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ENHANCING AWARENESS OF AUTISM SPECTRUM DISORDER AMONG UNIVERSITY STUDENTS

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Abstract:

Autism Spectrum Disorder (ASD) is a developmental condition that affects social interaction, communication, and behaviour, often resulting in social stigmatization and employment barriers. This study aimed to examine the effectiveness of a targeted awareness campaign in increasing knowledge and fostering positive attitudes toward ASD among undergraduates at the International Islamic University Malaysia (IIUM). A mixed-methods approach was employed. Qualitatively, semi-structured interviews with staff at Akademi Remaja Islam Autisma (ARISMA) provided localized insights into the challenges experienced by young adults with ASD. Quantitatively, 50 undergraduate students completed a pre-test and post-test questionnaire adapted from Alsehemi et al. (2017). Paired-sample t-test results indicated a significant increase in the participants' knowledge and awareness of ASD after engaging with the campaign, demonstrated by a rise in mean scores from 26.02 to 30.42 (p < .05). Qualitative feedback indicated that the campaign's digital infographics effectively disseminated information on ASD, but participants suggested more interactive, in-person events for broader impact. The findings corroborate the importance of targeted awareness and education programs in reducing stigma and promoting inclusion for individuals with ASD. Future recommendations include expanding the sample size, refining campaign materials for greater accessibility, and implementing longitudinal evaluations to assess sustained changes in knowledge, attitudes, and practices.

Keywords:

Autism Spectrum Disorder (ASD), Awareness Campaign, Inclusive Education, KAP Model, Malaysia

Introduction

Autism Spectrum Disorder (ASD) is a pervasive neurological and developmental condition that significantly affects an individual's learning, behaviour, and social interactions (National Institute of Mental Health, 2023). Although an ASD diagnosis can be made at any age, it is classified as a developmental disorder because its primary symptoms typically emerge within the first two years of life. According to the *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition, Text Revision (DSM-5-TR), core characteristics of ASD include difficulties in social communication and interaction, as well as restrictive and repetitive behaviours. These challenges can compromise an individual's ability to function effectively in employment, education, and various aspects of daily life (American Psychiatric Association, 2022).

In recent years, there has been a growing recognition of the unique challenges faced by young adults with ASD, particularly in the context of employment and societal integration. Despite possessing appropriate skills, individuals with ASD often experience anxiety during hiring and interviewing processes, primarily because these procedures frequently assess social competence (Reid, n.d.). Once employed, they may encounter additional hurdles such as discrimination or misunderstandings from colleagues, as well as hypersensitivity to workplace environments. These issues can negatively impact their self-esteem and job retention (Hedley et al., 2021). Zauderer (2023) underscores the necessity of creating supportive and inclusive work environments that embrace neurodiversity. Companies can foster a culture of empathy and understanding by raising autism awareness, providing staff training on ASD-specific

needs, and proactively recognising the unique talents of autistic individuals. Encouraging open communication and dispelling misconceptions are key strategies for nurturing an environment where every employee feels valued (Scott et al., 2021).

Scope and Objectives

Recognising the multifaceted challenges faced by young adults with ASD, the present study aims to increase awareness among undergraduate students at the International Islamic University Malaysia (IIUM). The objectives of the study are:

- 1. **To enhance understanding** of the unique challenges that young adults with ASD face in their daily lives, particularly regarding social integration and employment.
- 2. **To highlight the talents and capabilities** of young adults with ASD, emphasising their potential contributions to society.
- 3. **To assess the current knowledge, attitudes, and practices** of IIUM undergraduate students towards young adults with ASD.
- 4. **To propose strategies** for fostering a more inclusive and supportive environment within the university community.

This study was inspired by a notable lack of attention towards young adults with ASD, despite relatively higher public awareness of children with ASD. Collaboration with Akademi Remaja Islam Autisma (ARISMA) has been instrumental in facilitating direct engagement and providing valuable insights into the experiences of young adults with ASD.

Literature Review

Although society has become increasingly informed about ASD in children, awareness of how it affects individuals in their late teens and early adulthood remains limited (Shattuck et al., 2020). Young adults with ASD often struggle to integrate into the broader community due to communication difficulties and social anxiety (Hussin et al., n.d.). In Malaysia, they face barriers in securing or maintaining long-term employment, which exacerbates feelings of isolation and underachievement (Ibrahim et al., 2021).

A substantial body of work highlights the positive correlation between increased ASD awareness and more favourable attitudes (Chu et al., 2021; Low et al., 2021; Hashim et al., 2022). For instance, Chu et al. (2021) discovered that most of their respondents, particularly tertiary-educated female young adults, were generally knowledgeable about ASD and held positive views towards it. However, the generalisability of such findings may be limited due to the homogeneous and highly educated profile of respondents. Low et al. (2021) stress how educational background can shape ASD awareness, yet Azmi et al. (2022) offer a contrasting viewpoint, arguing that educational level alone is insufficient to predict ASD awareness and positive attitudes. They suggest that cultural beliefs, personal experiences, and exposure to individuals with ASD play significant roles.

Negative attitudes towards ASD often result from insufficient knowledge, which can perpetuate harmful stigma (Azmi et al., 2022). This stigma extends beyond individuals with ASD to their families, who may face discrimination in public settings due to behaviours associated with ASD. Consequently, several scholars recommend heightened public awareness campaigns to disseminate factual information about ASD and dismantle misconceptions (Chu et al., 2021; Low et al., 2021; Azmi et al., 2022). Such initiatives can serve as beneficial

resources for parents burdened by societal prejudice, aiding them in better navigating the challenges of caring for a child with ASD (Chu et al., 2020).

Parents' frustration is further exacerbated by the high unemployment rates among individuals with ASD, largely attributed to stigma and a lack of supportive employment practices (Ibrahim et al., 2021; Tang, 2022). Ibrahim et al. (2021) categorised the factors complicating employment for this population under three main themes: ASD symptomatology, contextual difficulties, and parenting behaviour. While some barriers are deeply personal, others relate to systemic shortcomings, such as inadequate job structures, limited support services, and employers' lack of awareness. There are also combined influences involving both personal and external factors, highlighting the complexity of the issue.

Critiques of Malaysia's comparatively low level of autism awareness further emphasise the potential benefits of job transition programmes and vocational training (Ibrahim et al., 2021; Tang, 2022). Tang (2022) specifically calls attention to the need for robust vocational education for youth with ASD, focusing on additional resources, teacher training, skill development, language proficiency, and social and behavioural growth. These programmes can equip young adults with the necessary tools to navigate the workforce more effectively.

Internationally, Maslahati et al. (2022) highlight the need for environmental modifications in the German labour market to improve employment outcomes among adults with ASD. Their study emphasises the value of recognising and utilising the strengths that many autistic individuals bring to the workplace, such as attention to detail and strong problem-solving skills. Provision of appropriate support systems, including workplace accommodations and mentorship programmes, is essential for maximising these strengths (Scott et al., 2021).

Theoretical Framework

The present study adopts the Knowledge, Attitude, and Practice (KAP) model as its theoretical framework (Kundu et al., 2021). The KAP model posits that an individual's knowledge influences their attitudes, which in turn inform their practices. By enhancing knowledge about ASD among IIUM students, the study aims to positively influence their attitudes towards young adults with ASD, leading to more supportive and inclusive practices within the university community. This framework is particularly relevant in addressing stigma and misconceptions, as increased awareness can challenge negative stereotypes and promote empathy (Montenegro et al., 2021).

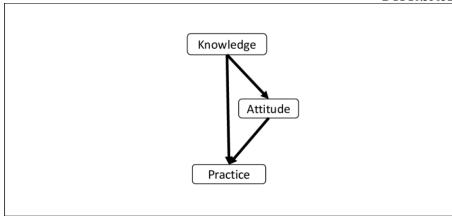


Figure 1: The KAP Model

Addressing the challenges faced by young adults with ASD requires a multifaceted approach that includes increasing public awareness, dismantling stigma, and fostering inclusive environments both in educational institutions and workplaces. By focusing on the university setting, this study seeks to empower future professionals and community leaders with the knowledge and sensitivity needed to support individuals with ASD. Ultimately, promoting empathy and informed perspectives among the IIUM community is intended to create a more inclusive societal environment that acknowledges and values the contributions of individuals with ASD.

Methodology

Research Design

This study employed a mixed-methods research design, incorporating both qualitative and quantitative approaches to gain a comprehensive understanding of the campaign's impact. Qualitative data was gathered through semi-structured interviews with the management of ARISMA (conducted in [Month, Year] at [Location of ARISMA]) to understand the challenges faced by people with ASD in the local area. This information informed the development of campaign materials. Quantitative data was collected using a pre-test/post-test design to measure changes in awareness and knowledge of ASD among IIUM undergraduate students before and after the campaign. Additionally, qualitative data was gathered through open-ended feedback forms to gain participants' perceptions and suggestions for improvement. The study was conducted between January and March 2024 at the International Islamic University Malaysia (IIUM).

Flow Chart of Process

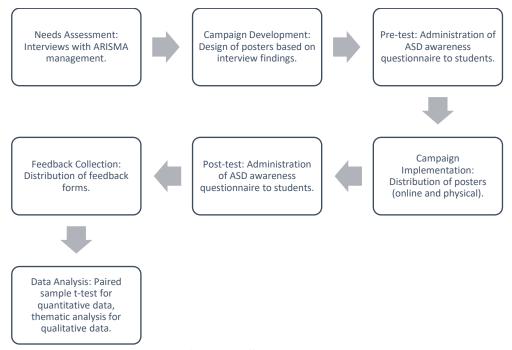


Figure 2: Study Flowchart

Challenges of Data Management

The study encountered several data management challenges, including ensuring accuracy in entering pre-test and post-test scores into SPSS, managing and organizing responses from open-ended feedback forms, and maintaining the privacy and anonymity of participants' data.

Participants

The participants for this study were undergraduate students at the International Islamic University Malaysia (IIUM). A purposive sampling technique was employed to recruit participants who met this specific criterion (Rai & Thapa, 2015). Data was gathered from 50 participants (N=50, Male=26, Female=24).

Measures

A shorter version of the questionnaire developed by Alsehemi et al. (2017) was adopted to survey public awareness and knowledge of ASD. This scale utilises yes/no answers to assess perceptions towards people with ASD. A generic open-ended feedback form was also adopted to gather feedback on the campaign.

Procedures

To develop the campaign materials, researchers conducted an engagement visit to ARISMA and engaged with its management to understand the challenges faced by individuals with ASD. Based on these findings and consultation with the course instructor, two posters were designed. These posters were distributed both physically and online via WhatsApp and other social media platforms. The posters included QR codes that participants could scan to access and complete the pre-test, post-test, and feedback form with their consent. After the campaign, pre- and post-test results were analyzed using a paired sample t-test, and open-ended feedback responses were analyzed using thematic analysis.

Data Analysis

Data analysis was performed using IBM SPSS 26. The Paired Sample T-Test was used to examine differences in mean awareness scores between the pre- and post-tests to assess the campaign's impact on understanding of ASD among IIUM undergraduate students. For the qualitative data, content analysis was employed to analyse the campaign's outcomes, exploring student awareness of ASD and the extent of their knowledge. This method allowed for a detailed examination of the messages conveyed through various communication modes, including the visual content of the posters. Furthermore, observational data was collected during a fieldwork trip to ARISMA, where researchers interacted with autistic students. These observations were then shared through the campaign and posters.

Results

A paired-sample t-test was conducted using IBM SPSS 26 to determine the impact of the awareness campaign on students' knowledge regarding Autism Spectrum Disorder (ASD) before and after the intervention. A total of 50 IIUM undergraduate students participated in the campaign (N=50; Male=26, Female=24). Results indicated a statistically significant increase in awareness and understanding of ASD among students from the pre-test (M=26.02, SD=2.910) to the post-test (M=30.42, SD=1.679), t(49)=-8.061, p < .001 (two-tailed). The mean increase in awareness was 4.4 points, with a 95% confidence interval ranging from -5.497 to -3.303. The standard deviation difference between the pre-test and post-test scores was -1.231. These findings suggest a significant improvement in students' knowledge and awareness of ASD following the campaign.

In addition to the quantitative data, participants were asked to complete a feedback form to assess the campaign's effectiveness in raising their awareness of ASD. The form included 12 close-ended questions regarding their understanding and perceptions of the programme's effectiveness, as well as an open-ended question about the campaign's strengths and weaknesses. Analysis of the feedback revealed that most participants agreed with the statements, indicating a positive response to the campaign. However, for question four, which stated, "My perception towards ASD children has changed after reading the poster," there was a slightly lower level of agreement.

Regarding the open-ended responses, participants expressed that they became more aware of ASD after joining the campaign. Comments included appreciation for the informative content and its impact on altering preconceived notions. For instance, participants noted:

- "I find the content in the poster to be quite informative and well-researched."
- "Informational and helped me change my perspective on it as I had only been exposed to the stigmatised internet joke that autism equates mental retardation."
- "Now my understanding about ASD is more detailed after reading the poster."

Participants also provided constructive feedback for improving future campaigns. Suggestions included conducting physical campaigns to reach a broader audience, as reflected in comments like "Make a physical campaign" and "I think it's better to carry out the campaign on a much bigger scale." Additionally, participants recommended enhancing the poster content by including information on appropriate interventions for individuals with ASD and presenting the information in a more concise manner.

Overall, the campaign was successful in increasing awareness and understanding of ASD among the participants. The findings indicate the potential benefits of such educational interventions in improving knowledge and altering attitudes toward individuals with ASD.

Discussion

The present study aimed to examine the effectiveness of an awareness campaign on Autism Spectrum Disorder (ASD) among undergraduate students at the International Islamic University Malaysia (IIUM). The campaign was designed to address three primary objectives: (1) to educate IIUM students with comprehensive information regarding ASD; (2) to highlight the abilities and creativity of young adults with ASD; and (3) to expose students to the inclusion of individuals with ASD in society.

Achievement of Objectives

The first objective was achieved by providing participants with detailed information about ASD and the activities of the Akademi Remaja Islam Autisma (ARISMA) through infographic posters. Despite the small scale of the project, the posters effectively reached 50 students, enhancing their knowledge about ASD. The significant increase in the post-test scores supports the effectiveness of the educational materials provided.

The second objective was met through direct engagement with young adults with ASD at ARISMA. Researchers observed and participated in activities showcasing the abilities of these individuals, such as baking, cooking, and cleaning. These observations highlighted the practical skills and potential contributions of young adults with ASD to society.

The third objective focused on promoting the inclusion of individuals with ASD within the university community. Feedback from participants indicated enhanced awareness and a shift in perceptions, suggesting progress toward a more inclusive attitude among students.

Integration of the KAP Model

The Knowledge, Attitude, and Practice (KAP) model was utilised as the theoretical framework for this study (Kundu et al., 2021). According to the KAP model, increasing knowledge leads to changes in attitudes, which in turn inform practices. The significant improvement in participants' knowledge (as evidenced by the test scores) suggests a positive shift in attitudes towards individuals with ASD. Participants' feedback indicated a change in perceptions, aligning with the attitude component of the KAP model.

While the study did not directly measure changes in behaviour or practices, the enhanced knowledge and improved attitudes imply potential future behavioural changes in how participants interact with individuals with ASD. This is consistent with findings from Montenegro et al. (2021), who emphasised that increased knowledge about ASD leads to more favourable attitudes and potentially more inclusive behaviours. The KAP model underscores the importance of educational interventions in addressing stigma and promoting social inclusion.

Effectiveness of the Campaign

The paired-sample t-test results demonstrated a statistically significant improvement in participants' knowledge and awareness of ASD. This aligns with previous research indicating that educational interventions can positively influence knowledge and attitudes (Chu et al.,

2021; Hashim et al., 2022). The qualitative feedback further corroborated the quantitative findings, with participants expressing that they gained valuable information and altered their perspectives on ASD.

However, the campaign's impact may be limited due to the small and homogeneous sample size, consisting solely of IIUM students. This limitation restricts the generalisability of the findings to the broader Malaysian society or students from other universities. Future campaigns should consider expanding the participant base to enhance impact and applicability.

Limitations and Recommendations

While the campaign was effective in achieving its objectives, several limitations were identified:

- 1. **Sample Size and Diversity**: The small, non-random sample limits the ability to generalise the results. Future studies should include a larger and more diverse participant pool to enhance validity.
- 2. **Delivery Mode**: Participants suggested conducting physical campaigns to increase engagement and reach. Incorporating face-to-face interactions could provide more immersive experiences and facilitate deeper understanding.
- 3. **Content Presentation**: Feedback indicated that the posters were text-heavy and could benefit from more concise information. Future materials should balance informativeness with accessibility, possibly by incorporating multimedia elements.
- 4. **Lack of Behavioural Measures**: The study did not assess changes in participants' practices or behaviours towards individuals with ASD. Incorporating measures to evaluate behavioural intentions or actual practices would provide a more comprehensive understanding of the campaign's impact.

Implications and Future Directions

The findings highlight the potential of educational campaigns in universities to enhance knowledge and positively influence attitudes towards individuals with ASD. Universities play a crucial role in shaping future professionals and can serve as platforms for promoting inclusivity and reducing stigma (Scott et al., 2021). By integrating ASD awareness into university programmes, institutions can contribute to creating a more inclusive society.

Future campaigns should consider utilising the KAP model more extensively by incorporating components that directly assess changes in attitudes and practices. This could involve longitudinal studies to track behavioural changes over time (Turan et al., 2022). Additionally, collaborating with other universities and organisations could amplify the reach and impact of such initiatives.

Islamic Perspective

From an Islamic viewpoint, treating all individuals with kindness, respect, and compassion is a fundamental principle (Kesherim, 2023). The Prophet Muhammad (peace be upon him) emphasised the importance of caring for those with disabilities, ensuring their needs are met and they are included in society. This perspective reinforces the ethical imperative to support individuals with ASD and combat societal stigma.

Conclusion

The awareness campaign effectively increased knowledge and began shifting attitudes towards individuals with ASD among IIUM students. Utilising the KAP model provided a valuable framework for understanding how educational interventions can influence attitudes and potentially lead to more inclusive practices. Addressing the identified limitations and expanding future campaigns can enhance their effectiveness and contribute to fostering an inclusive environment that recognises and values the contributions of individuals with ASD.

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