

The Role of Interpersonal Ability in Mediating the Influence of Entrepreneurship Education and Family Environment on the Entrepreneurial Readiness of Persons with Deaf Disabilities (Study on the Puspa Swara community, East Java)

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ABSTRACT

This study analyzes the mediating role of interpersonal ability in the influence of entrepreneurship education and the family environment on the entrepreneurial readiness of individuals with deaf disabilities. Conducted in the Puspa Swara community, East Java, using a quantitative PLS-SEM approach with 103 purposively selected respondents, the research employed a validated and reliable questionnaire. The results show that entrepreneurship education and the family environment significantly and positively affect both interpersonal ability and entrepreneurial readiness, while interpersonal ability significantly mediates these relationships. These findings highlight the importance of integrating interpersonal skills development and family support into entrepreneurship education programs to strengthen the entrepreneurial readiness of people with deaf disabilities.

INTRODUCTION

In the era of globalization and the Industrial Revolution 4.0, the development of digital technology and work automation has brought a major transformation in the world of business and employment. This change opens up wide opportunities for people to innovate, create new jobs, and increase economic competitiveness. However, behind these opportunities there are serious challenges for vulnerable groups, especially people with disabilities, who are often left behind in this transformation process due to limited access to education, technology, and formal employment opportunities (Alo et al., 2024; Carlisle et al., 2023). This condition creates gaps that can hinder the realization of truly inclusive economic growth (Gregori et al., 2021; Somià & Vecchiarini, 2024).

The United Nations (UN) through the Sustainable Development Goals (SDGs) agenda emphasizes the importance of social and economic inclusion for all people, including people with disabilities. The 8th goal of the SDGs, namely Decent Work and Economic Growth, and the 10th goal, Reduced Inequalities, explicitly encourage the expansion of access to decent work for marginalized groups (Karayianni et al., 2023; Seet et al., 2020). In this context, entrepreneurship is seen as a key strategy to bridge the access gap and encourage the economic independence of people with disabilities, including the deaf, to play an active role in sustainable development.

Entrepreneurship not only provides economic opportunities, but also a means of self-actualization, increasing self-confidence, and strengthening the social role of people with disabilities in society (Ahmad, 2020; Brush et al., 2023). However, entrepreneurial skills are not enough to be built through technical training alone. People with disabilities, especially the deaf, need more comprehensive support, including inclusive entrepreneurship education, the active role of the family as the immediate environment, and the strengthening of interpersonal skills that allow them to establish communication and social relations effectively (Alo et al., 2024; Mueller-Saegebrecht, 2024).

In Indonesia, access for people with disabilities to the world of work is still limited. Data from the Central Statistics Agency (BPS, 2024) shows that the participation rate of the labor force of people with disabilities is much lower than the national average, with the dominance of the informal sector that does not provide adequate social protection. This low access also occurs in East Java, including deaf communities such as Puspa Swara. This community has great creative potential in the field of performing arts, crafts, and creative products, but it has not developed optimally due to limitations in entrepreneurship education that meets the needs of nonverbal communication and lack of family support (Azizah & Pahlevi, 2021; Nguyen et al., 2024).

Family factors play an important role in supporting the entrepreneurial readiness of people with disabilities. A supportive family environment is able to build children's motivation, confidence, and courage to develop economic potential. On the other hand, passive or overprotective attitudes can be a serious obstacle in the process of economic empowerment of deaf people (Irikefe, 2023; Strampe & Rambe, 2024). Therefore, inclusion-based entrepreneurship education

must be integrated with strengthening family entrepreneurial literacy, in order to create a climate that encourages courage, creativity, and independence.

In addition to education and family support, interpersonal ability is an important factor that is often overlooked in the empowerment of deaf people. Nonverbal communication skills such as sign language, visual expression, gesture, and the use of assistive technology can be strategic capital in building networks, negotiating with customers, and adapting to market dynamics (Bekzhanova et al., 2022; Lin et al., 2023). Unfortunately, this aspect has not received adequate attention in various existing entrepreneurship training programs, so the social ability of the deaf to manage businesses effectively is still limited.

Based on these conditions, this study is here to fill the gap in the inclusive entrepreneurship literature by examining the role of interpersonal ability as a mediating variable between entrepreneurship education and the family environment on the entrepreneurial readiness of people with deaf disabilities. This study uses a study on the Puspa Swara community in East Java which represents great potential but is not optimally accommodated. With this approach, it is hoped that relevant, contextual, and sustainable intervention models can be found to improve the economic independence of people with disabilities in a challenging global era (Brausch-Böger & Förster, 2024; Rudnák et al., 2025). The research hypotheses that will be tested in this study are:

H1: Entrepreneurship education has a positive and significant effect on the entrepreneurial readiness of people with deaf disabilities.

H2: Entrepreneurship education has a positive and significant effect on the interpersonal ability of people with deaf disabilities.

H3: The family environment has a positive and significant effect on the entrepreneurial readiness of people with deaf disabilities.

H4: The family environment has a positive and significant effect on the interpersonal ability of people with hearing disabilities.

H5: Interpersonal ability has a positive and significant effect on the entrepreneurial readiness of people with deaf disabilities.

H6: Interpersonal ability mediates the influence of entrepreneurship education on the entrepreneurial readiness of people with deaf disabilities.

H7: Interpersonal ability mediates the influence of the family environment on the entrepreneurial readiness of people with deaf disabilities.

LITERATURE REVIEW

The grand theory of Perceived Behavioral Control (PBC), explains that individual behavior is highly determined by intention, which is influenced by three main factors: attitude toward behavior, subjective norms, and perceived behavioral control. PBC refers to the extent to which a person believes that he or she has the ability, resources, and opportunities to perform an action. In the context of entrepreneurship, PBC describes an individual's belief in his or her ability to start and manage a business independently. This belief is formed from past experiences, perceptions of challenges, and environmental support. For people with disabilities, especially the deaf, PBC is an important aspect because

it reflects confidence and self-control over entrepreneurial actions in the midst of limited verbal communication. When PBC is high, individuals are more likely to have a strong readiness to be entrepreneurial, as they feel able to overcome obstacles, manage risks, and run businesses with their competencies.

Entrepreneurship Education

Entrepreneurship education is a systematic process that aims to foster enthusiasm, skills, and business orientation in individuals to be able to create independent businesses. According to Fayolle & Gailly (2008), entrepreneurship education does not only provide technical knowledge about business, but also aims to form an adaptive, innovative, and opportunity-oriented entrepreneurial mindset. For people with hearing disabilities, entrepreneurship education should be inclusive and responsive to their specific needs, such as sign language use, visual practice-based learning, and participatory approaches. Education designed with this kind of approach is able to provide the confidence and competence needed to start and manage a business independently, while increasing their confidence in interacting with the outside world.

Family Environment

The family environment is the first foundation that shapes children's character and behavior, including in fostering an entrepreneurial spirit. Based on the developmental ecological theory of Bronfenbrenner (1979), the family is included in the microsystem that has a direct influence on the development of the individual. In the context of people with hearing disabilities, the role of the family is very important not only as a provider of emotional support, but also as a motivator and facilitator in the learning and entrepreneurial process. A supportive family environment will encourage individuals to recognize their potential, dare to take risks, and believe in their own abilities. On the other hand, if the family is overprotective or does not provide space for actualization, then individuals tend to experience obstacles in exploring entrepreneurial potential. Therefore, family support is one of the key factors in the entrepreneurial readiness of people with disabilities.

Interpersonal Ability

Interpersonal ability refers to an individual's ability to establish and maintain effective social relationships with others, including communication, empathy, listening skills, and collaboration skills. This concept comes from Social Intelligence Theory introduced by Thorndike (1920), which states that social intelligence is the ability to understand and manage others in social relationships. In the context of the deaf, interpersonal ability does not rely on verbal communication, but rather on mastery of nonverbal communication, sign language, facial expressions, and the ability to read social situations. This ability is vital in the world of entrepreneurship, as business success depends heavily on interpersonal relationships, including with customers, partners, and communities. High interpersonal ability can bridge verbal limitations and strengthen the confidence of people with disabilities in running their businesses.

Therefore, this variable is important as a mediator in increasing entrepreneurial readiness through education and family support.

Entrepreneurial Readiness

Entrepreneurial readiness is a psychological condition and skills that individuals have to start and manage a business independently. This readiness is closely related to perceived behavioral control, which is the extent to which a person feels capable and has control over his actions in starting a business. This readiness includes cognitive (knowledge of business), affective (motivation, interest, and courage to take risks), and conative (intention and determination to be entrepreneurial). For people with deaf disabilities, entrepreneurial readiness is not only influenced by training and support, but also by their perception of themselves and their environment. They require a learning approach that allows for visual and practical exploration of potential, as well as strengthening self-confidence to be able to face social challenges and stigmas. With good readiness, people with disabilities can become resilient and independent business actors in the midst of various limitations.

METHODOLOGY

This study uses a quantitative approach with the type of explanatory research to examine the causal relationship between the variables of entrepreneurship education, family environment, interpersonal ability, and entrepreneurial readiness in people with deaf disabilities. The location of the research was carried out in the Puspa Swara community of East Java which is a forum for deaf people to develop the potential of arts, crafts, and creative activities. The research population is all active community members, and through the purposive sampling technique, 103 respondents were determined as a research sample with the main criteria of deaf people of productive age and interest in entrepreneurial activities. Data were collected using a structured questionnaire that was compiled based on the indicators of each research variable and tested for validity and reliability before dissemination. Data analysis was carried out using the Partial Least Square-Structural Equation Modeling (PLS-SEM) method with the help of SmartPLS 3.0 software, which was chosen because it was able to analyze research models with latent variables and relatively small samples. Through this method, the study seeks to identify the direct and indirect influence of entrepreneurship education and the family environment on entrepreneurial readiness, and to test the role of interpersonal ability mediation more comprehensively.

RESEARCH RESULTS AND DISCUSSION

Table 1. Respondent Characteristics

No	Characteristics	Category	Number Respondents	of Percentage (%)
1	Gender	Man	47	45,63
		Woman	56	54,37

No	Characteristics	Category	Number Respondents	Percentage (%)
2	Age	16–20 years old	68	66,02
		21 years and older	35	33,98
3	Kota/Kabupaten	Surabaya	22	21,36
		Sidoarjo	15	14,56
		Hapless	12	11,65
		Gresik	10	9,71
		Mojokerto	8	7,77
		Jombang	7	6,80
		Pasuruan	6	5,83
		Kediri	5	4,85
		Blitar	4	3,88
		Lamongan	3	2,91
		São Paulo	3	2,91
		Batu City	3	2,91
		Others (Madiun, Ponorogo, etc.)	5	4,85
		Total	103	100.00

Based on the characteristics of the respondents, it can be seen that of the total 103 people with deaf disabilities who became respondents to the study, most of them were women, namely 56 people (54.37%), while men amounted to 47 people (45.63%). In terms of age, the majority of respondents were in the age range of 16–20 years old as many as 68 people (66.02%), while the remaining 35 people (33.98%) were aged 21 years and above. This shows that respondents are dominated by young age groups who are in the early stages of preparing for careers and entrepreneurial opportunities. In terms of regional distribution, the most respondents came from Surabaya with 22 people (21.36%), followed by Sidoarjo with 15 people (14.56%), and Malang with 12 people (11.65%). Meanwhile, other cities/regencies such as Jombang, Mojokerto, Gresik, and surrounding areas have a smaller number of respondents. This distribution illustrates that most respondents are concentrated in urban areas with more diverse access to education and family environments, which can affect their readiness for entrepreneurship.

This study uses SEM-PLS to test a series of research hypothetical relationships of entrepreneurial education variables (X1), family environment (X2), interpersonal ability (Z), entrepreneurial readiness (Y) of people with deaf disabilities in the Puspa Swara community, East Java. The steps of the SEM-PLS analysis refer to the procedure developed by Chin (1999), and Hair, et al. (2020), which include: (1) evaluation of the measurement model (outer model); (2)

evaluation of structural models (inner models), and (3) goodness of fit, and (4) hypothesis testing.

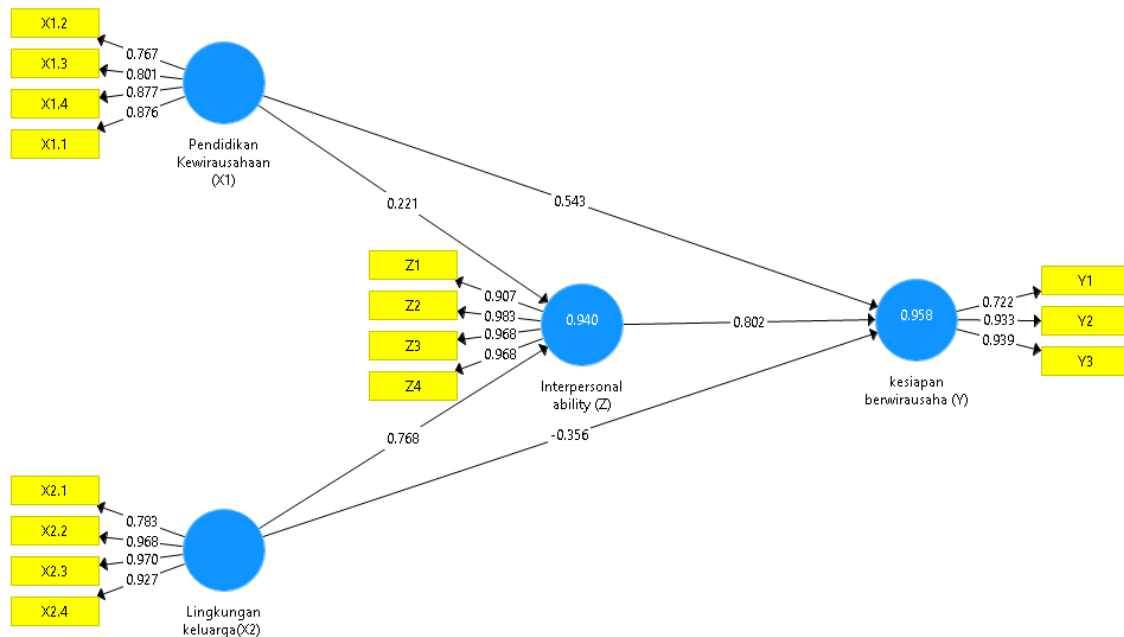


Figure 1. Data analysis results

Evaluation of Measurement Model (outer model)

Table 2. Outer Model Estimation

Variabel	Item Loading	Cronbach's Alpha	Composite Reliability	AVE
Entrepreneurship Education (X1)	X1.1 0,876	0,858	0,899	0,692
	X1.2 0,767			
	X1.3 0,801			
	X1.4 0,877			
Family Environment (X2)	X2.1 0,783	0,934	0,953	0,838
	X2.2 0,968			
	X2.3 0,970			
	X2.4 0,927			
Entrepreneurial Readiness (Y)	Y1 0,722	0,834	0,902	0,758
	Y2 0,933			
	Y3 0,939			
Interpersonal Ability (Z)	Z1 0,907	0,969	0,977	0,916
	Z2 0,983			
	Z3 0,968			

Variabel	Item Loading	Cronbach's Alpha	Composite Reliability	AVE
	Z4	0,968		

Based on the results of the validity and reliability test, all constructs in this study were declared valid and reliable. This can be seen from the loading factor value of all indicators greater than 0.70, so it can be said that each item has a good contribution in explaining its respective variables. Cronbach's Alpha and Composite Reliability values for all variables were also above 0.70, indicating high internal consistency and strong construct reliability. In addition, the Average Variance Extracted (AVE) value for each variable is greater than 0.50, which means that the research variable is able to explain more than half of the variance of the indicator. Thus, the variables of entrepreneurship education, family environment, interpersonal ability, and entrepreneurial readiness can be used further in the research model because they have met the validity and reliability criteria required in the PLS-SEM analysis.

Discriminant Validity

Discriminant validity is a cross loading factor value that is useful to find out whether the construct variable has adequate discrimination, namely by comparing the loading value of the intended construct variable must be greater than the loading value with other constructs (Hussein, 2015; Ghazali and Latnan, 2015). The discriminant validity test refers to the Fornell-Larscher criterion which shows a *cross-loading* value of > 0.70 , which means that these variables meet discriminant validity (Fornell, 1988; Chin, 2009; Hair, et al., 2013).

Table 3. *discriminant validity*

Fornell-Larcker Criterion

	Interpersonal ability (Z)	Family environment(X2)	Entrepreneurs hip Education (X1)	entrepreneu rial readiness (Y)
Interpersonal ability (Z)	0,957			
Family environment(X2)	0,964	0,915		
Entrepreneurs hip Education (X1)	0,905	0,892	0,832	
entrepreneuria l readiness (Y)	0,950	0,902	0,952	0,870

Based on the results of the discriminant validity test with the Fornell-Larcker criteria, it can be seen that the square root value of AVE (shown in the

diagonal of the table: 0.957; 0.915; 0.832; and 0.870) is greater than the correlation between the constructs below. This shows that each construct in the study, namely entrepreneurship education (X1), family environment (X2), interpersonal ability (Z), and entrepreneurial readiness (Y), has good discriminant validity. In other words, each construct is able to explain its own variables more dominantly than other constructs. This condition indicates that the model used in the study has met the requirements for discriminant validity, so it can be trusted to be used at the next stage of structural analysis.

Structural Model (Inner Model)

Coefficient of Determination (R²)

According to Ghozali and Latan (2015), the magnitude of R² indicates the magnitude of the influence of exogenous variables on endogenous variables. If the R² values are 0.75; 0.50 and 0.25, it can be concluded that the model is strong, moderate, and weak.

Table 4. R-Square test results

	R Square
Interpersonal ability (Z)	0,940
entrepreneurial readiness (Y)	0,958

The results of the R-Square (R²) test showed that the interpersonal ability (Z) variable had a value of 0.940, which means that 94% of the variation in interpersonal ability could be explained by independent variables in the model, while the remaining 6% were influenced by other factors outside the study. Meanwhile, the variable of entrepreneurial readiness (Y) obtained an R² value of 0.958, which indicates that 95.8% of the variation in entrepreneurial readiness can be explained by entrepreneurial education, family environment, and interpersonal ability, with the remaining 4.2% influenced by other external factors. Based on the interpretation criteria of R² according to Chin (1998), values above 0.67 are included in the strong category, so it can be concluded that this research model has excellent explanatory power and the relationship between the analyzed variables is substantial enough to describe the phenomenon of entrepreneurial readiness of people with deaf disabilities.

Effect Size (f²)

Table 5. Results Analysis

	Interpersonal ability (Z)	Family environment(X2)	Entrepreneurship Education (X1)	entrepreneurial readiness (Y)
Interpersonal ability (Z)				0,915
Family environment(X2)	2,023			0,205
Entrepreneurship Education (X1)	0,167			1,234

entrepreneurial readiness (Y)				
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The results of the analysis showed that the family environment (X2) had a very strong effect on interpersonal ability (Z) with a value of 2.023, although the direct influence on entrepreneurial readiness (Y) was relatively small at 0.205. On the other hand, entrepreneurship education (X1) had a more direct effect on entrepreneurial readiness with a score of 1.234, while the effect on interpersonal ability was only 0.167. Interpersonal ability itself plays an important role with a value of 0.915, which confirms its position as the main mediator. Thus, the entrepreneurial readiness of people with deaf disabilities is more optimal if family support and entrepreneurship education are able to improve interpersonal skills.

Hypothesis Testing

Direct and Indirect Influence Testing

Direct influence testing was used to test hypotheses 1 to 7 in this study. This test uses *path coefficients* values, taking into account the t-statistics value that is more than t-table (1.96) and the p-value < 0.05 to conclude that the hypothesis is acceptable, then the direct influence is positive and significant between the variables tested.

Table 6. Direct Effect

Relationship	B	T-value	P-values	Decision
Entrepreneurship education (X1) → Interpersonal ability (Z)	0,221	4,081	0,000	Supported
Entrepreneurship education (X1) → Entrepreneurial readiness (Y)	0,543	8,086	0,000	Supported
Entrepreneurship education (X1) → Interpersonal ability (Z) → Entrepreneurial readiness (Y)	0,177	3,093	0,002	Supported
Family environment (X2) → Interpersonal ability (Z)	0,768	14,184	0,000	Supported
Family environment (X2) → Entrepreneurial readiness (Y)	-0,356	2,078	0,038	Supported
Family environment (X2) → Interpersonal ability (Z) → Entrepreneurial readiness (Y)	0,616	4,475	0,000	Supported
Interpersonal ability (Z) → Entrepreneurial readiness (Y)	0,802	4,695	0,000	Supported

The results of the pathway analysis showed that entrepreneurship education (X1) had a positive and significant effect on interpersonal ability (Z) ($\beta = 0.221$; $p < 0.001$) and on entrepreneurial readiness (Y) ($\beta = 0.543$; $p < 0.001$). In addition, X1 also has an indirect influence through Z on Y ($\beta = 0.177$; $p =$

0.002), so it can be concluded that entrepreneurship education plays an important role both directly and through improving the interpersonal skills of people with deaf disabilities. Furthermore, the family environment (X2) had a significant positive effect on interpersonal ability (Z) ($\beta = 0.768$; $p < 0.001$) and indirectly also increased entrepreneurial readiness through Z ($\beta = 0.616$; $p < 0.001$). However, the direct relationship between X2 and Y showed a significant negative influence ($\beta = -0.356$; $p = 0.038$), which indicates that inappropriate family support can actually reduce entrepreneurial readiness if not balanced with the strengthening of interpersonal ability factors. Finally, interpersonal ability (Z) was shown to have a positive and significant effect on entrepreneurial readiness (Y) ($\beta = 0.802$; $p < 0.001$). Thus, entrepreneurship education and the family environment, both directly and through interpersonal ability, are key factors that determine entrepreneurial readiness for people with deaf disabilities in East Java.

DISCUSSION

Hypothesis 1 (H1) Entrepreneurship education (X1) has a positive and significant effect on interpersonal ability (Z)

The results of the study show that entrepreneurship education has a positive and significant effect on the interpersonal ability of people with deaf disabilities. Theoretically, this is in line with human capital theory which emphasizes the importance of education in shaping individual skills, including interpersonal abilities (Becker, 1993). Conditions on the ground show that when deaf participants participate in entrepreneurial activities, such as business simulations and group discussions, they are encouraged to communicate more boldly through sign language and collaboration. This is in line with the research of Rahman et al. (2020), Nowiński et al. (2019), Bae et al. (2022), Hattab (2020), and Saptono & Wibowo (2021) which affirms that entrepreneurial learning is able to hone interpersonal skills through social interaction and cooperation.

Hypothesis 2 (H2) Entrepreneurship education (X1) has a positive and significant effect on entrepreneurial readiness (Y)

The findings of this study indicate that entrepreneurship education has a positive effect on entrepreneurial readiness. Based on the theory of planned behavior (Ajzen, 1991), the readiness of individuals in entrepreneurship is influenced by knowledge, attitudes, and skills obtained from the educational process. In the field, many respondents began to dare to open an online-based small business after receiving material on business planning and digital marketing. This strengthens the research results of Martin et al. (2019), Nabi et al. (2020), Sánchez (2021), Fayolle & Liñán (2020), and Maritz et al. (2022) which show that entrepreneurship education increases readiness by providing practical provisions in managing a business.

Hypothesis 3 (H3) Entrepreneurship education (X1) has a positive and significant effect on entrepreneurial readiness (Y) through interpersonal ability (Z) as a mediating variable

Interpersonal ability has been proven to mediate the influence of entrepreneurship education on entrepreneurial readiness. This is in line with the theory of social learning (Bandura, 1977), which explains that social skills can be learned through interactive educational experiences. In the field, respondents who actively discussed and collaborated in entrepreneurship classes showed higher readiness to open a business than those who tended to be passive. These results support the research of Puni et al. (2018), Ahmad et al. (2019), Abaho et al. (2022), Kwong & Thompson (2020), and Othman et al. (2021), which found that interpersonal ability increases confidence and readiness in managing a business, particularly in groups with communication limitations.

Hypothesis 4 (H4) Family environment (X2) has a positive and significant effect on interpersonal ability (Z)

The family environment has a positive effect on interpersonal ability. According to Bronfenbrenner's (1979) developmental ecological theory, the family is a microenvironment that influences the social development of individuals. Conditions in the field show that people with deaf disabilities who receive support in the form of communication with sign language at home and opportunities to participate in family activities, have better interpersonal skills. This is in line with the research of Carr & Sequeira (2019), Mustafa et al. (2020), Handayati et al. (2021), Ali & Yousaf (2022), and Entrialgo & Iglesias (2023), which affirms that family support forms important social skills to face entrepreneurial challenges.

Hypothesis 5 (H5) Family environment (X2) has a positive and significant effect on entrepreneurial readiness (Y)

The study also found that the family environment has a significant effect on entrepreneurial readiness, although the direction of influence can be different. In social support theory (Cohen & Wills, 1985), the family can act as a source of motivation or even a inhibiting factor. Conditions in the field show that some families are too protective so that it limits the independence of respondents in trying to do business, but there are also families who provide capital or guidance that actually increases their readiness. These findings are supported by research by Nguyen (2019), Lindquist et al. (2020), Mwiya et al. (2021), Ratten (2022), and Al Mamun et al. (2023), which underscore the dual role of families in supporting or limiting entrepreneurial readiness.

Hypothesis 6 (H6) The family environment (X2) has a positive and significant effect on entrepreneurial readiness (Y) through interpersonal ability (Z) as a mediating variable

Interpersonal ability has proven to be an important mediator in the relationship between the family environment and entrepreneurial readiness. Based on social capital theory (Coleman, 1988), family support strengthens social skills which ultimately increases readiness for entrepreneurship. In the

field, respondents who were involved in family small businesses or given responsibilities in household activities had better interpersonal skills, which then increased their readiness to open their own businesses. These findings are consistent with the research of Edelman et al. (2020), Batista et al. (2021), Eresia-Eke & Okerue (2022), Guerrero et al. (2021), and Lanero et al. (2023), which affirm that interpersonal skills play an important role as an important link between the social environment and entrepreneurial readiness.

Hypothesis 7 (H7) Interpersonal ability (Z) has a positive and significant effect on entrepreneurial readiness (Y)

Interpersonal ability has a significant positive influence on entrepreneurial readiness. Based on competency theory (Spencer & Spencer, 1993), interpersonal skills are part of soft skills that determine an individual's readiness to face the world of work and business. Conditions in the field show that respondents with good sign communication skills, are able to build relationships with consumers, and can work together with peers, show higher readiness compared to those who are still passive. This is in line with the research of Baron & Markman (2019), Riggio (2020), Unger et al. (2021), Robles & Zárraga-Rodríguez (2022), and Obschonka et al. (2023), which emphasizes the importance of interpersonal skills in entrepreneurial success and readiness.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the study, it can be concluded that entrepreneurship education and the family environment have an important role in increasing the entrepreneurial readiness of people with deaf disabilities, both directly and through interpersonal ability mediation. Entrepreneurship education is proven to not only equip participants with technical knowledge and skills, but also to develop interpersonal skills that strengthen confidence and communication skills, thereby increasing entrepreneurial readiness. The family environment also plays a significant role, both in forming interpersonal skills through social support and communication, and in providing motivation and resources to start a business. However, family influence can be twofold, as excessive protective attitudes can actually hinder independence. Interpersonal ability itself has proven to be a key variable that links entrepreneurship education and family support with entrepreneurial readiness, emphasizing that social ability is an important capital in starting a business, especially for groups of people with hearing disabilities. Thus, increasing entrepreneurial readiness requires synergy between applicable entrepreneurship education, constructive family support, and strengthening interpersonal skills relevant to market needs.

ADVANCED RESEARCH

This study opens opportunities for advanced research by encouraging deeper investigation into how pedagogical design, family dynamics, and social skill development interact to shape entrepreneurial readiness among people with deaf disabilities. Future studies could integrate mixed-methods or longitudinal designs to capture changes in interpersonal ability over time and

examine how different types of entrepreneurship education—experiential learning, digital platforms, or project-based training—affect entrepreneurial outcomes in disability communities. Researchers may also explore cross-disability comparisons, the role of assistive communication technologies, and the influence of cultural norms on family support patterns. In addition, advanced modeling such as multigroup SEM or machine-learning-based profiling could identify subgroups with distinct readiness pathways, enabling the development of more personalized and inclusive entrepreneurship ecosystems for people with disabilities.

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