding how structured, evidence-based instructional approaches can effectively support language development in adolescents with ASD within special education contexts. Addressing this issue is essential for aligning theoretical perspectives on intelligence, policy mandates on inclusive education, and practical classroom interventions that foster meaningful learning participation.

Educational services must extend beyond formal classroom learning. Article 15 of Law No. 20 of 2003 on the National Education System recognizes multiple types of education, including special education. Adolescents with ASD require comprehensive support in personality development, creativity, aptitude, and physical and mental skills to fully realize their potential (UN Convention, 2006, Article 24).

Holland's RIASEC model (1985) categorizes vocational interests into six personality types: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. Adolescents who are curious, analytical, and knowledge-driven fall under the Investigative category. However, studies indicate that many students in Indonesia do not consider their aptitudes when choosing academic or career paths (Candiasa, Natajaya, & Widiartini, 2018), often due to peer influence or lack of awareness. Although teachers recognize the importance of aptitude and interest (Farid, 2021), there are challenges in identifying and incorporating these into learning, especially for students with special needs (Widodo et al., 2020; Anggraini et al., 2021). Research at SMP Negeri 27 Surabaya showed that 80% of parents

lack awareness of their children's strengths, often due to limited attention and socio-economic factors (Farid, 2021).

Thus, recognizing and developing the aptitudes and interests of adolescents with ASD is crucial. Teachers, parents, and schools must work together to provide individualized support and educational pathways that empower these adolescents to thrive.

METHOD

Research Design

This study employed a quantitative correlational design to examine the relationship between aptitude and vocational interest among adolescents with Autism Spectrum Disorder (ASD). The design was selected to determine the strength and direction of association between the two psychological constructs without manipulating variables.

Participants and Sampling Technique

Participants were 16 adolescents with ASD selected using non-probability sampling, specifically purposive sampling. This technique was applied because only individuals who met predetermined inclusion criteria were eligible to participate. The inclusion criteria comprised: (1) formal diagnosis of ASD, (2) adolescent developmental stage, and (3) ability to respond to structured assessment items with assistance when needed.

Data Collection Techniques

Data were collected through structured psychological assessments administered individually. The aptitude and interest instruments were delivered using a Likert-scale format to capture participants' responses to standardized statements. Administration was conducted in a controlled learning environment to ensure comprehension and response consistency. When necessary, visual cues and simplified instructions were provided to support understanding without influencing responses.

Research Instruments

the researchers conducted a correlation analysis using Kendall's Tau. Aptitude was assessed using a psychological test instrument based on Gardner's Multiple Intelligences theory, while interest was measured using a psychological scale based on Holland's Vocational Interest Theory (RIASEC). Both instruments utilized a Likert scale, which is commonly used to

measure individual or group attitudes, perceptions, and ideas toward a social phenomenon (Sugiyono, 2015). The aptitude identification instrument included 64 favorable statements. Validity testing using Pearson's Product Moment correlation resulted in 42 valid items, while 22 were discarded, reliability test using Alpha Cronbach approach resulted in score 0,938 indicates strongly reliable.

Data Analysis Techniques

Descriptive statistics were used to summarize aptitude and interest scores. Prior to hypothesis testing, instrument validity and reliability were evaluated using Pearson Product Moment correlation and Cronbach's Alpha coefficient. The relationship between aptitude and vocational interest was analyzed using Kendall's Tau correlation coefficient due to the small sample size and ordinal data characteristics. Statistical significance was determined at $\alpha = 0.05$.

RESULTS AND DISCUSSION

The results of the Kendall's Tau correlation test showed a calculated r value of 0.310, which is less than the r table value of 0.383 at a 5% significance level. This indicates that the null hypothesis cannot be rejected, meaning there is no significant correlation between verbal-linguistic intelligence and Investigative interest among adolescents with ASD in special education schools in Solo Raya.

These findings align with prior research by Azmir et al. (2019) in Malaysia, which also reported no significant correlation between verbal-linguistic intelligence and Investigative vocational interest, nor with other vocational categories such as Realistic, Artistic, Social, Enterprising, and Conventional. Similarly, Widhiarsi and Sugiyo (2022) found that intelligence levels do not always correlate with learning interest, noting that students with high verbal-linguistic intelligence sometimes exhibit low interest in learning, particularly affecting listening skills. Suryana (2022) supports this by emphasizing that adolescence is a critical phase for developing diverse interests relevant to adult social roles.

In contrast, research by Putri et al. (2023) in Makassar on fifth-grade students at SDN Rappocini revealed a positive correlation between verbal-linguistic intelligence and interest in reading short stories. As cited by Yaumi (2013) in Putri et al. (2023), individuals with strong verbal-linguistic intelligence often enjoy storytelling, have a good memory, and are enthusiastic readers, suggesting a natural curiosity and desire for knowledge.

The lack of correlation in this study may be influenced by several factors. Interestingly, 43.75% ($N = 16$) of adolescents with ASD in this study scored high in verbal-linguistic Intelligence, which contrasts with the theoretical expectation that individuals with ASD typically struggle with language and communication (Fatihah, 2024). This inconsistency may be attributed to external factors such as parenting style, which significantly influences language development. As noted by Esaputri et al.

(2022), language acquisition begins with early interactions with parents, particularly the mother, through imitation, speech, reading, and communication.

Furthermore, Mustofa (2017, in Esaputri et al., 2022) highlights that verbal expression and emotional sharing often start within parent-child relationships, and Amral (2015, in Esaputri et al., 2022) emphasizes that native language acquisition typically develops naturally from early environmental exposure. The findings of Rahma and Salsabila (2023) further suggest that the severity of ASD affects language development, with those having mild to moderate ASD displaying more systematic learning patterns.

This study also found that 43.75% (N = 16) of adolescents with ASD had low levels of Investigative interest. This finding is consistent with a 2024 study in the *Journal of Health and Medical Technology (JKTM)*, which reported that individuals with ASD often display highly restricted interests, typically centered on a single object or topic with excessive focus (Fatihah, 2024). While individuals with Investigative interest generally demonstrate high initiative, curiosity, and a strong desire for knowledge, such traits contrast with behavioral patterns often observed in ASD.

According to Kurniawan (2021), individuals with ASD typically struggle with spontaneous social interactions and sharing interests or achievements with others. They also face difficulties in integrating emotional and social behaviors, which contributes to their limited engagement with peers. Azmir et al. (2019) noted that Investigative individuals tend to be observant, environmentally aware, and capable of forming personal judgments, traits that are typically underdeveloped in adolescents with ASD, who often remain isolated and disconnected from their surroundings (Fatihah, 2024). These characteristics explain the low levels of Investigative interest observed in the ASD population in this study.

CONCLUSION

Based on the research, analysis, and discussion of existing theories and studies, it can be concluded that adolescents with ASD in special education schools in Solo Raya generally exhibit moderate to high levels of verbal-linguistic aptitude, while their levels of Investigative interest tend to be low. The results of the Kendall's Tau correlation test ($r = 0.310 < r_{table} = 0.383$, $p = 0.124 > 0.05$) indicate that the null hypothesis (H_0) is accepted, and the alternative hypothesis (H_a) is rejected. Therefore, it can be concluded that there is no significant correlation between verbal-linguistic aptitude and Investigative interest in adolescents with ASD in this region.

ACKNOWLEDGMENTS

The researchers would like to express their sincere gratitude to all individuals and institutions who contributed to the completion of this study. Special thanks are extended to the special education schools in Solo Raya for their cooperation and support, as well as to the adolescents with ASD and the teachers who participated in this research.

The researchers also acknowledge the valuable guidance provided by Erma Kumala Sari and Tias Martika as academic mentors and colleagues during the development of the methodology, particularly in the use of Gardner's Multiple Intelligences theory and Holland's RIASEC model. Appreciation is also given to those who assisted in the validation and data analysis processes, including the testing of instruments.

REFERENCES

- American Psychiatric Association. (2022). *DSM V-TR*. Washington DC: American Psychiatric Association. Psychiatric Association.
- Angraini, dkk. (2021). Mengidentifikasi minat bakat siswa sejak dini di SD Adiwiyata. *Islamika: Jurnal Keislaman dan Ilmu Pendidikan*, 2(1), 161-169.
- Azmir, A. M., Johari, K. S. K. & Mahmud, I. (2019). *Proceedings of the 1st Progress in Social Science, Humanities and Education Research Symposium Relationship Between Multiple Intelligence and Career Interest Among Secondary School Students*, hlm. 671–677. Bangi: Universiti Kebangsaan Malaysia.
- Candiasa, I. M., Natajaya, N. & Widiartini, K. (2018). Vocational aptitude test. *SHS Web of Conferences* 44.
- Esaputri, I. M., dkk. (2022). The Relationship of mother language activities with reading ability in children with autism spectrum disorder at Gentaralam Special School, Palembang City. *Medical Journal of Nusantara (MJN)*, 1(1), 26-34.
- Farid, A. (2021). Menggali potensi minat dan bakat siswa inklusif di sekolah metal dengan parenting, konseling, dan skill education. *Cendekia: Jurnal Ilmu Pengetahuan*, 1(1), 140-150.
- Fatihah, N. S. (2024). Analisa autism spectrum disorder berdasarkan DSM V. *Jurnal Kesehatan dan Teknologi Medis (JKTM)*, 6(3), 253-259.
- Gardner, H. (2011). *Frames of minds: The theory of multiple intelligences*. New York: Basic Books.
- Holland, J. L. (1973). *Making vocational choices: A theory of career*. New Jersey: Prentice-Hall Inc.
- Hurlock, E. B. (2017). *Psikologi perkembangan: suatu pendekatan sepanjang rentang kehidupan*. Terj. Istiwidayanti dan Soerjarwo. Jakarta: Penerbit Erlangga. (Buku asli diterbitkan 1980).
- Kurniawan, A. (2021). Deteksi dini anak autism. *Jurnal Ortopedagogia*, 7(1), 57.
- Mansur, M. A. N. S. U. R. (2018). Hambatan komunikasi anak autis. *Al-Munzir*, 9(1), 80-96.
- Maslow, A. H. (1943). *A theory of human motivation*. *Psychological Review*, 50(4), 370–396.
- PBB. (2013). *Konvensi mengenai Hak-hak Penyandang Disabilitas*. PBB

- Permendiknas RI Nomor 70 Tahun 2009 tentang Pendidikan Inklusif bagi Peserta Didik yang Memiliki Kelainan dan Memiliki Potensi Kecerdasan dan/atau Bakat Istimewa.
- Rahma, A. A. & Salsabila A. H. (2024). Gangguan berbahasa pada anak autisme ringan (studi kasus anak usia 13 tahun). *Pragmatik: Jurnal Rumpun Ilmu Bahasa dan Pendidikan*, 2(4), 1-8.
- Sari, A. M., dkk. (2023). Bakat dan minat. *KOLONI: Jurnal Multidisiplin Ilmu*, 2(4), 227–238.
- Sinaga, dkk. (2022). Faktor interaksi sosial pada anak autisme di Pusat Layanan Autism. *Journal of Telenursing (JOTING)*, 4(2), 636-645.
- Suryana, E., dkk. (2022). Perkembangan remaja awal, menengah dan implikasinya terhadap pendidikan. *Jurnal Ilmiah Mandala Education (JIME)*, 8(3), 1917-1928.
- Widhiarsi, D. & Sugiyo. (2022). Pengaruh kecerdasan linguistik dan minat belajar terhadap keterampilan menyimak berita. *Fahima: Jurnal Pendidikan dan Kajian Keislaman*.
- Widodo, A., dkk. (2020). Identifikasi bakat Peserta Didik Berkebutuhan Khusus (PBDK) di Madrasah Inklusi Kabupaten Lombok. *Jurnal Pendidikan Inklusi*, 3(2), 102-116.
- Yuliasuti, D. P. A. (2022). *Hubungan antara dimensi bakat dengan dimensi minat remaja tunarungu di SLB se-Solo Raya*. Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sebelas Maret.
- Zakaria, A. M., dkk. (2024). Analisis gangguan bicara, komunikasi, dan autisme serta implikasinya terhadap pembelajaran. *Jurnal Penyuluhan Agama*, 11(1), 77-90