

# Causative Factors Of Difficulty In Securing Employment Amongst Autism Vocational Training Centre Graduates

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**Abstract:** Vocational education has been said as the best intervention to prepare students with autism for the labour market. It has also been proven to be helpful with the severity of their symptoms. Unfortunately, despite doing well in vocational education, there are still those who are unable to secure any employment. This research was carried out to identify the main reason behind the lack of employability amongst autism vocational training centre graduates regardless of the thorough training they received. This research utilized qualitative method through semi structured interviews with administrators of vocational training centres for autistics learners to obtain related information. The interview data was analysed thematically using NVIVO software based on Social Cognitive Career Theory (SCCT). Results show weak social skills and external influences are the main reason behind the difficulties faced by autism vocational training centre graduates in securing employment. Elements of the aforementioned social skills are communication with employer and colleagues, voicing ideas and opinions, giving responses, and responding to workplace related issues. Hence, workplace oriented social skills should be exposed to these students to complement their vocational training. The findings of this study are very important to be used as a guide and reference especially to the administration of vocational training centres for autism and to relevant government bodies under Ministry Of Education (MOE), Ministry Of Human Resources (MOHR) dan The Ministry of Women, Family and Community Development (KPWKM) to devise a strategy to deal with the factors that have been identified in order to expand autism individual potential so they would be as desirable as others in the labour market.

**Keywords:** autism, employment, vocational training, social skills, external influences

## 1. Introduction

Autism (Autism Spectrum Disorder, ASD) is a complex developmental disability due to a neurological disorder that affects brain function. It affects the normal development of the brain in social interaction and communication skills [1],[2]. Children and adults with autism face difficulties in verbal and non-verbal communication, social interaction, and leisure activities. This disorder makes it difficult for them to connect with the outside world due to their difficulty communicating with other people. Aggressive and/or self-injurious behaviour may be present in some

cases [2] which makes it more difficult for autistic individuals to find a place in society. There is still no specific drug available to cure autism, but there are a large number of different drugs prescribed to reduce symptoms and better manage patients.

According to the data released in 2022 by the Centres for Disease Control (CDC), United States, the incidence of autism is 1 in 44 children. Most ASEAN countries including Malaysia do not have accurate data and only use estimates from the CDC where it is estimated that 1% of the total population of a country is autistic [3]. With the

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worrying increase in the number people with autism, various interventions and studies have been carried out which, among other things, aim to reduce the symptoms of autism in individuals and to ensure that they are not excluded from society. Previous studies or interventions are mostly focused on autism in children, but now it also includes autistic teenagers and adults. This inclusion is due to concerns regarding their life direction, and the community's sense of responsibility to ensure that autistic individuals can continue living without having to depend too much on others.

Intervention or education for autistic individuals is most effective if it is implemented uniquely for them without any integration with normal individuals or individuals with other disabilities [4]. Moreover, most studies have found that vocational training is the best in helping autistic teenagers and adults becoming more independent and reducing their autism symptoms [5],[6]. Therefore, various vocational programs with various interventions are implemented to adapt vocational education to the level of ability of autistic individuals. Hands-on activities are seen to be the most effective for them, especially at the adolescent [7]. Realizing the impact of vocational education on autistic individuals' independence and symptoms severity, various vocational training centres have been developed with the aim to provide various special programs to train these autistic individuals. This is important as they cannot be left out of society and continue to depend on others for their survival. Autistic individuals should be given a role in society so they can contribute to the nation's economy or at least fend for themselves.

Autistic individuals need to be accounted as one of the nation's progress contributors by becoming a skilled employee to meet the country's workforce needs. This will also enable them to improve the economic status of themselves, their families, and the local community. However, despite various interventions including vocational training which is indeed the best for these individuals, competing in the labour market and securing employment is still difficult for them [8]. According to a report by the Autistic Society in the United Kingdom, in 2021 only 22% of autistic adults were employed compared to 77% of the group who were willing to work. Meanwhile, in the United States, MyDisabilityJobs.com, a job matching platform between employers and people with disabilities, reports that at least 85% of autistic adults are unable to find employment despite their training. In Malaysia, although there is no official data related to working autistic individuals, a report from the Ministry of Human Resources released in 2019 shows that throughout the year 1997 to 2018, only 3782 people with disabilities (OKU) were accepted to work in the public sector. It is also reported that only 14 252 people with disabilities were able to secure an employment in the private sector, a

small amount as compared to 13.704 million private sector workers. Due to the fact that autism is categorized as a disability, the specific number of individuals with autism who are accepted to work is definitely smaller.

Previous studies have also proven the difficulty faced by autistic individuals to be accepted for work and the number of those who have the opportunity to secure an employment is too low compared to the rate of the entire population [9],[10]. This rate covers all individuals with autism including those who have received vocational training or have been trained with job-oriented skills. A study done by Hayward[11] reported that individuals with autism have difficulty in obtaining employment opportunities and even if they were accepted to work, they would have difficulty maintaining it. According to him, the work tasks given to individuals with autism are usually unimportant and less meaningful. Autism symptoms, especially communication problems and social interaction weaknesses are always used as reasons by employers to deny autistic individuals to fill a job vacancy[12].

## **2. Problem Statement**

Having difficulty in securing employment, especially when these autistic individuals have already received vocational training, results in many losses. Due to their inability to contribute and socialize with society, they will remain isolated and unable to make a positive impact on their lives. [13]. As a result, they do not have the opportunity to develop their potential and strength, such as attention to detail, logical reasoning, honesty, and focus, [14] which are commendable traits needed in the workplace. Having been marginalized at work further makes it difficult for them to be independent and survive on their own. [15]. As the years pass, they will continue to rely on family members and other people for their basic needs. They remain in vocational centres even after they reach adulthood and have already acquired certain skills in the field of vocational skills. A situation like this is detrimental and should not have happened.

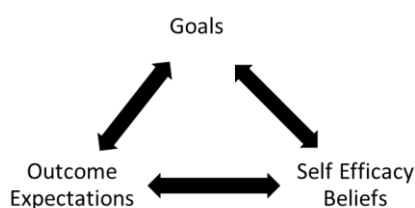
## **3. Objective**

The focus of this study is to investigate the factors that contribute to the difficulty of securing employment for autistic vocational training centres graduates despite having received the necessary training to be a fully functioning employee.

## **4. Literature Review**

Social Cognitive Career Theory (SCCT) is used as a guide in this study; this theory can help researchers explore various

assumptions and perceptions about obstacles to achieving a goal and the sources of those obstacles [16]. SCCT incorporates Bandura's triadic reciprocal model of causality. According to SCCT, an individual is a byproduct of their environment, which itself is the outcome of their interactions. The goal of SCCT is to identify the relationship between individuals and their career-related contexts in decision-making by considering the whole environment. In addition to looking for a link between one's own impact and outside influences, it also strives to identify relationships between cognitive processes and interpersonal aspects. The basis of SCCT consists of three interacting components which aim to explain the process that individuals go through in developing interest in a career, determining career selection and achieving success in a career [17].



**Figure 1:** Foundation of SCCT

**Self-efficacy beliefs:** defined as belief in one's own ability to plan and implement steps to achieve certain personal goals. This self-confidence is dynamic and related to the environment associated with the task or the nature of the task itself. In the context of autism training centre graduates, they are indeed trained with vocational skills according to the program they follow. However, their symptoms make it difficult for them to be accepted or to keep their existing employments. A significant symptom of autism is the weakness of social skills, which include difficulty in communicating, difficulty in giving responses and opinions and weakness in adapting to certain situations [8],[13]. Moreover, their families' worries, impatience and lack of confidence in their ability to take care of themselves have inhibited their optimal involvement in the employment sphere [18],[19],[20]. Families of autistic people undoubtedly want their autistic child to be capable of independence, but they also constantly worry whenever their autistic child is away from them or someone they can trust. It is made worse by the lack of community support for people with autism as a result of a lack of understanding, experience, and sense of responsibility in dealing with autistic people. [21]. In the end, autistic individuals are often denied the chance to interact with the community, including being prevented from finding employment.

**Outcome expectations:** refers to the expected outcome, effect, or consequence of a certain behaviour. The tendency

usually is to expect positive results and avoid anything that is expected to have negative results, even if that one action requires high self-efficacy. Both self-efficacy and outcome expectations are closely related. If a person has high confidence in their ability to do something, they may expect positive results. Likewise, if people expect a positive outcome, they are more likely to feel more confident and attempt certain behaviours that lead to a positive outcome. For autistic individuals, they do not place any expectations on what they do [22]. Those who are upright and loyal will obey orders. However, it still depends on their comfort and the severity of their autism symptoms [21]. Autistic people also don't consider the consequences of their conduct at work, acting instead on their regular behaviours. [23]. They need to be constantly monitored and guided by people they are comfortable with. However, this situation would definitely be better if colleagues, employers, and society as a whole have knowledge and awareness in how to handle autistic individuals, especially in the aspect of their adapting to a job.

**Goals, or personal goals:** refers to how strongly and to what extent a person wants to do something. A person will organize, direct, and maintain certain behaviours towards achieving goals. Goals are influenced by one's self-efficacy beliefs and outcome expectations. The high or low level of progress in the process of achieving goals can have an impact on self-efficacy beliefs and outcome expectations and vice versa. Ideally, autistic individuals will perform tasks well if they receive very clear instructions [22]. The goal set for them is to perform the given task perfectly. They will focus on the task without prioritising other things. In other words, a goal for autistic individuals is not determined by themselves but by either family, employers, or colleagues. However, a change in goals will definitely make it difficult for them because they have a hard time dealing with routine changes. [9]. Here it can be seen that a goal, regardless of whether it is long-term or short term, is not determined by the autistic individual himself. Employers and family members will play a role in determining the direction of these autistic individuals so that they can be independent and no longer depend too much on others.

## 5. Methodology

This study was carried out to determine the factors that make it difficult for graduates of autism vocational training facilities to find employment after receiving training. This study employs a qualitative case study methodology since it satisfies the standards Yin[24] has suggested. According to him, research with a case study design is used when the question of 'how' or 'why' is expressed or there is an inquiry on the reason why it happened. This approach also provides a method to obtain more detailed information to answer the research question. Case studies help researchers explain the diversity of a contemporary event in a real-life situation.

According to Creswell[26], qualitative approach of case studies helps the study to be investigated in depth whether it is a programme, event, activity or process involving one or more individuals.

### 5.1 Participants

Semi-structured interviews were conducted with the supervisors of autism vocational centres in Malaysia. This means these vocational centres, only accommodate autistic students. A total of five informants were selected to be interviewed to explore the factors behind the difficulty for these autistic students to place themselves in the employment sphere despite having received sufficient training at the vocational training centre. The informants were chosen based on their experience and knowledge in teaching and training autistic students from the perspective of daily self-management and job-related skills. In addition, they are also key persons who are directly involved in the transition process of this autistic individual from the training centre to the labour market.

### 5.2 Procedure and Data Collection

The selected supervisors were from different vocational training centres, and the interviews were conducted separately. The interviews were conducted face-to-face, and each interview session took about 45 minutes. Although these interviews generally followed a guide or protocol designed prior to the interview and were focussed on core topics to provide a general structure, semi-structured interviews also allow for discovery, with the scope of key topics as the conversation progresses [27]. Semi-structured interviews are exploratory interviews most often used in social sciences for qualitative research purposes or to collect clinical data. According to Husband[28] the use of semi-structured interviews offers more in-depth information adding to the questionnaire or interview structure provided. This is because in semi-structured interviews, information is thoroughly elaborated, and the informant can give their direct view during the interview session.

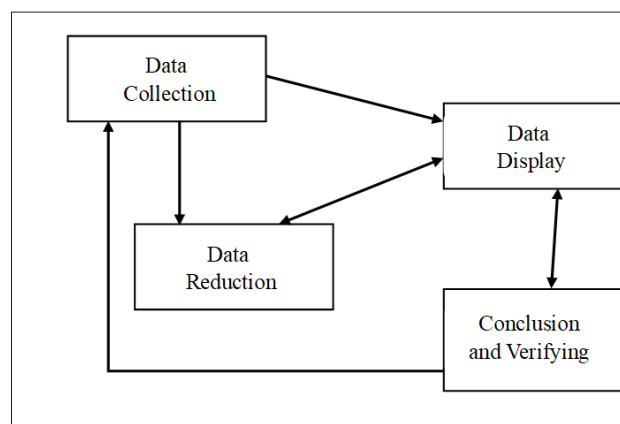
The semi-structured interview conducted has taken into account all procedures and ethics. Audio recordings and field notes were used as the main medium for storing information. The findings of this interview were transcribed and analysed to find the factors behind the difficulty for graduates of autism vocational training centre to find a place in the labour market. Several steps were taken to ensure the validity of the data as suggested by Paolo Hayashi et. al[29]. Expert validation was sought against the developed interview protocol. From the aspect of reliability, important steps were taken by recording all the data obtained and obtaining consent and confirmation from the informant on the transcription of the interview that has been

conducted. Data from the interview session was recorded through three methods: (i) tape recording; (ii) notes by the researcher during the interview; and (iii) the researcher's notes on how much information is remembered after the end of the interview session. The transcription process was carried out first before the next on-location interview. This is to ensure that the next interview can be carried out better based on the information obtained from the previous interview.

### 5.3 Data Analysis

The analysis process started as soon as the first data was obtained and not after all the data has been successfully collected to avoid uncontrolled and confusing dumping of data. The interview data that has been transcribed went through thematic analysis which involved the process of coding and the construction of categories, followed by the formation of themes using NVIVO software. The coding process formed data categories based on the researcher's skills, knowledge, and intuition in obtaining frequent, unique, interesting and appropriate codes. These categories of data then formed themes. The analysis was further done by categorizing the data and determining themes and patterns.

The data analysis process of this study is based on the interactive model of qualitative data analysis introduced by Miles and Huberman (1994) which contains three activity streams as shown in Figure 2.



**Figure 2:** Interactive Model of Qualitative Data Analysis Introduced by Miles and Huberman (1994) [30]

#### i Data Collection

Collected based on research methodology. Raw data is labelled according to specific labels and organized systematically to avoid confusion and duplication of data sources. It is then transcribed and verified. All difficulties and lack of information related to the data are resolved either by repeating the study methodology process or simply by

confirmation from the study participants and experts.

ii Data Reduction

Data is filtered, summarized, and organized through the processes of categorization, labelling and coding to form more compact, manageable, and relevant data for the research question. This process runs continuously throughout the analysis process. In the initial stages, it occurs through editing, segmentation and summarizing the data. At the second stage, it occurs through the coding of related activities such as finding themes, clusters, and patterns. In the final stage, it happens through concepts and explanations, because developing abstract concepts is also a way to reduce data. In both qualitative and quantitative analysis, the objective of data reduction is to reduce data without losing significant information. However, in qualitative analysis, an additional component that is important so as not to lose information is to not remove the data from its context.

iii Data Display

The researcher organizes and combines the data obtained in a form that is easy to understand to help the researcher to draw conclusions based on the data that has been condensed. This data display is used at all levels to enable and facilitate the data to be organized and summarized. It also shows the level of analysis that has been achieved and becomes the basis for further analysis.

iv. Conclusion and verifying.

All the data that has been analysed is taken into account in presenting the conclusions. The meaning of the findings is in line with what the participants intended to convey. The purpose of reducing and displaying the data created is to help draw conclusions. Logically, the conclusion is drawn after the activity of reduction and display of data. But what actually happened was that it was done more or less simultaneously. Therefore, there is indeed a possibility that a conclusion can be produced at the beginning of the analysis, but it may still be vague and not clearly formed. However, this conclusion is withheld and polished while the researcher carrying out further activities related to the study. Conclusions are not finalized until all the complete data has been analysed. Conclusions can be in form of recommendations, and when they have been produced, they need to be verified.

In this study, all data were analysed by setting themes, sub-themes and categories based on the objectives of the study. All of this data was compiled and verified by experts to ensure that the data obtained coincides with the objectives of the study. The research findings, which had been organized according to themes, sub-themes, and categories, were reviewed and verified by experts in special education from the Johor State Education Department (JPN) and experts in autism education from Universiti Teknologi

Malaysia (UTM). In addition, the findings were also checked by the study supervisor to ensure their accuracy based on the objectives of the study. From the findings that have been reviewed and confirmed by all experts, conclusions and further recommendations were made.

## 6. Results

There were five informants, consisting of supervisors from five different autism vocational training centres. The details of the informant are as in Table 1:

**Table 1: Informant Detail**

Informer	Gender	Service Experience
L1	Female	11 Years
L2	Female	8 Years
L3	Female	21 Years
L4	Female	13 Years
L5	Female	14 Years

Informants cooperated effectively to provide accurate information as required by the study's objectives. It is undoubtedly challenging for graduates of this autistic vocational training facility to compete in the employment market, according to all of the informants. Even if they are hired, they find it difficult to keep their job; they would either be dismissed, or they would give up. Among the things the source said:

*“You can’t see any number of autisms who are working in Malaysia.” (L1)*

*“We also had an experience where one of our graduate went for interviews many times and most of the interviewers told him that they would call him back within 2 weeks’ time. But they didn’t. So, he had a question, “was it my mistake when I went to the interview, I showed my disability card.?” Does his disability card make employers not want to hire him? So, he ended up now jobless. Not working and still seeking for jobs and then he was very frustrated because he said he was qualified in terms of skills.” (L1)*

*“He quit his job. His mother had to get him resigned because he threw tantrum. He didn’t want to go to work, even at work, he didn’t want to do anything; he always had a tantrum.” (L2)*

*“ These autistic children have less opportunities to work in the real world.” (L3)*

*“Can’t get a job. But we do train them to work. Train.*

*Train to work.*" (L4)

*"But they are still not fit to work. If employers want to compare them with normal individuals, then it is not fair. We have tried. The teachers seem to have done their best."* (L5)

From the hands-on aspect, all the informants confirmed that the graduates of this autism vocational training centre are capable of carrying out the tasks that will be given by prospective employers, but they stated that the weakness in communicating and interacting is the biggest contributor to the difficulty of the graduates of this autism vocational training centre for getting a job. Among those stated by the informant:

*"...he has a problem with social communication. He can't even engage in social interaction. It means not being able to interact with other people. How will he interact with colleagues? How will he to ask for help if he himself has a problem with social interaction?"* (L1)

*"In our experience, there was a student of ours named XXX who is good at making donuts and bread. He doesn't even need any help. starting from weighing, he refers to the recipe until it is ready. He can do it himself. Then, his parents took him to work at YYY. The teacher became his guide for some time, but not even a month. He is ok. Because he can do everything. While working, the teacher sees that he is okay, no problem. With friends is okay. But he doesn't talk, he doesn't communicate with people. He doesn't know how to interact with other people. Even the people there don't know how to tackle him. He only works on the instructions of others or just follow the schedule given about what he should do. Indeed, he followed one by one. But up to a point I'm not sure why, the parent called to tell that he couldn't do it anymore. A report from his employer said that he behaved badly, He can't work at YYY anymore. So, the employer had to fire him."* (L4)

From this lack of communication and interaction, other forms of difficulty arises, such as difficulty in obeying rules, not being able to solve problem, not giving an appropriate response to certain situations and their opinions not being heard. Among those stated by informant about this matter:

*"They also have problems following social rules at work."* (L2)

*"... they have a hard time relating cause and effect."* (L3)

*"Let say, for the situation that the student made a mistake in measuring the flour. Say... In the recipe 600. He measured 650. Then we told him. "ZZ, that's wrong, check it back". Then he checks and he will reduce it back. That's him. But he didn't say anything. He doesn't seem to admit that it's his*

*fault. Unlike us normal individuals who would say "okay..okay...I'll take it back, sorry"... He understands, he will reduce it and that's it."* (L4)

*"If this autistic student doesn't understand, he doesn't want to ask. If he does wrong, then that is it."* (L5)

In addition, the nature of autism interferes with their performance and ability in the work environment. It is difficult for them to eliminate their autism symptoms such as lack of independence and problems in routine changes. The informant stated among others:

*".. they are not flexible. It means he is rigid. You cannot change the instructions. Like today you tell me to do this work, tomorrow do that work, the day after that do that work. He can't, because he's rigid, right? So, he can't function, I mean that in a work environment."* (L1)

*One more thing, our staff named VV really wants to work. He said if he could, he would really like to find another job with a higher salary. But he doesn't want to work more than the time he worked here which is from 730 to 330 pm. When another place offers him, he doesn't want it. He wants 730 to 330 only. He wants that one. He doesn't want to work on Saturday and Sunday because it's the weekend and supposed to be an off day. That's what I'm talking about changing the routine. The change in routine that he made every day, to change the workplace with a new routine, a new place, a new job, a new work schedule, he can't. So, he will feel frustrated and get angry."* (L2)

*"Tell them what to do otherwise, they just sit back and do nothing because they don't know what to do."* (L4)

*"Sometimes we can't foresee the behaviour of these autistic students. Sometimes he's ok, sometimes they go berserk."* (L5)

It is also apparent that there are causative factors which are not from themselves or their autism symptoms but from their own families, employers or colleagues. Family members, employers, and co-workers can be grouped as the closest person to these autistic individuals within their work environment. The lack of support from this group of people indeed inhibits the ability of graduates of autism vocational training centres to compete in the labour market or to maintain existing jobs. The causative factors caused by this group were stated by the informant. Among them:

*"Then there is also the parental factor. Because some parents are afraid, overprotective."* (L2)

*"We used to ask a mother. His autistic child is skilled. "Don't you want him to work?". "If the centre helps, then ok."*

*If I do it alone, I can't". (L3)*

*"It would be good for any employer who wants to hire an autistic individual to have attended courses related to autism. They have to know the ways to handle autistic individuals even if they have handled other autistic individuals. Before they hire an autistic individual to work with them, they first have to know what autism is like." (L3)*

*"For example, if the act disturbs public order, someone can file a police report, some might say he is crazy. All this is social stigma among friends at work. And also, there is discrimination." (L5)*

Based on SCCT, the factors causing difficulty for graduates of autism vocational training centres to compete in the job market as stated and agreed on by all informants can be classified as shown in Table 2:

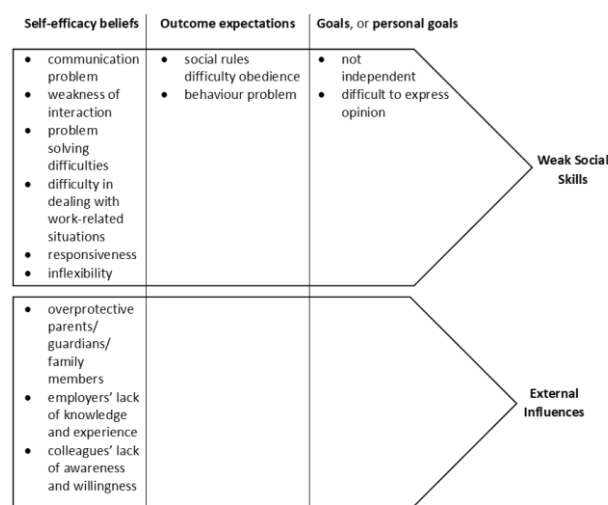
**Table 2:** Factors Causing the Difficulty of Autism Vocational Training Centre Graduates Competing in the Job Market

SCCT components	Factors Causing Difficulty
<b>Self- Efficacy Beliefs</b>	<ul style="list-style-type: none"> <li>• communication problem</li> <li>• weakness of interaction</li> <li>• problems solving difficulties</li> <li>• difficulty in dealing with work-related situations</li> <li>• responsiveness</li> <li>• inflexibility</li> <li>• overprotective parents/ guardians/ family members</li> <li>• employers' lack of knowledge and experience</li> <li>• colleagues' lack of awareness and willingness</li> </ul>
<b>Outcome Expectations</b>	<ul style="list-style-type: none"> <li>• social rules difficulty obedience</li> <li>• behaviour problem</li> </ul>
<b>Goals or Personal Goals</b>	<ul style="list-style-type: none"> <li>• not independent</li> <li>• difficult to express opinion</li> </ul>

## 8. Discussion

The results of the data analysis found that the main cause

of autism vocational training centre graduates inability to find a place in the labour market is due to factors that can be classified into two categories, namely the (i) weak social skills and (ii) external influences. These two categories is classified as covering all three components of SCCT. The components of social skills as stated in previous studies [31],[32],[33] indeed coincide with the findings obtained from this study. Meanwhile factors from the role of parents or family, employers and colleagues are classified as external influences which do not come from the autistic individual himself. Figure 3 below can translate the relationship between these two categories of social skills and external influence with SCCT.



**Figure 3:** Classification of Factors that Cause Difficulty for Autism Vocational Training Centre Graduates to Compete in the Labour Market

Weakness in social skills has indeed been known to be one of the main symptoms of autism. However, considering that the effort to make these autistic to be less dependent on others to continue their survival has been done through the application of vocational skills. Therefore, it is the society's shared responsibility to ensure that vocational training to autistic individuals really works. Thus, this effort cannot stop at training them with vocational skills alone. This study has shown the factors that hinder autistic individuals, especially those from autism vocational training centre, from competing in the labour market need to be overcome.

## 9. Conclusion

From the research that has been carried out, it was found that two things, namely social skills and external influences also need to be given attention apart from vocational skills to ensure that autistic individuals are fully equipped to compete in the job market. Further studies can be carried

out in terms of detailing the social skills that need to be applied and how to deal with external influences to ensure that the factors mentioned above can be addressed. As stated by Dubreucq[34], autistic individuals can be trained and given understanding regarding social skills as long as they are applied according to their abilities and capabilities. In the context of this study, the limitation is for autistic individuals who have been trained in vocational skills at an autism vocational training centre.

## 10. References

- [1] C. Lord *et al.*, "Autism spectrum disorder To cite this version : HAL Id : pasteur-02445082," 2020.
- [2] R. Marotta *et al.*, "The neurochemistry of autism," *Brain Sci.*, vol. 10, no. 3, pp. 1–18, 2020, doi: 10.3390/brainsci10030163.
- [3] M. J. A. Rahman and A. Alias, "Kesedaran Guru Pendidikan Khas Terhadap Latihan Berkaitan Autisme," *J. Dunia Pendidik.*, vol. 3, no. 2, pp. 114–1115, 2021.
- [4] S. Carrington, B. Saggars, A. Webster, K. Harper-Hill, and J. Nickerson, "What Universal Design for Learning principles, guidelines, and checkpoints are evident in educators' descriptions of their practice when supporting students on the autism spectrum?," *Int. J. Educ. Res.*, vol. 102, no. June, p. 101583, 2020, doi: 10.1016/j.ijer.2020.101583.
- [5] J. E. Rast, A. M. Roux, and P. T. Shattuck, "Use of Vocational Rehabilitation Supports for Postsecondary Education Among Transition-Age Youth on the Autism Spectrum," *J. Autism Dev. Disord.*, vol. 50, no. 6, pp. 2164–2173, Jun. 2020, doi: 10.1007/s10803-019-03972-8.
- [6] K. Sarri, *The Challenges of Vocational Training for Individuals With Autism Spectrum Disorder*. 2022.
- [7] A. Gandotra, E. Kotyuk, A. Szekely, K. Kasos, L. Csirmaz, and R. Cserjesi, "Fundamental movement skills in children with autism spectrum disorder: A systematic review," *Research in Autism Spectrum Disorders*, vol. 78. Elsevier Ltd, Oct. 01, 2020. doi: 10.1016/j.rasd.2020.101632.
- [8] A.-A. Cooper and B. G. Mujtaba, "Assessment of Workplace Discrimination against Individuals with Autism Spectrum Disorder (ASD)," *Socioecon. Challenges*, vol. 6, no. 2, pp. 19–28, 2022, doi: 10.21272/sec.6(2).19-28.2022.
- [9] C. Anderson, C. Butt, and C. Sarsony, "Young Adults on the Autism Spectrum and Early Employment-Related Experiences: Aspirations and Obstacles," *J. Autism Dev. Disord.*, vol. 51, no. 1, pp. 88–105, Jan. 2021, doi: 10.1007/s10803-020-04513-4.
- [10] Melissa H Black *et al.*, "Perspectives of key stakeholders on employment of autistic adults across the United States, Australia, and Sweden.," *Autism Res.*, vol. 12, no. 2, 2019.
- [11] S. M. Hayward, K. R. McVilly, and M. A. Stokes, "Autism and employment: What works," *Res. Autism Spectr. Disord.*, vol. 60, pp. 48–58, Apr. 2019, doi: 10.1016/j.rasd.2019.01.006.
- [12] M. K. Puteri Zarina, S. I. Safie, M. Y. M. Yusop, C. Mason, and W. M. Dahalan, "Technical Vocational Education Training Pathway for Post-secondary Autistic Students in Malaysia," *Adv. Struct. Mater.*, vol. 147, no. February, pp. 91–101, 2021, doi: 10.1007/978-3-030-67307-9\_10.
- [13] C. C. Hudson, L. Hall, and K. L. Harkness, "Prevalence of Depressive Disorders in Individuals with Autism Spectrum Disorder: a Meta-Analysis," *J. Abnorm. Child Psychol.*, vol. 47, no. 1, pp. 165–175, Jan. 2019, doi: 10.1007/s10802-018-0402-1.
- [14] R. Nuwer, "Finding strengths in autism," *Spectrum*, no. May, 2021, doi: 10.53053/rahq7664.
- [15] C. N. Marsack-Topolewski, P. S. Samuel, and W. Tarraf, "Empirical evaluation of the association between daily living skills of adults with autism and parental caregiver burden," *PLoS One*, vol. 16, no. 1 January, pp. 1–18, 2021, doi: 10.1371/journal.pone.0244844.
- [16] R. W. Lent, S. D. Brown, and G. Hackett, "Toward a Unifying Social Cognitive Theory of Career and Academic Interest, Choice, and Performance," *J. Vocat. Behav.*, vol. 45, no. 1, pp. 79–122, 1994, doi: 10.1006/jvbe.1994.1027.
- [17] F. Frank *et al.*, "Education and employment status of adults with autism spectrum disorders in Germany - A cross-sectional-survey," *BMC Psychiatry*, vol. 18, no. 1, Mar. 2018, doi: 10.1186/s12888-018-1645-7.
- [18] G. G. Peacock and D. Ph, "PARENT KNOWLEDGE OF AUTISM SPECTRUM DISORDER by Kandice J . Benallie A thesis submitted in partial fulfillment of the requirements for the degree of MASTER OF SCIENCE in Psychology Approved : Sarah E . Pinkelman , Ph . D . \_\_\_\_\_ Maryellen B," *Proquest*, 2019.
- [19] J. A. Crowell, J. Keluskar, and A. Gorecki, "Parenting behavior and the development of children with autism spectrum disorder," *Compr. Psychiatry*, vol. 90, pp. 21–29, 2019, doi: 10.1016/j.comppsy.2018.11.007.
- [20] Y. Voliovitch *et al.*, "Parenting Stress and its Associated



- Components Prior to an Autism Spectrum Disorder (ASD) Diagnostic Evaluation,” *J. Autism Dev. Disord.*, vol. 51, no. 10, pp. 3432–3442, 2021, doi: 10.1007/s10803-020-04804-w.
- [21] W. Song, L. Shea, S. L. Nonnemacher, E. Brusilovskiy, G. Townley, and M. S. Salzer, “Community Participation Comparison Between Adults on the Autism Spectrum and Adults in the General Population,” *J. Autism Dev. Disord.*, vol. 52, no. 4, pp. 1610–1621, 2022, doi: 10.1007/s10803-021-05059-9.
- [22] N. Martin, Christopher Barnham, and Joanna Krupa, “Identifying and Addressing Barriers to Employment of Autistic Adults,” *J. Incl. Pract. Furth. High. Educ.*, vol. 10, no. 1, pp. 56–77, 2019.
- [23] L. McCormack, S. W. Wong, and L. E. Campbell, “‘If I don’t Do It, I’m Out of Rhythm and I Can’t Focus As Well’: Positive and Negative Adult Interpretations of Therapies Aimed at ‘Fixing’ Their Restricted and Repetitive Behaviours in Childhood,” *J. Autism Dev. Disord.*, no. 1, 2022, doi: 10.1007/s10803-022-05644-6.
- [24] Robert K. Yin, *Case study research: Design and methods (4th ed.)*. 2009.
- [25] “Creswell - 2007 - Qualitative Inquiry and Research Design.pdf.”
- [26] J. W. Creswell, W. E. Hanson, V. L. C. Plano, and A. Morales, “Qualitative Research Designs: Selection and Implementation,” *Couns. Psychol.*, vol. 35, no. 2, 2007, doi: <https://doi.org/10.1177/0011000006287>.
- [27] D. Magald and M. Berler, “Semi-structured Interviews,” in *Encyclopedia of Personality and Individual Differences*, 2020, pp. 4825–4830.
- [28] G. Husband, “Ethical data collection and recognizing the impact of semi-structured interviews on research respondents,” *Educ. Sci.*, vol. 10, no. 8, pp. 1–12, 2020, doi: 10.3390/educsci10080206.
- [29] P. Hayashi, G. Abib, and N. Hoppen, “Validity in qualitative research: A processual approach,” *Qual. Rep.*, vol. 24, no. 1, pp. 98–112, 2019, doi: 10.46743/2160-3715/2019.3443.
- [30] A. Campbell, O. McNamara, and P. Gilroy, “Qualitative Data Analysis,” *Pract. Res. Prof. Dev. Educ.*, pp. 125–145, 2011, doi: 10.4135/9780857024510.d49.
- [31] T. Silveira-Zaldivar, G. Özerk, and K. Özerk, “Developing social skills and social competence in children with autism,” *Int. Electron. J. Elem. Educ.*, vol. 13, no. 3, pp. 341–363, 2020, doi: 10.26822/IEJEE.2021.195.
- [32] S. L. Littin and M. Haspel, “School-based social skills programming to increase employment for individuals with asd,” *Int. Electron. J. Elem. Educ.*, vol. 13, no. 3, pp. 333–340, 2020, doi: 10.26822/IEJEE.2021.194.
- [33] M. Gorenstein *et al.*, “Brief Report: A Job-Based Social Skills Program (JOBSS) for Adults with Autism Spectrum Disorder: A Pilot Randomized Controlled Trial,” *J. Autism Dev. Disord.*, vol. 50, no. 12, pp. 4527–4534, 2020, doi: 10.1007/s10803-020-04482-8.
- [34] J. Dubreucq, F. Haesebaert, J. Plasse, M. Dubreucq, and N. Franck, “A Systematic Review and Meta-analysis of Social Skills Training for Adults with Autism Spectrum Disorder,” *J. Autism Dev. Disord.*, vol. 52, no. 4, pp. 1598–1609, 2022, doi: 10.1007/s10803-021-05058-w.