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TOGETHER, WE STAND: EMBRACING THE DAWN AFTER THE DARK – THE
EFFECT OF A 3-HOUR WORKSHOP ON PARENTAL STRESS, KNOWLEDGE OF
AUTISM SPECTRUM DISORDER (ASD), RESILIENCE, AND SELF-COMPASSION
AMONG PARENTS OF CHILDREN WITH ASD

JOANNE CHIN ROU HENG 20AAB02349

LIM SHU PING 20AAB03986

TAN ZI CHING 20AAB01583

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ABDUL RAHMAN

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Running head: THE EFFECT OF A 3-HOUR WORKSHOP

Together, We Stand: Embracing the Dawn After the Dark - The Effect of a 3-Hour
Workshop on Parental Stress, Knowledge of Autism Spectrum Disorder (ASD), Resilience,
and Self-Compassion among Parents of Children with ASD

Joanne Chin Rou Heng, Lim Shu Ping, and Tan Zi Ching

Universiti Tunku Abdul Rahman

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Tunku Abdul Rahman. Submitted on April 2024.

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JOANNE CHIN ROU HENG

LIM SHU PING

TAN ZI CHING

Declaration

We declare that the material contained in this paper is the end result of our own work and that due acknowledgment has been given in the bibliography and references to ALL sources be they printed, electronic or personal.

Name: Joanne Chin Rou Heng

Student ID: 20AAB02349

Signed: *Joanne*

Date: 7th April 2024

Name: Lim Shu Ping

Student ID: 20AAB03986

Signed: *Shu Ping*

Date: 7th April 2024

Name: Tan Zi Ching

Student ID: 20AAB01583

Signed: *Zi Ching*

Date: 7th April 2024

Approval Form

This research paper attached here to, entitled “Together, We Stand: Embracing the Dawn after the Dark – The Effect of a 3-Hour Workshop on Parental Stress, Knowledge of Autism Spectrum Disorder (ASD), Resilience, and Self-Compassion Among Parents of Children with ASD” prepared and submitted by “Joanne Chin Rou Heng, Lim Shu Ping, Tan Zi Ching” in partial fulfilment of the requirements for the Bachelor of Social Science (Hons) Psychology is hereby accepted.

Supervisor

(Mr. Tay Kok Wai)

Date: _____

Abstract

This research aimed to investigate the effectiveness of a 3-hour workshop in reducing parental stress and improving knowledge of ASD, resilience, and self-compassion among parents of children with ASD. Combining purposive sampling and voluntary response sampling, parents of children with ASD in Sarawak, Kuching were recruited as participants to be involved in the workshop organized at the Kuching Autistic Association, Sarawak. As the study employed a single-arm pretest-posttest design, 10 participants aged between 31 and 46 participated in the pre-test, and subsequently 7 participants aged between 31 and 45 in the post-test. The Parental Stress Scale (PSS), Autism Knowledge Questionnaire (AKQ), Brief Resilience Scale (BRS), and Self-Compassion Scale-Short Form (SCS-SF) were employed to measure the variables. The results indicated non-significant changes in parental stress, resilience, knowledge of ASD and self-compassion among the participants. This study provides evidence that a brief psychoeducation-based workshop may not suffice to elicit positive impacts on parental stress, knowledge of ASD, resilience, and self-compassion among parents of children with ASD. The findings underscore the significance of components proposed in the Theory of Planned Behaviour and Information-Motivation-Behavioural Skills (IMB) Model for inducing behavioural change among parents. Furthermore, the findings offer insights for workshop design and resource allocation by policymakers. Future researchers interested in organising similar interventions for parents of children with ASD are advised to consider integrating longer duration and follow-up sessions, employing probability sampling methods, and addressing language and logistical barriers.

Keywords: parents of children with ASD, parental stress, knowledge of ASD, resilience, self-compassion, workshop

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List of Abbreviations

ABC	Antecedents, Behavior, Consequences
AKQ	Autism Knowledge Questionnaire
AMOR	Acceptance, Mindfulness, Optimism, Resilience
ASD	Autism Spectrum Disorder
BRS	Brief Resilience Scale
CBCT	Cognitively-Based Compassion Training
CBT	Cognitive Behavioural Therapy
CI	Confidence Interval
df	Degree of freedom
KAA	Kuching Autistic Association
IMB	Information-Motivation-Behavioural Skills
MBPBS	Mindfulness-Based Positive Behavior Support (MBPBS),
MBSR	Mindfulness-Based Stress Reduction
n	Number of respondents
PMR	Progressive Muscle Relaxation
PSS	Parental Stress Scale
SCS-SF	Self-Compassion Scale-Short Form
SERC	Scientific and Ethical Review Committee
SPSS	Statistical Package for Social Sciences
STOP	Stop, Take a Breath, Observe, Proceed
TD	Typically Developed
TPB	Theory of Planned Behaviour
UTAR	Universiti Tunku Abdul Rahman

d	Cohen's d
M	Mean
SD	Standard Deviation
p	Significance level
t	Test statistic

Chapter 1

Introduction

Background of Study

Autism Spectrum Disorder (ASD) is a lifelong neurodevelopmental condition characterized by challenges in social communication, restricted interests, and repetitive behaviours (American Psychiatric Association, 2013). The term "spectrum" implies variability in the type and severity of functioning impairments associated with ASD (National Institute of Mental Health, 2024). Consequently, children with ASD often require heightened care and support from parents, posing a potential risk to parental mental well-being (Costa et al., 2017) and contributing to psychological distress among parents (Onyishi et al., 2023).

Parents of children with ASD face unique challenges distinct from those with typically developed (TD) children, leading to different sources of parental stress (María Priego-Ojeda & Rusu, 2023). Various factors, including maternal age, education levels, income, the behaviour of children with ASD, social support, and mental health problems, contribute to parental stress (Hartini et al., 2021). Additionally, the severity of autistic symptoms increases stress due to the long-term dependency of children (Papadopoulos, 2020). Effective interventions, such as parent training programs (Akhani et al., 2021), behavioural management skills programs (Wahdan et al., 2023), and parent-targeted clinician-led interventions (Merriman et al., 2020), are recommended to alleviate parental stress.

Parents' knowledge of ASD is crucial, as a lack of understanding about what ASD is and the positive skills to support their developmental needs can lead to frustration and a sense of powerlessness (Iida et al., 2018; Papadopoulos, 2020). Many parents still rely heavily on the internet for knowledge acquisition about the disorder (Mackintosh et al., 2012). Interventions like psychoeducation (Pillay et al., 2010), direct parent training methods

(McConachie & Diggle, 2007), and group sessions focusing on increasing parental knowledge (Iida et al., 2018) are designed to enhance understanding.

However, knowledge alone is insufficient for positive outcomes; behavioural changes and skill acquisition must complement knowledge for a desirable result (Arlinghaus & Johnston, 2017). Resilience plays a vital role in parents' mental well-being, as those with high resilience tend to experience lower levels of parental stress (Duca, 2015). Resilience helps parents cope with societal stigma and false beliefs associated with ASD in Malaysia (Ilias et al., 2019). Hence, with resilience, parents are more likely to face the life changes brought by their children adaptively. Various interventions, such as dance movement psychotherapy (Aithal et al., 2020), spirituality resilience training (Pandya, 2016), and group resilience training (Raffaele Mendez et al., 2019), are suggested to enhance resilience among parents.

Positive mental health practices, particularly self-compassion, are predictors of high level of resilience (Neff & Faso, 2014). Parents practicing self-compassion tend to be kind to themselves, accept life challenges compassionately, and maintain hope, contributing to increased life satisfaction and functional relationships with their children (Neff & Faso, 2014). According to Schwartzman et al. (2021), the practice of self-compassion predicted resilience among parents positively while it predicted parental stress negatively. With this knowledge, self-compassion is important and useful for parents to reduce self-criticism and cope with the difficulties in life as they will not identify themselves as failure due to feelings of helplessness, which promotes positive psychological well-being among the parents (Aydın, 2015). Interventions, including mindfulness and psychoeducation with experiential learning modules (Ahmed & Raj, 2022; Bazzano et al., 2013), are recommended to enhance self-compassion among parents of children with ASD.

Problem Statement

Numerous studies highlighted the elevated levels of parental stress experienced by parents of children with ASD. In a Malaysian study, Rahman and Jermadi (2021) identified clinically high-stress levels among parents, attributing them to dysfunctional interactions and experiences, including rejection and emotional distance from their children. A parallel study in Malaysia reported that 90.4% of parents of children with ASD experienced significant stress, with 53.8% facing psychological disturbances (Nikmat et al., 2008). As mentioned above, problematic behaviour and emotional issues in children, as well as parental feelings of guilt and self-blame due to feeling bad about themselves for not doing enough for the autistic child and their typically developing children, contributed significantly to the escalating stress levels (Huang et al., 2014; Neff & Faso, 2014; O'Nions et al., 2017). Despite the overwhelming and often unrewarding nature of parenting children with ASD, effective interventions to alleviate parental stress are lacking in the Malaysian context.

Parental knowledge about ASD is a critical aspect that cannot be assumed for all parents. A study in Saudi Arabia revealed that 85.5% of parents lacked sufficient knowledge about ASD, and 16.4% believed that most children with ASD are mentally retarded (Asiri et al., 2023). This knowledge gap poses challenges for early diagnosis and interventions that are crucial for therapeutic gains and improved developmental outcomes (McConachie & Diggle, 2007; Liu et al., 2016). In fact, discussing with the specialist and planning the early intervention properly for the children helps to reduce the stress and burden among parents as well. The delay in ASD identification exacerbates problematic behaviours in children, leading to negative behaviour of parents, increased parental stress, internalized social stigma. The need for comprehensive parental education on ASD is evident, but the impact of interventions targeting parental knowledge remains unclear (Asiri et al., 2023; Karst & Van Hecke, 2012).

While addressing the negative aspects of parental well-being, it is equally important to focus on psychological strengths to face challenges in parenting a child with ASD.

Transitioning from a deficit-based model to a competency-based model of mental health can contribute to resilience among caregivers (Southwick et al., 2014). A study conducted by Kotera et al. (2020b) also reported similar findings and provided suggestions to enhance resilience among caregivers by putting attention on the strengths and resources available instead of the difficulties and emotional distress. However, studies measuring resilience as a primary outcome and developing effective interventions for parents of children with ASD are insufficient (Schwartzman et al., 2021).

Additionally, self-compassion serves as a positive coping mechanism that may predict positive psychological well-being among parents of children with ASD. Despite its potential importance, self-compassion has received limited attention in the literature, and interventions aimed at improving self-compassion to reduce caregiver burden remain unexplored (Neff & Faso, 2014).

While parent education programs are crucial for providing knowledge and skills, there is a notable lack of education specifically designed to enhance understanding of ASD, including available support such as local support groups. Detailed information about what parents may encounter in the future is essential for parents of children with ASD (Lodder et al., 2019; Schultz et al., 2011).

Significance of Study

Reducing negative impacts, such as parental stress, is paramount, as elevated stress levels can lead to detrimental outcomes such as emotional exhaustion, burnout, and depression (LeMoult, 2020). Therefore, an intervention that educates parents on managing increased stress levels is essential. Enhanced knowledge of autism spectrum disorder (ASD) among parents not only increases the likelihood of early diagnosis but also reduces parental stress through early planning and intervention for their children (Anwar et al., 2018).

Furthermore, it is crucial to foster resilience among parents as a protective factor for poor psychological well-being, with positive cognitions contributing to increased resourcefulness among caregivers (Curley et al., 2023). Additionally, practicing self-compassion is vital for parents, as a high level of self-compassion enables them to approach challenges optimistically and reduce the impact of internalized stigma (Mak & Kwok, 2010; Neff & Faso, 2014).

This study aims to assess the effectiveness of a 3-hour workshop in empowering parents to manage stress effectively and cultivate positive mental practices, including resilience and self-compassion. Serving as a psychological resource, the workshop equips parents with skills to navigate future challenges, thereby enhancing their psychological well-being on their caregiving journey. Learning about ASD through a reliable source rather than the internet ensures parents are well informed about their children's general symptoms and needs. This knowledge enables them to provide suitable assistance, reducing stress derived from uncertainty and fostering a sense of competency. The choice of a 3-hour duration is practical, considering the lack of consensus on the ideal timeframe and intensity for educational parenting programs (Al-Oran et al., 2019).

In conclusion, this study addresses a significant knowledge gap by examining the effectiveness of a 3-hour workshop in reducing parental stress and enhancing knowledge of ASD, resilience, and self-compassion among parents of children with ASD. The practical significance lies in providing a guideline for future short-term interventions catering to the diverse needs of parents in the ASD community. Moreover, the study contributes to filling the research gap regarding the effectiveness of short-term interventions for parents of children with ASD in the Malaysian context.

Research Objectives

To assess the effectiveness of a 3-hour workshop that aims to reduce parental stress and improve the knowledge of ASD, enhance resilience, and self-compassion of parents of children with ASD.

1. To determine the effectiveness of a 3-hour workshop in decreasing the level of parental stress among the parents of children with ASD.
2. To determine the effectiveness of a 3-hour workshop in improving the knowledge of ASD among the parents of children with ASD.
3. To determine the effectiveness of a 3-hour workshop in enhancing the level of resilience among the parents of children with ASD.
4. To determine the effectiveness of a 3-hour workshop in enhancing the level of self-compassion among the parents of children with ASD.

Research Questions

1. Does a 3-hour workshop significantly decrease the level of parental stress among the parents of children with ASD?
2. Does a 3-hour workshop significantly improve the knowledge of ASD among the parents of children with ASD?
3. Does a 3-hour workshop significantly enhance the level of resilience among the parents of children with ASD?
4. Does a 3-hour workshop significant enhance the level of self-compassion among the parents of children with ASD?

Hypotheses

Hypothesis 1:

H0: A 3-hour workshop does not significantly decrease the level of parental stress of the parents of children with ASD.

H1: A 3-hour workshop significantly decreases the level of parental stress of the parents of children with ASD.

Hypothesis 2:

H0: A 3-hour workshop does not significantly improve the knowledge of ASD of the parents of children with ASD.

H1: A 3-hour workshop significantly improves the knowledge of ASD of the parents of children with ASD.

Hypothesis 3:

H0: A 3-hour workshop does not significantly enhance the level of resilience of the parents of children with ASD.

H1: A 3-hour workshop significantly enhances the level of resilience of the parents of children with ASD.

Hypothesis 4:

H0: A 3-hours workshop does not significantly enhance the level of self-compassion of the parents with children with ASD.

H1: A 3-hour workshop significantly improves the level of self-compassion of the parents with children with ASD.

Conceptual Definition

Parental Stress

Parental stress is the negative psychological response towards the obligations of parenthood, activated when a parent's demands exceed available resources, including effective parenting knowledge (Bornstein, 2002). It encompassed negative responses to daily

parenting life and major life events, extending beyond child-related factors to include financial, marital, and personal life issues (Jennings & Dietz, 2007).

Knowledge of ASD

Knowledge of ASD involved a comprehensive understanding of the disorder, encompassing its characteristics, typical behavioural symptoms, cognitive aspects, potential causes, and available treatments (Furnham & Buck, 2003; Shah, 2001).

Resilience

Recent studies defined resilience as a dynamic process between perceived risk and recovery factors (Stainton et al., 2018). Resilience can also be defined as the ability to "bounce back" and move forward from hardship (Southwick et al., 2014).

Self-Compassion

Self-compassion can be defined as a healthy attitude towards oneself. A person is self-compassionate if the person can be kind and not judgemental to oneself, does not harshly criticize oneself, and can view difficulties as a large experience of life (Neff, 2003).

Operational Definition

Parental Stress

In this study, the level of parental stress will be examined by Parental Stress Scale (PSS) developed by Berry and Jones (1995). PSS is a self-reported scale that consists of 18 items and a 5-point scale was used (1= strongly disagree, 5= strongly agree). The final score is calculated by summing up the total score including the scores of reversed items, a higher score indicates a higher level of parental stress.

Knowledge of ASD

Knowledge of ASD of parents will be examined using Autism knowledge Questionnaire (AKQ). It consists of 30 items and the respondents are required to respond True or False or Don't Know, to avoid guessing and for more accurate data. (Haimour & Obaidat, 2013).

Resilience

The level of resilience will be measured using a brief self-rating scale, namely the Brief Resilience Scale (BRS). It consists of a total of 6 items, including 3 positive items and 3 negative items. The example of a positive item is "I tend to bounce back quickly after hard time." The example of a negative item is "I have a hard time making it through stressful events." Respondents will be asked to respond to a 5-point scale (1= strongly disagree, 5= strongly agree) and a higher score indicates a higher level of resilience. (Amat et al., 2014).

Self-Compassion

In this study, the level of self-compassion will be measured by Self-Compassion Scale-Short Form (SCS-SF). It is a self-reported scale with a total 12 items which categorized into 6 subscales and a 5-point scale (1= almost always, 5= almost never). The scoring of this scale is by calculating the mean of the 6 subscale score and then average the total mean, a higher score indicates a high level of total self-compassion. (Kotera et al., 2020a)

Chapter 2

Literature Review

Introduction

This chapter aims to systematically review the effectiveness of evidence-based interventions tailored to address the distinctive needs of parents facing the challenges of raising children with ASD. Recognizing the integral aspects of parental well-being, such as parental stress, knowledge of ASD, resilience, and self-compassion, this study underscores the critical importance of targeted interventions. Elevated parental stress and a dearth of understanding in managing challenging behaviour exhibited by children with ASD can result in adverse socioemotional outcomes for parents. Furthermore, the cultivation of resilience and self-compassion emerges as a valuable strategy to reduce internalized stigmatization experienced by parents and ultimately enhance their overall quality of life.

The review delves into various evidence-based interventions, including relaxation techniques, mindfulness-based approaches, psychoeducation, cognitive behavioural therapy, and integrated interventions. A comprehensive analysis encompasses factors such as sample size, intervention content, procedures, measures, and main outcomes across 19 studies within the context of special needs and parenting skills. The chapter further explores theoretical and conceptual frameworks, including top-down and bottom-up mechanisms, mind-body connections, cognitive-behavioural therapy, the theory of planned behaviour, and the information-motivation-behavioural skills model, to elucidate how these interventions effectively alleviate parental stress, enhance ASD knowledge, and bolster resilience and self-compassion among parents of children with ASD. It is anticipated that the interventions included will have a positive effect in reducing parental stress, improving knowledge of ASD, enhancing resilience and self-compassion among parents of children with ASD.

Needs

Parental stress

Parents of children with ASD experienced significantly higher levels of stress compared to parents of typically developing children or those with other neurodevelopmental disorders, posing concerns about the mental well-being of the parent population (Basri & Hashim, 2019; Craig et al., 2016; Lee et al., 2017; Lievore et al., 2023; Mancil et al., 2009, Rahman & Jermadi, 2021). The study by Hayes and Watson (2013) also found a large difference in stress levels of parents of children with ASD and parents of typically developing children. Besides, studies also reported that there were no gender differences found in the significant stress levels among fathers and mothers of children with ASD (Lee et al., 2017; Nikmat, 2008). The finding of the existing study showed that parents of children with ASD were prone to experiencing increased stress as they faced genuine difficulties in providing care and support for their children (Azamin Anuar et al., 2022).

One of the difficulties was the dysfunctional parent-children relationship, which was linked to feelings of disappointment, rejection, alienation, or a lack of appropriate bonding (Rahman & Jermadi, 2021) after their child was diagnosed with autism as the diagnosis represented the loss of a “healthy” child (Hahler & Elsabbagh, 2014; Mulligan et al., 2012). Besides, another difficulty was the challenging nature of behaviours which might be dangerous to others and characteristics such as cognitive impairments and lower ability to learn and adapt to new things exhibited by children with ASD (Basri & Hashim, 2019; Bishop et al., 2007; Charman & Baird, 2002; Craig et al., 2016; Herring et al., 2006; Murphy et al., 2009; Norhaniza et al., 2010; Postorino et al., 2019; Tomanik et al., 2004; Volkmar et al., 2004). The risky behaviours and challenging characteristics might lead to restriction to the community services and impairments in academic, communication, and social skills which cannot meet the expectations of most of the parents, especially in Asian countries

where obedience and academic excellence of children are often prioritized (Lee et al., 2017; Matson & Nebel-Schwalm, 2007). Apart from the child factors that contributed to the stress of parents, parents may also face additional caregiving challenges, including increased expenses for therapy, difficulties in finding childcare, and the search for affordable therapeutic facilities, all stemming from a scarcity of clinical resources and government support (Lovell & Werherell, 2015; Suen et al., 2021).

Knowledge of ASD

The lack of understanding about ASD might come from difficulty in looking for accurate information about ASD to explain the behaviours of children with ASD that might lead the parents to feel stress and anxiety (Hermaszewska & Sin, 2021). Knowledge about ASD could be disseminated not just through scientific journals but also through various mass media channels to educate the public about autistic children and their needs (Mohammed Shamsudin & Abdul Rahman, 2014). However, many websites offered information about ASD included advertisements for treatments and interventions that lacked evidence-based support. This complicated the process for individuals to seek accurate information about ASD, making it challenging to differentiate between valid scientific knowledge regarding diagnostic methods and treatments with unfounded beliefs or treatments not supported by research (Bain et al., 2009; Hansen, 2015). Parents also expressed worry about the lack of understanding of the disorder, which might lead to delay in seeking assistance for their children, as certain characteristics became apparent only when the children reached specific ages and were occasionally subtle (Yaacob et al., 2021). However, the study by Catalano et al. (2018) found that parents often felt relief and have more confidence in seeking the suitable services after receiving information that helped explaining their children's behaviours.

Not only that, an improved understanding of ASD would also promote greater acceptance of the children's behavior (Catalano et al., 2018). The lack of understanding and awareness regarding ASD among the different populations in society contributed to society's negative perceptions of children with ASD and their parents (Effatpanah et al., 2019; Lee et al., 2017; Luleci et al., 2016; Rahbar et al., 2010; Salleh et al., 2018) and led to the societal disapproval that would often result in stigmatization, causing parents to experience shame and exclusion from regular social activities (Farrugia, 2009; Lee et al., 2017). Hence, given that many individuals were not readily accepting of the child's unique behaviours, parents of children with ASD who lacked social support were more vulnerable to experiencing stigma, which in turn contributed to higher stress (Broady & Stoyles, 2015; Lee et al., 2017). Therefore, enhancing parental knowledge could result in the refusal of society's stigmatizing perspectives and, importantly, may serve to hinder the internalization of such stigma (Lodder et al., 2019).

Resilience

According to the study of Becvar (2012), resilience can be understood as an overarching concept comprising two key elements: facing significant challenges or adversity and demonstrating positive adaptation. This conceptualization highlighted the dynamic interplay between factors that pose risks and those that provide protective resources (Zhao & Fu, 2020). A few studies also showed that parents of children with ASD who exhibited adverse symptoms demonstrate resilience by mitigating the impact of crises and minimizing negative reactions, ultimately leading to positive individual adaptation (Cornish et al., 2018; Gray, 2002; Hall & Graff, 2011; Hartley et al., 2011; Hastings & Taunt, 2002; King et al., 2008; Luong et al., 2009; Yaacob et al., 2022; Zhao & Fu, 2020). However, most studies that investigated resilience in parents of children with ASD was conducted in Western or

European contexts (Gray, 2002; Hall & Graff, 2011; Hartley et al., 2011; Hastings & Taunt, 2002; King et al., 2008), there was a lack of studies conducted in the collectivistic cultures (Cornish et al., 2018; Zhao & Fu, 2020).

Besides, the resilience-stress model developed by Fletcher and Sarkar (2013) and Masten (2011) highlighted the negative relationship between resilience and stress. Hence, by cultivating resilience among the parents of children with autism that tapping into strengths related to various positive psychological resources, stress that resulted from the feelings of uncertainty and helplessness following a diagnosis, and caregiver stressors such as challenging children's behaviours and dysfunctional parent-child relationships were able to be reduced and buffered (Bitsika et al., 2013; Kotera et al., 2020b; Schwartzman et al., 2022). As there is always a challenge for the parents of children with ASD to muster the courage and strength needed when facing a crisis, especially in handling the children (Abdullah et al., 2022), an intervention that can cultivate their psychological strengths is urgently needed.

Self-Compassion

According to Neff (2003), self-compassion was conceptualized into three interconnected elements: self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus over-identification. Neff (2003) emphasized that cultivating self-compassion was a strategy for well-being, and the emphasis should be on fostering positive dimensions such as self-kindness, recognizing common humanity, and mindfulness, rather than dwelling on negative dimensions like self-judgment, isolation, and over-identification. This was similar to the findings of Bohadana et al. (2019) which found that the higher scores on negative dimensions of self-compassion were associated with greater stress, especially in the context of parenting a child with ASD.

Moreover, as parents of children with ASD often experienced the affiliate stigma which was the internalized stigma among the family members of stigmatized individuals, parents who tended to have higher self-compassion would experience lower psychological distress and parenting stress that results from the affiliate stigma (Torbet et al., 2019; Wong et al., 2016), as they tended to have a greater acceptance of self and current situation. For instance, they were less likely to view their children's behaviours as difficult and problematic and had the embracement of hope for future when their inner support and self-confidence were instilled by self-compassion (Neff & Faso, 2014; Wong et al., 2016).

On the other hand, self-compassion was not only able to reduce parental stress but might also be able to increase the quality of life by reducing the parental stress as the study by Suen et al. (2021) found that self-compassion was one of the factors to moderate the correlation between parenting stress and quality of life. Meanwhile, the findings of Bohadana et al. (2019) also found that higher scores on positive dimensions of self-compassion were associated with greater quality of life. As the results from Wong et al. (2016) showed that self-compassion played a positive role in the mental health of parents of children with ASD, which brought benefits for the parents such as positive coping, helpful thinking and perspective and emotional validation as reported in Bohadana et al. (2020) as well, an intervention that cultivates self-compassion should be introduced among these parents.

Evidence-based Interventions

Relaxation Techniques

Relaxation techniques such as progressive muscle relaxation (PMR), relaxation breathing, deep breathing exercises, guided imagery, diaphragmatic breathing, and mindfulness training were implemented as stress management programs among parents of children with special needs (Fotiou et al., 2016; Gika et al., 2012; Tsiouli et al., 2014). In

interventions that involved relaxation techniques, such as progressive muscle relaxation, showed a significant effect in reducing parental stress and perceived stress (Gika et al., 2012; Tsiouli et al., 2014; Refer to Appendix A1).

Mindfulness-based Interventions

Mindfulness-based interventions including meditation practices, brief mindfulness practice, Mindfulness-Based Stress Reduction (MBSR), Mindfulness-Based Positive Behavior Support (MBPBS), mindfulness-based parent training and Cognitively-Based Compassion Training (CBCT) were conducted among parents and caregivers of children with ASD or developmental disabilities or delay. Implementing mindfulness-based interventions significantly reduced parental stress, with a large effect size (Ferraioli and Harris, 2012; Fernández-Carriba et al., 2019; Singh et al., 2020) and a moderate to small effect size (Benn et al., 2012; Lo et al., 2017; Neece, 2013), as reported in the Appendix A2. Mindfulness-based interventions also found to be effective in reducing depressive symptoms and improving empathy, acceptance, and self-compassion among parents. An improvement in quality of life and general health were observed as well (Bazzano et al., 2013; Fernández-Carriba et al., 2019; Ferraioli & Harris, 2012; Lo et al., 2017; Neece, 2013; Singh et al., 2020).

Psychoeducation

Psychoeducation was found to be effective in improving the knowledge acquisition of ASD, reducing stress and depressive symptoms as well as increasing self-efficacy among parents of children with ASD across different age group and socioeconomic status, with a large effect size as reported in the Appendix A3 (Hemdi & Daley, 2017; McAleese et al., 2013; Zimmerman, 2013). Common elements included in psychoeducation across all studies

were (i) knowledge of ASD (ii) ways to reduce stress and mood (iii) ways to manage child's problematic behaviour (iv) ways to educate child (v) socialization and communication skills (vi) ways to manage sensory issues and (vii) resources available. (Hemdi & Daley, 2017; McAleese et al., 2013; Patra et al., 2015; Zimmerman, 2013). It is important to take note that although online psychoeducation program may be applicable due to accessibility, parents reported frustration when facing technical difficulties, which hindered the effectiveness of psychoeducation intervention (Zimmerman, 2013).

Cognitive Behavioural Therapy

Cognitive Behavioural Therapy such as Group Cognitive Behaviour Therapy and CBT intervention which included 13 elements that aiming to challenge the irrational thoughts and lead to desired behavioural changes were implemented among parents of children with ASD, showed its profound effectiveness in reducing parental stress and its effectiveness successfully maintained after three months (Izadi-Mazidi et al., 2015; Onyishi et al., 2023), as reported in the Appendix A4. Besides, ABC model training also proved to effectively enhance resilience among mothers of children with ASD (Behnamfar et al., 2023).

Integrated Interventions

Integrated intervention refers to intervention that is designed based on more than one principle and aim to address more than one need of parents of children with ASD. Group Therapy module involved psychoeducation about ASD, relaxation techniques, coping strategies and behavioural management and mindfulness STOP which are effective in reducing somatic symptoms, stress, and negative mood state of parents (Tay, 2017). Besides, AMOR (Acceptance, Mindfulness, Optimism, Resilience) Method which is designed based on CBT and MBSR, is proved to have a large effect size in enhancing resilience and reducing

parental stress as well as able to maintain its effectiveness after 2 months (Schwartzman et al., 2021), as reported in Appendix A5.

Theoretical Framework/Conceptual Framework

The efficacy of the interventions which were relaxation techniques, mindfulness-based intervention, psychoeducation, and cognitive behavioural therapy was well-established in the existing literature, where they had consistently demonstrated the effectiveness in reducing the overall parental stress, enhancing the parents' knowledge about ASD as well as fostering resilience and self-compassion. The interventions are supported by the top-down and bottom-up mechanisms, mind-body connections, cognitive behavioural therapy theory, theory of planned behaviour (TPB), and information-motivation-behavioural skills (IMB) to instil the lasting changes in parental stress, parental knowledge of ASD, resilience and self-compassion.

Top-Down and Bottom-Up Mechanisms and Parental Stress

The top-down and bottom-up mechanisms, as proposed by Taylor et al. (2010), provided a framework for understanding how parental stress was reduced by relaxation techniques such as progressive muscle relaxation (PMR) and deep breathing. In the "top-down" mechanism, parents consciously decide to calm themselves. They are using their brain, particularly the cerebral cortex when focusing on their breathing and intentionally relaxing their muscles (Keptner et al., 2020; Taylor et al., 2010; Toussaint et al., 2021). This conscious focus on breathing or muscle relaxation enhances the parent's awareness of their bodily responses during stressful events and facilitates a more intentional relaxation (Keptner et al., 2020). In turn, this heightened awareness increases the likelihood of the parents

utilizing relaxation techniques intentionally to reduce the parental stress of parents of children with ASD.

In "bottom-up" mechanism, various sensory receptors are stimulated as breathing is slowed down and muscles are relaxed and travel up from the periphery to the brainstem and cerebral cortex. This prompts the activation of parasympathetic nervous system which is a built-in relaxation system that provides a quick relief and effectively reducing the parental stress of parents of children with ASD. (Keptner et al., 2020, Taylor et al., 2020; Toussaint et al., 2021). Hence, in "bottom-up" mechanism, the body's signal plays an important role to reduce the parental stress of parents of children with ASD.

Mind-Body Connection and Self-Compassion

The mind-body connection highlights the interconnectedness of mental and physical processes, emphasizing how the state of mind can influence the state of the body, and vice versa (Brower 2006; Selva, 2017). It forms the foundational theory for mindfulness-based interventions which integrate aspects of mindfulness, have garnered growing evidence supporting their efficacy across various mental and physical health conditions (Baer, 2014; Carlson, 2012; Mace, 2007). Protocols for these interventions typically emphasize the development of mindfulness, defined as the awareness that arises through purposeful attention to the present moment, without judgment (Russell & Tatton-Ramos, 2014). This awareness extends to both mental processes, such as thoughts and emotions, and physical sensations in the body (Kabat-Zinn, 2003).

In this study, mindfulness-based interventions, supported by the mind-body connection, promote self-compassion among parents. Mindfulness, by bringing awareness to one's suffering without judgment (Neff, 2003), initiates self-compassion, fostering kind and understanding thoughts. This positive mindset contributes to improved physical well-being.

For parents of children with ASD, low self-compassion often leads to negative thoughts and stress-induced bodily responses such as headaches, muscle tension, or insomnia. Research suggests that mindfulness interventions can reduce prolonged stress reactivity. By activating the parasympathetic nervous system, mindfulness practices promote mental relaxation, fostering an overall sense of calm and physical well-being (Chu et al., 2022; Gamaiunova et al., 2022).

Cognitive Behavioural Theory and Resilience

CBT that is supported by cognitive behaviour theory (Beck, 2011) is able to promote resilience among the parents of children with ASD. The foundational concept of cognitive-behavioural theory lies in the triadic reciprocity between thoughts, emotions, and behaviours (Fenn & Byrne, 2013; Onyishi et al., 2023). This interconnected system means that a change in one aspect can influence the others. (Cully & Teten, 2008; Ellis, 1994; Ellis et al., 1999; Shaw et al., 2013). Positive changes in thoughts, emotions, and behaviours enhance psychological well-being, empowering individuals with adaptive coping strategies to navigate challenges and setbacks with resilience (Main, 2022).

In the realm of parenting children with ASD, the parents' beliefs about their child's impairment can influence their emotions and parenting techniques, contributing to parental stress (Oniyishi et al., 2023). By utilizing CBT, parents are encouraged to challenge negative thoughts and adopt realistic perspectives, fostering flexible and optimistic thinking (Fenn & Byrne, 2013; Onuigbo et al., 2018). By reframing thoughts, parents can see challenges as growth opportunities, proactively finding solutions and maintaining control instead of succumbing to emotions (Behnamfar et al., 2023). Therefore, it fosters the development of resilience among the parents of children with ASD.

Theory of Planned Behaviour (TPB) and Parental Stress, Knowledge of ASD, Resilience and Self-Compassion

TPB, introduced by Ajzen (1985) serves as a framework for understanding how parents' intentions are formed by attitudes, perceived behavioural control, and subjective norms shape their behaviour change in reducing parental stress, increasing knowledge of ASD, and fostering resilience and self-compassion through workshop interventions. According to Ajzen (1991), intentions reflect motivational factors, indicating the level of effort individuals are willing to exert for a particular action, with stronger intentions associated with a higher likelihood of behaviour performance. These intentions are constructed based on three key components: attitude, perceived behavioural control, and subjective norms (Ajzen, 1991). Attitude reflects favourability toward a behaviour, perceived behavioural control relates to self-efficacy in utilizing resources, and subjective norms involve perceived social pressure to perform or avoid a behaviour. Besides, the perceived behavioural control can also influence the one's behaviour change (Ajzen, 1991).

Applying the TPB to parents of children with ASD, their intentions to reduce parental stress and enhance parental knowledge, self-compassion, and resilience are determined by their attitudes—whether positive or negative—towards the autism, subjective norms which are the common myths about autism, and perceived behavioural control of being able to implement the interventions to manage stress, parental knowledge, resilience, and self-compassion after attending workshop. If the parents have the confidence to implement the intervention, it will also directly lead to a change in their behaviour in reducing stress and enhancing knowledge of ASD, resilience and self-compassion. After the parents change their behaviour by implementing the strategies, positive behavioural changes yield reciprocal influences on attitude, perceived behavioural control, and subjective norms, creating a

comprehensive framework for understanding and influencing parental behaviour in the context of raising a child with ASD.

IMB Skills Model and Parental Stress, Knowledge of ASD, Resilience and Self-Compassion

The behaviour changes in reducing parental stress, increasing knowledge of ASD, fostering resilience and self-compassion through workshop interventions can be supported by the Information-Motivation-Behavioural Skills (IMB) model, proposed by Fisher et al. (1996). This model incorporates three key constructs influencing behaviour change: information and knowledge about the behaviour, an individual's motivation to perform the behaviour, and the behavioural skills required for execution (Fisher et al., 1996).

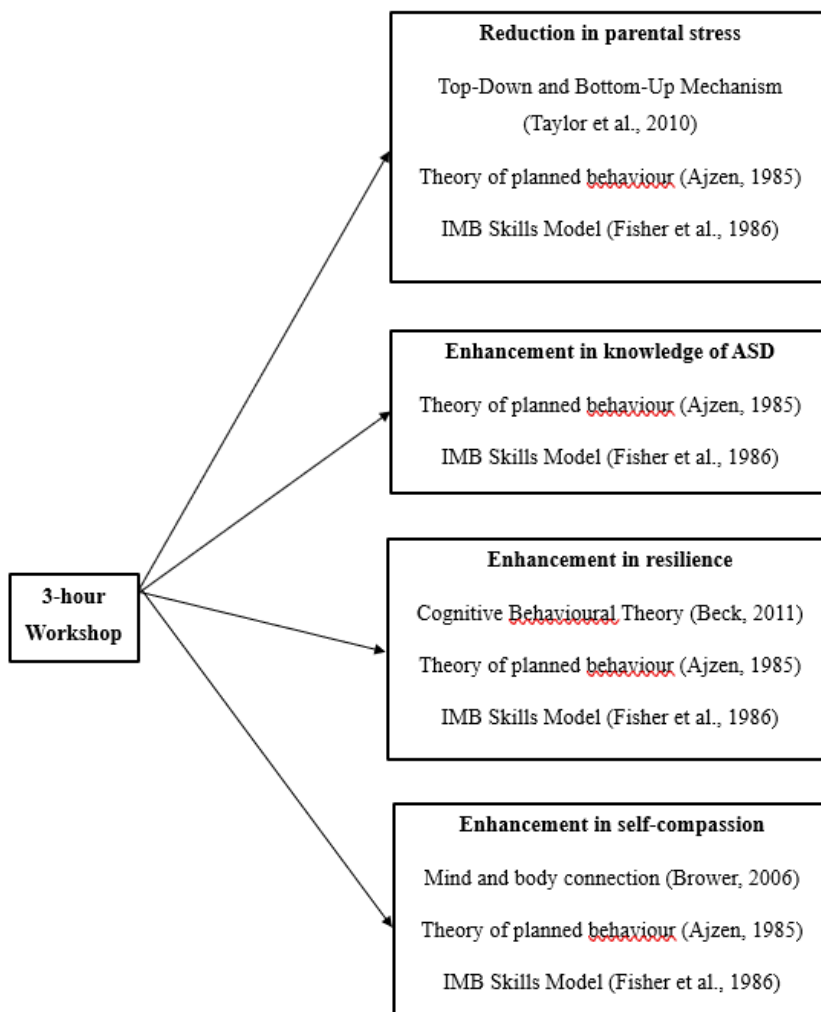
Information encompasses the relevant knowledge obtained by the parents regarding the need and importance to reduce the parental stress, enhance psychological strengths such as self-compassion and resilience, and expand parental knowledge about ASD. Motivation encompasses personal attitudes toward behaviour and social motivation derived from perceived support (Rongkavilit et al., 2010). The parents will have the desire to make a change to reduce their stress and strengthen their knowledge of ASD and psychological strength when they are having the positive perceptions about the effectiveness of workshop content and strong support from family and friends. Besides, parents' information will also influence their motivation, and vice versa which creates a dynamic interplay (Fisher et al., 1996). For instance, if the parents do not have sufficient information about the knowledge, it will lead the parents to have low motivation to make a change.

After gaining information and motivation, essential behavioural skills become crucial for parents attending a workshop on ASD. These skills, including objective abilities and perceived self-efficacy in implementing the workshop interventions. After acquiring the

behavioural skills by attending the workshop, it eventually leads the parents to have positive changes in parental stress, ASD knowledge, and psychological strengths. In summary, IMB model suggests that for the behavioural changes, such as to modify parenting behaviour to occur, an adequate information about the knowledge and importance, a strong and positive motivation towards acquiring parenting skills and the acquisition of behavioural skills should be fulfilled by the parents.

Figure 2.1

Theoretical/Conceptual Framework of the Effect of 3-hour Workshop on Parental Stress, Knowledge of ASD, Resilience and Self-compassion



Chapter 3

Methodology

Research Design

The present study adopted an experimental research design, specifically the single-arm trial to examine the effectiveness of the 3-hour workshop on reducing parental stress and enhancing knowledge of ASD, resilience and self-compassion among the parents of children with ASD. In this design, without a control group, a group of participants will receive the experimental intervention and the outcome within the group will be assessed through the follow up after a certain period of time (Evans, 2010). It is commonly employed to obtain evidence for the preliminary efficacy of a newly developed treatment (Evans, 2010). Simultaneously, the current study was quantitative research as a pretest-posttest experimental design was utilized to gather data from the participants. They are requested to fill up the questionnaires regarding parental stress, knowledge of ASD, resilience and self-compassion before the workshop and two weeks after the workshop to evaluate any change in these variables among them.

Participants

The inclusion criterion of the present study is being parents of children with ASD in Kuching, Sarawak. Initially, 20 parents of children with ASD from Kuching, Sarawak registered for the 3-hour workshop. However, only 10 of them managed to participate on the day of the workshop and filled up the pre-test due to their busy schedule during Chinese New Year, according to KAA. After 2 weeks of the workshop, 7 of them filled up the post-test, contributing to the final number of participants, which has fulfilled the minimum required sample size.

Sampling Method

Purposive sampling technique, which is a non-probability sampling method was used to recruit participants for the present study. Using this technique, researchers intentionally choose participants who possess certain characteristics and background which match the interest or purpose of study (Etikan et al., 2016). As a result, this sampling method allows the researchers to collect data that they desire to obtain in the most cost-effective way (Palinkas et al., 2015, as cited in Campbell et al., 2020). Hence, it was utilized for the current study as there was specific inclusion criteria for the participants to involve in this study. Simultaneously, another non-probability sampling method which is voluntary response sampling technique was applied in the present study. In this method, researchers invite or request potential participants to participate in their study, and the final sample will consist of those who are willing to involve in the study (Murairwa, 2015). In the present study, not only parents of children with ASD from KAA centre were invited, those who are external to the centre were also recruited by posting the workshop details on social media including Facebook, Instagram and Xiaohongshu, and they have the right to decide on the participation.

Sample Size

Using GPower 3.1, the power analysis for a one-tailed paired-sample t-test has found that minimum sample size to generate a statistical power of at least .95 with an alpha of .05 and a large effect size, $d = 1.539$ is 7 participants (refer to Appendix B1).

To obtain this value of effect size to be inputted into the GPower, firstly the average effect sizes of the existing interventions for the individual outcome variables were calculated (refer to Appendix B2). This provides a more comprehensive understanding of the specific effectiveness of the interventions for individual outcome variables. Apart from extracting the effect sizes from the interventions which involved one component, the integrated approach was also included due to the similarity to the workshop in the current study that consists of multiple components of interventions. For the comparability among effect sizes across different studies, only the studies which used Cohen's d as the measure of effect size and t- test as the statistical test were included when calculating the average effect sizes. According to Cohen (1998), the most frequently employed measure of effect size in t-tests is Cohen's d , and the statistical test planned to be used in the current study is also a paired sample t-test.

Additionally, the reason to focus on the Cohen's d effect size in only t-tests is to ensure the effect sizes included are standardized and comparable, as the formula of Cohen's d effect size is different across various statistical tests. Since the studies included with the interventions for self-compassion did not fulfil both criteria, which are the effect size is not reported as Cohen's d and t-test is not utilized in the data analysis process, average effect sizes are only calculated for the parental stress, knowledge of ASD and resilience by including the relevant studies of the interventions (Fernandez-a et al., 2019, Ferraioli and Harris, 2012; Neece, 2013; Schwartzman et al., 2021; Zimmerman, 2013).

Then, a total mean effect size, which is the final effect size used in sample size calculation was computed by summing up those average effect sizes and dividing by three (refer to Appendix B2). Since the workshop in the present study is an integrated approach,

using a total mean effect size provides a more holistic view by looking into the overall effectiveness of the interventions for different outcome variables.

Research Location

The workshop was conducted in the physical mode, specifically at the Kuching Autistic Association (KAA) Centre in Sarawak. This institution was chosen as there is a large group of parents with ASD associated with them, providing readily available participants for the current study. The permission letter and workshop proposal were submitted to the KAA via email, and approval to conduct this study in their place was obtained. (refer to Appendix C1 to C4).

Although there are many studies claim the advantages of online interventions for parents, such as convenient access as well as decreased travel time and expenses (Aqdassi et al., 2019; Aqdassi et al., 2021; Barak & Grohol, 2011; Breitenstein et al., 2014; Hammond et al., 2012; Khanna et al., 2007; Ristkari et al., 2019, as cited in Sadeghi et al., 2021), there is a lack of physical presence in the online interventions even with the camera (Sadeghi et al., 2021). Hence, it may limit the participants from absorbing the information and skills as precisely as in face-to-face interventions as the participants and instructors find it difficult to see each other clearly. As the workshop in the present study not only involved knowledge delivery, but also transfer of practical techniques or skills, physical mode was chosen to maximize the understanding of content among the participants.

Likewise, other undesirable aspects of the technology used in educating parents were considered as well. Păsărelu et al. (2023) has claimed that although online programs for parents of children with neurodevelopmental disorder have been proven effective, the

issues of attendance and involvement such as drop-out rates remain crucial aspects for consideration. In addition, the online mode of interventions might pose challenges to the parents with lower socioeconomic status (SES) as they have restricted availability and knowledge of the technology use (Broomfield et al., 2021). Hence, to increase engagement and lower the possibility of dropping out among the participants during the workshop and considering the lack of easy access to technology among certain participants, the workshop was conducted in physical mode.

Intervention

Based on past studies, it clearly showed that certain interventions are particularly efficacious to improve one and/or more outcome variables which the current study is focusing on among the parents of children with ASD.

First and foremost, relaxation techniques have been proven to reduce parental stress (Gika et al., 2012; Tay, 2017; Tsiouli et al.; 2014). Therefore, the 3-hour workshop included relaxation techniques as the intervention for parental stress reduction.

Secondly, a number of studies has shown that the mindfulness-based intervention is feasible to decrease parental stress (Benn et al., 2012; Lo et al., 2017; Neece, 2013; Fernández-Carriba et al., 2019; Ferraioli and Harris, 2012; Schwartzman et al., 2021; Singh et al., 2020), enhance resilience (Schwartzman et al., 2021), and self-compassion (Bazzano et al., 2013; Benn et al., 2012). Hence, mindfulness was integrated into the 3-hour workshop to focus on reducing parental stress and enhancing resilience as well as self-compassion simultaneously.

Thirdly, psychoeducation has been verified as an efficacious intervention to improve knowledge of ASD (McAleese et al., 2013; Zimmerman, 2013) and reduce parental stress (Hemdi & Daley, 2017). Thus, psychoeducation regarding ASD was also incorporated into the workshop to aim at improving knowledge of ASD and decreasing parental stress.

Fourthly, the efficacy of CBT for the reduction of parental stress has been supported (Onyishi et al., 2023; Schwartzman et al., 2021), and it is also effective to enhance resilience (Behnamfar et al., 2023; Schwartzman et al., 2021). Therefore, to maximize the efficacy of the workshop in reducing parental stress and enhancing resilience of the parents of children with ASD, the workshop consisted of the component of CBT.

Considering the relatively short duration of the workshop, only certain components were extracted from these interventions and embraced into the workshop. The whole workshop was implemented with supervision and guidance from a licensed clinical psychologist to ensure the content was accurate and ethical. It began with psychoeducation about ASD, including the diagnosis, symptoms, etiology, misconceptions, and available treatment choices for children with ASD in Malaysia were included. Then, a brief psychoeducation regarding self-compassion, resilience and parental stress were provided to the participants. The participants were specifically introduced about a self-compassion exercise suggested by Neff (2018, as cited in Curl & Hampton, 2023) to practice at home after the workshop.

After that, a brief introduction of mindfulness was exposed to the participants before the practice. Farias and Wikholm (2016) have claimed that mindfulness meditation could pose the danger of triggering negative emotions and even traumatized memories, which would especially be harmful if one is practicing it alone or in group without any professional. Thus, a simpler mindfulness technique, which is informal mindfulness,

specifically STOP mindfulness was incorporated, given that the workshop is too short to ensure the participants' capability to practice the mindfulness meditation alone in home, and it is difficult for the trained clinical psychologist in the workshop to pay individualized attention to guide every participant. In addition, a mindfulness worksheet was given to the participants for them to complete at home in order to design their own informal mindfulness ritual in their own daily life.

Similarly, explanations about CBT principles were given to establish a basic understanding of it among the participants. Specifically, the Hot Cross Bun diagram and types of cognitive distortions with examples relevant to the parental context. Moving on to the cognitive restructuring, the participants were introduced by the clinical psychologist on the Socratic questioning. Apart from that, they learnt the steps of applying relaxation techniques, including 1-minute progressive muscle relaxation and diaphragmatic breathing. In short, informal mindfulness, Socratic questioning, progressive muscle relaxation and diaphragmatic breathing are the techniques that are relatively brief and simple to be applied in the busy schedule of the parents of children with ASD. A detailed workshop flow is attached as Appendix D. Other than whiteboard, the presentation aids of PowerPoint slides were used in the workshop (Appendix E1), and soft copy of handouts which consisted of important take-home messages such as steps of practices was distributed to the participants by the end of workshop (Appendix E2). The main language used in the workshop and presentation aids was English, with verbal translation to Bahasa Malaysia sometimes to facilitate the participants' understanding of the content.

Research Instruments

Demographic Questionnaire

A demographic questionnaire was used to collect the parents' information on their nickname, age, gender, ethnicity, number of child(ren) with ASD, age of child(ren) with ASD, and presence of any comorbidity in their child(ren) with ASD (refer to Appendix F2). The participants' nickname was requested to identify the participants for comparison of pre-test and post-test results while maintaining the anonymity of their identity.

Parental Stress Scale (PSS)

PSS (Berry & Jones, 1995; refer to Appendix F3) is an 18-item scale which was designed to measure level of parental stress which is specifically derived from parenthood rather than other circumstances such as relationship and financial issues (Lessenberry & Rehfeldt, 2004). It is free to use, and no permission is required unless there is any adaptation or usage for profit purpose (Child Outcomes Research Consortium, n.d.). The items focus on the positive dimensions of the parenthood such as personal growth and emotional advantages, as well as negative dimensions which include constraint and resource demands. This scale is suitable to be used by both parents of children with and without clinical disabilities. It consists of negatively worded items, which are item 1, 2, 5, 6, 7, 8, 17, and 18. The example of positive items is "I sometimes worry whether I am doing enough for my child(ren)", whereas the example of negative items is "I am happy in my role as a parent". All of the items were rated on a 5-point Likert scale from 1 (Strongly disagree) to 5 (Strongly agree). To obtain the total score, the scores of all items were summed up after reversing the negative items. The possible score range is 18 to 90, and a higher score reveals a higher level of parental stress. With the sample of wives of drug abusers, this scale has demonstrated a high internal consistency of 0.86 in Malaysian Context (Ahmad Shahril et al., 2022). Berry and Jones (1995) also reported a good internal

consistency ($\alpha = .83$) and test-retest reliability ($\alpha = .81$) for this scale. In addition, it had a significant correlation with Parenting Stress Index ($r = .75, p < .01$), supporting the convergent validity of this scale (Berry & Jones, 1995). The adequate convergent validity was also shown as it was significantly and positively correlated with anxiety ($r = .46, p < .01$), while the divergent validity was also proven by its negative correlation with social support satisfaction ($r = -.35, p < .01$; Berry & Jones, 1995).

Autism Knowledge Questionnaire (AKQ)

The knowledge of ASD among the parents was examined using the AKQ (Haimour & Obaidat, 2013; refer to Appendix F4). As this questionnaire was initially developed to be utilized among teachers, it consists of two sections, the first section contains demographic questions specifically for the teachers, and the second section contains 30 items regarding information of ASD. As permission is required for its usage in research (Nordike, 2018), a request for the usage was sent to one of the developers (refer to Appendix G1). With the permission granted by the developer (refer to Appendix G2), this present study has employed this instrument, particularly the second section. According to the developers, the items were modified based on other similar questionnaires, such as the one developed by Furnham and Buck (2003) which has been used among parents, the 10-item instrument developed by Shah (2001) which has been utilized among medical students, and the Autism Survey developed by Stone (1987) which has been employed among parents (Stone & Rosenbaum, 1988). Some examples of the items are “Most children with Autism have an intellectual disability” and “Autism is a developmental disorder”. The items were responded in three choices (T-True, F-False and DK-Do Not Know). Thus, this response format reduces the possibility for participants to guess the answer in case they have any

knowledge gap. In terms of scoring, 1 score was given for each right answer, whereas 0 score was given for every wrong and “Do Not Know” response, then the mean number of correct responses was computed, with a higher score revealing better knowledge of ASD. The mean number which is greater than 0.7 is interpreted as “Good”, between 0.5 to 0.7 is “Acceptable”, while the one which is lower than 0.5 is considered as “Weak” for the knowledge of ASD. The internal consistency of this scale has been proven as good with the value of 0.926, while expert judgment has been implemented to examine the face validity of this scale with the percentage of agreement achieving 87% (Haimour & Obaidat, 2013).

Brief Resilience Scale (BRS)

Resilience of the participants was evaluated using the BRS (Smith et al., 2008; refer to Appendix F5) which comprises 6 items. It is free to use, and no permission is required (Measure Wellbeing, n.d.). As the positive items include item 1, 3 and 5, one of the examples is “I tend to bounce back quickly after hard times”. While the items 2, 4, and 6 are negatively worded, one of the examples is “I tend to take a long time to get over setbacks in my life”. The responses were assessed on a 5-point Likert scale, ranging from 1 (Strongly disagree) to 5 (Strongly agree). The scoring was done by reversing the negative items and taking the mean of scores from all items, with a higher score indicating higher level of resilience. As the score can range from 1 to 5, 1.00 to 2.99 is interpreted as low resilience, 3.00 to 4.30 is moderate resilience, and 4.31 to 5.00 is high resilience (Smith et al., 2013). It has been found to have a high internal consistency ($\alpha = .70$) among the sample of university students from Malaysia and the United Kingdom (Kotera et al., 2020a). While in the Asian context among the Chinese university students, BRS also showed a high internal consistency ($\alpha = .71$; Fung, 2020). It had an adequate convergent validity as it was

significantly and positively correlated with self-esteem ($r = .44, p < 0.001$) and mental well-being ($r = .45, p < 0.001$), while it also negatively correlated with negative affect, showing a good discriminant validity ($r = -.41, p < 0.001$; Fung, 2020). The Confirmatory Factor Analysis of the BRS also found that it had a high factorial and construct validity (Fung, 2020).

Self-Compassion Scale-Short Form (SCS-SF)

The SCS-SF (Raes et al., 2011; refer to Appendix F6) was employed to assess the level of self-compassion among participants. This instrument is free for research use (ACTwithcompassion, 2016). It was chosen for the current study as it is shorter and thereby participant-friendly, simultaneously highly correlated with the original version. It includes 12 items which are categorized into 6 subscales, where the positive items are from the subscales of self-kindness, common humanity, and mindfulness, while the negative items are from the subscales of self-judgment, isolation and over-identification. The example of positive items is “When something painful happens I try to take a balanced view of the situation”, whereas the example of negative items is “When I’m feeling down I tend to obsess and fixate on everything that’s wrong”. The items were rated on a 5-point Likert scale, ranging from 1 (Almost never) to 5 (Almost always). After reversing the scores of negative items (1, 4, 8, 9, 11, 12), the means of each 6 subscales were computed, and a total score was obtained by calculating the average of the subscales' means. A higher score indicates a higher level of self-compassion. The score range of 1.00 to 2.49 is considered as low, 2.50 to 3.50 as moderate, 3.51 to 5.00 as high self-compassion. This scale showed a high internal consistency of 0.72 among samples of university students from Malaysia and the United Kingdom (Kotera et al., 2020a). Among the sample of Malaysia university students, there was a high test-retest reliability ($\alpha = .76$) and adequate

convergent validity as it was significantly and positively correlated with self-esteem ($r = .62, p < .05$) and authenticity ($r = .37, p < .05$) as well as adequate discriminant validity when it negatively correlated with fear of negative evaluation ($r = -.35, p < .05$; Zhang et al., 2022).

Research Procedures

Ethical Approval

The present research was approved by UTAR Scientific and Ethical Review Committee (SERC) with the ethical code number of U/SERC/78-195/2024 before proceeding to the recruitment of sample and data collection (refer to Appendix H). This approval is essential to acknowledge the ethical considerations within the present research and ensure that the current study is conducted in adherence to ethical standards.

Recruitment of Participants

A permission letter was emailed to KAA to obtain approval from the institution to conduct the workshop at their place and invite the parents affiliated with them to involve in our workshop as the research participants. The details of the present study such as topic, objectives, procedure, ethical practice, and absence of incentive were explained in the letter. Whereas the workshop proposal contained the estimated date and time, number of targeted participants, fee, title, objectives, speakers, and the flow for their reference. After obtaining approval from KAA and ethical approval from SERC, KAA was requested to facilitate the recruitment process by posting workshop poster (refer to Appendix I1) in the

group chat consisting of parents associated with KAA, as well as on KAA's social media accounts via Facebook and Instagram to publicize and open the workshop to parents external to KAA. The parents who were interested to participate in the workshop required to register through a Google Form (Appendix I2) attached in the poster.

Consent

2 days prior to the workshop, the informed consent form (refer to Appendix F1) was sent to the participants individually via email (Appendix J1). The description of the current study, confidentiality, potential benefits and risks, rights for voluntary participation and withdrawal were stated clearly in the consent form.

Pre-Test Measurement

The participants were requested to fill up the Qualtrics self-report questionnaire which was attached after the consent form (refer to Appendix J1) . It consisted of the demographic questionnaire and the questionnaires measuring the outcome variables, including PSS, AKQ, BRS and SCS-SF. Along with sending an invitation card for the workshop, a reminder about the pre-test questionnaire sent through email was also sent to the parents via WhatsApp. As the response of the pre-test questionnaire was limited, 30 minutes of the workshop duration was used to request the participants to fill up the questionnaire on a voluntary basis.

3-Hour Workshop

The participants involved in the workshop consisted of the psychoeducation session regarding the outcome variables which are parental stress, knowledge on ASD, resilience and self-compassion, as well as the practical session regarding the techniques of mindfulness, CBT, and relaxation. Two short breaks were given in between, and Question and Answer session was also conducted to clear any doubt among the participants by the end of the workshop.

Post-Test Measurement

Two weeks after the workshop, the participants were required to fill up the same set of Qualtrics questionnaire measuring the outcome variables, which was sent to them individually via email (refer to Appendix J2). Similarly, a reminder to fill up the questionnaire was sent to the participants via WhatsApp.

Data Analysis

The data from the pre-test and post-test measurement were collected using Qualtrics and analyzed using IBM SPSS Statistics 26.0. While missing data was removed before data analysis, outliers were identified through visual inspection of boxplot. In terms of descriptive statistics, frequency, percentage, mean and standard deviation of the responses for demographic variables among the participants were identified, while mean and standard deviation were generated for the scores of PSS, AKQ, BRS and SCS-SF. As for inferential statistics, normality for the scores of parental stress, knowledge of ASD, resilience and self-compassion as well as normality of difference scores were first tested through Shapiro-Wilk Test in order to make decision on using either Paired sample t-test or

Wilcoxon signed-rank test to assess changes within the same group of participants before and after the workshop. The preconditions which must be met to apply the Paired sample t-test include interval or ratio data for the outcome variables, normality of data distribution for each group of scores and pairwise differences (Allen et al., 2014). While these preconditions were fulfilled in the current study, the Paired sample t-test which is a parametric test was employed in the current study. It is utilized to analyze the statistically significant difference between mean scores of the pre-test and post-test in a single sample (Abdi, 2023).

Chapter 4

Results

Demographic Variables

The demographic information of the participants of the pre-test and post-test have been attached as Appendix K1 to K2 and tabulated in the table. Among the 10 participants of the pre-test, the majority of them were females (70%) and only 30% of them were males. The participants' age ranged from 31 to 46 years old, with a mean age of 39.10 ($SD = 4.771$). Most of them were Bidayuh (50%), followed by Iban (20%), Malay (10%), Chinese (10%), Kelabit (10%). While 90% of them have 1 child with ASD and 10% of them have 2 children with ASD, the age range of their children was 4 to 11 years. 40% of the participants reported that their children with ASD were living with comorbidity, including ADHD and speech delay, whereas another 40% of them did not, and the remaining 20% of them were not sure about the presence of comorbidity in their children. On the other hand, there were 7 participants who participated in the post-test, with 71.4% of them were females and 28.6% of them were males. Their age range was 31 to 45 years old, with a mean age of 38.57 ($SD = 4.928$). There were 57.1% of Bidayuh, 28.6% of Iban, and 14.3% of Chinese among these participants. As all of them have only 1 child with ASD, the children's ages ranged from 4 to 7 years. 42.9% of their children had comorbid speech delay, while 28.6% did not, and the remaining 28.6% were uncertain.

Table 4.1

Demographic Information of Participants

	Pre-test (<i>n</i> = 10)	Post-test (<i>n</i> = 7)
Gender		
Male	3(30%)	2(28.6%)
Female	7(70%)	5(71.4%)
Age	39.10*	38.57*
Ethnicity		
Malay	1(10%)	
Chinese	1(10%)	1(14.3%)
Bidayuh	5(50%)	4(57.1)
Iban	2(20%)	2(28.6%)
Kelabit	1(10%)	
Number of Child(ren) with ASD		
1	9(90%)	7(100%)
2	1(10%)	
Age of Child(ren) with ASD		
4	2(20%)	1(14.3%)
5	4(40%)	3(42.9%)
6	2(20%)	2(28.6%)
7	1(10%)	1(14.3%)
11	1(10%)	
Comorbidity		
Yes	4(40%)	3(42.9%)

No	4(40%)	2(28.6%)
Not Sure	2(20%)	2(28.6%)

*Data are means

Note. Frequency and percentage are calculated for gender, ethnicity, number of child(ren) with ASD, age of child(ren) with ASD, and comorbidity.

Missing Data

Among the data collected after the workshop, there is 30% of missing data. Initially, there were 10 participants who filled up the pre-test questionnaire, but the post-test questionnaire was filled up by only 7 of them, resulting in 3 incomplete data. Following the removal of these missing data, the final sample size available for data analysis is seven.

Outlier

Four outliers were identified in the post-test measurements (refer to Appendix K3). The boxplot revealed two outliers for post-test scores of parental stress, one lying beyond the upper whisker and the other beyond the lower whisker. Additionally, one outlier below the lower whisker was observed for post-test scores of knowledge of ASD, and one outlier above the upper whisker was detected for post-test scores of resilience. Considering that the outliers were detected in only post-test measurement, a decision was made to retain them within the dataset.

Normality Tests

Normality of Pre-test and Post-test scores

Normality assumptions for the pre-test and post-test scores of the parental stress, knowledge of ASD, resilience, and self-compassion were not violated, supported by the Shapiro-Wilk statistics which were not significant ($p > .05$). This suggested that the distributions of scores for both the pre-test and post-test measurements were approximately normally distributed (refer to Appendix K4).

Table 4.2

Shapiro-Wilk Test for Normality of Pre-test and Post-test Scores

	W	<i>p</i>
Pre-test score of parental stress	0.90	0.34
Post-test score of parental stress	0.95	0.69
Pre-test score of knowledge of ASD	0.91	0.37
Post-test score of knowledge of ASD	0.85	0.12
Pre-test score of resilience	0.94	0.62
Post-test score of resilience	0.91	0.43
Pre-test score of self-compassion	0.97	0.87
Post-test score of self-compassion	0.96	0.81

Note. Significant results suggest a deviation from normality.

Normality of Difference Scores

Using the Shapiro-Wilk Test, pairwise differences for the parental stress, knowledge of ASD, resilience, and self-compassion during the pre-test and post-test were found to be approximately normally distributed, as indicated by the p-values greater than .05 (refer to Appendix K5).

Table 4.3

Shapiro-Wilk Test for Normality of Difference Scores

	W	p
Parental stress	0.95	0.71
Knowledge of ASD	0.98	0.97
Resilience	0.93	0.53
Self-compassion	0.88	0.22

Note. Significant results suggest a deviation from normality.

Effect of the 3-Hour Workshop

Parental Stress

A paired-sample t-test was conducted to determine the effect of the 3-hour workshop on the parental stress of the parents of children with ASD before and after the 3-hour workshop (refer to Appendix K6). The results indicated that the mean score of parental stress after the 3-hour workshop ($M = 47.57$, $SD = 13.27$) was lower than before the 3-hour workshop ($M = 49.43$, $SD = 8.344$). The difference was 1.86, 95% CI [-5.41, 9.13], but it was not statistically significant, $t(6) = .63$, $p = .56$. Hence, the results do not support the H1

that the 3-hour workshop significantly decreases the level of parental stress of the parents of children with ASD.

Table 4.4

Results of t-test and Descriptive Statistics for Parental Stress

	Pre-test		Post-test		<i>n</i>	95% CI for Mean Difference	<i>r</i>	<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>						
Parental stress	49.43	8.34	47.57	13.27	7	-5.41, 9.13	.830*	.63	6	.56

Knowledge of ASD

A paired-sample t-test was conducted to determine the effect of the 3-hour workshop on the knowledge of ASD of the parents of children with ASD before and after the 3-hour workshop (refer to Appendix K7). The results indicated that the mean score of knowledge of ASD after the 3-hour workshop ($M = .51$, $SD = .19$) was higher than before the 3-hour workshop ($M = .50$, $SD = .10$). The difference was $-.01$, 95% CI $[-.14, .10]$, but it was not statistically significant, $t(6) = -.38$, $p = .71$. Hence, the results do not support the H2 that the 3-hour workshop significantly improves the knowledge of ASD of the parents of children with ASD.

Table 4.5

Results of t-test and Descriptive Statistics for Knowledge of ASD

	Pre-test	Post-test	95% CI
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	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>n</i>	for Mean Difference	<i>r</i>	<i>t</i>	<i>df</i>	<i>p</i>
Knowledge of ASD	.50	.10	.51	.19	7	-.14, .10	.795*	-.38	6	.71

Resilience

A paired-sample t-test was conducted to determine the effect of the 3-hour workshop on the resilience of the parents of children with ASD before and after the 3-hour workshop (refer to Appendix K8). The results indicated that the mean score of resilience after the 3-hour workshop ($M = 2.95$, $SD = .21$) was lower than before the 3-hour workshop ($M = 2.98$, $SD = .39$). The difference was .03, 95% CI [-.44, .49], but it was not statistically significant, $t(6) = .14$, $p = .90$. Hence, the results do not support the H3 that the 3-hour workshop significantly improves the level of resilience of the parents of children with ASD.

Table 4.6

Results of t-test and Descriptive Statistics for Resilience

	Pre-test		Post-test		<i>n</i>	95% CI for Mean Difference	<i>r</i>	<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>						
Resilience	2.98	.39	2.95	.21	7	-.44, .49	-.357	.14	6	.90

Self-Compassion

A paired-sample t-test was conducted to determine the effect of the 3-hour workshop on the self-compassion of the parents of children with ASD before and after the 3-hour workshop (refer to Appendix K9). The results indicated that the mean score of self-compassion after the 3-hour workshop ($M = 3.19$, $SD = .21$) was higher than before the 3-hour workshop ($M = 3.16$, $SD = .26$). The difference was $-.03$, 95% CI $[-.20, .13]$, but it was not statistically significant, $t(6) = -.54$, $p = .61$. Hence, the results do not support the H4 that the 3-hour workshop significantly improves the level of self-compassion of the parents of children with ASD.

Table 4.7

Results of t-test and Descriptive Statistics for Self-Compassion

	Pre-test		Post-test		n	95% CI for Mean Difference	r	t	df	p
	M	SD	M	SD						
Self-compassion	3.16	.26	3.19	.21	7	-.20, .13	.749	-.54	6	.61

Chapter 5

Discussion

Introduction

The study assessed a 3-hour workshop's effectiveness in supporting parents of children with ASD by reducing stress, increasing ASD knowledge, strengthening resilience, and fostering self-compassion. Despite integrating various techniques like psychoeducation, Cognitive Behavioural Therapy (CBT), informal mindfulness, and progressive muscle relaxation (PMR), the workshop did not significantly bring impact to these areas, hence failed to reject the null hypotheses. This chapter highlights possible challenges faced in the workshop, such as time constraints and low motivation for change among the parents. Additionally, it explores the discrepancies between the current findings and past research, discusses the implications and limitations of the current study as well as the recommendations for future research.

Possible Reasons for Insignificant Results

Limited Time Frame of Workshop

The limited duration of the 3-hour workshop may hinder the parents' ability to fully grasp the intricate knowledge and skills presented. As a result, it may restrict opportunities for parents to engage in real-life application of the newly acquired skills. Bassam and Tork (2019) highlighted that knowledge improvement is influenced by factors such as the rate of memorization, capacity for knowledge acquisition, accumulation of experience, and exposure to varied approaches of active learning during program implementation. However,

the workshop in the current study may have lacked diverse strategies to facilitate active learning, such as role-play sessions, due to time constraints. This limitation could have contributed to the insignificant effects observed in the workshop outcomes.

Low Motivation to Change among Parents

According to the Information-Motivation-Behavioural Skills (IMB) model proposed by Fisher et al. (1996), the motivation to implement newly acquired skills plays a pivotal role in effecting positive changes in daily life. Hence, the parents' motivation for change may derive from positive perceptions regarding the effectiveness of the workshop. However, the abbreviated duration of the workshop may impede parents' ability to fully learn and practice the skills, potentially influencing their perceptions of the skills' effectiveness. Consequently, this may diminish their confidence and motivation to integrate the skills into their daily routines, ultimately resulting in negligible outcomes. Additionally, in line with the Theory of Planned Behaviour (Ajzen, 1991), parents' perceived behavioural control over implementing these skills post-workshop may diminish if they harbour negative views regarding the effectiveness of these skills. This notion is supported by findings from a study among parents of children with ASD, where participants emphasised the importance of fluency in mindfulness and self-compassion skills for efficacy (Curl & Hampton, 2023). Moreover, Sahinidis and Bouris (2011) demonstrated that perceived training effectiveness significantly influences motivation levels, suggesting that parents' negative perspectives could dampen their motivation to implement change, thereby contributing to the lack of significant results in the present study.

Effect on the Level of Parental Stress

There was no significant difference in the level of parental stress among the parents before and after the 3-hour workshop, even with a slight reduction in the mean score. This finding contradicted the previous research, which suggested that interventions such as learning mindfulness techniques, relaxation methods, and participating in educational programs targeting parenting stress are effective in reducing stress levels among parents of children with ASD (Al-Oran et al., 2019; Ferraioli & Harris, 2012). This may be due to the increased awareness of discomfort after practicing mindfulness among the parents, which a heightened awareness of emotions may lead to an increase in stress. Studies showed that mindfulness involves discomfort and unpleasant experiences due to increased awareness of one's present situation, and may be overwhelming to the participants, therefore leading to insignificant effect on parental stress after attending this workshop (Baer et al., 2019; Binda et al., 2022).

Effect on the Knowledge of ASD

Despite observing an increase in mean score, the current study found no significant difference in the knowledge of ASD among the parents before and after the 3-hour workshop. This contrasted with the past research findings suggesting that interventions incorporating psychoeducation modules significantly improved parents' knowledge of ASD (Patra et al., 2015). Similarly, Bassam and Tork (2019) demonstrated that programs focusing on teaching ASD knowledge contribute to increased autism awareness and facilitate early diagnosis and appropriate treatment for children. However, the present study's findings diverged from these previous research outcomes.

Effect on the Level of Resilience

The study found no significant difference in the level of resilience among the parents before and after the 3-hour workshop, with a lower mean score reported in the post-test. This result was inconsistent with the findings of Behnamfar et al. (2023), which suggested that resilience among parents of children with ASD can be fostered through Cognitive Behavioural Therapy (CBT). Behnamfar et al. (2023) highlighted that CBT interventions focus on enhancing individuals' self-perception, problem-solving skills, coping mechanisms, and sense of adequacy, ultimately promoting resilience. Additionally, research on parents of children with cancer conducted by Khosrobeigi et al. (2021) revealed that learning coping strategies to manage negative emotions, such as stress, contributes to building resilience and efficacy in confronting their children's illness. Consequently, the hypothesis that integrating CBT would enhance resilience among parents of children with ASD was not supported by our study's findings, indicating a discrepancy with prior research findings.

Effect on the Level of Self-Compassion

In the present study, there was no significant difference in the level of self-compassion among the parents before and after the 3-hour workshop, despite an increase in the mean score in the post-test. Literature suggested that equipping parents with self-compassion skills facilitates in reducing parental stress and enhancing overall quality of life (Suen et al., 2021). To address self-compassion, the mindfulness technique, particularly informal mindfulness, was introduced during the workshop. However, these

findings were inconsistent with a study by Benn et al. (2012), which demonstrated greater enhancement in self-compassion following a 5-week mindfulness training where participants learned to practise forgiveness and compassion towards oneself and others in two of the sessions. Additionally, a 3-day virtual workshop conducted by Curl and Hampton (2023) yielded significant improvements in self-compassion among parents, contrary to our findings. Curl and Hampton (2023) attributed this effect to the inclusion of the Soothing Touch exercise, which was particularly helpful and easy for parents to practise. The absence of this exercise in the 3-hour workshop may be one of the reasons for the insignificant effect on self-compassion among the parents of children with ASD.

Implications

Drawing upon the Theory of Planned Behaviour, which emphasises attitude, perceived behavioural control, and subjective norms as key influencers of behavioural intentions and subsequent change, we expected significant improvements across these dimensions following the workshop. However, the findings of the current study revealed a lack of significant differences in self-compassion, resilience, parental knowledge about ASD, and parental stress before and after the workshop. While the Theory of Planned Behaviour provides a framework for understanding behaviour change, the current findings suggested that the anticipated shifts in attitude, perceived behavioural control, and subjective norms among parents following the workshop may not be materialising as anticipated. This raises questions about the workshop's effectiveness in achieving its intended outcomes. Besides, this also suggests that the factors driving parental behaviour might be more intricate than initially assumed. Hence, further research is warranted to delve deeper into these complexities and refine intervention strategies accordingly.

Besides, in the framework of the Information-Motivation-Behavioural Skills (IMB) model proposed by Fisher et al. (1996), motivation emerges as a critical driver of parental behaviour change, encompassing personal attitudes toward behaviour and social motivation derived from perceived support (Rongkavilit et al., 2010). However, our study's findings underscored the profound influence of motivation on parental engagement with our workshop content. This insight suggests that parents' perceptions regarding the efficacy of the workshop content may heavily impact their motivation to utilise the acquired skills, as also supported by Sahinidis and Bouris (2011). For instance, negative views regarding the workshop's effectiveness could erode parents' confidence and motivation to integrate these skills into their daily lives. To effectively address this, the IMB model, within the context of our study, emphasises the importance of focusing on enhancing parents' motivation by fostering positive attitudes toward workshop content. Furthermore, recognizing and addressing additional motivational factors such as individual coping strategies, perceived barriers to participation, and the quality of social support are crucial for promoting sustained engagement and participation in intervention programs. Henceforth, interventions should prioritise fostering positive attitudes toward intervention content and addressing individual and contextual factors that influence parental motivation. This will better support parents in effectively utilising acquired skills to navigate the challenges of raising a child with ASD and promote overall well-being.

Next, this study's findings indicated that the 3-hour workshop was ineffective in addressing parental stress, knowledge of ASD, resilience, and self-compassion among parents of children with ASD. This insight suggests that future researchers should reconsider the efficacy of such brief workshops and instead focus on redesigning interventions to better meet the needs of this population. While the results did not demonstrate significant differences in self-compassion, resilience, parental knowledge about

ASD, and parental stress before and after the workshop, they underscore the necessity of comprehensive support strategies tailored to the unique challenges faced by parents and families affected by ASD. Practitioners may consider supplementing brief workshops with follow-up sessions to enhance their effectiveness. Past studies have shown that interventions incorporating follow-up sessions have been successful in reducing parental stress, increasing knowledge of ASD, and fostering self-compassion and resilience (Bazzano et al., 2013; Benn et al., 2012; Hindi & Daley, 2017; Onyishi et al., 2023; Schwartzman et al., 2021). Furthermore, the findings also suggest that a one-size-fits-all approach may not be adequate for supporting parents of children with ASD. Future interventions should be tailored to accommodate individual differences such as cultural background, severity of ASD symptoms of children, and family dynamics.

Considering these findings, policymakers are encouraged to redirect resources towards evidence-based interventions that offer longer-duration workshops, individualized counselling sessions, or community-based support networks. For instance, they can use these findings to advocate for greater research funding and collaboration to develop and evaluate these evidence-based interventions to address the complex needs of parents in this population. Thereby, the effectiveness and sustainability of support services can be ensured, ultimately improving outcomes for both parents and children affected by ASD.

Limitations

Several limitations are identified in the current study. Firstly, our study identified an undercoverage bias, evident in the unequal distribution of participants across gender and ethnicity groups in our demographic results. Despite our endeavours to recruit a diverse participant pool, disparities in gender and ethnicity distributions suggest that certain

segments of the target population may have been inadvertently overlooked or excluded. Consequently, this limitation may restrict the generalizability of our findings to diverse populations, contexts, or settings (Bornstein et al., 2013).

Secondly, the generalizability of the findings may be constrained by the sampling methods employed, namely purposive sampling and voluntary response sampling. These non-probability sampling techniques, where the sample population is selected in a non-systematic process that does not guarantee equal chances for each subject in the target population (Elfil & Negida, 2017) may potentially limit the broader applicability of the findings of the study (Tipton et al., 2017).

Thirdly, a language barrier presents a notable limitation in the study. Among the participants, most of the parents were more comfortable using their native language, and this study did not account for their proficiency in English. Despite the workshop being predominantly conducted in English and the questionnaires being designed in the same language, this limitation may impede parents' comprehension of the content and questions of the questionnaires. As a result, parents may encounter difficulties understanding the workshop material and questionnaire items, which could reduce their engagement and comprehension of the techniques being taught (Tariq et al., 2016). This limitation highlights the importance of considering participants' language preferences and proficiency levels when designing interventions and research instruments.

Lastly, logistical arrangements emerge as a significant limitation in this study, contributing to increased dropout rates during the 3-hour physical workshop. This mirrors concerns highlighted by Păsărelu et al. (2023) in the online programs for parents of children with neurodevelopmental disorders, suggesting that high dropout rate is not exclusive to a particular delivery format but rather stem from broader challenges related to participant

engagement and retention. However, in the context of our study, these challenges in logistical arrangement, such as inconvenient timing, location constraints, or transportation issues may cause the increase of dropout rates. Additionally, these challenges may also compromise the internal validity of this study and restrict the generalizability of the findings of this study to parents of children with ASD due to the increased dropout rates that cause a smaller sample size.

Recommendations for Future Research

Firstly, future researchers are encouraged to redesign the intervention programs of the workshop. This could entail extending the duration of workshops to facilitate deeper exploration of topics and more extensive skill-building exercises. Besides, they may consider integrating follow-up sessions or supplementary resources to offer ongoing support and reinforcement of workshop content. This is to ensure the development of more tailored and comprehensive intervention programs, better equipped to support the well-being and resilience of parents of children with ASD.

Secondly, it is recommended for future studies with ample time resources to utilise probability sampling methods, which are more time-consuming but can enhance the generalizability of findings and mitigate undercoverage bias. One of the methods researchers may consider is stratified sampling, which involves dividing the population into homogeneous subgroups or strata based on specific characteristics (Elfil & Negida, 2017). This approach improves external validity and generalizability by ensuring that all subjects in the target population have equal chances of selection (Elfil & Negida, 2017). For example, researchers could stratify parents of children with ASD based on variables such as age, gender, children's age groups, or severity of ASD symptoms of children. Subsequently,

participants would be randomly selected from each stratum to partake in the workshop. This method would help prevent underrepresentation of certain subgroups and achieve a more balanced representation across different demographic and clinical characteristics.

Thirdly, future workshops could benefit from the inclusion of bilingual facilitators to support participants with limited English proficiency, addressing the language barrier limitation identified in the research. Besides, researchers should consider incorporating culturally adapted measures and materials to ensure participants fully comprehend the content and actively engage in intervention programs conducted during the workshop (Tariq et al., 2016). This approach promotes inclusivity and enhances the accessibility of the intervention, ultimately improving participant experiences and outcomes.

Lastly, future researchers should explore strategies to minimize logistical barriers, thereby reducing dropout rates in physical workshops. For instance, the researchers can conduct assessments to assess the needs and preferences of the participants to tailor workshop arrangements, accordingly, ultimately enhancing participant engagement and reducing dropout rates to improve the internal validity of the research. This proactive approach to addressing logistical challenges and aligning workshop arrangements with participant preferences can optimize participant retention and overall research outcomes.

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Appendices

Appendix A: Evidence-Based Interventions

Appendix A1: Relaxation Techniques

Author	Sample size	Intervention content	Intervention procedure	Measures	Main outcome
(1) Gika et al. (2012)	11 mothers of children with autism	Relaxation training that included relaxation breathing and progressive muscle relaxation for stress	6-week relaxation training. During the initial visit, participants received information on the procedure and potential benefits, along with practical training. At the end of the first visit, mothers received a CD containing guidance for relaxation breathing and progressive muscle relaxation. They were directed to practice the technique for 20 minutes, twice daily, for at least 6 weeks. The subsequent three visits,	14-items PSS PSI/SF VABS	In this case-series study, relaxation training significantly reduced maternal ratings of stress by > 30% of the baseline media values of both stress measures.

			conducted at home or in the hospital, addressed practical concerns and clarified any doubts regarding the practice of the techniques.		
(2) Tsiouli et al. (2014)	44 parents of children and adolescents with diabetes type 1	Stress management program that included relaxation techniques which are progressive muscle relaxation and diaphragmatic breathing.	Participants were trained with the combined relaxation techniques in 37 minutes over the eight weeks. Then, they were given materials containing instructions on exercising relaxation techniques and were asked to perform twice each day for eight weeks.	Salivary cortisol levels Lifestyle Parameter s: Questionn aire measuring daily routine, lifestyle, and health.	The intervention group showed a statistically significant decrease in perceived stress (from 27.21 to 19.00, $p =$.001) and parenting stress (from 85.79 to 73.68, $p = .003$).

				14 items- PSS	
				PSI-SF	
				HLC	
(3) Fotiou et al. (2016)	59 parents of infants <37 weeks of gestational age who admitted to the neonatal intensive care unit.	Psychoeducation and three relaxation techniques which were deep breathing exercise, progressive muscle relaxation, and guided imagery were introduced.	Five interactive training courses that lasted approximately 90 minutes each followed by a 3-month post- discharge period. The participants were given with an educational course that included information on prematurity, stress in NICU, breastfeeding, preparation for discharge, infant care at home, positive thinking, healthy lifestyle and self-knowledge. Then, participants were asked to practice the three different	14 items- PSS STAI 1 and 2 Salivary cortisol levels	The perceived stress decreased in both intervention and control groups but with no statistically significant difference ($p =$.699). An interaction coefficient of -0.53 was determined, suggesting that the effect of the intervention was more effective when participants had higher initial perceived stress scores.

relaxation techniques twice daily for 15 to 20 minutes. During the 3-month post-discharge period, participants were given an audio CD either recorded relaxation techniques or general information for infants to be practiced.

Notes. HLC, Health Locus of Control; ParentSS, Parental Stress Scale; PSS, Perceived Stress Scale; PSI/SF, Parenting Stress Index-Short Form; PWB, Psychological Well-Being; SCS, Self-Compassion Scale; STAI, State-Trait Anxiety Inventory; VABS, Vineland Adaptive Behaviour Scales.

Appendix A2: Mindfulness-Based Interventions

Author	Sample size	Intervention content	Intervention procedure	Measures	Main outcome
(1) Benn et al. (2012)	25 parents and 35 educators of children with special needs	SMART-in-Education which included stress management and relaxation techniques programme was implemented in the mindfulness training. Mindfulness practices encompassed specific mental exercises like focusing on thoughts or the breath, as well as assigned daily sitting practices and monitoring emotional and behavioral responses. Each session typically included Q&A sessions, informative	11 sessions were carried twice a week over a 5-week period. Nine of the sessions were 2.5 hours long and two of the sessions were 6 hours long Session 1: Introduction about mindfulness, guided visualization, written reflection, raisin exercise Session 2: Perceptions by setting intentions, moods and thoughts exercise, stress didactic and discussion, body scan, silent eating, emotions didactic, mindful stretching, breath awareness. Session 3: Responding versus reacting	FFMQ 14 items- PSS STAI CES-D PANAS 18 items- PWB SCS TTF	Cohen's d of MT on stress during post-MT was -0.40 and increased to -0.79 after a 2-month follow-up. Cohen's d of MT on self-compassion during post-MT was 0.40 and decreased to 0.37 after a 2-month follow-up.

		lectures, group discussions, demonstrations of mindfulness practices, and actual group mindfulness exercises.	Session 4: Pleasant, unpleasant and neutral affect Session 5: Exploring forgiveness Session 6: Working with conflict Session 7: Compassion and kindness Session 8: Working with anger Session 9: Silent retreat Session 10: Working with fear Session 11: Beginnings and endings A follow-up assessment was carried out 2 months later.	IRI PALS Every Parenting Scale ParentSS	
(2) Bazzan o et al. (2013)	66 parents and caregivers of individuals with	Meditation practice included awareness of breathing, a body scan, a loving kindness intention practice, supported group discussion of stressors	Eight weekly 2-hour sessions and 4-hour silent retreat. Session 1: Awareness of positive self	MAAS 10 items- PSS ParentSS	During the post-program, the findings showed a significant decrease of 33% in perceived stress and a significant decrease of 22% in parental stress of the participants. Besides, there was a

developmental disabilities	affecting parents/caregivers and gentle yoga/movement. A half-day retreat included extended practice of various meditations, stretching techniques, and practice to deepen the experience of being with one's own experience.	<p>Session 2: Guided body scan meditation, wandering mind-acceptance and refocusing.</p> <p>Session 3: Guided mindful yoga and guided sitting meditation, breathing awareness.</p> <p>Session 4: Awareness on breathing, sensations, body as a whole, listening and trusting in inner wisdom, awareness of stress and stress reactivity, loving kindness.</p> <p>Session 5: Mindfulness in problem-focused and emotion-focused coping strategies to stress, mindful pain management, loving kindness meditation.</p> <p>Session 6: Guided mindful yoga and meditation</p>	18 items-PWB SCS SRH	significant increase in mindfulness, self-compassion, and overall well-being among the participants. After a 2-month follow-up, mindfulness scores were increased compared to post-program scores. Besides, a significant reduction in perceived stress and parental stress was also shown.
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			<p>Session 7: Sitting meditation with choiceless awareness, mindfulness of moving out of self-destructive diet practices, mindful communication.</p> <p>Session 8: Body scan, meditation, and review.</p>		
(3)	15 parents of children with ASD	Six modules included instruction, discussion and a 30- to 40- minute meditation. Module 1: Developing Attention and Stability of Mind Module 2: Cultivating Insight into the Nature of Mental Experience Module 3: Cultivating Self – Compassion	<p>One 2-hour session each week for eight weeks with follow up.</p> <p>In each session, participants are led through a series of meditation exercises and discussions that help them progressively cultivate attention skills, first, and then other-centered thoughts while overcoming self-focused thoughts.</p>	<p>ABC</p> <p>PSI/SF</p> <p>14 items- PSS</p> <p>AAQ</p> <p>IRI</p> <p>MAAS</p>	<p>After eight weeks of CBCT, statistically significant differences in measure scores and large effect sizes were observed. CBCT showed a decrease in the perceived severity of the child’s symptoms, a decrease in parental stress, an increase in acceptance, an increase in empathy and compassion, an increase in behaviour flexibility, and improved parent-child</p>

		Module 4: Developing Equanimity and Impartiality Module 5: Developing Appreciation and Affection for Others Module 6: Empathy and Compassion		BRIEF-A PSOC	relationships. Specifically, there was a large effect size, $d = -3.03$ for the significant decline in parental stress.
(4) Lo et al. (2017)	180 parents of preschool children with developmental disabilities	Brief Mindfulness-Based Programme: Psychoeducation for stress management and mindfulness practice including body scan, mindful stretching, mindful sitting, loving-kindness exercise, and informal practice (mindful eating and mindful walking).	Six weekly sessions, nine total contact hours, and 10 minutes of daily home practice with follow-up. The training includes six sessions that lasted 1.5 hour were conducted by two instructors. Session 1: Introduction of Mindfulness Session 2: Reconnecting with body as parent. Session 3: Perception is the key to well-being.	PSI/SF CES-D ECBI IM-P KMS	The researchers found that the parents had significant improvement in parental stress, depression, and stress from parent-child dysfunctional interaction. Besides, the parents with severe stress and depression reported more significant positive changes, and they reported moderate effect sizes of -0.62 for stress and -0.57 for depression, respectively.

			Session 4: Responding versus reaction in parental stress.		
			Session 5: Self-care and kindness		
			Session 6: Mindfulness in daily family life.		
(5)	46 parents	Mindfulness-Based	One 2-hour session each week	PSI/SF	The researchers found that the
Neece	of children	Stress Reduction was	for 8 weeks. The participants		treatment group had
(2013)	with	consisted of three	attended the eight sessions and	FIQ	significantly less stress and
	developmental	components:	a meditation retreat after the 6 th	CES-D	depression as well as greater life
	delays	Didactical material	session.		satisfaction compared with wait
		covering the concept of	After that, they were also	SWLS	list-control parents. Besides, a
		mindfulness, the	required to have daily home		large effect size that ranged from
		psychology and	practice based on the audio and	CBCL-	$d = 0.70$ to 0.90 for treatment
		physiology of stress and	CDs with instruction.	1.5-5	group differences at the post-
		anxiety, and ways to			treatment was observed across
		implement mindfulness.			all parental mental health
		Mindfulness exercise		SUDS	measures which are PSI, FIQ,
		included body scan,			and CES-D. Specifically, $d = -$
		sitting meditation with			0.70 for the effect of parental
					stress.

		awareness of breath and mindful movement. Discussion and sharing			
(6) Singh et al. (2020)	195 mothers of children with ASD	Three-day stepped-care model of the Mindfulness-Based Positive Behavior Support (MBPBS) program included mindfulness training: three basic meditations, four immeasurable, five hindrances, three poisons, beginner's mind, ethical precepts, daily logs of meditation, journaling and Positive Behavior Support (PBS) training: guiding principles, goals for mother and child,	10-week pre-intervention control condition, 30 weeks of implementation of intervention followed by a follow-up each year for 3 years. Day 1: Mindfulness Training Day 2: PBS Training Day 3: Mindfulness and PBS training and practice to review and practice of daily meditation for the mothers	10 items-PSS	The researchers found that there is the largest progressive decline in perceived stress in the group using MBPBS, followed by the mindfulness-based (MB) group with the least decline in the positive behaviour support (PBS) group. Besides, a significantly large effect size, $\eta^2 = 0.47$ was also observed in the group (MBPBS, MB, and PBS).

		gathering positive behaviour intervention and support (PBIS) plans, assessment instruments, designing PBIS plans and questions for the plans.			
(7)	21 parents of children with ASD (10 in mindfulness group, 11 in skills training group). However, only 15 completed the training programme.	A. Mindfulness-Based Parent Training Sharing of mindfulness techniques in daily life (observing, describing events and personal responses, nonjudgmental acceptance, distancing from thoughts, staying present and being effective. Discussion about pleasant event – link	Each of the programme consisted of eight weekly meetings for two hours. Mindfulness-Based Parent Training Week 1: Introduction to mindfulness principles Week 2: Practice nonjudgmental acceptance Week 3: Identifying automatic thoughts. Week 4: Accepting/distancing from thoughts.	PSI/SF GHQ-28 MAAS ABA Questionnaire	The mindfulness group exhibited significantly greater improvements in both the parenting stress index and general health questionnaire compared to the skills group. There was a large effect size, $d = -2.03$ within the mindfulness group, and $d = -1.59$ between the mindfulness group and skills training group. Nevertheless, it's important to note that the sample size is insufficient to fully capture the extent of the effect.

between activity and mood	Week 5: Staying Present (Part 1)
Practice exercise	Week 6: Staying Present (Part 2)
Group discussion	
Homework	Week 7: Discussion on pleasant events
B. Skills-Based Parent Training (in lecture points)	Week 8: Discussion on effectiveness of mindfulness practice.
Psychoeducation	
A review of evidence-based treatment	B. Skills-Based Parent Training
Behavioral strategies	Week 1: Psychoeducation
Role Play	Week 2: Discussion on reinforcement
Group activities and discussion	Week 3: Discussion on direct instruction
Discuss about importance of play and social skills.	Week 4: Naturalistic teaching such as role play
Sharing on successes and failures from the past	Week 5: Social skills and play
week.	Week 6: Functional assessment

Week 7: Discussion on
decreasing behaviour

Week 8: Discuss punishment
procedures.

Notes. AAQ, Acceptance and Action Questionnaire; ABA, Applied Behavior Analysis; ABC, Aberrant Behaviour Checklist; BRIEF-A, Behaviour Rating Inventory of Executive Function-Adult; CES-D, Center for Epidemiological Studies Depression; FFMQ, Five-Facet Mindfulness Questionnaire; MAAS, Mindful Attention Awareness Scale; CBCL, Child Behaviour Checklist; CES-D, Center for Epidemiological Studies Depression; ECBI, Eyberg Child Behavior Inventory; FIQ, Family Impact Questionnaire; GHQ, General Health Questionnaire; IM-P, Interpersonal Mindfulness in Parenting Scale; IRI, Interpersonal Reactivity Index; KMS, Kansas Marital Satisfaction Scale; PALS, Patterns of Adaptive Learning Scale; PANAS, Positive and Negative Affect Schedule; ParentSS, Parental Stress Scale; PSS, Perceived Stress Scale; PSOC, Parenting Sense of Competency Scale; PSI/SF, Parenting Stress Index-Short Form; PWB, Psychological Well-Being; SCS, Self-Compassion Scale; SRH, Self-Rated Health; STAI, State-Trait Anxiety Inventory; SUDS, Subjective Units of Distress Scale; SWLS, Satisfaction with Life Scale; TTF, Tendency to Forgive.

Appendix A3: Psychoeducation

Author	Sample size	Intervention content	Intervention procedure	Measures	Main outcome
(1) Hemdi and Daley (2017)	62 mothers of children with ASD	<p>Psychoeducation</p> <p>Intervention: Etiology of Autism</p> <p>Discussion on ways to reduce stress.</p> <p>Discussion on ways to manage a child's behavioural problem.</p> <p>Discussion on mood.</p> <p>Information about resources available.</p>	<p>The first session was a 60-minute face-to-face session in which the intervention materials were distributed to the participants, and they were informed about the etiology of ASD. Session 2 to 5 were 30-minute therapeutic support included discussion on ways to reduce stress, manage child's behavioural problem, handle mood and resources available through WhatsApp with follow-up.</p>	<p>PSI-SF</p> <p>HADS</p> <p>SDQ</p> <p>ISAA</p> <p>ASH</p>	<p>Researchers found large effect size on stress ($d = -1.52$) and depression ($d = -2.14$) for psychoeducation intervention after the postintervention of and 8-week follow-up. Although the results showed that psychoeducation intervention with WhatsApp support is beneficial, condensed sessions on stress and interventions targeting anxiety are still needed for the mothers of children with ASD.</p>
(2) Zimmerman (2013)	8 parents of adolescents with ASD	<p>The group sessions covered the topic of stress reduction, individualized</p>	<p>Four of the group sessions that lasted no more than one and half hours each were facilitated using a video-conferencing</p>	<p>SIPA</p>	<p>Quantitative and qualitative data were collected in this study. The quantitative findings showed that a small effect size on stress,</p>

		educational programmes, puberty and transition to adulthood.	website called BigMaker. Each participant received a brief online training session that designed to remove user error and technological issues during sessions.		which is $d = -0.24$, and large effect sizes on knowledge acquisition through the web-based group was observed, which are $d = 1.26, 3.03$ and 1.08 for different topics of knowledge. On the other hand, the findings of the qualitative study showed participants were showing a positive attitude towards web-based groups. However, some participants had mentioned that the technical difficulties that happened were making them feel frustrated.
(3) McAlee se et al. (2013)	83 parents of children with ASD attended the workshops but only 74	Psychoeducational and psychotherapeutic group programme: Knowledge of ASD Intervention strategies on sensory issues	Three sessions that were approximately three hours for each session were conducted once a week for three weeks. Session 1: Parents received ASD training that explained	Wright and Williams' (2007) Pre-course and Post	A large effect size on parental understanding of social deficits, cognitive and behavioural difficulties of ASD, the management and strategies used to support a child with ASD and

	parents attended all three workshops in the correct timeframe.	Behavioural Intervention	the symptoms using “triad of impairments”. Session 2: Addressing hypo-arousal and hyper-arousal through intervention strategies. Session 3: Discuss theory of using visual aids to aid behavioural difficulties.	course Questionnaires	self-reported self-efficacy was observed for the three-session psychoeducational and psychotherapeutic group program, which are $\eta^2 = 0.726, 0.748, 0.704, 0.665$ respectively.
(4) Patra et al. (2015)	18 parents of children with ASD	Parent psychoeducation intervention module that consisted of three sections: i. Socialization ii. Animation iii. Imitation iv. Play v. Communication vi. Turn Taking vii. Modeling language	A half-day workshop that consisted of six 2-hour sessions. Parents participated in a series of sessions covering general information, socialization, and communication (three sessions each), with two sessions dedicated to behavioral problems and one session addressing sensory issues. Throughout these sessions, parents were actively	ISAA GDT and VSMS for children below 6 years of age MISIC and CPM for children	The study revealed that a parent psychoeducation intervention module focusing on ASD) led to a reduction in parenting stress and an enhancement in ASD-related knowledge among parents in the middle socioeconomic status.

viii.	Expanding language	encouraged to engage and interact with one another.	above 6 years
ix.	Behavioral problems		Family
x.	Define and measure behaviour.		interview
xi.	Track the behaviour.		Parent's knowledge of ASD
xii.	Types of reinforcements and effectiveness.		questionnaire

Notes. ASH, Arabic Scale of Happiness; CPM, Raven's Coloured Progressive Matrices; GDT, Gesell, Drawing Test; HADS, Hospital Anxiety and Depression Scale; ISAA, Indian MISIC, Malin's Intelligence Scale For Indian Children; Scale for Assessment of Autism; PSI/SF, Parenting Stress Index-Short Form; SDQ, Strength and Difficulties Questionnaire; SIPA, Stress Index for Parents of Adolescents; VSMS, Vineland Social Maturity Scale.

Appendix A4: Cognitive Behavioural Therapy (CBT)

Author	Sample size	Intervention content	Intervention procedure	Measures	Main outcome
(1) Behna mfar et al. (2023)	45 mothers of children with ASD (Two experimental groups of CBT and ACT and control group have 15 mothers respectively)	CBT: <ol style="list-style-type: none"> i. ABC model training ii. Discussion on unhealthy negative emotions, negative spontaneous thoughts, ways to challenge and fix illogical beliefs iii. Learning techniques iv. Summarization ACT: <ol style="list-style-type: none"> i. Mindfulness training 	Eight 90-minute sessions of CBT and ACT training. Each session commenced with a review of the previous assignments, followed by the training. At the session's conclusion, participants engaged in a question-and-answer session, addressing and resolving any issues they encountered.	CR-RISC-2002	The researchers found the findings from the MANCOVA analysis strongly indicate a linear difference between the variables in the three groups (CBT, ACT, and control group), with a large effect size of 0.83 and statistically significant results, as reflected in the low p-value ($p < .001$) and high F-statistic ($F = 93.60$). Besides, the findings from Turkey's post hoc test also showed that ACT training is more effective in the components of perception of individual competence and spiritual effects while CBT is more effective on trust in

n on ways to improve mood, difference between surrender and tolerance, disagreement between self as content and context.

ii. Homework

individual instincts, positive acceptance, and control of mothers of children with ASD. Hence, the obtained results shoes that CBT has a more pronounced effect than ACT on the resilience of mothers of children with ASD.

(16)	20 mothers of children with autism	Group Cognitive Behavior Therapy: Relaxation training Discussion about feelings, automatic thoughts, cognitive errors Summarization	Seven 90-minute group cognitive behavior therapy sessions on a weekly basis. Session 1: Introduction of CBT and psychoeducation Session 2: Discussion about feelings and analyzing cost benefits. Session 3: Identify automatic thoughts and link of automatic	PSI-SF DASS CBCL	The findings showed a significant decrease in mother's parenting stress after the intervention as there was a significant difference between pre-test and post-test scores of parenting stress and subscale of parenting distress.
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			thoughts with emotions and behaviours		
			Session 4: Identify and modify cognitive errors.		
			Session 5: Modifying underlying belief.		
			Session 6: Continue to work on belief.		
			Session 7: Summarization.		
(17) Onyishi et al. (2023)	97 parents of children with ASD (48 were randomly allocated into CBT while 49 were in the waitlist comparison group)	CBT intervention: ABCDE techniques Assessments Goal-setting Progressive relaxation techniques Discussion Disputation Cognitive restructuring Problem-solving skills Desensitization	12 sessions of 2-hour session of CBT for 12 weeks with follow-up. Session 1 – 2: Introduction Session 3 – 4: Using CBT model in relationships between thoughts, activities and emotions. Session 5 – 6: Discuss strategies to increase positive thoughts and decrease unhealthy assumptions.	21 items- DASS STTS-R	The researchers found the findings from the MANOVA analysis indicated that DASS- stress has a strong effect size in post-test and follow-up which is $\eta^2 p = -0.59$ and -0.53 respectively. Hence, the obtained results confirmed that CBT intervention reduces stress among parents of children with ASD and was maintained through a 3-month follow-up.

Unconditional self-acceptance	Session 7 – 8: Continue to dispute irrational belief associated with autism and parenting.
Guided imagery	
Rationalizing	
Reframing	Session 9 – 10: Develop the habit of functional health practices and positive psychology.
Homework	Session 11 – 12: Ending treatment and relapse prevention.

Notes. CBCL, Child Behaviour Checklist; CR-RISC, Connor-Davidson Resilience Scale; DASS, Depression Anxiety Stress Scales; PSI-SF, Parenting Stress

Index-Short Form; STTS-R, Satisfaction with Therapy and Therapist Scale-Revised

Appendix A5: Integrated Interventions

Author	Sample size	Intervention content	Intervention procedure	Measures	Main outcome
(18) Tay (2017)	9 parents of children with ASD	Group Therapy Module: Psychoeducation about ASD Relaxation Strategies Coping strategies Behavioural management Collaborative problem solving Teaching of relaxation techniques for children by caregivers and social workers Discussion on the roles of allied health professionals	A six-session group intervention module was developed. Session 1: Introduction, psychoeducation, deep breathing exercise. Session 2: Introduction about mindfulness STOP, progressive muscle relaxation, coping strategies. Session 3: Revision of relaxation strategies, Discussion on positive coping mechanism and behavioural management. Session 4: Discussion of collaborative problem solving and personal experience.	GHQ-28 PSI-SF	The Mindfulness STOP and relaxation techniques were proven by the literature review and participants to reduce somatic symptoms, stress and negative mood state.

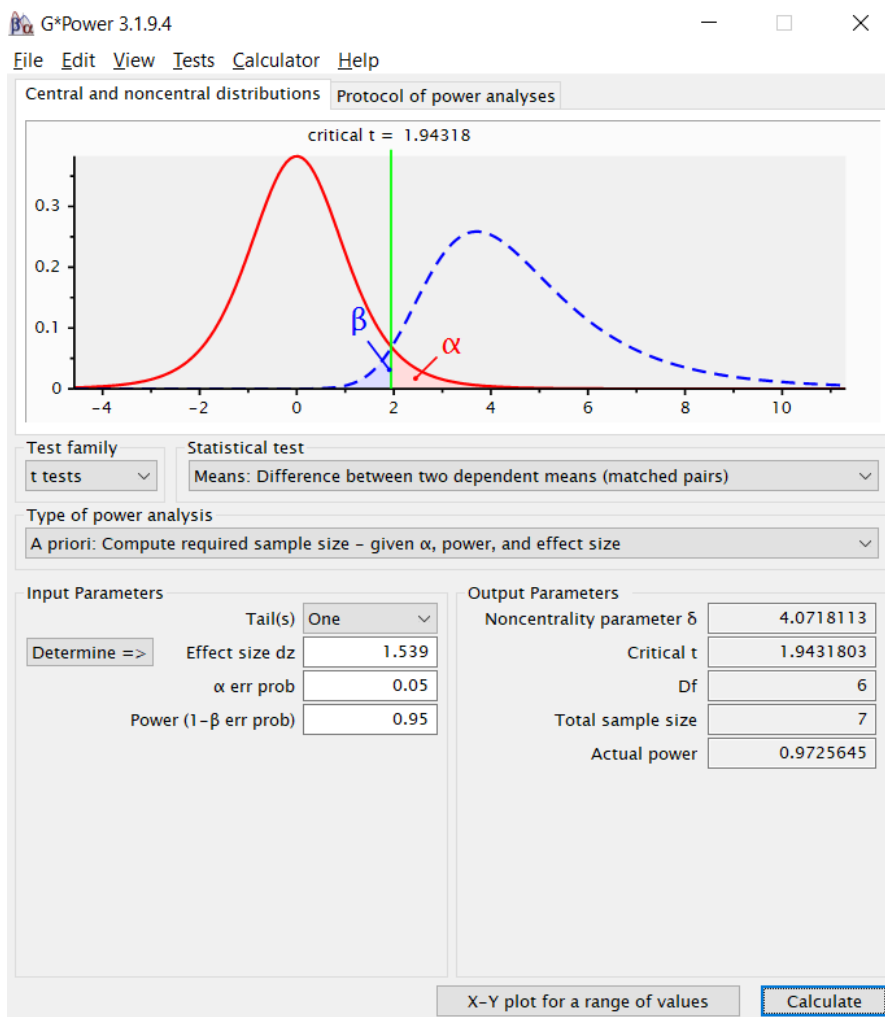
			Session 5: Teaching of relaxation techniques for children and social stories.		
			Session 6: Discussion on roles of allied health professionals, revision.		
(19)	35 parents of children with ASD	AMOR Method based on CBT and MBSR.	The 90-minute group sessions occurred weekly for eight consecutive weeks with six to nine parents per group.	25 items- CD-RISC	There was a significant increase in resilience ($d = 1.42$) and decrease in parenting stress ($d = -1.47$). After the 2-month follow-up, there was a maintenance of gaining in resilience and reduction of parenting stress.
Schwarzman et al. (2021)		A. CBT Psychoeducation Behavioural activation Identify Cognitive distortions. Cognitive restructuring Weekly homework assignments Review B. MBSR New Stress Mindsets Gratitude Practice Mindfulness	Homework was assigned after each session. A follow-up was conducted after two months. Session 1: Introduction of stress and resilience Session 2: Understand stress mindsets. Session 3: Mindfulness psychoeducation and practice Session 4: Acceptance and resilience	21 items- DASS SRS-2 PSI-4-SF AAQ-II MAAS LOT-R	

Grief and Loss Processing	Session 5: Grief, loss and resilience	SCS-SF
Values and Committed Actions	Session 6: Psychoeducation on optimism	FES
Self-compassion	Session 7: Thoughts quiz,	
Optimistic Thinking	cognitive distortions, cognitive restructuring	QMI
	Session 8: Review and prioritizing resilience strategies	SDQ
		ABC-2

Notes. ABC-2, Aberrant Behaviour Checklist-Second Edition; AAQ, Acceptance and Action Questionnaire; AMOR, Acceptance, Mindfulness, Optimism, Resilience; CR-RISC, Connor-Davidson Resilience Scale; DASS, Depression Anxiety Stress Scales; FES, Family Empowerment Scale; GHQ, General Health Questionnaire; LOT-R, Life Orientation Test-Revised; MAAS, Mindful Attention Awareness Scale; MBSR, Mindfulness-Based Stress Reduction; PSI-4-SF, Parenting Stress Index-Fourth Edition-Short Form; QMI, Quality of Marriage Index; SCS-SF, Self-Compassion Scale- Short Form; SDQ, Strength and Difficulties Questionnaire; SRS-2, Social Responsiveness Scale-Second Edition.

Appendix B: Sample Size Calculation

Appendix B1: GPower Analysis



Appendix B2: Effect Sizes Calculation

Average Effect Size of Interventions for Parental Stress

$$= (0.7 + 1.59 + 3.03 + 1.47 + 0.24) / 5$$

$$= 7.03 / 5$$

$$= 1.406$$

Average Effect Size of Interventions for Knowledge of ASD

$$= (1.26 + 3.03 + 1.08) / 3$$

$$= 5.37 / 3$$

$$= 1.790$$

Average Effect Size of Interventions for Resilience

$$= 1.42 / 1$$

$$= 1.420$$

Total Mean Effect Size

$$= (1.406 + 1.790 + 1.420) / 3$$

$$= 4.616 / 3$$

$$= 1.539$$

Appendix C: Request and Approval to Conduct Research in KAA

Appendix C1: Email of Request for Permission

11/29/23, 1:18 PM

Universiti Tunku Abdul Rahman Mail - Permission Letter for Conducting Final Year Project at Kuching Autistic Association (K...



CHIN ROU HENG JOANNE <joannechin20021126@1utar.my>

Permission Letter for Conducting Final Year Project at Kuching Autistic Association (KAA) and Workshop Proposal

1 message

CHIN ROU HENG JOANNE <joannechin20021126@1utar.my>

Wed, Nov 29, 2023 at 1:17 PM

To: cvcherchong@gmail.com

Cc: limsuki2002@1utar.my, tanziching7@1utar.my, Kok Wai Tay <taykw@utar.edu.my>

Dear Mdm Cherrie,

We are currently final year students in the Bachelor of Social Science (Hons) Psychology program at Universiti Tunku Abdul Rahman (UTAR), along with our Final Year Project supervisor, Mr Tay Kok Wai.

We are reaching out to seek your esteemed organization's permission to conduct our final year research project, titled "Together, We Stand: Embracing the Dawn After the Dark - The Effect of a 3-Hour Workshop on Parental Stress, Knowledge of Autism Spectrum Disorder (ASD), Resilience, and Self-Compassion among the Parents of Children with ASD" at KAA.

Attached below are the permission letter and workshop proposal. Feel free to express your concerns regarding the permission letter and workshop proposal. We are looking forward to hearing from you soon.

Thank you so much.

Regards,
Joanne Chin
Lim Shu Ping
Tan Zi Ching

2 attachments

 **Permission Letter.pdf**
388K

 **Workshop Proposal.pdf**
150K

Appendix C2: Permission Letter



UNIVERSITI TUNKU ABDUL RAHMAN

Wholly Owned by UTAR Education Foundation (Company No. 578227-M)

23 November 2023

Dear Sir/Madam,

I trust this letter finds you in good health. I am Tay Kok Wai, the Final Year Project supervisor for Joanne Chin Rou Heng, Lim Shu Ping, and Tan Zi Ching, final year students pursuing a Bachelor of Social Science (Honours) Psychology at Universiti Tunku Abdul Rahman (UTAR).

We are writing to formally request your esteemed organization's permission to conduct our final year research project, titled "Together, We Stand: Embracing the Dawn After the Dark - The Effect of a 3-Hour Workshop on Parental Stress, Knowledge of Autism Spectrum Disorder (ASD), Resilience, and Self-Compassion among Parents of Children with ASD," at the Kuching Autistic Association (KAA).

The primary aim of our research is to evaluate the efficacy of a 3-hour workshop designed to alleviate parental stress and enhance knowledge of ASD, resilience, and self-compassion among parents of children with ASD. Our specific research objectives include:

1. Assessing the effectiveness of the 3-hour workshop in reducing parental stress.
2. Evaluating the impact of the workshop on improving knowledge of ASD among parents.
3. Gauging the effectiveness of the workshop in enhancing parental resilience.
4. Measuring the impact of the workshop on improving levels of self-compassion among parents.

Our team will conduct the workshop at the KAA Centre, targeting parents of children with ASD. We extend an invitation to parents associated with your organization to participate in this research, as a significant number of participants are required.

The research involves administering an online pre-test on parental stress, ASD knowledge, resilience, and self-compassion before the workshop. A post-test will follow two weeks after the workshop to measure changes in these variables. All collected information, including test responses and demographic data, will be treated with utmost confidentiality and used solely for research purposes. I assure you that the research poses no risk to participants, and they reserve the right to withdraw at any point without consequence. Regrettably, due to the academic nature of the project, we are unable to provide incentives for participation.

Enclosed with this letter are the detailed workshop specifications for your review. We sincerely hope for the opportunity to collaborate with your esteemed organization on this research, contributing valuable insights to the community of parents of children with ASD. If you require further information, please do not hesitate to contact us. We eagerly await your response.

Thank you for your time and consideration.

Sincerely,

Tay Kok Wai (FYP Supervisor)
Joanne Chin Rou Heng (Student)
Lim Shu Ping (Student)
Tan Zi Ching (Student)
Department of Psychology and Counselling
Universiti Tunku Abdul Rahman

Kampar Campus : Jalan Universiti, Bandar Barat, 31900 Kampar, Perak Darul Ridzuan, Malaysia
Tel: (605) 468 8888 Fax: (605) 466 1313
Sungai Long Campus : Jalan Sungai Long, Bandar Sungai Long, Cheras, 43000 Kajang, Selangor Darul Ehsan, Malaysia
Tel: (603) 9086 0288 Fax: (603) 9019 8868
Postal Address: PO Box 11348, 50744 Kuala Lumpur, Malaysia
Website: www.utar.edu.my

Appendix C3: Workshop Proposal

Workshop Proposal

Date: 24 February 2024 (Saturday)

Time: 9.00a.m. to 1.00p.m.

Venue: Kuching Autistic Association Centre, Kuching, Sarawak

Target Participants: Parents of children with Autism Spectrum Disorder (ASD) without other comorbidities

Number of Targeted Participants: 40

Fee: Free of charge

Workshop Title: Together, We Stand: Embracing the Dawn After the Dark

Workshop Objectives:

1. To reduce the level of parental stress among parents of child(ren) with Autism Spectrum Disorder (ASD) in Kuching, Sarawak.
2. To improve the knowledge of ASD among parents of child(ren) with ASD in Kuching, Sarawak.
3. To improve the level of self-compassion among parents of child(ren) with ASD in Kuching, Sarawak.
4. To improve the level of resilience among parents of child(ren) with ASD in Kuching, Sarawak.

Workshop speakers:

1. Mr Tay Kok Wai, Lecturer of Department of Psychology and Counselling in Universiti Tunku Abdul Rahman (UTAR) with Master of Clinical Psychology (taykw@utar.edu.my, 010-3766221)

2. Joanne Chin Rou Heng, Psychology degree student from UTAR
(joannechin20021126@utar.edu.my, 011-25028178)
3. Lim Shu Ping, Psychology degree student from UTAR (limsuki2002@lutar.my, 012-5176030)
4. Tan Zi Ching, Psychology degree student from UTAR (tanziching7@lutar.my, 012-3857246)

Workshop Flow:

Time (Duration)	Content
9.00a.m.-9.50a.m. (50 minutes)	Psychoeducation on Autism Spectrum Disorder (ASD) <ul style="list-style-type: none"> • Diagnosis of ASD • Symptoms of ASD • Etiology and causes of ASD • Misconceptions and stigma about ASD • Treatment options of ASD • Financial assistance resources
9.50a.m.-10.00a.m. (10 minutes)	Psychoeducation on self-compassion, resilience and parental stress <ul style="list-style-type: none"> • Importance and impacts of these components
10.00a.m.- 10.35a.m. (35 minutes)	Introducing Mindfulness <ul style="list-style-type: none"> • Awareness of here and now Hands-on practice <ul style="list-style-type: none"> • Informal mindfulness (e.g., breath awareness)
10.35a.m.- 10.50a.m. (15 minutes)	Break

<p>10.50a.m.-11.40a.m (50 minutes)</p>	<p>Introducing principles of Cognitive Behavioural Therapy (CBT)</p> <ul style="list-style-type: none"> • CBT Model • Identification of cognitive distortions • Common examples of dysfunctional beliefs among parents of children with ASD <p>Hands-on practice</p> <ul style="list-style-type: none"> • Cognitive restructuring (e.g., thought record)
<p>11.40a.m. - 12.00p.m. (20 minutes)</p>	<p>Hands-on practice of relaxation techniques</p> <ul style="list-style-type: none"> • Progressive muscle relaxation • Deep breathing
<p>12.00p.m.-1.00p.m. (1 hour)</p>	<p>Q and A session</p>

Appendix C4: Approval Letter from KAA

Mr. Tay Kok Wai
 Department of Psychology and Counselling
 Universiti Tunku Abdul Rahman (UTAR)
 31900 Kampar, Perak, Malaysia
 Tel No: 05-468 8888 (ext 4294)
 Fax No: 05-466 7597

Date: 8 January 2024

Dear Mr. Tay,

ACCEPTANCE TO UNDERGO THE WORKSHOP

This is to inform you that our company would like to accept the following workshop training in our company for **1 day on 24 February 2024**.

Workshop Title : Together, We Stand: Embracing the Dawn After the Dark
 Venue : Kuching Autistic Association
 Time : 9 am to 1 pm
 Target Participants : Parents of Children with Autism Spectrum Disorder (ASD)
 without other comorbidities
 Number of Targeted Participants : 40

During the workshop period, you can directly contact to:

Name : Darren Anak Charlie
 Designation : Programme Coordinator
 Contact No. : 014-376 3751
 Email Address : darrencharlie91@gmail.com
 Company Address : Kuching Autistic Association
 (For visitation) Lot 5492, Block 225 KNLD,
 Lorong 15, Jalan Desa Wira, Batu Kawa,
 93250, Kuching, Sarawak

Yours sincerely,



Name: Darren Anak Charlie

Designation: Programme Coordinator



Company Official Stamp:

Appendix D
Workshop Flow

Time (Duration)	Content
9.00a.m.-9.30a.m. (30 minutes)	Fill up pre-test questionnaire (on voluntary basis)
9.30a.m.-10.15a.m. (45 minutes)	Psychoeducation on Autism Spectrum Disorder (ASD) <ul style="list-style-type: none"> · Diagnosis of ASD · Symptoms of ASD · Etiology and causes of ASD · Misconceptions and stigma about ASD · Treatment options of ASD
10.15a.m.-10.25a.m. (10 minutes)	Psychoeducation on self-compassion, resilience and parental stress <ul style="list-style-type: none"> · Definition, importance and impacts of these components · Self-compassion exercise (How would I treat a friend)
10.25a.m.-10.40a.m. (15 minutes)	Break

10.40a.m.-10.55a.m. (15 minutes)	<p>Introducing Mindfulness</p> <ul style="list-style-type: none"> · Awareness of here and now <p>Hands-on practice</p> <ul style="list-style-type: none"> · Informal mindfulness (STOP mindfulness)
10.55a.m.-11.00a.m. (5 minutes)	Break
11.00a.m.-11.40a.m. (40 minutes)	<p>Introducing principles of Cognitive Behavioural Therapy (CBT)</p> <ul style="list-style-type: none"> · Hot Cross Bun Diagram · Identification of cognitive distortions · Common examples of cognitive distortions in parental context · Cognitive restructuring (Socratic questioning)
11.40a.m.-11.50a.m. (10 minutes)	<p>Hands-on practice of relaxation techniques</p> <ul style="list-style-type: none"> · Progressive muscle relaxation · Diaphragmatic breathing
11.50p.m.-12.00p.m (10 minutes)	Question and Answer session

Appendix E: Workshop Materials

Appendix E1: PowerPoint slides

7/4/2024



1



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3



4



5



6

Autism Spectrum Disorder

Characterized by:

- a. Significant and persistent deficits in social interaction and communication skills
- a. Restricted and repetitive patterns of interest and behaviours

7

Prevalence and Course of ASD

- Malaysia
- 1 in 625 children
- Occur in all social classes
- More common in boys
- Girls that are affected tend to have more severe intellectual impairments

8

Age of onset

- Most often identified after the child's 2nd birthday and diagnosis is made in preschool period or later.
- The earliest point in development for a reliable detection period is from 12-18 months.
- Diagnosis made in 2 to 3 years are generally stable

9

How is ASD diagnosed?

10

Early Warning Signs

1. No big smiles or joyful expressions by 6 months or thereafter
2. No back-and-forth sharing of sounds, smiles, or other facial expressions by 9-month
3. No babbling by 12 months
4. No back-and-forth gestures by 12-month
5. Any loss of speech, babbling or social skills at any age

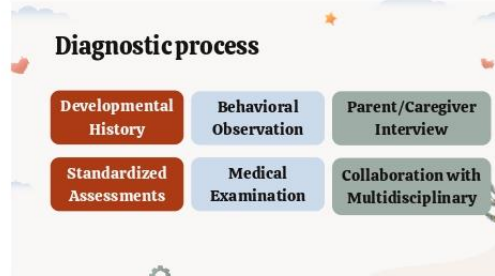
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HOW?

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The diagnosis of autism spectrum disorder (ASD) involves medical and clinical assessments.

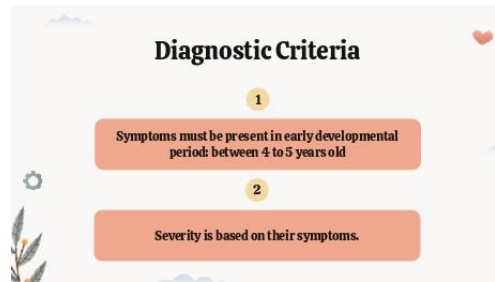
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There is no specific physical features that can reliably indicate the presence of ASD.

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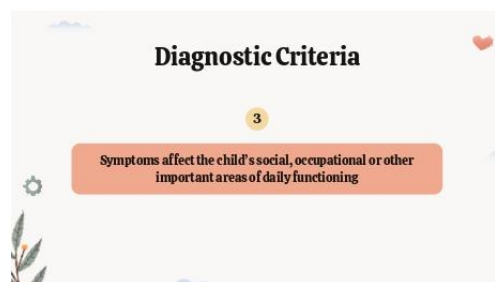


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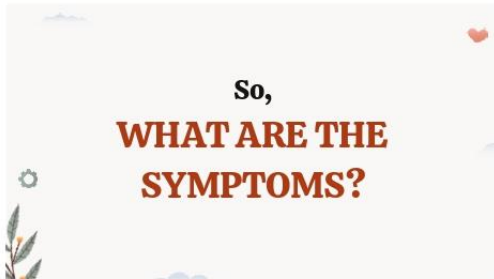
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Severity level	Social communication	Restricted, repetitive behaviors
Level 3 "Requiring very substantial support"	Severe deficits in verbal and nonverbal social communication skills cause serious impairments in functioning, very limited initiation of social communication, and restricted responses to social communication. For example, a person with this level of disability speaks only directly to others, initiates interaction only when prompted, and has severely limited capacity to respond to social communication.	Intolerance of change, extreme difficulty coping with change, or other restricted, repetitive behaviors severely enough to affect the person's functioning in all spheres. Canal behaviors: clapping, hand-flapping, or other.
Level 2 "Requiring substantial support"	Marked deficits in verbal and nonverbal social communication skills cause significant impairments in functioning, limited initiation of social communication, and restricted or abnormal responses to social communication. For example, a person with this level of disability initiates communication only when prompted, and has severely limited capacity to respond to social communication.	Intolerance of change, difficulty coping with change, or other restricted, repetitive behaviors severely enough to affect the person's functioning in all spheres. For example, a person with this level of disability has severely limited capacity to respond to social communication, and has severely limited capacity to respond to social communication.
Level 1 "Requiring support"	Without supports in place, deficits in social communication cause significant impairments in functioning, limited initiation of social communication, and restricted responses to social communication. For example, a person with this level of disability initiates communication only when prompted, and has severely limited capacity to respond to social communication.	Intolerance of change, extreme difficulty coping with change, or other restricted, repetitive behaviors severely enough to affect the person's functioning in all spheres. For example, a person with this level of disability has severely limited capacity to respond to social communication, and has severely limited capacity to respond to social communication.

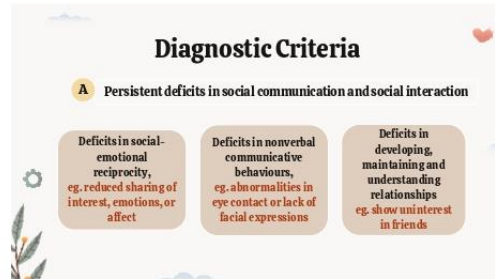
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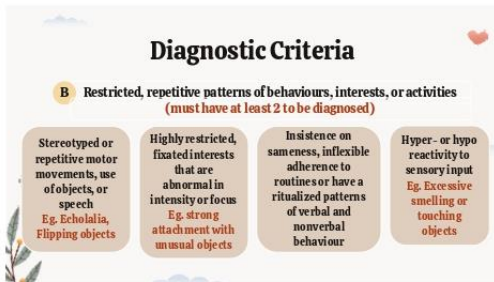
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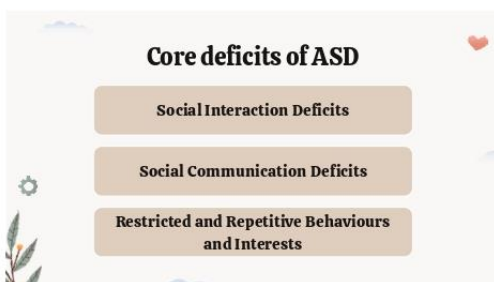
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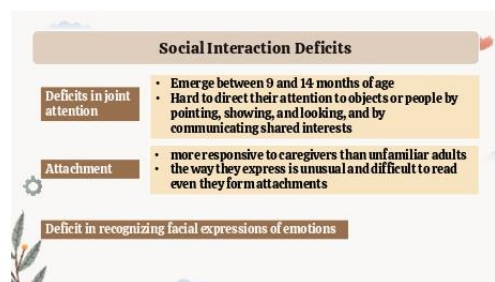
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Social Communication Deficits

- Inconsistent use of early preverbal communications
- Use gestures that are to express needs than gestures that are to direct visual attention of other people to objects of shared interest

Those who begin to speak may regress between 12-30 months old

Children with ASD who develop language usually do so before age of 5

25

Social Communication Deficits

Qualitative language impairments:

- Pronoun reversals**
E.g. Supposed to say, "I want milk."
Kid with autism: "You want milk"
- Echolalia**
Repeat what we say
- Perseverative speech**
Repeat a particular word, phrase, or topic without changing the conversation topic, or a lack of relevance to the current context.
- Difficulties in pragmatics**
Difficult to make decision based on practical considerations

26

Difficulty with Pragmatic Use of Language

Can you look at me?
Yes.

27

Children with Autism do make visual communication, although it may be different from what is typically expected.

28

Restricted and Repetitive behaviours and interests

- Stereotyped body movements**
→ Repetitive sensory and motor behaviours
- Self-stimulatory behaviour (Stimming/Fluttering)**
→ Craving for stimulation to excite their nervous system
→ To block out and control unwanted stimulation from environment that is too stimulating
- Atypical reactions to sensory input**
→ Can be confusing or even painful
- 90% of children with ASD have problems with 2 or 3 sensory domains that will continue in their adulthood.**

29

Inappropriate laughter or crying 	Lack of awareness of danger 	Hyperactivity or passiveness
Overresponsibility or underresponsibility to touch 	Strange attachment to objects 	Lack of eye contact

30



31

Not all individuals with ASD will exhibit all of these behaviors.

32

EVERY INDIVIDUAL IS UNIQUE

33

Associated Characteristics of ASD

Intellectual deficits and strengths

- 25% develop splinter skills eg. good memorization on bus schedule even though they do not know how to get to the bus station
- 5% often gifted with special talent

Cognitive and motivational deficits

- Hard to understand others' perspective (theory of mind)
- Deficits in information processing, planning and attention (weak drive for central coherence)

34

Associated Characteristics of ASD

Medical conditions and physical characteristics

- 2 most common accompanying disorders: Epilepsy and Intellectual Disability
- Others: ADHD, conduct problems, anxieties, fears and mood problems
- Have potentially life-threatening self-injurious behaviours

35

IS THERE ANY CAUSE?

36

World Health Organization

Causes

There is no exact cause towards this disorder yet!

Available scientific evidence suggests that there are probably many factors that make a child more likely to have autism, including environmental and genetic factors.

Extensive research using a variety of different methods many years has demonstrated that the measles, mumps and rubella vaccine does not cause autism. Studies that were interpreted as linking were flawed and some of the authors had undisclosed conflicts of interest.

What Causes Autism?
 Scientists believe the cause of autism is rising, but causes are not well understood. Scientists have found gene changes or mutations, as well as small common genetic variations in people with autism, in many genetic components. A growing area of research focuses on interaction of genetic and environmental factors. For example, a woman's exposure to harmful chemicals during pregnancy may trigger a genetic mutation leading to autism in her child. No one has been found between autism and vaccines, including those containing thimerosal, a mercury-based compound. (National Institute of Environmental Health Sciences, n.d.)

37

Quick Game Time!

38

Treatment Goals

- Minimize the core problems
- Maximize independence and quality of life

Help parents and the child to cope with the disorder effectively

39

Treatment Options

- Applied Behavioural Analysis (ABA)**
 focusing on increasing desirable behaviors and decreasing undesirable ones
- Discrete Trial Training (DTT)**
 a step-by-step approach to presenting stimulus and requiring a specific response
- Social Skill Training**
 two-way communication, choosing appropriate friends, appropriate use of humor, starting and joining conversations

40

Treatment Options

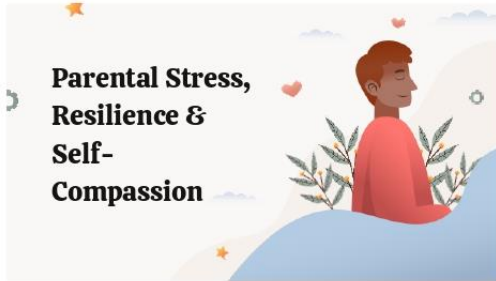
- Speech Therapy**
 helps in improving communication skills, language development and social interaction among children with ASD
- Occupational Therapy**
 work with children to enhance their skills and abilities in daily life activities

41

It's break time!

Please come back in 5 minutes.

42



43



44



45



46



47



48

Importance of Resilience

- Protect us from being overwhelmed by stress and the risks of mental disorders
- Positive mood and high life satisfaction

49

Self-Compassion

When your loved one has a difficult time, they fail in doing something, make any mistake or feel themselves are not good enough, what will you do to them?

50

Self-Compassion is..

When we act in the same way to ourselves

- Provide comfort
- Treat with understanding and kindness
- No criticism

51

Self-Compassion

- Understand that humans will make mistakes, no one is perfect
- Stop judging ourselves and forgive ourselves
- Some parents always blame themselves for not doing enough for children
- E.g., when child is sick, parent feel guilty

52

Importance of Self-Compassion

- Parents understand that they have done their best
- Take care of their own needs
- More optimism
- High life satisfaction
- Lower risks for parental stress and depression
- Cope with the challenges of raising kids with ASD better

53

Exercise: How would you treat a friend?

- Think about 5 times when a close friend feels really bad about him or herself or is really struggling in some way. How would you respond to your friend in this situation (especially when you're at your best)? Please write down what you typically do, what you say, and note the times in which you typically talk to your friends.
- Now think about times when you feel bad about yourself or are struggling. How do you typically respond to yourself in these situations? Please write down what you typically do, what you say, and note the times in which you typically talk to yourself.
- Did you notice a difference? If so, ask yourself why. What factors or ideas come into play that lead you to treat yourself and others so differently?
- Please write down how you think things might change if you responded to yourself in the same way you typically respond to a close friend when you're suffering.

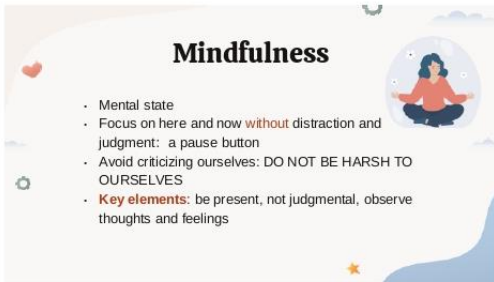
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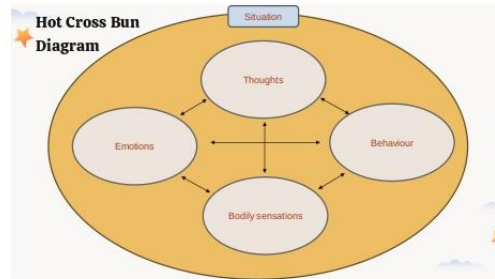
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Evidence-based psychological treatment: depression, anxiety disorder, insomnia, and pain

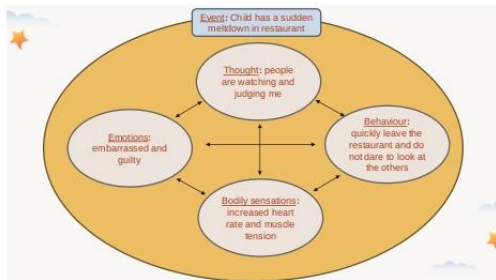
Used for self-help

Thoughts, emotions, body sensations and behaviours are interconnected

61



62



63

CBT

- Break negative cycle which cause suffering by changing one or more components in the cycle
- One difference in cycle -> Overall difference in cycle
- Suffering comes from the unhelpful thoughts about a situation
- Target on changing the way of thinking and behaviour

64

Automatic thoughts

- Thoughts that pop into our mind automatically, involuntarily and quickly
- Correct and incorrect (cognitive distortions or irrational beliefs)
- Cognitive distortions can cause the development or continuation of mental health conditions

65

Scan the QR code (you may choose more than 1 answer)

66

7/4/2024

Ally believes that she will only become a good mother if she does not make any mistake, even a small mistake makes her feel like a failure.

1. All-or-nothing thinking

- Thinking in an extreme way that there is no in-between or gray area
- Black or white thinking
- There are only right or wrong, good or bad, success or failure

67

After Alex failed to feed his kid for one time, he believes that he will always fail to feed his kid in future.

2. Overgeneralization

- When one single negative event happens, assuming the outcomes of future events will also be negative
- "Always" and "never"

68

When Gary's kid throws tantrum in public, Gary believes that everyone is negatively judging his kid and his parenting skill.

3. Mind reading

- Believe that others are thinking the things that they are not actually, without sufficient reason or evidence

69

Emma was so busy that she did not do the home activity with her child for one day to improve his motor skills. She believes that this will delay her child's improvement.

4. Catastrophizing/magnification

- Believe that something is worse than it really is

70

When knowing about the child's language delay, Mark feels hopeless about the diagnosis. So, because of this feeling, he believes that his child's situation is completely hopeless, with no possibility of improvement.

5. Emotional reasoning

- Making judgment or conclusion based on emotions rather than facts
- "I feel it, so it must be true"

71

When Susan forgets to prepare meals for her child just once, she immediately labels and blames herself as an irresponsible mother.

6. Labelling

- Taking one behaviour of a person and applying it to the whole person

72

Rachel's child has improved overall in the school, but she only notices the low score that her child has got for English, and totally ignores the progress that her kid has made for the other subjects.

7. Mental filtering

- Focusing on negative information and ignoring or excluding the positive aspects



73

David's child has improved his result for Science in the school, but he thinks this improvement is not important at all, because his child still does not perform well in Arts.

8. Disqualifying the positive

- Rejecting positive information
- Difference with mental filtering : actively rejecting the good things that happen
- "Yes, but..."

74

When Emily's child is sick, she thinks, "it is my fault, if I put more effort to take care of my child, he wouldn't be sick now."

9. Personalization

- The belief that one is responsible for a situation and entirely blame themselves as their fault, when the situation is out of their control, or logically not their fault.

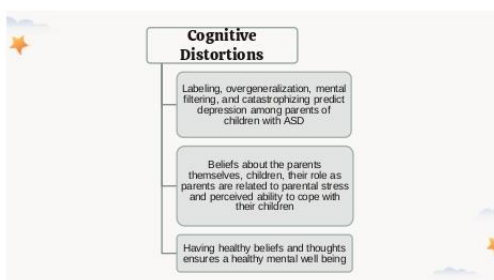
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When Karen's child accidentally injured his leg while playing, she feels guilty as she thinks that she should be with her child at all times to ensure his safety..


10. Should statements

- Belief that things always need to be in a certain way
- Impose unrealistic expectations on themselves or on others
- "I/You should/ ought to/ must do something"

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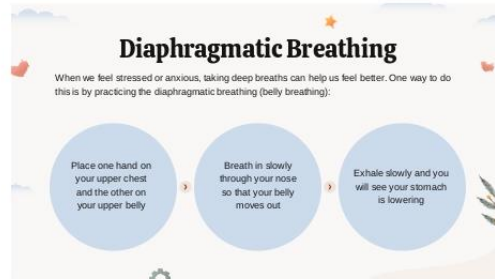


Thought Record

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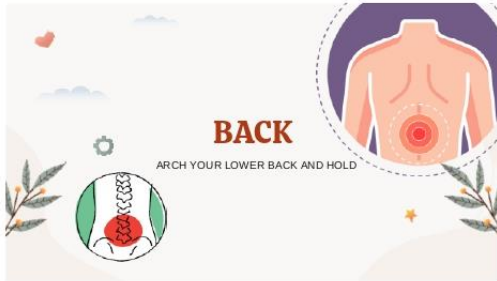


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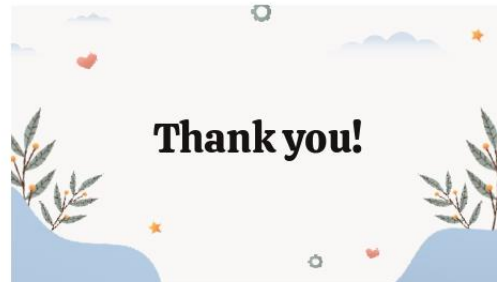
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Appendix E2: Handouts

Treatment Available for Your Kids !

Discrete Trial Training (DTT): a step-by-step approach to presenting stimulus and requiring a specific response

Applied Behavioural Analysis (ABA): increase desirable behaviour and decrease undesirable behaviour

Social Skill Training: two way communication, appropriate use of humor, join conversation etc.

Speech Therapy: build vocabulary, language development, communication skills

Occupational Therapy: work to enhance skills and abilities in daily life activities



AUTISM SPECTRUM DISORDER

AUTISM ISN'T A PUZZLE TO BE SOLVED, BUT A JOURNEY TO BE EMBARKED UPON WITH LOVE AND UNDERSTANDING.

A NEURODEVELOPMENTAL DISORDER

Characterized by:

1. Persistent and significant deficits in social interaction and communication skills
2. Restricted and repetitive patterns of behaviour and interest

**Together We stand,
Embrace the Dawn After Dark**



Prepared by: Joanne Chin Rou Heng, Lim Shu Ping, Tan Zi Ching

A Warm Reminder to Lovely You

When you feel tired or doubt yourself...

I AM STRONG Resilience

- You have the ability to recover from & adapt to life challenges
- Use your strengths to overcome challenges, view the situation, & focus on what you can control

Self-Compassion

- Treat yourself kindly when you fail, make mistakes & think you are not good enough
- You are just human, & no one is perfect
- Practice to forgive yourself, and take care of your own needs
- Exercise 

Parental Steess

- Don't ignore your body signals, it's okay to take a break before moving forward
- Your own mental health matters

PROGRESSIVE MUSCLE RELAXATION

 ENGLISH

 MALAY

 MANDARIN




S Stop: stop your actions and thoughts

T Take a breath: take a deep breath

O Observe: observe using your five senses (smell, hear, look, touch and taste)

P Proceed: proceed to what you are doing currently with a centered mind

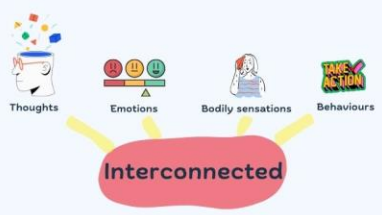
STOP Mindfulness

Diaphragmatic Breathing

- Place one hand on upper chest and the other on your belly
- Breathe in slowly through your nose so that your stomach moves out
- Exhale slower and you will notice your belly lowering



Cognitive Behavioural Therapy (CBT)



Interconnected

It's not what happened cause suffering to us, but it's our way of thinking

Cognitive Distortions	
Mind reading	Believe that others are thinking the things that they are not actually
Catastrophizing/ magnification	Think that something is worse than it really is
All-or-nothing thinking	Think in a very extreme way
Emotional reasoning	Feelings decide what we believe
Labelling	Make a quick conclusion to ourselves/others based on one behaviour
Mental filtering	Focus on bad things and ignore good things
Disqualifying the positive	Believe the good things are not important
Overgeneralization	Believe failure will always happen after a single failure
Personalization	Think that something happens because of us
Should statements	Put unrealistic expectations to ourselves or others

Prepared by: Joanne Chin Rou Heng, Lim Shu Ping, Tan Zi Ching

Appendix F: Questionnaires

Appendix F1: Informed Consent

4/7/24, 5:30 PM

Qualtrics Survey Software



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DU012(A)

Informed Consent

. Introduction

We are undergraduate students from Bachelor of Social Science (Hons) Psychology at UTAR Kampar campus. The course that we are currently taking is UAPZ3023 Final Year Project II. As the course requirement, we are working on a research project titled “Together, We Stand: Embracing the Dawn After the Dark - The Effect of a 3-Hour Workshop on Parental Stress, Knowledge of Autism Spectrum Disorder (ASD), Resilience, and Self-Compassion among Parents of Children with ASD”. Hence, we would like to request your agreement to participate in our research project.

Procedures

In this research, you will be invited to involve in a 3-hour workshop which is related to the parental stress, knowledge of ASD, resilience and self-compassion. Before the workshop, we request your completion of this online questionnaire comprising of demographic section and these four components, which would take approximately 15 to 20 minutes. Then, 2 weeks after the workshop, a same set of the online questionnaire comprising of the four components will be required to fill in.

Confidentiality

Your personal information and responses will be collected for research purpose. All the information will be handled in a private manner and can be accessed by the researchers and supervisor only. The results of the research will be reported as group data.

Participation

The participation in this research is completely voluntary. You have the right to

withdraw from this research any time without any penalty.

Benefits

By taking part in this study, you have the chance to acquire interventions aimed at lowering parental stress and enhancing your understanding of ASD, resilience, and self-compassion. This participation holds the potential for beneficial learning experiences.

Risk and Discomfort

During this research, we expect that any potential risks or discomfort you encounter will not exceed the typical experiences encountered in your everyday life.

Payment and Compensation

As an academic project, we regret to inform you that participation in this project will not be accompanied by any incentives.

Contact Information

If you have any further inquiry or concern about this research, please feel free to contact us through:

Joanne Chin Rou Heng joannechin20021126@1utar.my

Lim Shu Ping limsuki2002@1utar.my

Tan Zi Ching tanziching7@1utar.my

Tay Kok Wai (Supervisor) taykw@utar.edu.my

Statement of Consent

I have read through the information above. I fully understand that I have the rights to participate voluntarily, withdraw from this research without any form of consequence and ensure the confidentiality of my information. I am aware of the potential benefits and risks involved in this study. I have been given chances to ask any question regarding the study and been given comprehensive answer. I agree to participate in this research project.

Personal Data Notice

PERSONAL DATA PROTECTION NOTICE

Please be informed that in accordance with Personal Data Protection Act 2010 (“PDPA”) which came into force on 15 November 2013, Universiti Tunku Abdul Rahman (“UTAR”) is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

1. Personal data refers to any information which may directly or indirectly identify a person which could include sensitive personal data and expression of opinion.

Among others it includes:

- a) Name
- b) Identity card
- c) Place of Birth
- d) Address
- e) Education History
- f) Employment History
- g) Medical History
- h) Blood type
- i) Race
- j) Religion
- k) Photo
- l) Personal Information and Associated Research Data

2. The purposes for which your personal data may be used are inclusive but not limited

to:

- a) For assessment of any application to UTAR
- b) For processing any benefits and services
- c) For communication purposes
- d) For advertorial and news
- e) For general administration and record purposes
- f) For enhancing the value of education
- g) For educational and related purposes consequential to UTAR
- h) For replying any responds to complaints and enquiries

- i) For the purpose of our corporate governance
- j) For the purposes of conducting research/ collaboration

3. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.

4. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.

5. UTAR is committed in ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes.

Consent:

6. By submitting or providing your personal data to UTAR, you had consented and agreed for your personal data to be used in accordance to the terms and conditions in the Notice and our relevant policy.

7. If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.

8. You may access and update your personal data by writing to us at:

Joanne Chin Rou Heng joannechin20021126@1utar.my
Lim Shu Ping limsuki2002@1utar.my

4/7/24, 5:30 PM

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Tan Zi Ching tanziching7@utar.my

Tay Kok Wai (Supervisor) taykw@utar.edu.my

Acknowledgment of Notice:

- I have been notified and that I hereby understood, consented and agreed per UTAR above notice.
- I disagree, my personal data will not be processed.

Appendix F2: Demographic Questionnaire

Demographic Questions

Q1. Nickname (Please write the same nickname as what you have written in the registration form)

Q2. Age

Q3. Gender

- Male
 Female

4/7/24, 5:30 PM

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Q4. Ethnicity

- Malay
- Chinese
- Indian
- Other (Please specify)

Q5. Number of child(ren) with Autism Spectrum Disorder (ASD):

Q6. Age of child(ren) with Autism Spectrum Disorder (ASD):

Q7. Does your child(ren) have any other health conditions (e.g., ADHD) besides ASD (Autism Spectrum Disorder)?

(Please select 'Yes' even if only one of your child(ren) have the mental conditions other than ASD)

- Yes (Please state the specific health condition which your child(ren) have)

- No
- Not Sure

Appendix F3: Parental Stress Scale (PSS)

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Parental Stress Scale (PSS)

. The following statements describe feelings and perceptions about the experience of being a parent. Think of each of the items in terms of how your relationship with your child or children typically is. Please indicate the degree to which you agree or disagree with the following items.

	1 = Strongly disagree	2 = Disagree	3 = Undecided	4 = Agree	5 = Strongly agree
I am happy in my role as a parent.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is little or nothing I wouldn't do for my child(ren) if it was necessary.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Caring for my child(ren) sometimes takes more time and energy than I have to give.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sometimes worry whether I am doing enough for my child(ren).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel close to my child(ren).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoy spending time with my child(ren).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My child(ren) is an important source of affection for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having child(ren) gives me a more certain and optimistic view for the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The major source of stress in my life is my child(ren).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having child(ren) leaves little time and flexibility in my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having child(ren) has been a financial burden.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	1 = Strongly disagree	2 = Disagree	3 = Undecided	4 = Agree	5 = Strongly agree
It is difficult to balance different responsibilities because of my child(ren).	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The behaviour of my child(ren) is often embarrassing or stressful to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I had it to do over again, I might decide not to have child(ren).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel overwhelmed by the responsibility of being a parent.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having child(ren) has meant having too few choices and too little control over my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied as a parent.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find my child(ren) enjoyable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix F4: Autism Knowledge Questionnaire (AKQ)

Autism Knowledge Questionnaire (ASQ)

. Please carefully read each statement and respond with either 'True' if you believe it is correct, 'False' if you think it is incorrect, or 'Do not Know' if unsure. Please answer the questions **based on your own knowledge without referring to external resources e.g., Google.**

	True	False	Do not know
Most children with Autism have an intellectual disability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism disorder is usually diagnosed during the first three years of the child's age.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Children with Autism usually manifest special abilities like drawing and facts and figures remembering.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	True	False	Do not know
Children must exhibit impaired social interaction and language communication to be diagnosed with Autism.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism is a developmental disorder.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
With proper intervention, most children with Autism disorder will eventually "outgrow" the disorder.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most autistic children do not talk.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The majority of children with Autism are female.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Children with Autism do not make any visual communication during conversation with others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most children with Autism have a problem with imaginary playing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Some children with Autism have high or low sensitivity of visual, auditory, tactile, or olfactory stimuli.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism disorder is diagnosed by medical methods.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Behavioral patterns in children with Autism are similar.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We can diagnose Autism disorder depending on physical features.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Behavioral intervention is considered the most effective treatment method of Autism.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In many cases, the cause of Autism disorder is unknown.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Children with Autism tend to be auditory learners.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	True	False	Do not know
Some children with Autism demonstrate inconsistency in motor skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Poor parenting practices can cause Autism disorder.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Children with Autism behave better only in organized educational environments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If a particular method of treatment achieved effective results with some children with Autism, then it is necessarily effective with all children with Autism.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism could be associated with Epilepsy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autistic children prefer routine activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Child with Autism appears like a deaf.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autism disorder can be diagnosed through behavioral observation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Medication can alleviate the core symptoms of Autism disorder.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Genetic factors play an important role as a cause of Autism disorder.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Children with Autism frequently repeat the talk they hear.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generally, children with Autism understand feelings and emotions of others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Children with Autism demonstrate stereotypical behaviors like fluttering.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix F5: Brief Resilience Scale (BRS)

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Brief Resilience Scale (BRS)

. Please indicate the degree to which you agree or disagree with the following items.

	1 = Strongly disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly agree
I tend to bounce back quickly after hard times.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a hard time making it through stressful events.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It does not take me long to recover from a stressful event.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is hard for me to snap back when something bad happens.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I usually come through difficult times with little trouble.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tend to take a long time to get over setbacks in my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix F6: Self-Compassion Scale-Short Form (SCS-SF)

Self-Compassion Scale-Short Form (SCS-SF)

. Please indicate how often you behave in the stated manner using the following scale.

	1 = Almost never	2 = Rarely	3 = Sometimes	4 = Often	5 = Almost always
When I fail at something important to me I become consumed by feelings of inadequacy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to be understanding and patient towards those aspects of my personality I don't like.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4/7/24, 5:30 PM

Qualtrics Survey Software

	1 = Almost never	2 = Rarely	3 = Sometimes	4 = Often	5 = Almost always
When something painful happens I try to take a balanced view of the situation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I'm feeling down, I tend to feel like most other people are probably happier than I am.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to see my failings as part of the human condition.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I'm going through a very hard time, I give myself the caring and tenderness I need.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When something upsets me I try to keep my emotions in balance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I fail at something that's important to me, I tend to feel alone in my failure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I'm feeling down I tend to obsess and fixate on everything that's wrong.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm disapproving and judgmental about my own flaws and inadequacies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm intolerant and impatient towards those aspects of my personality I don't like.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Powered by Qualtrics

Appendix G: Request and Approval for the Questionnaire Use

Appendix G1: Request for the Use of Autism Knowledge Questionnaire (AKQ)

11/24/23, 8:23 PM

Universiti Tunku Abdul Rahman Mail - Permission to Use Instrument



SHU PING LIM <lmsuki2002@utar.my>

Permission to Use Instrument

SHU PING LIM <lmsuki2002@utar.my>
To: "dr.yahiakau@YAHOO.COM" <dr.yahiakau@yahoo.com>

Mon, Nov 20, 2023 at 8:09 AM

Dear Dr. Obaidat,

We are the final year undergraduate students from Universiti Tunku Abdul Rahman (UTAR), Bachelor of Social Science (Hons) Psychology. Currently, we are undertaking our final year project (FYP) with the title of "The Effect of 3-hour Workshop on Parental Stress, Knowledge on Autism Spectrum Disorder (ASD), Resilience and Self-compassion among Parents of Children with ASD". The objective of our research is to assess the effectiveness of a 3-hour workshop that targets to reduce the parental stress and improve the knowledge of ASD, resilience and self-compassion of parents of children with Autism Spectrum Disorder (ASD) in Kuching, Sarawak. Hence, to evaluate the knowledge of ASD among the participants, an instrument regarding knowledge of ASD is required to administer with them in both printed and electronic form. Therefore, we are writing to request permission to use the instrument, which is Autism knowledge Questionnaire (AKQ) developed by you and the another author Dr. Haimour and published in the journal article with title "School Teachers' Knowledge about Autism in Saudi Arabia" as we find the items in this instrument relate to our research context. Specifically, we will be using the second section of this instrument with your approval.

We appreciate the effort of you and your colleague in developing this instrument and contributing to the research field regarding ASD. We sincerely hope that we can have an opportunity to employ this instrument in our final year project to make further contribution to the relevant field. Please let us know if there is any inquiry. Looking forward to your response.

Thank you for your consideration.

Sincerely,

Lim Shu Ping, Joanne Chin Rou Heng, Tan Zi Ching

Appendix G2: Approval for the Use of Autism Knowledge Questionnaire (AKQ)

11/24/23, 8:25 PM

Universiti Tunku Abdul Rahman Mail - Follow Up: Request to Use Instrument



SHU PING LIM <limsuki2002@utar.my>

Follow Up: Request to Use Instrument

Dr.yahiakau Obaidat <dr.yahiakau@yahoo.com>
To: SHU PING LIM <limsuki2002@utar.my>

Thu, Nov 23, 2023 at 10:04 PM

Dear SHU PING LIM

Yes of course you can use the Autism knowledge Questionnaire (AKQ)
I wish you all the best

Sent from Yahoo Mail for iPhone
[Quoted text hidden]

Appendix H

Ethical Clearance Letter



UNIVERSITI TUNKU ABDUL RAHMAN DU012(A)
Wholly owned by UTAR Education Foundation Co. No. 578227-M

Re: U/SERC/78-195/2024

10 January 2024

Dr Pung Pit Wan
Head, Department of Psychology and Counselling
Faculty of Arts and Social Science
Universiti Tunku Abdul Rahman
Jalan Universiti, Bandar Baru Barat
31900 Kampar, Perak.

Dear Dr Pung,

Ethical Approval For Research Project/Protocol

We refer to the application for ethical approval for your students' research project from Bachelor of Social Science (Honours) Psychology programme enrolled in course UAPZ3013/ UAPZ3023. We are pleased to inform you that the application has been approved under Expedited Review.

The details of the research projects are as follows:

No	Research Title	Student's Name	Supervisor's Name	Approval Validity
1.	Together, We Stand: Embracing the Dawn After the Dark - The Effect of a 3-Hour Workshop on Parental Stress, Knowledge of Autism Spectrum Disorder (ASD), Resilience, and Self-Compassion Among Parents of Children with ASD	1. Joanne Chin Rou Heng 2. Lim Shu Ping 3. Tan Zi Ching	Mr Tay Kok Wai	10 January 2024 – 9 January 2025
2.	Fear of Ageing Among Different Age Groups in Malaysia: A Measure of Attitudes Towards Dementia	1. Hew En Qi 2. Kong Guan Yan 3. Ng Wei Xuan		
3.	The Relationship Between Self-critical Rumination, Self-compassion, Parenting Style, and Perfectionism Among Undergraduates in Malaysia	1. Yie Song Ying 2. Khoo Zhi Sin		

The conduct of this research is subject to the following:

- (1) The participants' informed consent be obtained prior to the commencement of the research;
- (2) Confidentiality of participants' personal data must be maintained; and
- (3) Compliance with procedures set out in related policies of UTAR such as the UTAR Research Ethics and Code of Conduct, Code of Practice for Research Involving Humans and other related policies/guidelines.
- (4) Written consent be obtained from the institution(s)/company(ies) in which the physical or/and online survey will be carried out, prior to the commencement of the research.

Kampar Campus : Jalan Universiti, Bandar Barat, 31900 Kampar, Perak Darul Ridzuan, Malaysia
Tel: (605) 468 8888 Fax: (605) 466 1313
Sungai Long Campus : Jalan Sungai Long, Bandar Sungai Long, Cheras, 43000 Kajang, Selangor Darul Ehsan, Malaysia
Tel: (603) 9086 0288 Fax: (603) 9019 8868
Website: www.utar.edu.my



etter

Should the students collect personal data of participants in their studies, please have the participants sign the attached Personal Data Protection Statement for records.

Thank you.

Yours sincerely,



Professor Ts Dr Faidz bin Abd Rahman
Chairman
UTAR Scientific and Ethical Review Committee

c.c Dean, Faculty of Arts and Social Science
 Director, Institute of Postgraduate Studies and Research



Appendix I: Registration for Workshop

Appendix I1: Registration Poster

**TOGETHER, WE STAND:
EMBRACING THE DAWN
AFTER THE DARK**

DEAR PARENTS,
Are YOU feeling burnout or stressed a lot of time as a caregiver?
Parenting a child with special needs can sometimes be difficult but YOU are not alone! We are here with all of you!

REGISTRATION QR CODE
LIMITED TO 40 PAX

SPEAKERS:

-  **TAY KOK WAI**
Clinical Psychologist
-  **TAN ZI CHING**
UTAR Psychology Student
-  **LIM SHU PING**
UTAR Psychology Student
-  **JOANNE CHIN**
UTAR Psychology Student

This workshop is open to parents of children with autism and the details of workshop are as below:

Saturday 9:00 am -
February 24, 2024 12:00 pm

Kuching Autistic Association Centre

FREE OF CHARGE

Appendix I2: Registration Form

4/7/24, 6:19 PM

Registration Form for 3-Hour Workshop "Together, We Stand: Embracing the Dawn After the Dark"

Registration Form for 3-Hour Workshop "Together, We Stand: Embracing the Dawn After the Dark"

Thank you for your interest in our upcoming workshop. Kindly fill out the form below to reserve your slot.

* Indicates required question

1. Email *

2. Nickname *

3. Gender *

Mark only one oval.

Male

Female

4. Email address *

5. Contact number *

4/7/24, 6:19 PM

Registration Form for 3-Hour Workshop "Together, We Stand: Embracing the Dawn After the Dark"

6. Does your child(ren) have any other health conditions (e.g., ADHD) besides ASD *
(Autism Spectrum Disorder)?

Mark only one oval.

- Yes
- No
- Not sure

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Google Forms

Appendix J: Request for Filling up Questionnaires

Appendix J1: Request for Filling up Pre-Test Questionnaire

4/7/24, 6:23 PM

Universiti Tunku Abdul Rahman Mail - QUESTIONNAIRE BEFORE THE WORKSHOP "Together, We Stand: Embracing the Da...



CHIN ROU HENG JOANNE <joannechin20021126@utar.my>

QUESTIONNAIRE BEFORE THE WORKSHOP "Together, We Stand: Embracing the Dawn After the Dark"

2 messages

CHIN ROU HENG JOANNE <joannechin20021126@utar.my>

Thu, Feb 22, 2024 at 11:03 AM

Dear parents,

Thank you for registering for our workshop which will be on this Saturday, 24th February 2024.

As the workshop is conducted for our Final Year Project research, we highly appreciate your response to the questionnaire to contribute to our research. The details about our research are provided in the questionnaire for your reference. The information being collected will be used for only research purposes, and it will be kept confidential. Please note that participation in this questionnaire is entirely voluntary.

Here is the questionnaire link: https://utarpsy.au1.qualtrics.com/jfe/form/SV_5ARkzhWHBxIG46O

Thank you for your time and contribution. If you have any questions or concerns, please do not hesitate to reach out.

Warm regards,

Joanne Chin Rou Heng
Lim Shu Ping
Tan Zi Ching
Tay Kok Wai

(Speakers of the workshop)

CHIN ROU HENG JOANNE <joannechin20021126@utar.my>
To: limsuki2002@utar.my

Thu, Mar 7, 2024 at 3:26 PM

[Quoted text hidden]

Appendix J2: Request for Filling up Post-Test Questionnaire

4/7/24, 6:23 PM

Universiti Tunku Abdul Rahman Mail - QUESTIONNAIRE AFTER THE WORKSHOP "Together, We Stand: Embracing the Daw...



SHU PING LIM <limsuki2002@utar.my>

QUESTIONNAIRE AFTER THE WORKSHOP "Together, We Stand: Embracing the Dawn After the Dark"

1 message

SHU PING LIM <limsuki2002@utar.my>

Fri, Mar 8, 2024 at 9:57 PM

Dear parents,

Thank you for coming for the workshop and helping us to fill up the questionnaire for our final year project.

For our research purposes, we sincerely appreciate if you can help in filling up the questionnaire again. The information being collected will be used for only research purposes, and it will be kept confidential. Please note that participation in this questionnaire is entirely voluntary.

Here is the questionnaire link: https://utarpsy.au1.qualtrics.com/jfe/form/SV_e9ye3yFREAf0IRY

Thank you for your time and contribution. If you have any questions or concerns, please do not hesitate to reach out.

Warm regards,

Joanne Chin Rou Heng
Lim Shu Ping
Tan Zi Ching
Tay Kok Wai

(Speakers of the workshop)

Appendix K: SPSS Output Results

Appendix K1: Demographic Variables for Pre-Test

• Frequencies

		Statistics							
		Age	Gender	Ethnicity	Ethnicity - Other	Number of child(ren) with ASD	Age of child (ren) with ASD	Comorbidity	Comorbidity - Specify
N	Valid	10	10	10	10	10	10	10	10
	Missing	0	0	0	0	0	0	0	0
Mean		39.10	1.70	3.50		1.10	5.80	1.80	
Std. Deviation		4.771	.483	1.080		.316	2.044	.789	

Frequency Table

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	31	1	10.0	10.0	10.0
	35	1	10.0	10.0	20.0
	36	1	10.0	10.0	30.0
	37	1	10.0	10.0	40.0
	38	1	10.0	10.0	50.0
	39	1	10.0	10.0	60.0
	40	1	10.0	10.0	70.0
	44	1	10.0	10.0	80.0
	45	1	10.0	10.0	90.0
	46	1	10.0	10.0	100.0
	Total	10	100.0	100.0	

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	3	30.0	30.0	30.0
	Female	7	70.0	70.0	100.0
	Total	10	100.0	100.0	

		Ethnicity			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	1	10.0	10.0	10.0
	Chinese	1	10.0	10.0	20.0
	Other (Please specify)	8	80.0	80.0	100.0
	Total	10	100.0	100.0	

		Ethnicity - Other			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	20.0	20.0	20.0
	Bidayuh	4	40.0	40.0	60.0
	BIDAYUH	1	10.0	10.0	70.0
	Iban	1	10.0	10.0	80.0
	IBAN	1	10.0	10.0	90.0
	Kelabit	1	10.0	10.0	100.0
	Total	10	100.0	100.0	

Number of child(ren) with ASD

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	9	90.0	90.0	90.0
	2	1	10.0	10.0	100.0
Total		10	100.0	100.0	

Age of child(ren) with ASD

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	2	20.0	20.0	20.0
	5	4	40.0	40.0	60.0
	6	2	20.0	20.0	80.0
	7	1	10.0	10.0	90.0
	11	1	10.0	10.0	100.0
Total		10	100.0	100.0	

Comorbidity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes (Please state the specific health condition which your child(ren) have)	4	40.0	40.0	40.0
	No	4	40.0	40.0	80.0
	Not Sure	2	20.0	20.0	100.0
	Total	10	100.0	100.0	

Comorbidity - Specify

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	60.0	60.0	60.0
	ADHD	1	10.0	10.0	70.0
	Speech delay	3	30.0	30.0	100.0
Total		10	100.0	100.0	

Appendix K2: Demographic Variables for Post-Test

Frequencies

[DataSet1] C:\Users\HP\OneDrive\桌面\FYP II\Posttest\POST TEST_March 17, 2024_07.40.sav

Statistics

	Age	Gender	Ethnicity	Ethnicity - Other	Number of child(ren) with ASD	Age of child (ren) with ASD	Comorbidity	Comorbidity - Specify
N	Valid	7	7	7	7	7	7	7
	Missing	0	0	0	0	0	0	0
Mean		38.57	1.71	3.71	1.00	5.43	1.86	
Std. Deviation		4.928	.488	.756	.000	.976	.900	

Frequency Table

Age

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	31	1	14.3	14.3
	35	1	14.3	28.6
	37	1	14.3	42.9
	38	1	14.3	57.1
	40	1	14.3	71.4
	44	1	14.3	85.7
	45	1	14.3	100.0
Total	7	100.0	100.0	

Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	2	28.6	28.6
	Female	5	71.4	100.0
Total		7	100.0	

Ethnicity

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chinese	1	14.3	14.3
	Other (Please specify)	6	85.7	100.0
Total		7	100.0	

Ethnicity - Other

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	14.3	14.3
	Bidayuh	4	57.1	71.4
	iban	1	14.3	85.7
	Iban	1	14.3	100.0
Total		7	100.0	

Number of child(ren) with ASD

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	7	100.0	100.0

Age of child(ren) with ASD

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 4	1	14.3	14.3	14.3
5	3	42.9	42.9	57.1
6	2	28.6	28.6	85.7
7	1	14.3	14.3	100.0
Total	7	100.0	100.0	

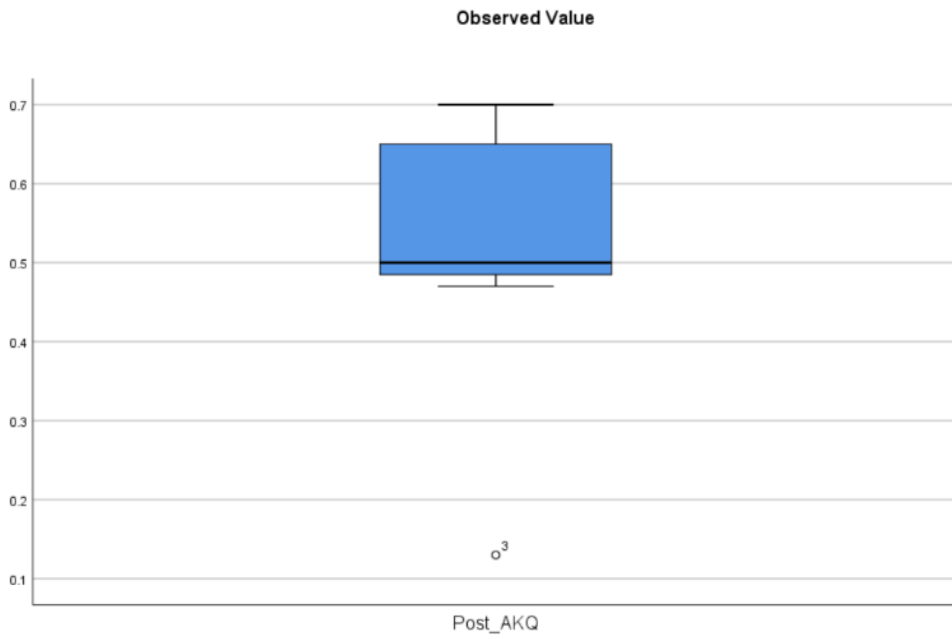
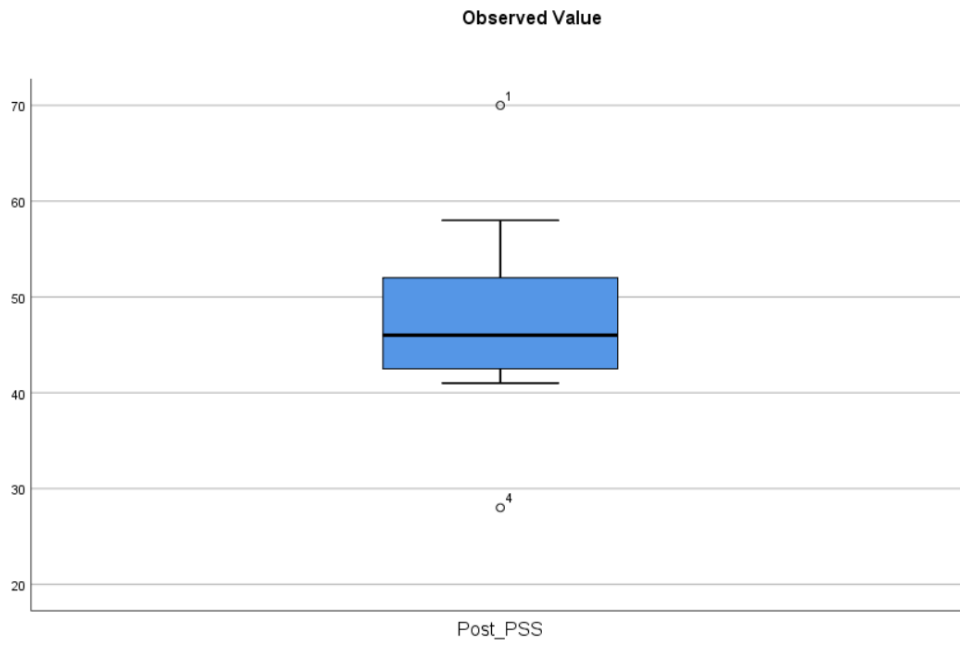
Comorbidity

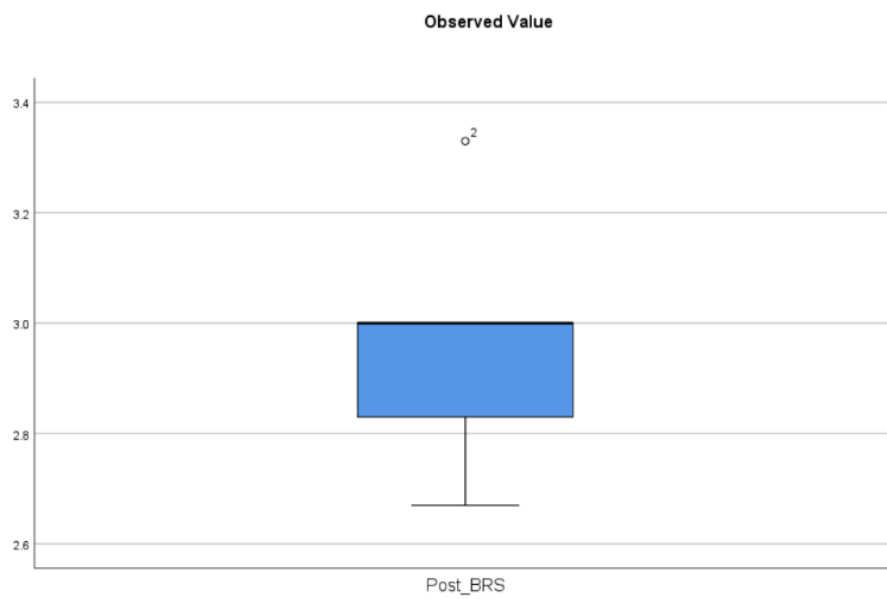
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes (Please state the specific health condition which your child(ren) have)	3	42.9	42.9	42.9
No	2	28.6	28.6	71.4
Not Sure	2	28.6	28.6	100.0
Total	7	100.0	100.0	

Comorbidity - Specify

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	57.1	57.1	57.1
Speech delay	3	42.9	42.9	100.0
Total	7	100.0	100.0	

Appendix K3: Outlier





Appendix K4: Normality of Pre-test and Post-test scores

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre_PSS	.231	7	.200 [*]	.901	7	.339
Post_PSS	.261	7	.161	.946	7	.694

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre_AKQ	.199	7	.200 [*]	.906	7	.368
Post_AKQ	.266	7	.144	.848	7	.118

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre_BRS	.218	7	.200 [*]	.937	7	.615
Post_BRS	.265	7	.148	.914	7	.428

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre_SCS	.153	7	.200 [*]	.966	7	.871
Post_SCS	.143	7	.200 [*]	.959	7	.809

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Appendix K5: Normality of Difference Scores

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PSS_Difference	.202	7	.200 [*]	.947	7	.707
AKQ_Difference	.157	7	.200 [*]	.982	7	.968
BRS_Difference	.245	7	.200 [*]	.927	7	.527
SCS_Difference	.208	7	.200 [*]	.879	7	.223

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Appendix K6: Effect of the 3-Hour Workshop on Parental Stress

T-Test

[DataSet1] C:\Users\HP\OneDrive\桌面\FYP II\Combination.sav

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_PSS	49.43	7	8.344	3.154
	Post_PSS	47.57	7	13.265	5.014

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Pre_PSS & Post_PSS	7	.830	.021

Paired Samples Test

		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Pre_PSS - Post_PSS	1.857	7.862	2.972	-5.414	9.128	.625	6	.555

Appendix K7: Effect of the 3-Hour Workshop on Knowledge of ASD

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_AKQ	.4957	7	.10031	.03791
	Post_AKQ	.5143	7	.19243	.07273

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Pre_AKQ & Post_AKQ	7	.795	.032

Paired Samples Test

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Pre_AKQ - Post_AKQ	-.01857	.12799	.04837	-.13694	.09980	-.384	6	.714

Appendix K8: Effect of the 3-Hour Workshop on Resilience

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_BRS	2.9771	7	.39152	.14798
	Post_BRS	2.9514	7	.20780	.07854

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Pre_BRS & Post_BRS	7	-.357	.431

Paired Samples Test

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Pre_BRS - Post_BRS	.02571	.50461	.19072	-.44097	.49240	.135	6	.897

Appendix K9: Effect of the 3-Hour Workshop on Self-Compassion

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_SCS	3.1557	7	.26159	.09887
	Post_SCS	3.1914	7	.21373	.08078

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Pre_SCS & Post_SCS	7	.749	.053

Paired Samples Test

		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Pre_SCS - Post_SCS	-.03571	.17415	.06582	-.19678	.12535	-.543	6	.607

Appendix L

Turnitin Receipt

FYP2

ORIGINALITY REPORT

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5	Submitted to Southern University College <small>Student Paper</small>	1%
6	Sini Li, Yijing Yong, Yamin Li, Jianhe Li, Jiao Xie. "Cognitive-Based Interventions for Improving Psychological Health and Well-Being for Parents of Children with Developmental Disabilities: A Systematic Review and Meta- analysis", Journal of Autism and Developmental Disorders, 2023 <small>Publication</small>	1%

7	Chong, Siu Kwan. "Daily Heterosexism Experiences and Well-Being Among LGB People: the Moderating Role of Mindfulness, Self-Compassion, and LGB-Affirmative Support.", University of Maryland, College Park, 2020 Publication	1 %
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