ORIGINAL ARTICLE

Anxiety Level Among Parents of Newly Diagnosed Children with Speech-Language Impairment: A Study Using the Malay Version of DASS.

Juliana Aminah Marhaban [1*], Nuratirah Nazihah Ngadimin[1], Rosnani Sarkarsi [2]

[1]Department of Audiology and Speech- Language Pathology, Kulliyyah of Allied Health Sciences, International Islamic University Malaysia, 25200, Kuantan, Pahang, Malaysia
[2]Department of Special Care Nursing, Kulliyyah of Nursing, International Islamic University Malaysia, 25200, Kuantan, Pahang, Malaysia

Keywords:
Parental anxiety; speech-language impairment; newly diagnosed children; DASS-M

ABSTRACT

Background: Parents of newly diagnosed children with speech-language impairment often experience elevated levels of anxiety and stress, primarily due to concerns about their child's developmental future and the complexity of intervention pathways. This study aims to assess the anxiety levels among these parents using the validated Malay version of the Depression Anxiety Stress Scale (DASS-M). **Methods:** A cross-sectional quantitative study was conducted involving 15 parents whose children were diagnosed with speech-language impairment within the past 12 months. Participants completed demographic questions and the DASS-M via an online Google Form. Data were analysed to identify anxiety levels and explore associations with demographic variables: educational level, socioeconomic status, and parent age group. **Results:** Most participants (86.7%) reported no anxiety, while 13.3% reported mild anxiety. Correlation analysis showed no statistically significant associations between anxiety and socioeconomic status, parent age group, and educational level. Power analysis indicated that all tests were underpowered (power < 0.80), limiting the ability to detect true relationships. **Conclusion:** This study examined anxiety levels among parents of children newly diagnosed with speech-language impairment using the DASS-M, finding that most reported no symptoms while a few exhibited mild anxiety. Despite limitations such as a small sample size and potential underreporting, the findings highlight the need for culturally sensitive tools and support strategies to better understand and address parental emotional responses during the early post-diagnosis stages.

INTRODUCTION

Speech and language are fundamental components of human communication. Speech refers to the verbal production of language, while language involves the conceptual processing of communication, including both receptive (understanding) and expressive (output) components (McLaughlin, 2011). Speech-language impairment refers to both speech-language delays and disorders (*Communication Difficulties in Childhood*, 2017).

Children with speech delays often struggle with articulation, phonological processing, or motor planning, leading to unclear or limited verbal output (American Speech-Language-Hearing Association [ASHA], 2023). On the other hand, language delays affect the child's ability to comprehend and use language appropriately for their developmental stage. These delays typically follow a normal developmental sequence but at a slower pace (Jin, 2024). On the contrary, speech or language disorders involve atypical developmental patterns and often require long-term, specialized interventions (Jin, 2024).

The prevalence of speech and language impairment is notable. Wooles et al. (2017) reported that 6-7% of children entering school present with communication impairment. Similarly, Law et al. (2000) estimated that 5-8% of preschool-aged children are affected. Globally, the prevalence may reach as high as 10-15% (Yew et al., 2014). These impairments can impede social interaction, academic achievement, and emotional development, along with communication ability (Carson et al., 1998; St Clair et al., 2011). Early identification and intervention are crucial. Early involvement by speech-language

* *Corresponding author.*
E-mail address: julia_am@iium.edu.my

Journal homepage: https://journals.iium.edu.my/ijahs/index.php/IJAHS
EISSN NO 2600-8491

pathologists and implementation of evidence-based interventions have been shown to have a significant enhancement in outcomes (Children's Hospital of Philadelphia, 2024; Law et al., 2000; Northwestern University, 2024).

The term 'newly diagnosed' is often applied to cases identified within the previous 6 to 12 months, as this time frame is frequently used in research to capture the early adjustment period (Lu et al., 2018; Dolgin et al., 2007). For parents of children with speech-language impairment, this early period following diagnosis is often marked by emotional disturbance, confusion, and heightened anxiety as they seek to understand their child's needs and navigate complex intervention pathways (Asghar et al., 2023).

Despite the significance of the early post-diagnosis period, Malaysia-based literature focusing specifically on parents' experiences during this stage for children with speech-language impairment or developmental language disorder remains sparse. Most parent-experience research in the Malaysian context emphasizes autism spectrum disorder, particularly exploring parental challenges, stigma, and support barriers (Yaacob et al., 2021). Only limited studies address speech-language impairment and parental roles in early post-diagnosis intervention (Fadzillah & Lee, 2018; *Wong et al.*, 2025), none of which foreground parents' early post-diagnosis perspectives for speec—language impairments.

Parental anxiety in response to a child's speech-language impairment is a well-documented psychological concern. According to Asghar et al. (2023), the emotional burden placed on parents stems from concerns about long-term developmental, academic, and social implications for their child. Naniwadekar (2022) further emphasizes that this anxiety is often driven by the uncertainty surrounding intervention efficacy and future communication abilities. Brannan et al. (2017) observed that parents may experience fear, frustration, and helplessness, particularly when cultural stigma or limited-service access is involved. These feelings are not only detrimental to the parent's mental health but can also affect the child's development. Fields et al. (2020) found that children of anxious parents are more likely to exhibit behavioural issues and struggle with emotional regulation due to increased household stress.

The Depression Anxiety Stress Scales (DASS; Lovibond & Lovibond, 1995) is a widely used self-report tool for measuring psychological distress. It includes subscales for depression, anxiety, and stress and has been validated across multiple cultures and populations, including in the Malay language (Hassan et al., 2020; Lovibond & Lovibond, 1995). The Malay version (DASS-M; Nurulhuda et al., 2017) has demonstrated reliability and validity within Malaysia and is particularly suited for psychological assessments involving adults. Although DASS-M has been used in psychiatric and general adult populations such as medical students (Ramli et al., 2012), nurses (Majid et al., 2019), and mixed ethnic adult patients (Musa & Aidid, 2020), its application to parents of children with speech-language impairment remains limited (Tan & Mohamad, 2019). This signals a need for more focused research to determine how well the DASS-M captures the anxiety profiles of this specific group. Despite the increasing prevalence of speech-language impairment in Malaysia (Yew et al., 2014), limited research has explored parental anxiety during the early adjustment phase following a child's diagnosis. This study aims to fill that gap by examining anxiety levels among parents of newly diagnosed children using the DASS-M.

The primary aim of this research is to determine the anxiety level among parents of newly diagnosed children with speech-language impairment. By doing so, the findings can contribute to the development of targeted support strategies that help parents manage their emotional well-being while effectively addressing their children's developmental needs.

MATERIALS AND METHODS

This cross-sectional study was conducted at the Speech and Hearing Clinic (HSC), IIUM Kuantan, and was open to participants both from the clinic and the wider community. The research spanned 4 weeks. A total of 37 parents were identified and invited to participate in the study. Of these, 21 parents provided informed consent. However, only 15 participants met the inclusion criteria and were included in the final data analysis. Six participants were excluded because they did not meet the eligibility criteria, including having a child diagnosed more than 12 months prior or having received prior mental health intervention for anxiety. The study focused on parents of children aged below 12 years who had received a diagnosis of speech-language impairment within the past 12 months. These inclusion criteria ensured the sample captured families are still in the early stages of emotional and psychological adjustment. Parents of children who had received the diagnosis more than 12 months prior, or those who had already received formal mental health interventions for anxiety, were excluded from the study. At the point of data collection, all children involved in the study had been diagnosed with speech-language impairment, with no confirmed underlying neurological, sensory, or physical conditions that could independently account for their communication difficulties.

Parents were informed about the purpose of the study and were required to provide informed consent before accessing the questionnaire. For data collection, the DASS-M questionnaire was distributed to parents via an online Google Form, which also included sections for demographic information such as the parents' age, education level, and socioeconomic status. In cases where clarification was needed due to misunderstandings or incomplete responses, the researcher followed up with the participants via email to ensure the accuracy and completeness of the data. All collected data were kept anonymous and stored securely. The responses were downloaded and analysed using the Statistical Package for the Social Sciences (SPSS).

Data Analysis

Data were analysed using the SPSS. Descriptive statistics, including frequencies and percentages were used to summarise participants' demographic characteristics and anxiety severity levels based on the DASS-M classifications. Shapiro- Wilk test was used to assess the normality of the data. As the data were not normally distributed, non-parametric statistical tests were applied. Spearman's rank-order correlation was used to examine associations between anxiety levels and selected demographic variables, including parental age group, educational level, and socioeconomic status. Statistical significance was set at $p < 0.05$. A post-hoc power analysis was conducted to evaluate the adequacy of the sample size in detecting statistically significant correlations, with a conventional power threshold of 0.80 used as a reference.

Ethical Considerations

This study received ethical approval from the International Islamic University Malaysia Research Ethics Committee (IREC) (Approval No.: IREC 2025-KAHS/DASLP14). Participation was voluntary, and informed consent was obtained from all participants prior to data collection. No personal identifiers were collected, and all data were kept confidential and used solely for research purpose

RESULTS

Participants' Characteristics and Response Rate

A total of 37 invitations were distributed to eligible parents from the HSC database. Of these, 21 parents provided consent to participate. However, only 15 participants met the inclusion criteria and were included in the final analysis.

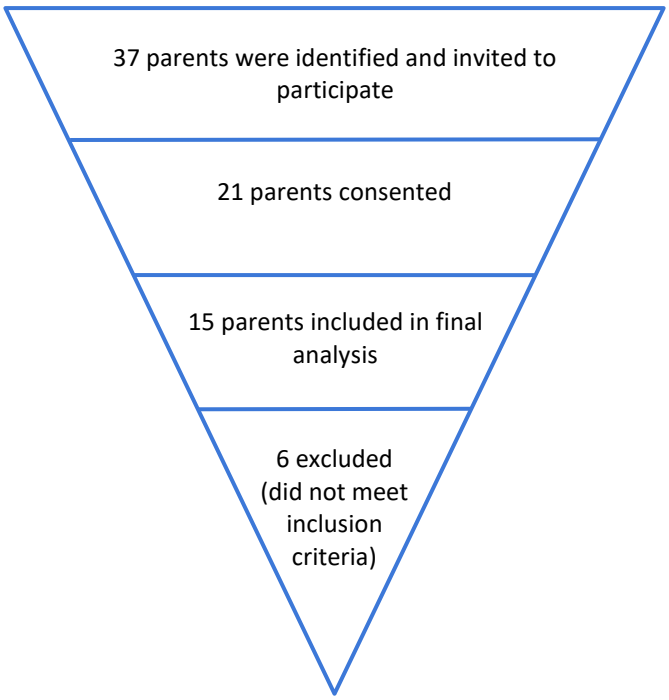

Figure 1: Participant recruitment funnel

Anxiety Level Among Parents

Descriptive analysis was conducted to summarise the frequency and percentage of participants within each severity category, providing a clear overview of the anxiety levels among the parents. Based on DASS-M, most participants (n = 13, 86.7%) reported no anxiety (Table 1). A small number of parents (n = 2, 13.3%) reported mild anxiety. No cases of moderate, severe, or extremely severe anxiety were recorded based on DASS-M severity rating.

Table 1: Participant characteristics, response rate, and anxiety levels (n= 15)

Variable	Category	No anxiety n (%) (n= 13)	Mild anxiety n (%) (n= 2)
Response rate	Invited	37	-
	Consented	21	-
	Included in final analysis	15	-
Educational level	Secondary school	4 (30.8)	0 (0.0)
	Diploma	1 (7.6)	0 (0.0)
	Degree	6 (46.2)	1 (50.0)
	Master's/ PhD	2 (15.4)	1 (50.0)

Socioeconomic status	Very low	2 (15.4)	0 (0.0)
	Low	3 (23.1)	1 (50.0)
	Lower- middle	4 (30.8)	0 (0.0)
	Upper-middle	1 (7.6)	1 (50.0)
	High	3 (23.1)	0 (0.0)
Parent age group (years)	25- 34	5 (38.5)	2 (100.0)
	35- 44	7 (53.8)	0 (0.0)
	45- 54	1 (7.6)	0 (0.0)

In terms of educational level (Table 1), among the 13 parents who reported no anxiety, nearly half held a Degree/*Ijazah Sarjana Muda* (n = 6, 46.2%). This was followed by Secondary School/*Sekolah Menengah* (n = 4, 30.8%), Masters/PhD (n = 2, 15.4%), and Diploma (n = 1, 7.6 %).

Among the 2 parents who reported mild anxiety, one (50.0%) had a Degree/*Ijazah Sarjana Muda*, and the other (50.0%) held a Master's/PhD qualification.

For the socioeconomic status (SES) classification based on Malaysian household income groups followed the Department of Statistics Malaysia (DOSM, 2020) categorization, among the 13 parents who reported no anxiety, the majority were from the Lower-Middle SES group (n = 4, 30.8%), followed by Low (n = 3, 23.1%) and High (n = 3, 23.1%). Two parents (15.4%) were from the Very Low SES group, and one parent (7.6%) was from the Upper-Middle SES group (Table 1).
Among the 2 parents who reported mild anxiety, one parent (50.0%) belonged to the Low SES group, and the other (50.0%) was from the Upper-Middle SES group.

In terms of parents' age group, based on categories used by the Department of Statistics Malaysia (DOSM, 2020), among the 13 parents who reported no anxiety, the majority were between 35-44 years old (n = 7, 53.8%), followed by those aged 25-34 years (n = 5, 38.5%) and 45-54 years (n = 1, 7.6%) (Table 4).

Among the 2 parents who reported mild anxiety, both were in the 25-34 years age group (n = 2, 100.0%).

Power of the study

A post-hoc power analysis was conducted to assess the adequacy of the sample size in detecting significant correlations among the demographic variables. The correlation between socioeconomic status and parent age group yielded a power of 0.484, indicating that the test was underpowered. Similarly, the correlation between educational level and socioeconomic status had a power of 0.228, and the correlation between educational level and parent age group showed a power of 0.084. All values were below the conventional threshold of 0.80, suggesting that the study was underpowered.

DISCUSSION

The findings of this study revealed that most parents (86.7%) reported no anxiety based on the DASS-M, while only a small proportion (13.3%) exhibited mild anxiety symptoms. This suggests that most parents in this sample may have adapted to their child's diagnosis of speech-language impairment without experiencing significant psychological distress (Burnley et al., 2023). While the DASS-M is a validated and commonly used tool, it may not capture the full extent of psychological burden experienced by parents, particularly those who are in the initial period of adjustment. Emotions such as guilt, helplessness, or fear for the future may not align precisely with the general anxiety items in the scale. Therefore, while the DASS can serve as an initial screening tool, it may not capture the full extent of psychological burden experienced by parents, particularly those who are in the initial period of adjustment to a diagnosis (Lee & Loomba, 2022).

Furthermore, this study did not account for external factors that may have influenced parental anxiety levels that were not accounted for. For instance, the severity of the child's impairment, the presence of co-occurring conditions, or whether the child had already shown progress in therapy could significantly affect parental emotional responses. Additionally, factors such as coping strategies, family or community support, and the quality of information or counselling received during the diagnostic process may have played a role. These factors may explain the low anxiety levels in some parents, not necessarily because of true emotional resilience, but due to external support or lack of awareness.

The study also raises the possibility that some parents may not have fully understood the long-term implications of the diagnosis. For parents still early in the adjustment period, lower anxiety scores may reflect limited awareness or even denial rather than emotional stability. As suggested by previous research, early engagement and education by professionals are essential to prepare parents and reduce distress (Marshall et al., 2007).

Another factor in interpreting the results is the rate of non-

participation. Although 37 invitations were distributed, only 21 parents agreed and consented to take part, and only 15 participants subsequently met the final inclusion criteria. The low response rate may indicate several potential barriers to participation. A study by Yeh et al. (2005) stated that stigma surrounding mental health, time constraints, emotional distress, and a perceived lack of relevance may discourage parents from participating in research on psychological well-being. In the context of this study, it is also possible that some parents were not yet ready to confront or reflect on their emotional reactions to their child's diagnosis, particularly during the early stage of acceptance. Future studies need to consider ways to optimize recruitment, such as offering emotional support, convenient data collection procedures, or incorporating brief psychoeducation to explain the study's relevance.

There are several strengths to this study. It focuses on a specific and often under-researched population, which is parents of newly diagnosed children with speech-language impairment, and it uses a validated tool in the Malay language, making the results more applicable to the local context. Furthermore, the focus on the early diagnosis period provides valuable insight into how parents cope during a particularly critical time. There are, however, some limitations to consider. The small sample size may restrict the generalizability of the results to other groups. Furthermore, the use of a self-report instrument like the DASS-M may have led to response bias, particularly in sociocultural environments in which discussion of mental health is still stigmatized. A further limitation is that the research did not collect in-depth data on parents' awareness and understanding of the diagnosis, or the level of information provided to them, both of which could have affected their reported anxiety scores. In addition, the study did not examine other external factors that may affect parental anxiety, such as the severity of the child's impairment, the presence of co-occurring conditions, access to therapy, or the availability of family and social support. Future research should explore the emotional experiences of these parents using a mixed-method approach. Qualitative interviews could provide deeper insights into the specific types of anxiety and concerns that parents experience following a diagnosis. It may also be useful to develop or adapt assessment tools specifically for parents of children with developmental conditions, considering cultural sensitivity and the nature of parental anxiety in this context.

CONCLUSION

This study investigated the anxiety levels among parents of children newly diagnosed with speech-language impairment using the DASS-M. Most parents in this sample reported no symptoms of anxiety, while a small proportion exhibited mild anxiety. These findings suggest that most parents had begun to emotionally adjust to their child's diagnosis during the early post-diagnostic period, though other unmeasured factors may have influenced their reported anxiety levels.

These findings suggest that while many parents may demonstrate early emotional adjustment following a chils's diagnosis, a subset may still experience psychological vulnerability. Regular screening of parental anxiety levels within the first stages of the diagnosis could help to identify those parents who would be in need of prompt emotional support. This could help to improve parental wellness, which would subsequently influence children's active involvement in speech-language therapy services.

ACKNOWLEDGEMENT

The author would like to express sincere appreciation to the staff of the Speech and Hearing Clinic, International Islamic University Malaysia (IIUM), Kuantan, for their assistance during the data collection process, and to all parents who participated in this research for their cooperation and commitment.

Gratitude is also extended to the Kulliyyah of Allied Health Sciences for providing the facilities and resources that supported the completion of this study. Finally, the author acknowledges all individuals who contributed directly or indirectly to the success of this work.

This research was not funded by any grant.

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