

**International Journal of Contemporary Issues**  
**Vol. 2, Issue 2, September 2024**  
**e-ISSN: 2976-3851**

# **INTERNATIONAL JOURNAL OF CONTEMPORARY ISSUES (IJCI)**

---

**VOL. 2, ISSUE 2, SEPTEMBER 2024**

**ABRAR GLOBAL**



# INTERNATIONAL JOURNAL OF CONTEMPORARY ISSUES (IJCI)

Vol. 2, Issue 2, September 2024



ABRAR GLOBAL

---

---

**Editor in Chief**

Assoc. Prof. Dr. Yusuf Haji Othman

**Executive Director**

Assoc. Prof. Dr. Mohd Sholeh Sheh Yusuff

**Coordinator**

Dr. Mohd Sofian Mohammad Rosbi

**Editor**

Dr. Mohammadtahir Cheumar

**Graphic Design**

Dr. Nurul Shahariza Abu Hassan

**Editorial Manager**

Nurul Husna Ali

**Editorial Board Member**

Assoc. Prof. Dr. Mohd Nizam Sahad  
School of Humanities, USM  
Malaysia

Assoc. Prof. Dr. Shuhairimi Abdullah  
Fakulti Sains Gunaan dan Kemanusiaan  
UniMAP  
Malaysia

Dr. Mohamad Hazli Ismail  
Kulliyah of Theology and Quranic Sciences  
UniSHAMS, Malaysia

Syeikh Mat Rani Abdul Manaf  
Kulliyah of Theology and Quranic Sciences  
UniSHAMS, Malaysia

Dr. Ali Omar Salem Balagem  
Kulliyah of Theology and Quranic Sciences  
UniSHAMS, Malaysia

Dr. Reda Owis Hassan Serour  
Kulliyah of Theology and Quranic Sciences  
UniSHAMS, Malaysia

Dr. Syahiza Binti Arsad  
Kulliyah of Muamalat & Management Sciences,  
UniSHAMS, Malaysia

Dr. Mohd Farid Abd. Latib  
Kulliyah of Muamalat & Management Sciences,  
UniSHAMS, Malaysia

Tengku Zawani Tengku Zawawi  
Kulliyah of Theology and Quranic Sciences  
UniSHAMS, Malaysia

Dr. Muhammad Baqir Abdullah  
Kulliyah of Muamalat & Management Sciences,  
UniSHAMS, Malaysia

Assoc. Prof. Dr. Mukhamad Hadi Musolin Subagio  
Kulliyah of Theology and Quranic Sciences  
UniSHAMS, Malaysia

Dr. Mohamad Alwi Bin Ab Rahman  
Kulliyah of Theology and Quranic Sciences  
UniSHAMS, Malaysia

---

---

---

---

Copyright © 2024 ABRAR GLOBAL

Publisher:

Abrar Global  
358, Lorong Insaniah 3/8, Taman Insaniah 09300 Kuala Ketil,  
Kedah.

Email: [abrar.ijci@gmail.com](mailto:abrar.ijci@gmail.com)

---

---

Vol. 2, Issue 2, September 2024

---

---

Printed:

ASA MESRA PRINTER  
No. 9, Lot 33, Bandar Darul Aman 06000 Jitra, Kedah  
Darul Aman, Malaysia

---

---

[www.abrarglobal.com](http://www.abrarglobal.com)

Articles	Page
The Female Circumcision: Legal Challenges and Human Rights Concerns in Malaysia <i>Nursyafiqah Izzati binti Azmi Rais, Nur Nadiatulhusna binti Anuar Layani, Tengku Mawaddah binti Tengku Maizal, Farhanin binti Abdullah Asubaimi</i>	1
Merancang Pengajaran Matematik Yang Berkesan <i>Mohd Zamir Bin Mohd Sharif; Noor Saadah Mohd Radzuan; Nor Hafizah Hamidon; Siti Nor Sakinah Sam</i>	9
Strengthening Corporate Governance: The Role of Ethics and Integrity in Malaysian SMEs During Economic Uncertainty <i>Syed Zabiruddin Bin Syed Musa</i>	22
Establishing Elder Daycare Centers: A Solution for Supporting Malaysia's Sandwich Generation <i>Syed Zabiruddin Bin Syed Musa</i>	49
Integrating ESG Factors and Circular Economy Practices in Family-Owned SMEs: An Islamic Perspective <i>Syed Zabiruddin Bin Syed Musa</i>	66
Lipedema Awareness Among Malaysian Women: A Closer Look <i>Siti Muyassarab Rusli; Syed Zabiruddin Bin Syed Musa</i>	85
Optimizing Operational Performance in the Malaysian Army: Integrating ESG and SDG Principles within a Low-Budget Framework <i>Syed Zabiruddin Bin Syed Musa</i>	105
Raising Awareness of the Dangers of Breast Fillers: Insights from a Survey in Malaysia <i>Siti Muyassarab Rusli; Syed Zabiruddin Bin Syed Musa</i>	122
Exploring the Regulatory and Ethical Challenges in Stem Cell Therapies for Women's Health in Malaysia: A Case Study Approach <i>Siti Muyassarab Rusli; Syed Zabiruddin Bin Syed Musa; Siti Nur Izzati binti Saiful Anuar</i>	132
مؤسسة العلم النافع ودورها في الدعوة إلى الله هارون راؤوب تايلاندي; الدكتور رضا عويس حسن سرور	153

IJCI



## **The Female Circumcision: Legal Challenges and Human Rights Concerns in Malaysia**

Nursyafiqa Izzati binti Azmi Rais, Nur Nadiatulhusna binti Anuar Layani, Tengku Mawaddah binti Tengku Maizal, Farhanin binti Abdullah Asuhaimi\*

<sup>1</sup> Faculty of Law and International Relations, Universiti Sultan Zainal Abidin

\*Corresponding Author: farhanin@unisza.edu.my

### **Abstract**

Female circumcision, also known as female genital mutilation (FGM), is a controversial practice in Malaysia that involves the partial or total removal of the external female genitalia for non-medical reasons. Despite being classified as FGM by the World Health Organization (WHO), Malaysia faces significant legal and ethical challenges in addressing the practice due to its deep cultural and religious roots. In 2009, the National Fatwa Council issued a religious edict making female circumcision mandatory for Muslim girls, despite a lack of evidence supporting its medical or religious necessity. This has led to a medicalisation of the practice, with an estimated 93% of Muslim women in Malaysia having undergone some form of circumcision. The practice in Malaysia is primarily categorized as Type I (removal of the clitoral hood) and Type IV (other harmful procedures to the genitalia for non-medical purposes). However, recent studies suggest that more invasive forms, such as partial removal of the clitoral glans (Type I), may also be performed by medical practitioners. Malaysia's dual judicial system, which incorporates both Islamic law and secular state law, has complicated efforts to address FGM. While the country has acceded to international treaties like the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and the Convention on the Rights of the Child (CRC), which prohibit harmful practices against women and children, the practice remains legally permitted. A 2020 study found that 20.5% of Muslim doctors in Malaysia practice female genital cutting, highlighting the need for stronger medical guidelines and education on the harms of FGM. Some argue that any form of harm inflicted on female genitals should be considered FGM, regardless of the degree of cutting. In conclusion, the practice of female circumcision in Malaysia poses significant legal and ethical challenges. Addressing this issue will require a multifaceted approach involving legal reforms, medical guidelines, and community education to protect the rights and well-being of girls and women in Malaysia.

**Keywords:** Female Circumcision, Human Rights, Malaysia

### **Introduction**

Female circumcision, also known as female genital mutilation (FGM), is a deeply controversial practice that has garnered significant global attention in recent decades. The World Health Organization (WHO) and numerous international human rights organizations have condemned FGM as a harmful and unethical practice that violates the rights of women and girls. (World Health Organization, 2021) However, in certain countries like Malaysia, the



practice remains deeply entrenched in cultural and religious traditions, posing complex legal and ethical challenges.(Nik Mat et al., 2023)

Malaysia presents a unique case study in the global discourse on FGM. As a Muslim-majority country with a dual legal system incorporating both secular and Islamic laws, Malaysia has struggled to develop a cohesive legal and policy guideline to address female circumcision.(Rashid & Iguchi, 2019) While the country has ratified international treaties such as the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and the Convention on the Rights of the Child (CRC), which call for the elimination of harmful practices like FGM, the practice continues to be widely accepted and performed in Malaysia.(Zakuan, 2023)

In 2009, the National Fatwa Council, the highest Islamic legal authority in the country, issued a religious edict making female circumcision mandatory for Muslim girls.(Ainslie, 2015) This fatwa, coupled with the lack of clear legal prohibitions, has contributed to the normalization and medicalization of the practice. A 2012 study found that an estimated 93% of Muslim women in Malaysia have undergone some form of circumcision, with the majority of procedures performed by medical professionals.(Zakuan, 2023)

The types of female circumcision practiced in Malaysia primarily fall under WHO classifications Type I (removal of the clitoral hood) and Type IV (other harmful procedures to the genitalia for non-medical purposes).(Zakuan, 2023) However, there are indications that more invasive forms, such as partial removal of the clitoral glans (also classified as Type I), may also be performed by some practitioners. (Rashid & Iguchi, 2019) This raises serious concerns about the potential physical and psychological harm inflicted on women and girls subjected to these procedures.

This article explores the complex legal and ethical landscape surrounding female circumcision in Malaysia. By examining the interplay between cultural traditions, religious interpretations, international human rights norms, and domestic laws, it aims to shed light on the challenges and potential pathways for addressing this contentious issue. The authors argue that a comprehensive, rights-based approach that considers Malaysia's unique sociocultural context is necessary for effectively balancing religious obligation with the rights of women to protect their bodies from being harm.

### **Literature Review**

The practice of female circumcision, commonly referred to as female genital mutilation (FGM), is a deeply contentious issue that has garnered significant attention from researchers, human rights advocates, and medical professionals, particularly in the context of Malaysia. A substantial body of research indicates that female circumcision is associated with numerous health risks and offers no medical benefits. Dr. Harlina Siraj, an obstetrician-gynaecologist, emphasizes that the procedure can lead to a range of complications, including pain, infection, and sexual dysfunction.(Manar Al Adam, 2020) The World Health Organization (WHO) categorizes FGM as a harmful practice that can result in severe physical and emotional harm, calling for its elimination globally. (World Health Organization, 2024) This medical perspective



is critical in arguing against the normalization of the practice, as it highlights the potential for significant harm to women's health.

The medical and health implications of female circumcision, are a central concern in the discourse surrounding this practice in Malaysia. Despite its deep cultural and religious roots, a growing body of evidence highlights the significant health risks associated with female circumcision, as well as the absence of any medical benefits. Female circumcision can lead to both immediate and long-term health complications. Immediate risks include excessive bleeding, infection, and severe pain during and after the procedure. According to international health experts, these complications can arise from the use of unsterilized instruments and the lack of medical oversight, particularly when traditional practitioners perform the procedure (FMT, 2023).

Long-term consequences are equally concerning. Women who have undergone female circumcision may experience chronic pain, complications during childbirth, and sexual dysfunction. Dr. Harlina has noted that many women report difficulties with sexual arousal and satisfaction following the procedure, which can lead to psychological distress and a diminished quality of life. Additionally, the psychological impact of undergoing a procedure that is often traumatic can lead to anxiety, depression, and post-traumatic stress disorder (PTSD). (Al Jazeera, 2020).

In Malaysia, the legal status of female circumcision is influenced by both Islamic law and secular legislation. (Wan Hamzah, 2011) In 2009, the National Fatwa Council issued a religious edict declaring female circumcision mandatory for Muslim girls, which has led to widespread acceptance of the practice within the Muslim community. (Ainslie, 2015) This fatwa has created a legal gray area where female circumcision is sanctioned under Islamic law, despite being classified as a harmful practice by the World Health Organization. (Mohd Khalib, 2022)

While the Malaysian Ministry of Health has issued circulars prohibiting female genital cutting in government hospitals, there are no comprehensive laws regulating the practice in private healthcare settings. (Mohd Khalib, 2022) This regulatory gap allows for the continuation of female circumcision in private clinics, where parents often seek the procedure for their daughters despite the absence of regulated guidelines.

The involvement of medical professionals in performing female circumcision presents ethical dilemmas that complicate the practice's legitimacy. (Mohd Khalib, 2022) Some healthcare providers argue that conducting the procedure in a clinical setting makes it safer by ensuring a sterilize environment and access to medical equipment; (Rashid & Iguchi, 2019) however, the lack of regulated guidelines can exacerbate the situation if complication arise, such as bleeding or infection. (Leye et al., 2019) Without clear protocols and oversight, the risks associated with female circumcision may not be adequately addressed, potentially leading to worse outcomes for the patients. (Lau, 2023)

The practice of female circumcision is increasingly viewed through the lens of human rights, with advocates arguing that it constitutes a violation of women's rights and bodily autonomy. Organizations such as Human Rights Watch emphasize that female circumcision is often



erroneously linked to religion and is not supported by any religious texts. The practice is seen as a form of gender-based violence that reinforces patriarchal norms and undermines the rights of women and girls (Manar Al Adam, 2020).

Malaysia's commitment to international human rights treaties, such as the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), places an obligation on the government to protect women from harmful practices. (World Health Organization, 2010) However, the continued legal acceptance of female circumcision raises questions about the effectiveness of these commitments in practice. The failure to address the issue through comprehensive legal reforms and public education campaigns perpetuates a cycle of harm and discrimination against women and girls. (Leye et al., 2019)

Apart from that, the practice of female circumcision in Malaysia raises several human rights concerns that can be supported by specific articles in the Federal Constitution of Malaysia.

**Right to Life and Personal Liberty:** Article 5 guarantees the right to life and personal liberty, which is violated by female circumcision as it involves non-consensual procedures that can lead to physical and psychological harm. Female circumcision involves the removal or alteration of female genitalia, which constitutes a significant violation of physical integrity. It is said that the practice exposes girls and women to immediate risks such as bleeding, infection, and long-term health complications. (Nakamura et al., 2023) Additionally, female circumcision subjects individuals to physical and psychological harm without their consent, thus infringing upon their security and personal autonomy.

**Equality before the Law:** Article 8 provides that all persons are equal before the law and entitled to equal protection. Female circumcision is said to affect women and girls profoundly, thereby violating their right to equality and non-discrimination. The practice, which involves the partial or total removal of external female genitalia, perpetuates gender inequality by enforcing traditional gender roles and discriminating against women and girls, limiting their autonomy and control over their own bodies. (Zakuan, 2023)

In recent years, there has been a growing movement among medical professionals and human rights advocates in Malaysia calling for the abolition of female circumcision. (Lau, 2023; Mohd Khalib, 2022) This movement emphasizes the need to challenge cultural norms that support the practice and to educate communities about its harmful effects. Advocates argue that female circumcision should not be medicalized or normalized but should be recognized as a violation of women's rights. This perspective aligns with global efforts to eliminate FGM, as outlined in the United Nations Sustainable Development Goals, which call for the elimination of all harmful practices against women and girls. Furthermore, it is said that the absence of guidelines to create a safe procedure for female circumcision strengthens this perspective, highlighting the inherent risks and reinforcing the call for its complete eradication. (Lau, 2023)

### **Discussion and Conclusion**

Given the complex cultural, religious, and social contexts surrounding female circumcision in Malaysia, a nuanced approach to legislation is necessary. Instead of outright prohibition, the focus should be on enacting laws that provide specific rules and guidelines for the practice,

thereby ensuring that it is performed under medically approved conditions and with appropriate safeguards. (Mokhtar & Khair, 2019)

The Malaysian government should develop and enact a comprehensive guidelines and standards for the practice of female circumcision. This guideline should aim to ensure that any form of female circumcision performed is medically approved, safe, and respects the rights of women and girls.

The guideline should begin by clearly defining what constitutes female circumcision and categorizing the various types of procedures. This classification should align with the World Health Organization's typology of FGM (World Health Organization, 2024), which includes the following;

Type I: Clitoridectomy, or partial or total removal of the clitoral glans and/or the clitoral hood.

Type II: Excision, or partial or total removal of the clitoris and the labia minora, with or without removal of the labia majora.

Type III: Infibulation, or narrowing of the vaginal opening by creating a covering seal. The seal is formed by cutting and repositioning the inner or outer labia, with or without removal of the clitoris.

Type IV: Other harmful procedures, including pricking, piercing, incising, scraping, and cauterizing the genital area.

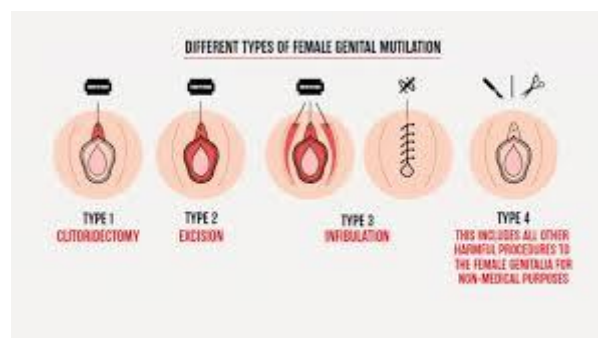


Figure 1: Four Types of Female Genital Mutilation (GalenCentre, 2022)

By clearly defining these categories, the guideline can help differentiate between acceptable medical practices and harmful procedures that should be prohibited. In Malaysia, female circumcision practices include types I and IV, which are generally considered less harmful to women. (Ab. Rahman Isa, 1999) These types involve minimal physical alteration, focusing on the removal of a small portion of the clitoral hood or the prepuce. Unlike more severe forms, these procedures are believed to have lesser health risks and complications, aligning with cultural traditions while aiming to minimize long-term adverse effects on women's health and well-being. (Mokhtar & Khair, 2019) Obviously, this practice does not deprive women's right to their physical body as well as giving them any psychological effect.

Additionally, the guideline should also include specific medical standards for performing female circumcision, emphasizing the need to use sterile instruments and proper medical equipment to minimize the risk of infection and complications. This includes ensuring the



procedure is conducted in a clean and safe environment, preferably in a healthcare facility. Additionally, the guidelines draw parallels to male circumcision, which has been widely practised and regulated in Malaysia, providing a reference point for all medical personnel involved. (Kementerian Kesihatan Malaysia, 2017)

The guideline should also outline the specific qualifications for practitioners who perform female circumcision. This may involve creating a certification program for healthcare professionals that covers the medical, ethical, and cultural aspects of the procedure. Practitioners should be trained to understand the potential risks and complications associated with female circumcision.

It is also crucial to emphasize that the guideline should also include the requirement for obtaining informed consent from the guardians of minors undergoing the procedure. This process should involve providing comprehensive information about the potential risks and benefits, as well as the procedures that do not involve genital cutting. Ensuring guardians are fully informed is essential to acknowledge their role in deciding on the safe procedure of female circumcision practiced in the country. By promoting transparency and respecting the rights of guardians to make informed decisions, the guidelines aim to uphold ethical standards and protect the well-being of minors undergoing such procedures. This approach also aligns with international human rights principles that advocate for the autonomy and dignity of individuals, including children and their guardians.

To ensure compliance, the guideline should also highlight the need for monitoring and enforcement mechanism, including conducting regular audits of healthcare facilities and practitioners who perform female circumcision. This is essential to ensure adherence to the established standards and guidelines and to promptly identify and address any violations.

Additionally, the guideline should establish a system for reporting violations of the regulations, such as a hotline or online platform where individuals can report concerns about non-compliance or unsafe practices.

To further reinforce compliance, the guidelines should implement penalties for practitioners who fail to adhere to the established standards, including fines, suspension of medical licenses, or criminal charges for severe violations. By incorporating these measures, the framework aims to maintain high standards of safety and ethical conduct, protecting the health and rights of women and girls undergoing the procedure.

Alongside the regulatory guideline, it is crucial to implement public awareness and education campaigns to inform communities about the new regulations and the health risks associated with female circumcision. These campaigns should aim to address cultural beliefs that support the practice and promote understanding of women's rights and bodily autonomy, educate parents and guardians about the importance of seeking qualified healthcare providers and the potential dangers of traditional practices performed outside of medical settings.

In conclusion, establishing a comprehensive regulatory guideline for female circumcision in Malaysia is essential for ensuring that any procedures performed are safe, ethical, and



respectful of women's rights. By defining the practice, setting medical standards, implementing monitoring mechanisms, and promoting public awareness, Malaysia can create an environment that prioritizes the health and well-being of women and girls. This approach acknowledges the cultural significance of the practice while ensuring that it is conducted in a manner that aligns with international human rights standards. Ultimately, the goal should be to protect the rights of women and girls while minimizing the risks associated with female circumcision.

### **Acknowledgement**

This research was supported by the Universiti Sultan Zainal Abidin through Kajian Penguikuan Projek Ilmiah Tahun Akhir-FUHA (UniSZA/2024/PSU-TDA/08) granted.

### **References**

- Ab. Rahman Isa, R. S. and M. S. O. (1999). The Practice of Female Circumcision among Muslims in Kelantan, Malaysia. *Reproductive Health Matters*, 7(13), 137–144. [https://doi.org/https://doi.org/10.1016/S0968-8080\(99\)90125-8](https://doi.org/https://doi.org/10.1016/S0968-8080(99)90125-8)
- Ainslie, M. J. (2015). The 2009 Malaysian Female Circumcision Fatwa : State Ownership of Islam and The Current Impasse. *Women's Studies International Forum*, 52, 1–9. <https://doi.org/10.1016/j.wsif.2015.06.015>
- GalenCentre. (2022). *Female Circumcision Should Be Prohibited and Not Medicalised*. Galen Centre. <https://galencentre.org/2022/02/07/female-circumcision-should-be-prohibited-and-not-medicalised/>
- Kementerian Kesihatan Malaysia. (2017). Male Circumcision. In *Health Technology Assessment Section* (Vol. 002).
- Lau, A. (2023, February 6). Review Fatwa on Female Circumcision, Putrajaya Urged. *FreeMalaysiaToday*. <https://www.freemalaysiatoday.com/category/nation/2023/02/06/review-fatwa-on-female-circumcision-putrajaya-urged/>
- Leye, E., Eekert, N. Van, Shamu, S., Esho, T., & Barrett, H. (2019). Debating Medicalization of Female Genital Mutilation / Cutting ( FGM / C ): Learning from ( policy ) Experiences across Countries. *Reproductive Health*, 16(158), 1–10.
- Manar Al Adam. (2020). *Malaysia's anti-FGM advocates: Leave our bodies alone*. AlJazeera. <https://www.aljazeera.com/news/2020/2/7/malaysias-anti-fgm-advocates-leave-our-bodies-alone>
- Mohd Khalib, A. (2022). *Female Circumcision Should Be Prohibited And Not Medicalised*. CodeBlue.
- Mokhtar, R. H., & Khair, N. S. (2019). *No Basis for Banning Female Circumcision*. Malaysiakini. <https://www.malaysiakini.com/news/461775>
- Nakamura, K., Miyachi, K., Miyawaki, Y., & Toda, M. (2023). Female Genital Mutilation/Cutting: Global Zero Tolerance Policy and Diverse Responses from African and Asian Local Communities. In *Female Genital Mutilation/Cutting: Global Zero Tolerance Policy and Diverse Responses from African and Asian Local Communities*. Springer. <https://doi.org/10.1007/978-981-19-6723-8>
- Nik Mat, N. N. A. S., Stefanie Pillai, & Surinderpal Kaur. (2023). Female Circumcision in Malaysia : Challenges and Lessons Learned in using Focus Groups through an NGO-Academia Collaboration. *Journal of Modern Languages*, 33(1), 74–86.



- Rashid, A., & Iguchi, Y. (2019). Female Genital Cutting in Malaysia: A mixed-Methods Study. *BMJ Open*, 9(4). <https://doi.org/10.1136/bmjopen-2018-025078>
- Wan Hamzah, W. A. (2011). *A First Look at Malaysian Legal System*.
- World Health Organization. (2010). *Global Strategy to Stop Health-Care Providers from Performing Female Genital Mutilation*. World Health Organization. <https://www.who.int/publications/i/item/WHO-RHR-10.9>
- World Health Organization. (2021). *Ethical Considerations in Research on Female Mutilation*.
- World Health Organization. (2024). *Female Genital Mutilation*. World Health Organization. <https://www.who.int/news-room/fact-sheets/detail/female-genital-mutilation>
- Zakuan, A. S. (2023). *Khatan Perempuan : Amalan Budaya atau Agama?* SIS Forum (Malaysia).



## **Merancang Pengajaran Matematik Yang Berkesan**

Mohd Zamir Bin Mohd Sharif<sup>1</sup>; Noor Saadah Mohd Radzuan<sup>2</sup>; Nor Hafizah Hamidon<sup>2</sup>; Siti Nor Sakinah Sam<sup>2</sup>

<sup>1</sup>Sekolah Berasrama Penuh Integrasi Selandar

<sup>2</sup>Sekolah Menengah Sains Alor Gajah

### **Abstrak**

Pencapaian murid sekolah-sekolah di Malaysia dalam mata pelajaran Matematik di peringkat antarabangsa amat membimbangkan. Ini dapat dilihat daripada prestasi murid-murid di Malaysia dalam TIMSS (Trend in Mathematics and Science Studies) yang dijalankan setiap empat tahun oleh satu badan antarabangsa yang menilai keberkesanan polisi dan amalan pengajaran dan pembelajaran Matematik dan Sains yang diamalkan oleh negara-negara yang menyertai TIMSS. Didapati pencapaian murid di sekolah-sekolah Malaysia menunjukkan penurunan dalam tiga kali pelaksanaan ujian TIMSS iaitu pada tahun 2003, 2007 dan 2011 manakala berlaku peningkatan pada tahun 2015 tetapi masih di bawah skor purata iaitu skor 500. Berdasarkan kepada nilai skor ini didapati amalan pengajaran dan pembelajaran Matematik dan Sains di kalangan guru dan murid-murid di Malaysia adalah dalam tahap yang kurang memuaskan dan perlu diberi penekanan. Kertas konsep ini akan membincangkan lima teras serta tiga elemen yang diberikan keutamaan dalam guru Matematik merancang pengajaran yang berkesan. Dapatan daripada kajian-kajian yang lepas menunjukkan bahawa lima teras yang perlu ada dalam proses merancang pengajaran Matematik yang berkesan adalah i. persediaan, ii. refleksi, iii. jangkaan, iv. penilaian dan v. ulangkaji manakala tiga elemen yang diberikan keutamaan dalam merancang pengajaran yang berkesan adalah i. pengetahuan dan kepercayaan guru, ii. peluang dan kekangan serta iii. niat untuk bertindak. Implikasi daripada kertas konsep ini ialah memperkenalkan Komuniti Pembelajaran Profesional dalam sukatan latihan bakal-bakal guru di institusi perguruan atau institusi pengajian tinggi dan juga memperkasakan penglibatan guru-guru pakar atau Jurulatih Utama dalam memberikan bimbingan perancangan pengajaran Matematik kepada guru-guru yang baharu mahupun yang lama. Selain daripada itu juga pihak Kementerian Pendidikan juga perlu melihat semula bahan bantu mengajar yang digunakan untuk mengajar Matematik di sekolah-sekolah yang lebih bersesuaian dan juga mengikuti arus zaman. Kesimpulannya bagi memastikan perancangan pengajaran Matematik yang berkesan perlu melibatkan lima teras perancangan iaitu persediaan, refleksi, jangkaan, penilaian dan ulangkaji dan perancangan tersebut dirangka mengikut keutamaan-keutamaan seperti pengetahuan dan kepercayaan guru, peluang dan kekangan serta niat untuk bertindak yang mana diakhirnya dapat meningkatkan prestasi terhadap pembelajaran Matematik.

**Kata kunci:** Model Perancangan, TIMSS, Teori Pengajaran Instruksional, Teori Pengajaran dalam Konteks



## **Pengenalan**

Penurunan pencapaian murid-murid Malaysia dalam ujian TIMSS dan PISA secara tidak langsung menunjukkan pencapaian pendidikan di Malaysia secara keseluruhan terutama dalam Matematik dan Sains. Pencapaian murid Malaysia didapati berada di bawah pencapaian murid-murid dari negara Asia seperti Singapura, Hong Kong, Korea Selatan, Jepun dan Thailand. Menurut Martin & Mullis (2006) minat murid terhadap Matematik merupakan salah satu faktor penyumbang kepada pencapaian tersebut. Bagi memastikan minat murid terhadap Matematik ini dapat dipupuk dan ditingkatkan, kaedah mengajar guru memainkan peranan yang amat penting. Oleh itu guru perlu bijak dalam merancang. Merancang merupakan satu seni yang perlu dimahir oleh para guru dan kemahiran terhadap seni tersebut boleh diperolehi daripada pengalaman-pengalaman guru yang berkaitan ataupun melalui perkongsian pengalaman guru-guru yang lebih pakar. Suatu perancangan pengajaran yang berkesan terutamanya dalam mengajar mata pelajaran Matematik adalah sangat penting bagi memastikan pemahaman murid ditingkatkan serta sikap positif murid terhadap mata pelajaran dapat dipupuk seterusnya akan memberikan impak yang positif terhadap prestasi mata pelajaran tersebut. Sikap murid dilihat sebagai salah satu faktor penyumbang terhadap pencapaian Matematik di sekolah-sekolah (Ali & Awan, 2013). Manakala menurut Papanastasiou & Zembylas (2004) menyatakan bahawa sikap positif murid terhadap suatu mata pelajaran di sekolah harus menjadi matlamat pembelajaran yang utama dan mempengaruhi prestasi matapelajaran tersebut. Oleh yang demikian, dengan sikap positif murid terhadap sesuatu mata pelajaran terutamanya matapelajaran Matematik perlu dipupuk dan ini dapat direalisasikan melalui proses perancangan pengajaran yang betul dan berkesan. Menurut D. Akyuz, Juli & Michelle (2013), bagi memastikan sikap positif murid terhadap mata pelajaran dapat dipupuk maka proses merancang oleh guru adalah sangat penting.

Pembaharuan dalam persekitaran pengajaran Matematik akan memberikan peluang kepada murid untuk membangunkan pemahaman yang kuat dalam Matematik dengan menggalakan mereka untuk turut serta dalam perbincangan berkaitan penyelesaian masalah Matematik (*National Council of Teachers of Mathematics, 2000*). Oleh yang demikian, sebagai seorang guru, mereka perlu bertindak sebagai fasilitator untuk mencipta satu persekitaran yang dapat menyokong murid untuk membina pemahaman terhadap Matematik secara sendiri (*National Council of Teachers of Mathematics, 1991*). D. Akyuz et. al (2013) mencadangkan bagi merealisasikan hasrat tersebut, guru perlu membuat perancangan yang baik dan teliti bagi memastikan pengajaran yang disampaikan bukan sahaja dapat mencapai objektif tetapi yang lebih penting di sini ialah mewujudkan kebarangkalian untuk murid belajar sendiri dan memahami Matematik secara sendiri.

Oleh itu amat penting bagi guru memahami proses merancang yang tepat bagi memastikan pengajaran dan pembelajaran yang berkualiti serta berkesan kepada murid-murid. Proses merancang tersebut disokong dengan penggunaan Teori Instruksional serta melibatkan lima teras dalam proses tersebut (D. Akyuz et. al, 2013). Manakala Clark & Peterson (1986) mencadangkan terdapat tiga keutamaan yang perlu dipertimbangkan oleh guru dalam proses merancang suatu pengajaran yang berkesan. Lima teras yang perlu diambil kira dalam proses merancang pengajaran Matematik yang berkesan seperti yang dicadangkan oleh D. Akyuz et. al (2013) adalah seperti berikut:



1. Persediaan (*Preparation*)
2. Refleksi (*Reflection*)
3. Jangkaan (*Anticipation*)
4. Penilaian (*Assessment*)
5. Ulangkaji (*Revision*)

Manakala tiga keutamaan yang perlu dipertimbangkan dalam proses merancang suatu pengajaran yang berkesan adalah seperti berikut:

1. Pengetahuan dan Kepercayaan (*Knowledge and Beliefs*)
2. Peluang dan Kekangan (*Opportunities and Constraints*)
3. Niat untuk bertindak (*Intentions to act*)

### **Teori Instruksional**

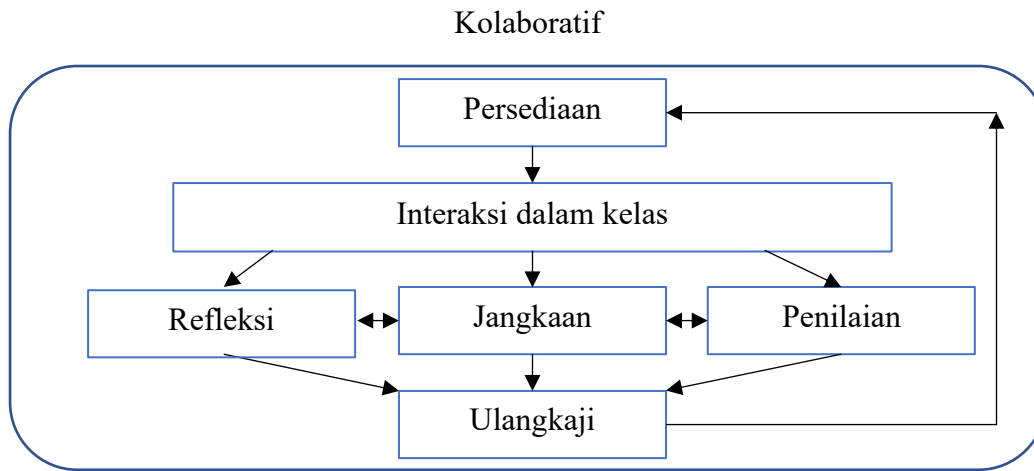
Teori Instruksional atau juga dikenali sebagai Teori Pengajaran yang diperkenalkan oleh Robert M. Gagne pada tahun 1965. Teori ini memberikan satu garis panduan yang jelas tentang bagaimana seorang guru untuk melaksanakan pengajaran yang berkesan kepada murid-murid dan seterusnya membantu murid belajar serta memperkembangkan pemahaman murid tersebut. Teori ini dapat membantu guru untuk merancang kaedah pengajaran yang boleh mempengaruhi dan mewujudkan persekitaran yang dapat meningkatkan kebarangkalian murid untuk belajar secara sendiri. Robert M. Gagne turut terkenal dengan proses pengajaran instruksional yang dikenali sebagai 9 Proses Instruksional Gagne (*9 Events of Instructional of Gagne*) yang menggariskan 9 urutan proses dalam pengajaran instruksional iaitu:

1. Menarik perhatian
2. Menyatakan objektif pembelajaran
3. Merangsang pengetahuan sedia ada
4. Menyampaikan pengajaran
5. Menyediakan panduan untuk belajar
6. Menunjukkan prestasi
7. Sediakan maklum balas
8. Menilai prestasi
9. Memperkasakan ingatan dan pemindahan idea

### **Teori Pengajaran Dalam Konteks (*Teaching-In-Context*)**

Teori ini diperkenalkan oleh Alan H. Schoenfeld pada tahun 1998. Beliau merupakan seorang pakar Matematik yang sangat terkenal dengan penulisan beliau berkaitan dengan pengajaran dan pembelajaran mata pelajaran Matematik. Antara penulisan beliau yang terkenal yang memperkenalkan teori tersebut adalah "*Toward a Theory of Teaching-in-Context*" yang diterbitkan pada tahun 1998. Teori ini menjelaskan bahawa segala aktiviti yang dirancang oleh guru dalam merangka pengajaran Matematik adalah dalam ruang lingkup pengetahuan dan pengalaman guru tersebut (*teaching-in-context*). Teori ini juga menjelaskan bahawa proses pengajaran seseorang guru juga merupakan satu proses penyelesaian masalah berdasarkan kepada pengetahuan, kepercayaan dan matlamat seseorang guru tersebut. Menurut D. Tirosh & P. Tsamir (2009), Teori Pengajaran Dalam Konteks menggambarkan bagaimana seseorang guru membuat keputusan dalam merancang pengajaran dan keputusan tersebut bergantung kepada pengalaman serta pengetahuan guru tersebut.

**Model Kitaran Perancangan**

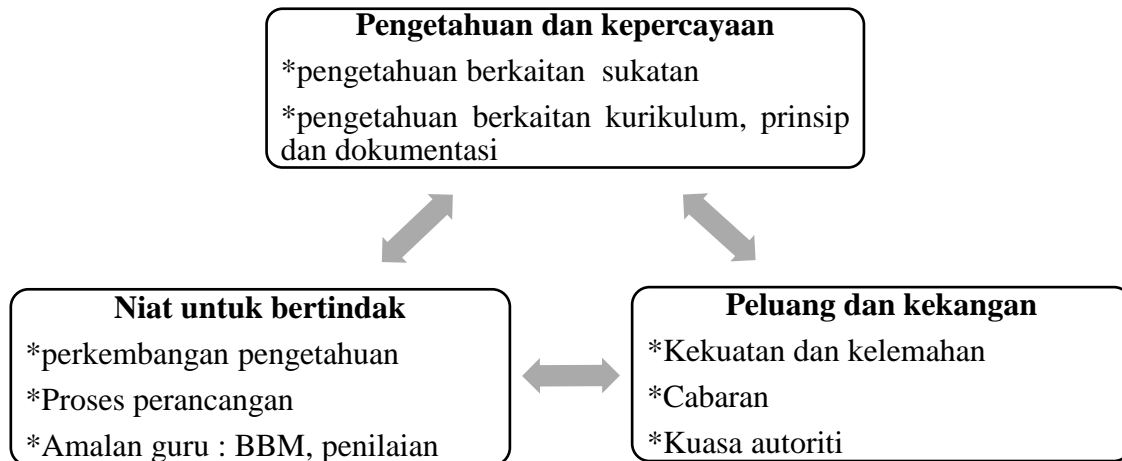


Sumber: D. Akyuz et.al 2013

Model Kitaran Perancangan ini diterbitkan oleh D. Akyuz et.al (2013) dalam kajian beliau dan rakan-rakannya bertajuk *'Improving the quality of mathematics teaching with effective planning practices*. Menurut model ini, terdapat lima teras dalam proses merancang. Kitaran perancangan bermula dengan persediaan awal guru termasuk membuat persediaan awal bagi refleksi, jangkaan dan juga penilaian. Selepas itu guru akan melaksanakan pengajaran di dalam kelas. Semasa berinteraksi bersama murid di dalam kelas, guru akan melaksanakan refleksi, jangkaan dan penilaian. Selepas proses berinteraksi bersama murid di dalam kelas, proses ulangkaji akan berlaku di mana guru akan melihat keberkesanan proses-proses sebelum ini dan seterusnya membuat penambahbaikan untuk hari berikutnya. Semua proses ini dijalankan dalam suatu komuniti pembelajaran yang diwujudkan dengan penyertaan guru-guru pakar dan juga penyelidik.

**Model Keutamaan Perancangan Pengajaran Matematik**

Rajah 2: Adaptasi daripada Rajah Skematik Clark dan Peterson



Sumber: P. Sullivan et.al 2012

Model ini diadaptasi oleh P. Sullivan et.al (2012) daripada rajah skematik yang dibina oleh Clark & Peterson (1987). Model ini menunjukkan kaitan antara keutamaan-keutamaan yang dipertimbangkan dalam merancang suatu pengajara Matematik. Antara keutamaan yang dipertimbangkan adalah pengetahuan dan kepercayaan guru tersebut, peluang dan kekangan serta niat untuk bertindak. Ketiga-tiga keutamaan ini akan berbeza mengikut kepada pengalaman guru, sumber pendidikan serta niat dan kesungguhan guru tersebut.

**Kajian Literatur**

Kajian lepas menunjukkan bahawa guru bukan sahaja bertindak sebagai guru yang memberikan pengetahuan tetapi sebagai fasilitator yang memberikan kefahaman. Guru perlu berkelakuan sebagai seorang fasilitator untuk mewujudkan persekitaran yang menyokong pelajar untuk membina pemahaman Matematik mereka sendiri dan bukan bertindak sebagai sumber pengetahuan yang hanya menunjukkan prosedur untuk mendapatkan jawapan yang betul (*National Council of Teachers of Mathematics, 1991*).

Kajian-kajian lepas juga menunjukkan bahawa proses merancang adalah sangat penting bagi seseorang guru. Menurut D. Akyuz et.al (2013) mencadangkan supaya guru perlu mengetahui kaedah merancang yang baik, bagaimana untuk mengkaji semula perancangan tersebut dan membuat penyesuaian berdasarkan realiti bilik darjah, dan bagaimana untuk melaksanakan rancangan itu walaupun pelbagai cabaran itu boleh dihadapi di dalam kelas. Beliau juga menyatakan bahawa perancangan yang berkesan akan melibatkan proses persediaan, refleksi, jangkaan, penilaian dan ulangkaji.

Terdapat kajian yang dijalankan di Afrika Selatan, menunjukkan penekanan tentang kepentingan garis panduan dalam membuat perancangan untuk guru akses kompleksiti yang wujud dalam penyediaan pengajaran berkesan (Rusznyak & Walton, 2011). Manakala mengikut rajah skematik Clark dan Peterson (1989) yang diperbaharui oleh P. Sullivan et.al (2012) menunjukkan bahawa terdapat tiga keutamaan yang perlu diberikan pertimbangan



dalam guru membuat keputusan dalam membuat perancangan iaitu aspek pengetahuan dan kepercayaan, aspek peluang dan kekangan dan aspek niat guru.

Kajian-kajian lepas juga menunjukkan bahawa terdapat perbezaan antara guru-guru di beberapa negara dari sudut prinsip merancang pengajaran Matematik yang berkesan. Di Amerika Syarikat, guru-gurunya mengambil sumber dari buku teks dan panduan guru yang berkaitan sebagai kurikulum, dan merancang pengajaran mereka. Guru di Amerika Syarikat digambarkan sebagai pelaksana kurikulum dan bukannya perancang kurikulum (Superfine, 2008). Fernandez dan Cannon (2005) berhujah bahawa guru di Jepun memberi tumpuan untuk memastikan bahawa pelajar memahami konsep dan membangunkan pendekatan positif terhadap pembelajaran mereka. Berdasarkan kepada Holmqvist dan Wennas Brante (2011) memerhatikan perbezaan perancangan guru Sweden dan guru Hong Kong di mana para guru Sweden memberi tumpuan kepada aktiviti dan kaedah pengajaran, yang mana mereka beranggapan berasingan daripada sukatan manakala guru di Hong Kong lebih memberikan tumpuan kepada sukatan dalam membuat perancangan.

### **Dapatan Kajian Lepas**

Jadual 1 hingga Jadual 4 merupakan hasil dapatan yang melihat kepada keutamaan-keutamaan yang dipertimbangkan serta lima teras yang ada dalam proses merancang pengajaran Matematik yang berkesan. Hasil dapatan tersebut diperolehi daripada soal selidik yang diberikan kepada guru-guru sekolah menengah dan juga sekolah rendah. Hasil dapatan ini diterjemahkan ke bentuk nilai min yang disusun mengikut kedudukan menaik dan juga dua item yang paling utama dipilih oleh guru akan dijumlahkan dan dijadikan nilai peratus. Sebagai contoh jika nilai peratus adalah 50% bermaksud sebanyak 50% guru memilih item tersebut sebagai dua keutamaan yang penting.

Jadual 1: Proses perancangan spesifik mengikut kedudukan (sekolah menengah)  
(n-138)

	Min mengikut kedudukan	% 2 item teratas dipilih
Berdasarkan kepada pemahaman sedia ada murid, saya akan mengumpul aktiviti-aktiviti yang bersesuaian, pilih yang bersesuaian dengan tajuk dan melaksanakan mengikut susunan yang saya tetapkan	2.5	57
Saya akan membaca dokumen kurikulum rasmi dan mengenalpasti hasil pembelajaran yang spesifik dan merancang pengajaran saya berdasarkan maklumat tersebut	3.2	46
Saya akan melihat buku teks atau bahan yang digunakan oleh guru lain dan merancang pengajaran yang berkaitan dengan kandungan yang diberikan.	3.3	34



Saya akan melihat dokumen kurikulum berasaskan sekolah dan saya kenalpasti hasil pembelajaran yang spesifik, pilih jenis aktiviti dan dilaksanakan kepada murid	3.3	34
Saya akan berjumpa dengan guru lain, berkongsi idea dan pengalaman. Kemudian merancang sumber dan aktiviti yang akan digunakan.	3.6	30
Saya membaca dokumen kurikulum rasmi untuk mengenalpasti hasil pembelajaran yang spesifik dan menggunakan idea pengajaran dan sumber yang dicadangkan dalam dokumen tersebut.	4.5	21

Sumber: P. Sullivan et.al 2012

Jadual 2: Proses perancangan spesifik mengikut kedudukan (sekolah rendah) (n-117)

	Min mengikut kedudukan	% kedudukan pernyataan
Berdasarkan kepada pemahaman sedia ada murid, saya akan mengumpul aktiviti-aktiviti yang bersesuaian, pilih yang bersesuaian dengan tajuk dan melaksanakan mengikut susunan yang saya tetapkan	2.6	52
Saya akan membaca dokumen kurikulum rasmi dan mengenalpasti hasil pembelajaran yang spesifik dan merancang pengajaran saya berdasarkan maklumat tersebut	2.8	48
Saya akan berjumpa dengan guru lain, berkongsi idea dan pengalaman. Kemudian merancang sumber dan aktiviti yang akan digunakan.	3.23	48
Saya akan melihat dokumen kurikulum berasaskan sekolah dan saya kenalpasti hasil pembelajaran yang spesifik, pilih jenis aktiviti dan dilaksanakan kepada murid	3.7	20
Saya membaca dokumen kurikulum rasmi untuk mengenalpasti hasil pembelajaran yang spesifik dan menggunakan idea pengajaran dan sumber yang dicadangkan dalam dokumen tersebut.	3.9	23



Saya akan melihat buku teks atau bahan yang digunakan oleh guru lain dan merancang pengajaran yang berkaitan dengan kandungan yang diberikan.	3.7	0
---	-----	---

Sumber: P. Sullivan et.al 2012

Jadual 1 dan Jadual 2 menunjukkan analisis bagi item-item yang disoal kepada guru-guru sekolah menengah dan sekolah rendah bagi menilai keutamaan yang dipertimbangkan semasa membuat persediaan perancangan pengajaran Matematik. Analisis menunjukkan bahawa item yang paling utama yang dipilih oleh guru sekolah menengah dan juga guru sekolah rendah adalah item *“Berdasarkan kepada pemahaman sedia ada murid, saya akan mengumpul aktiviti-aktiviti yang bersesuaian, pilih yang bersesuaian dengan tajuk dan melaksanakan mengikut susunan yang saya tetapkan”* manakala item seperti *“Saya membaca dokumen kurikulum rasmi untuk mengenalpasti hasil pembelajaran yang spesifik dan menggunakan idea pengajaran dan sumber yang dicadangkan dalam dokumen tersebut”* mendapat nilai min tertinggi bagi guru sekolah menengah manakala item *“Saya akan melihat buku teks atau bahan yang digunakan oleh guru lain dan merancang pengajaran yang berkaitan dengan kandungan yang diberikan”* pula merupakan item yang mendapat in paling tinggi dalam kalangan guru sekolah rendah.

Jadual 3: Proses perancangan spesifik menggunakan maklumat penilaian mengikut kedudukan (sekolah menengah) (n=115)

	Min mengikut kedudukan	% kedudukan pernyataan
Saya akan menggunakan maklumat penilaian untuk mendapatkan pandangan secara umum pencapaian murid saya dan seterusnya memilih aktiviti yang bersesuaian sekurang-kurangnya setengah dari tahap pemahaman mereka	2.3	63
Saya akan menggunakan maklumat penilaian untuk mengagihkan murid kepada kumpulan yang tertentu dan merancang aktiviti yang berbeza mengikut yang diperlukan oleh mereka	2.4	61
Saya akan menggunakan maklumat penilaian untuk melihat kumpulan mana yang memerlukan bimbingan yang lebih manakala kumpulan yang lain akan berkerja secara bebas semasa pengajaran	3.7	4.0
Saya tidak akan menggunakan maklumat penilaian tetapi bergantung semata-mata kepada penilaian saya sendiri atau berdasarkan kepada maklumat daripada guru lain	4.0	25



Saya akan menganalisis respon murid berdasarkan kepada soalan-soalan yang tertentu dan berdasarkan kepada keputusan tersebut saya akan merancang pengajaran saya	4.5	16
Saya akan menggunakan perbandingan keseluruhan yang dikeluarkan oleh Jabatan Pendidikan Negeri dan membuat pertimbangan dalam pengajaran saya	4.9	10

Sumber: P. Sullivan 2012

Jadual 4: Proses perancangan spesifik menggunakan maklumat dari penilaian mengikut kedudukan (sekolah rendah) (n=88)

	Min mengikut kedudukan	% kedudukan pernyataan
Saya akan menggunakan maklumat penilaian untuk mengagihkan murid kepada kumpulan yang tertentu dan merancang aktiviti yang berbeza mengikut yang diperlukan oleh mereka	2.1	7
Saya akan menggunakan maklumat penilaian untuk mendapatkan pandangan secara umum pencapaian murid saya dan seterusnya memilih aktiviti yang bersesuaian sekurang-kurangnya setengah dari tahap pemahaman mereka	3.42	29
Saya akan menggunakan maklumat penilaian untuk melihat kumpulan mana yang memerlukan bimbingan yang lebih manakala kumpulan yang lain akan berkerja secara bebas semasa pengajaran	3.9	23
Saya akan menganalisis respon murid berdasarkan kepada soalan-soalan yang tertentu dan berdasarkan kepada keputusan tersebut saya akan merancang pengajaran saya	4.8	6
Saya tidak akan menggunakan maklumat penilaian tetapi bergantung semata-mata kepada penilaian saya sendiri atau berdasarkan kepada maklumat daripada guru lain	5.8	4
Saya akan menggunakan perbandingan keseluruhan yang dikeluarkan oleh Jabatan	5.7	2



Pendidikan Negeri dan membuat pertimbangan  
dalam pengajaran saya

---

Sumber: P. Sullivan 2012

Jadual 3 dan Jadual 4 pula menunjukkan analisis item soal selidik yang membincangkan keutamaan guru dalam membuat perancangan menggunakan maklumat penilaian murid. Guru-guru sekolah menengah dan guru sekolah rendah mempunyai pandangan yang berbeza dari segi menggunakan maklumat penilaian murid dalam merancang pengajaran Matematik. Bagi guru sekolah menengah, mereka menggunakan maklumat penilaian murid untuk merancang aktiviti yang bersesuaian dan sekurang-kurangnya aktiviti tersebut dapat mencapai separuh daripada pemahaman murid manakala guru sekolah rendah pula menggunakan maklumat penilaian murid dan mengagihkan murid mengikut kumpulan yang berbeza mengikut pencapaian.

### **Perbincangan Dapatan Kajian Lepas**

Dapatan kajian lepas jelas menunjukkan keutamaan-keutamaan yang dipertimbangkan dalam proses merancang pengajaran Matematik adalah berbeza di antara guru-guru sekolah menengah dan juga guru-guru sekolah rendah. Hasil dapatan menunjukkan bahawa guru sekolah menengah lebih gemar untuk mendapatkan maklumat daripada guru-guru yang lebih berpengalaman atau guru pakar semasa membuat perancangan berbeza dengan guru-guru sekolah rendah lebih banyak merujuk buku teks atau sebarang dokumen rasmi dalam membuat perancangan.

Selain daripada itu, guru-guru sekolah menengah mahupun sekolah rendah secara umumnya memerlukan sokongan luaran atau tambahan dalam menjelaskan idea mereka untuk diterjemahkan dalam perancangan pengajaran. Walaupun hampir kebanyakan guru-guru yang terlibat dalam soal selidik tersebut mempunyai pengetahuan dalam topik atau bab yang ingin diajar, tetapi masih ada sebilangan kecil yang masih tidak dapat menjelaskan secara terperinci topik atau bab yang ingin diajar dengan penuh keyakinan. Berdasarkan kepada ini, guru-guru perlu membuat jangkaan kepada persoalan-persoalan yang bakal diajukan oleh murid-murid semasa melaksanakan pengajaran di dalam kelas nanti.

Hasil dapatan menunjukkan bahawa guru-guru sekolah menengah dan sekolah rendah menggunakan maklumat daripada penilaian murid secara optimum dalam merancang pengajaran mereka secara berkesan. Guru-guru merancang kaedah pengajaran yang pelbagai berdasarkan kepada maklumat penilaian yang diperolehi oleh mereka bagi memastikan objektif pengajaran mereka tercapai dan berkesan.

Hasil dapatan menyokong kepada konsep lima teras dalam proses merancang pengajaran Matematik yang berkesan iaitu persediaan, refleksi, jangkaan, penilaian dan ulangkaji. Berdasarkan kepada temuramah antara pengkaji dengan responden "*..... saya mendapatkan maklumat berkaitan topik yang diajar melalui program-program sekolah yang diadakan sebelum ini, dan berdasarkan kepada maklumat tersebut, saya akan menyediakan perancangan mengajar, membentuk soalan latihan, bahan bantu mengajar, latihan kerja rumah*" menunjukkan persediaan adalah antara teras yang perlu ada dalam membuat perancangan. Selain daripada itu, anara komen responden "*..... saya menjalankan pra-ujian*



*kepada murid untuk melihat pemahaman kepada konsep yang ingin diajar, kemudian saya membuat perbincangan hasil pra-ujian tersebut dengan guru lain dan saya merangka soalan berdasarkan kepada hasil penilaian pra-ujian tersebut. Kemudian saya kembali semula ke dalam kelas dan mengajar mengikut perancangan yang berdasarkan hasil penilaian dan seterusnya membuat refleksi. Proses ini berjalan lebih daripada satu jam dan kitaran proses ini memberikan pemahaman yang lebih mendalam berkaitan konsep yang diajar". Berdasarkan kepada komen responden menunjukkan bahawa dalam proses merancang perlu adanya refleksi, jangkaan dan juga ulangkaji.*

### **Isu-Isu Di Malaysia**

Berdasarkan kepada perbincangan hasil dapatan, bagi membuat suatu perancangan yang berkesan perlunya sokongan luar untuk membantu. Dalam persekitaran pendidikan di Malaysia, ini dapat dikaitkan dengan pelaksanaan Komuniti Pembelajaran Profesional atau lebih dikenali sebagai PLC. Walaubagaimanapun, pelaksanaan PLC ini dilihat tidak dijalankan secara menyeluruh dan berterusan. PLC ini sekadar menjadi bahan dokumentasi sahaja tanpa dipraktik sepenuhnya dalam kalangan guru-guru di Malaysia.

Selain daripada itu, pencerapan guru-guru oleh pentadbir, pihak Pejabat Pendidikan Daerah dan Jabatan Pendidikan Negeri yang terdiri daripada mereka yang tidak mempunyai pengetahuan berkaitan pengajaran Matematik juga merupakan satu isu pendidikan di Malaysia. Pencerapan yang biasa dijalankan oleh sebahagian pegawai-pegawai ini lebih kepada untuk melihat kepada pematuhan pelaksanaan polisi-polisi baharu seperti Kemahiran Berfikir Aras Tinggi dan Pembelajaran Abad ke-21 dan kebanyakan pegawai-pegawai yang mencerap guru Matematik ini bukan berlatar belakang opsyen Matematik. Pegawai ini tidak mendapat gambaran sebenar secara keseluruhan pengajaran tersebut dan seringkali guru-guru Matematik ini diberikan komen yang kurang baik selepas pencerapan. Seharusnya pihak yang berkaitan perlu menyediakan pegawai yang mempunyai pengetahuan serta pengalaman yang luas dalam bidang Matematik untuk mencerap guru-guru Matematik. Ini secara tidak langsung dapat membantu guru-guru Matematik yang baharu menimba pengalaman dan bebas untuk berbincang dengan lebih terbuka.

Bahan Bantu Mengajar yang tidak dikemaskini yang digunakan oleh guru-guru di Malaysia merupakan satu lagi isu yang perlu diberikan perhatian. Bahan Bantu Mengajar yang biasa digunakan oleh guru-guru adalah buku teks. Buku teks yang sedia ada tidak selaras dengan perkembangan semasa dan tidak seiring dengan usaha meningkatkan kemahiran berfikir aras tinggi murid. Buku teks yang sedia ada juga tidak mencabar minda dan hanya melatih murid dengan kemahiran berfikir aras rendah iaitu dengan melakukan perkara rutin serta menghafal. Selain daripada itu juga kaedah mengajar atau pedagogi guru juga masih lagi tidak mengalami perubahan yang bersesuaian dengan kehendak masa seperti penerapan elemen Kemahiran Berfikir Aras (KBAT) serta Pembelajaran Abad ke-21 (PAK21). Sebilangan besar guru masih lagi selesa dengan pedagogi yang lama iaitu *chalk and talk* atau berpusatkan guru yang mana kaedah adalah kurang sesuai untuk memupuk kemahiran berfikir aras tinggi murid.



### **Implikasi**

#### **1. Dasar-Dasar Kementerian**

Kementerian perlu memandang serius kepentingan proses perancangan kerana dengan perancangan yang betul dan baik dapat menghasilkan keputusan yang memenuhi hasrat kerajaan serta kementerian. Oleh yang demikian, kementerian perlu menitik beratkan program-program yang dapat membudayakan amalan merancang yang baik dalam kalangan warga pendidikan. Pelantikan Jurulatih-Jurulatih Utama yang mempunyai pengetahuan meluas berkaitan teori dan pelaksanaan perancangan boleh membantu guru membuat perancangan yang baik sepertimana sebelum ini wujudnya Jurulatih Utama yang mahir dalam membuat kajian tindakan pernah dilaksanakan bagi memperkasakan budaya membuat kajian tindakan dalam kalangan guru.

Kementerian juga perlu meneliti semula pengisian yang terdapat dalam buku teks yang sedia ada yang diedarkan ke sekolah-sekolah supaya bersesuaian dengan arus pendidikan masa kini serta dapat membantu guru-guru membuat perancangan yang baik dan berkesan dalam pengajaran mereka.

#### **2. Latihan Perguruan**

Mengukuhkan pengetahuan serta mempraktikkan secara serius Komuniti Pembelajaran Profesional (PLC) dalam kalangan bakal-bakal guru atau guru pra-perkhidmatan di Institusi Pendidikan Guru dan juga Institusi Pengajian Tinggi yang menawarkan kursus pendidikan bagi memastikan Komuniti Pembelajaran Profesional (PLC) ini dapat dikembangkan dan menjadi budaya dalam kalangan guru-guru di Malaysia.

#### **3. Peranan Pentadbir Di Peringkat Sekolah, Daerah, Negeri Dan Kebangsaan**

Pentadbir dari pelbagai peringkat juga perlu jelas dengan teori serta proses perancangan dan juga jelas dengan kaedah pelaksanaannya. Seharusnya pentadbir menjadi suri teladan atau *role model* kepada guru-guru dalam perkara melibatkan perancangan kerana para pentadbir ini merupakan satu kumpulan perancang utama mengikut peringkat sama ada di sekolah, daerah, jabatan dan juga kebangsaan. Pentadbir seharusnya menjadi fasilitator dalam membantu serta menasihati guru-guru dalam membuat perancangan.

### **Kesimpulan**

Perancangan pengajaran Matematik yang berkesan seharusnya mempunyai kelima-lima teras tersebut iaitu persediaan, refleksi, jangkaan, penilaian dan diakhiri dengan ulangkaji. Perancangan seseorang guru akan berbeza antara satu sama lain disebabkan berbezaan yang terdapat dalam keutamaan-keutamaan yang dipertimbangkan oleh seseorang guru iaitu pengetahuan dan kepercayaan, peluang dan halangan serta niat untuk bertindak. Perbezaan ini disebabkan oleh pengalaman, sumber rujukan serta kesungguhan seorang guru untuk mengajar. Gabungan antara kelima-lima teras serta disesuaikan dengan pertimbangan keutamaan guru akan menghasilkan pengajaran Matematik yang berkesan dan seterusnya dapat meningkatkan prestasi murid dalam Matematik.

### **Rujukan**

Ball, D. 1993. "With an Eye on the Mathematical Horizon: Dilemmas of Teaching Elementary School Mathematics." *The Elementary School Journal* 93 (4)



- Clark, C. M., and R. J. Yinger. 1987. "Teacher Planning." In *Exploring Teachers' Thinking*, edited by J. Calderhead, 84–103. London: Cassell Educational.
- D. Akyuz, Juli & Michelle. 2013. *Improving the quality of mathematics teaching with effective planning practices*. Teacher Development: An International Journal of Teachers' Professional Development.
- D. Tirosh & P. Tsamir. 2009. Commentary on Understanding a Teacher's Actions in the Classroom by Applying Schoenfeld's Theory *Teaching-In-Context: Reflecting on Goals and Beliefs*
- Fernandez, C., & Cannon, J. (2005). What Japanese and U.S. teachers think about when constructing mathematics lessons: A preliminary investigation. *The Elementary School Journal*, 105(5)
- Holmqvist, M., & Wennås Brante, E. (2011). What is discerned in teachers' expressions about planning? *Education Inquiry*, 2(3)
- Martin, M. O., & Mullis, I. V. S. (2006). TIMSS: Purpose and Design. In S. J. Howie & T. Plomp (Eds.), *Contexts of learning mathematics and science: Lessons learned from TIMSS* (p. 17)
- National Council of Teachers of Mathematics. 1991. *Professional Standards for Teaching Mathematics*. Reston, VA: Author.
- National Council of Teachers of Mathematics. 2000. *Principles and Standards for School Mathematics*. Reston, VA: Author
- P. Sullivan, D. J. Clarke, D.M. Clarke, L. Farrell, J. Gerrard. 2012. Processes and priorities in planning mathematics teaching: Mathematics Education Research Group of Australasia
- Papanastasiou, E. C., & Zembylas, M. 2004. Differential effects of science attitudes and science achievement in Australia, Cyprus, and the USA. *International Journal of Science Education*, 26(3)
- Peterson, P. L., R. W. Marx, and C. M. Clark. 1978. "Teacher Planning, Teacher Behavior, and Student Achievement." *American Educational Research Journal* 15
- Preuschoff, A. C. (2011). *Using TIMSS and PIRLS to Construct Global Indicators of Effective Environments for Learning. ProQuest Dissertations and Theses*
- Rusznayak, L., and E. Walton. 2011. "Lesson Planning Guidelines for Student Teachers: A Scaffold for the Development of Pedagogical Content Knowledge." *Education as Change* 15 (2): 271–285.
- Schoenfeld, A. H. 1998. "Toward a Theory of Teaching-in-Context." *Issues in Education* 4



## **Strengthening Corporate Governance: The Role of Ethics and Integrity in Malaysian SMEs During Economic Uncertainty**

Dr Syed Zahiruddin Bin Syed Musa

Universiti Islam Malaysia, Bangunan Aisyah, Lot 287, Jalan 16/3, Seksyen 16, 46350 Selangor

### **Abstract**

Corporate governance ensures transparency, accountability, and ethical management, critical for Malaysian SMEs during economic uncertainty. Effective governance, including ESG principles, helps SMEs navigate challenges like financial instability and regulatory changes, fostering resilience and long-term success. Ethical standards and integrity are foundational, enhancing trust and aligning operations with strategic goals. Effective governance structures, such as boards of directors, ensure strategic oversight. Research shows that good governance positively impacts SME performance and resilience, with case studies highlighting practical applications and success during economic uncertainty. This research employs a case study methodology to examine governance, ethics, and ESG practices in three Malaysian companies. The method focuses on in-depth analysis through secondary data review, thematic analysis, and comparative analysis, providing detailed, context-specific insights into the application and challenges of these principles across diverse sectors. This study explores governance, ethics, and ESG practices in three Malaysian companies—Julie’s Manufacturing Sdn Bhd, CK Packaging & Plastic Industries Sdn Bhd, and Homegrown Farms. The case studies emphasize robust governance frameworks, strategic ESG integration, and adaptive responses to market challenges, offering valuable insights for SMEs on effective governance and sustainability practices. The discussion highlights how Julie’s Manufacturing, CK Packaging, and Homegrown Farms navigate governance and ESG practices during economic uncertainty. Robust governance frameworks, tailored ESG strategies, and strong ethical foundations are essential for resilience and long-term success. SMEs should integrate these principles to manage risks, sustain growth, and enhance stakeholder trust.

**Keywords:** Corporate Governance, Ethics, ESG, SMEs, Economic Uncertainty

### **Introduction**

Corporate governance is a critical framework that guides the management and oversight of organizations. It ensures that companies operate in a manner that is transparent, accountable, and equitable towards all stakeholders (Ellili, 2023). For small and medium-sized enterprises (SMEs) in Malaysia, robust governance practices are crucial for sustaining investor trust and achieving operational efficiency. Governance structures involve mechanisms and practices that help set and reach objectives, monitor and assess risks, and optimize performance. In Malaysia, SMEs significantly impact the economic landscape, contributing substantially to employment and GDP. However, these enterprises face unique challenges that can influence their governance practices. Effective governance is essential for navigating these challenges and supporting ongoing growth. Key components of good governance include a clear organizational structure,



transparent decision-making processes, and rigorous internal controls. These elements ensure that an enterprise operates efficiently, aligns with strategic goals, and complies with legal and regulatory requirements.

Ethical standards and integrity form the foundation of sound governance. Ethics pertain to the moral principles guiding an organization's decisions and actions, while integrity involves maintaining consistency and honesty in these practices. Both are crucial for fostering a culture of trust and accountability. Upholding ethical behavior and integrity helps build a positive organizational reputation, which is vital for securing long-term success and stakeholder trust. In addition to ethical standards and integrity, the incorporation of Environmental, Social, and Governance (ESG) principles into corporate governance practices is becoming increasingly important. ESG encompasses criteria related to environmental sustainability, social responsibility, and effective governance (Feng & Zhang, 2021). These principles address broader societal and environmental impacts beyond traditional governance concerns. Integrating ESG principles can lead to enhanced organizational performance, improved risk management, and better stakeholder relations.

The significance of corporate governance, ethics, and ESG principles is particularly pronounced during economic uncertainty. Recent years have posed numerous economic challenges for Malaysian SMEs, including fluctuating market conditions, regulatory changes, and the global economic impacts of events such as the COVID-19 pandemic (Ahmad & Seet, 2022). These challenges have tested the resilience of SMEs and highlighted the need for strong governance frameworks and ethical practices. Economic uncertainty often exacerbates the risks associated with business operations. During such times, SMEs may struggle with maintaining financial stability, managing operational risks, and complying with regulatory requirements. This heightened risk environment underscores the importance of adopting sound governance practices to effectively adapt and respond to changing conditions. Strong governance provides a framework for managing risks, ensuring compliance, and sustaining stakeholder confidence.

The COVID-19 pandemic has underscored the vital role of effective governance and ethical practices in managing economic challenges. Many SMEs have faced disruptions in supply chains, shifts in consumer behavior, and evolving regulatory requirements. These disruptions have necessitated rapid and effective responses to mitigate adverse effects and ensure business continuity. In this context, governance practices that emphasize transparency, accountability, and ethical behavior have been essential in guiding SMEs through the uncertainties of the pandemic. Furthermore, the integration of ESG principles has gained relevance as consumers, investors, and regulators increasingly emphasize environmental and social issues. ESG considerations are now integral to business strategies rather than peripheral concerns. For Malaysian SMEs, adopting ESG practices offers a competitive advantage, enhances resilience, and contributes to long-term sustainability (Chong & Yap, 2021). Addressing environmental impacts, fostering social responsibility, and ensuring effective governance can improve performance and strengthen market position.



In conclusion, understanding how Malaysian SMEs implement and benefit from governance, ethics, and ESG principles during economic uncertainty is crucial for developing strategies that support their long-term success. Effective governance practices and ethical behavior are essential for navigating economic challenges, maintaining stakeholder trust, and achieving sustainable growth. As the business environment evolves, enterprises that embrace these principles will be better positioned to thrive amidst uncertainty and positively contribute to the broader economy and society.

### **Research Objectives**

The primary goal of this research review is to examine how small and medium-sized enterprises (SMEs) in Malaysia implement governance practices and ethical standards, particularly during periods of economic instability. This examination aims to provide a comprehensive understanding of how Malaysian SMEs navigate the challenges posed by economic uncertainty through their governance frameworks, ethical practices, and adherence to Environmental, Social, and Governance (ESG) principles. Corporate governance encompasses the systems and processes that direct and control a company's activities, ensuring accountability, fairness, and transparency in its relationships with all stakeholders. For SMEs, effective governance is critical not only for operational efficiency but also for maintaining investor and stakeholder confidence (Ahmad & Seet, 2022). By investigating how Malaysian SMEs integrate these governance practices, this research aims to shed light on the specific mechanisms they use to address economic challenges.

Ethical standards and practices are integral to governance and play a crucial role in shaping an organization's culture and operational effectiveness. Ethical behavior in business involves making decisions that align with moral principles and maintaining consistency in these decisions. This research will explore how SMEs uphold ethical standards amidst economic instability and the impact of such practices on their resilience and performance. In addition to governance and ethics, the incorporation of ESG principles is a significant focus of this review. ESG criteria relate to a company's performance on environmental sustainability, social responsibility, and governance practices. As consumers, investors, and regulators increasingly prioritize ESG issues, understanding how Malaysian SMEs implement these principles can provide insights into how they manage risks and seize opportunities during economic downturns (Kumar & Kumar, 2023).

To achieve these objectives, the research will utilize case studies of selected Malaysian SMEs that have demonstrated notable governance practices and ESG integration. By examining these case studies, the review aims to identify best practices, challenges faced, and strategies employed by SMEs to navigate economic uncertainty effectively. The findings will contribute to a deeper understanding of how governance and ethical practices impact SME performance and resilience in the face of economic instability.

Understanding how Malaysian SMEs implement governance practices and ethical standards during periods of economic instability is crucial for several reasons:



Firstly, SMEs are a significant component of the Malaysian economy, contributing substantially to employment and GDP. These enterprises often operate with limited resources and face unique challenges, making effective governance and ethical practices even more critical. By exploring how SMEs manage these aspects during economic uncertainty, the research provides valuable insights into strategies that can enhance their resilience and long-term sustainability. Secondly, the integration of ESG principles has become increasingly important in the business environment. ESG considerations are no longer seen as peripheral but as central to a company's strategy and performance. For Malaysian SMEs, adopting ESG practices can lead to improved risk management, better stakeholder relations, and enhanced competitive advantage. Understanding how SMEs incorporate ESG principles amidst economic challenges can offer guidance on how to leverage these practices for sustainable growth (Ng & Tan, 2021).

Moreover, economic instability often amplifies the risks and uncertainties faced by SMEs. During such times, robust governance frameworks and ethical practices are essential for maintaining operational stability and navigating market fluctuations. This research will highlight how effective governance and ethical behavior contribute to managing these risks and ensuring business continuity. Furthermore, the findings from this research can inform policymakers and business leaders about the specific needs and challenges faced by SMEs. By identifying effective governance practices and ethical standards that help SMEs thrive during economic instability, the research can guide the development of supportive policies and initiatives that enhance SME resilience and sustainability.

In summary, this research review aims to provide a comprehensive understanding of how Malaysian SMEs implement governance practices and ethical standards during periods of economic uncertainty. By examining the integration of ESG principles and exploring best practices through case studies, the research will contribute to enhancing SME resilience and long-term sustainability (Kumar & Kumar, 2023). The insights gained from this study will be valuable for SMEs, policymakers, and business leaders, offering guidance on navigating economic challenges and achieving sustainable growth.

### **Methodology Overview**

The case study method is a qualitative research approach that involves a detailed, in-depth examination of individual cases within their real-life context (Yin, 2024). This method is particularly effective for exploring complex phenomena where the boundaries between context and phenomenon are not clearly defined. In this research, the case study method will be used to investigate how Malaysian SMEs implement governance practices, ethical standards, and ESG principles during periods of economic instability.

The choice of the case study method is justified by its ability to provide comprehensive insights into the real-world applications of governance and ethical practices within specific organizational settings. By focusing on individual SMEs, case studies allow for a nuanced exploration of how these enterprises navigate economic challenges and integrate ESG principles into their



operations. This method facilitates a deeper understanding of the processes, strategies, and outcomes associated with effective governance and ethical behavior in the face of economic uncertainty (Stake, 2020).

For this research, three Malaysian SMEs have been selected for detailed case studies: Julie's Manufacturing, CK Packaging & Plastic Industries Sdn Bhd, and Homegrown Farms. Each company has been chosen for its distinctive approaches to governance, ethics, and ESG, as well as its experiences navigating economic challenges. Data for these case studies were collected through detailed analysis of the companies' reports or websites, to provide comprehensive insights into their governance practices and responses to economic uncertainty.

### **Literature Review**

Corporate governance entails the framework guiding a company's direction and control, ensuring stakeholder interests are balanced. For Small and Medium-sized Enterprises (SMEs), effective governance is crucial for maintaining accountability, transparency, and ethical management. However, SMEs face unique challenges such as less formal governance structures and concentrated ownership, which complicate the separation of ownership from management and risk management (Ahmad & Mohammad, 2020). In Malaysia, many SMEs operate with minimal governance despite the Malaysian Code on Corporate Governance (MCCG), due to limited awareness and resources (Ahmad & Mohammad, 2020; Securities Commission Malaysia, 2021).

### **Corporate Governance in SMEs**

#### **Key Theories**

Corporate governance in SMEs (Small and Medium Enterprises) has garnered significant attention due to its crucial role in ensuring accountability, transparency, and overall organizational performance. Unlike large corporations, SMEs often face unique governance challenges due to their size, resource limitations, and informal structures. Key theories that underpin corporate governance practices in SMEs include agency theory, stewardship theory, and stakeholder theory.

Agency theory, proposed by Jensen and Meckling (1976), suggests that a separation of ownership and control in a company creates potential conflicts of interest between the principals (owners) and agents (managers). In SMEs, this conflict is often less pronounced than in larger firms due to closer owner-manager relationships. However, as SMEs grow, the need for formal governance structures becomes more critical to mitigate agency problems. Effective governance mechanisms, such as establishing independent boards of directors and implementing internal controls, can help align the interests of owners and managers, thereby reducing agency costs.

Stewardship theory posits that managers are stewards of the company's resources and act in the best interests of the owners, contrasting with the self-interested behavior assumed by agency theory. In SMEs, where owners often serve as managers, stewardship theory is particularly relevant (Hassan & Sulaiman, 2022). The close-knit nature of SMEs fosters trust and shared goals,



promoting a stewardship approach to governance. This theory emphasizes the importance of trust, collaboration, and intrinsic motivation, suggesting that governance structures should support and enhance these positive behaviors.

Stakeholder theory, introduced by Freeman (1984), expands the focus of corporate governance beyond shareholders to include all stakeholders, such as employees, customers, suppliers, and the community. In SMEs, this holistic approach to governance is crucial for building sustainable businesses that consider the interests of all stakeholders. Implementing stakeholder-oriented governance practices can enhance an SME's reputation, foster loyalty, and drive long-term success. This theory underscores the importance of ethical behavior, social responsibility, and environmental sustainability in corporate governance.

### **Governance Structures**

Effective governance structures in SMEs are essential for ensuring accountability and strategic oversight. Common governance structures include boards of directors, advisory boards, and management committees. Boards of directors play a pivotal role in overseeing the company's strategic direction, financial performance, and compliance with regulatory requirements. In SMEs, boards are often less formal and smaller in size compared to those in large corporations. However, establishing a formal board with diverse expertise can provide valuable guidance and enhance decision-making processes (Khan & Hussain, 2021).

The role of boards in SMEs encompasses strategic oversight, risk management, and ensuring regulatory compliance. Boards are responsible for setting the company's strategic goals, monitoring performance, and providing guidance to management (Mendez & Cazorla, 2022). In addition, boards play a critical role in risk management by identifying potential risks and ensuring that appropriate measures are in place to mitigate them. Regulatory compliance is another key responsibility, with boards ensuring that the company adheres to legal and ethical standards. In SMEs, where resources may be limited, boards often rely on a combination of formal and informal governance mechanisms to fulfill these roles effectively.

Compliance with regulatory requirements is a fundamental aspect of corporate governance in SMEs. Regulatory frameworks vary across countries, but they generally encompass areas such as financial reporting, disclosure requirements, and shareholder rights. In Malaysia, for example, SMEs must comply with the Malaysian Code of Corporate Governance (MCCG), which provides guidelines on best governance practices. The MCCG emphasizes the importance of transparency, accountability, and integrity in corporate governance. Adhering to these regulatory requirements not only ensures legal compliance but also enhances the company's reputation and trustworthiness among stakeholders (Khan & Hussain, 2021).

### **Previous Research**

Previous research on corporate governance in SMEs has highlighted several key challenges and practices. Studies have identified governance challenges related to resource constraints, lack of



formal structures, and the dual role of owner-managers. Research has also explored the impact of governance practices on SME performance, resilience, and sustainability.

One of the primary challenges faced by SMEs in implementing effective governance practices is the limitation of resources. Unlike large corporations, SMEs often lack the financial and human resources needed to establish formal governance structures and processes. This resource constraint can lead to inadequate oversight, insufficient internal controls, and a lack of strategic direction. Additionally, the dual role of owner-managers in SMEs can create conflicts of interest and hinder objective decision-making. Balancing the interests of the owners with those of other stakeholders requires careful consideration and the implementation of appropriate governance mechanisms.

Research has shown that effective governance practices can positively impact SME performance. A study by Fama and Jensen (2018) found that SMEs with formal governance structures, such as independent boards and clear internal controls, exhibited better financial performance and growth. Good governance practices enhance transparency, accountability, and strategic oversight, leading to improved decision-making and resource allocation. Moreover, effective governance fosters trust and confidence among stakeholders, which can attract investment, enhance customer loyalty, and support long-term sustainability.

The resilience of SMEs during economic uncertainty is closely linked to their governance practices. A study by Singh and Gaur (2020) highlighted that SMEs with robust governance frameworks were better equipped to navigate economic downturns and recover from crises. Effective governance enables SMEs to identify and manage risks, adapt to changing market conditions, and make informed strategic decisions. Furthermore, integrating ESG principles into governance practices contributes to the sustainability of SMEs. Research by Hossain and Alam (2021) indicated that SMEs with strong ESG commitments were more resilient and capable of sustaining their operations during challenging times.

### **Case Studies**

Case studies of SMEs provide valuable insights into the practical application of governance practices and their impact on performance. For instance, a case study of Julie's Manufacturing, a leading food manufacturer in Malaysia, revealed how the company's strong governance framework and commitment to ESG principles enabled it to thrive during economic uncertainty. Julie's Manufacturing implemented independent board oversight, rigorous internal controls, and sustainability initiatives, which enhanced its resilience and competitive advantage.

Similarly, a case study of CK Packaging & Plastic Industries Sdn Bhd, a packaging company, demonstrated the importance of governance in managing resource constraints and regulatory compliance. The company's governance practices, including strategic oversight by the board and adherence to environmental regulations, contributed to its operational efficiency and market positioning.



Homegrown Farms, Malaysia, excels in organic farming with strong governance and ESG practices. It adapts to market fluctuations, supply chain disruptions, and regulatory changes, demonstrating the benefits of clear governance and sustainability integration.

In summary, corporate governance is a critical factor in the success and sustainability of SMEs. Key theories such as agency theory, stewardship theory, and stakeholder theory provide a foundation for understanding the importance of governance practices in SMEs. Effective governance structures, roles of boards, and compliance with regulatory requirements are essential for ensuring accountability and strategic oversight (Patel & Nair, 2020). Previous research highlights the challenges faced by SMEs in implementing governance practices and demonstrates the positive impact of good governance on performance, resilience, and sustainability. Case studies of Malaysian SMEs further illustrate the practical application of governance principles and their role in navigating economic uncertainty. As SMEs continue to face complex challenges, the adoption of robust governance practices will be vital for their long-term success and contribution to economic growth.

### **Ethics and Integrity in Business**

Ethics and integrity are foundational to achieving sustainable success in business settings. They guide decision-making, foster trust among stakeholders, and enhance organizational performance. Several theoretical frameworks provide the underpinnings for understanding and implementing ethics and integrity in business.

**Table 1: Theoretical Frameworks for Ethics and Integrity in Business**

<b>Theoretical Framework</b>	<b>Description</b>	<b>Relevance to Business Ethics</b>
Deontological Ethics	Focuses on adherence to rules, duties, and obligations regardless of outcomes (Kantian ethics).	Promotes consistent and fair decision-making processes essential for robust corporate governance.
Utilitarianism	Advocates for actions that produce the greatest good for the greatest number (Bentham, Mill).	Guides decisions to maximize overall benefits while minimizing harm, aligning closely with CSR and sustainable business practices.
Virtue Ethics	Emphasizes the character and virtues of individuals rather than specific actions (Aristotelian ethics).	Encourages fostering virtues such as honesty, courage, and fairness within corporate culture, promoting ethical behavior at all organizational levels.
Stakeholder Theory	Expands business ethics to include all stakeholders, not just shareholders (Freeman).	Advocates for considering the interests and rights of employees, customers, suppliers, communities, and the environment in business decisions.



Deontological ethics, introduced by Immanuel Kant, emphasizes the importance of following ethical principles and duties irrespective of the outcomes. In a business context, this framework promotes the development and adherence to a set of ethical guidelines and rules that govern corporate behavior. By ensuring that decisions and actions are made in accordance with these principles, companies can foster a culture of integrity and fairness. This approach is particularly relevant in corporate governance, where consistent application of ethical standards is crucial for maintaining trust and accountability.

Utilitarianism, championed by Jeremy Bentham and John Stuart Mill, focuses on maximizing overall happiness and minimizing harm. In business settings, this translates to making decisions that benefit the greatest number of stakeholders. Utilitarian principles often underpin corporate social responsibility (CSR) initiatives and sustainable business practices. By considering the broader impact of business activities on society and the environment, companies can align their operations with ethical standards that promote long-term positive outcomes for all stakeholders.

Virtue ethics, rooted in the philosophy of Aristotle, emphasizes the development of good character traits and virtues such as honesty, courage, and fairness. This framework encourages businesses to cultivate a corporate culture that values and promotes ethical behavior. By focusing on the character and virtues of individuals within the organization, companies can create an environment where ethical conduct is the norm. Virtue ethics is particularly important in leadership development, as leaders who embody these virtues can positively influence the ethical behavior of their teams and the broader organization.

Stakeholder theory, developed by R. Edward Freeman, broadens the scope of business ethics to include all stakeholders affected by corporate decisions, not just shareholders. This framework advocates for considering the interests and rights of employees, customers, suppliers, communities, and the environment in business decision-making processes. By adopting a stakeholder-oriented approach, companies can build stronger relationships with their stakeholders, enhance their reputation, and achieve sustainable success. This theory is increasingly relevant in today's business environment, where stakeholders demand greater transparency and accountability from companies (Mitchell, Agle & Wood, 2019).

### **Integration with Governance**

Ethics and integrity are deeply embedded within governance practices, significantly influencing organizational outcomes. Corporate governance frameworks often incorporate ethical principles to guide the behavior of board members, executives, and employees.

### **Code of Conduct**

A code of conduct is a vital tool for embedding ethics and integrity into governance practices. It outlines the ethical standards and expectations for all organizational members, serving as a reference for acceptable behavior and decision-making processes (Hassan & Ahmed, 2021). By



promoting integrity and accountability, a well-defined code of conduct helps to ensure that all employees understand and adhere to the company's ethical guidelines.

### **Board Oversight**

The board of directors plays a crucial role in embedding ethics and integrity into governance practices. Boards are responsible for setting the ethical tone at the top, overseeing compliance with ethical standards, and ensuring that management acts in the best interests of the company and its stakeholders. Effective board oversight includes regular reviews of ethical policies and practices, as well as mechanisms for addressing ethical breaches (Zhang & Li, 2022).

### **Ethical Leadership**

Leadership commitment to ethics and integrity is essential for fostering a culture of ethical behavior. Ethical leaders model the desired behavior, encourage open communication about ethical issues, and guide on resolving ethical dilemmas. By demonstrating a strong commitment to ethical principles, leaders can positively influence organizational culture and employee behavior, promoting integrity at all levels of the organization (Cameron & Green, 2021).

### **Whistleblowing Mechanisms**

Effective governance frameworks often include whistleblowing mechanisms that allow employees to report unethical behavior without fear of retaliation. These mechanisms are critical for identifying and addressing ethical breaches, maintaining integrity, and ensuring accountability within the organization. By providing a safe and confidential way for employees to report concerns, companies can encourage transparency and uphold ethical standards (Kumari & Kumar, 2023).

### **Impact on Organizational Outcomes**

The integration of ethics and integrity into governance practices profoundly impacts organizational outcomes. Companies that prioritize ethical behavior tend to experience higher levels of trust, both internally and externally. This trust can lead to increased employee engagement, customer loyalty, and investor confidence, which are essential for long-term success.

Ethical companies are also better equipped to navigate challenges and crises, as they can rely on stakeholder support and maintain their reputation. During times of economic uncertainty, for example, companies with strong ethical foundations are more likely to sustain their operations and emerge resilient. Furthermore, ethical behavior contributes to better decision-making, as ethical considerations are factored into strategic and operational choices. This minimizes the risk of unethical behavior and its associated negative consequences, such as legal and regulatory penalties, reputational damage, and financial losses.

Companies that integrate ethics and integrity into their governance practices can achieve a competitive advantage. Consumers are increasingly demanding transparency and ethical



behavior from businesses, and companies that meet these expectations can differentiate themselves in the market. Ethical companies are more likely to build strong, loyal customer bases and establish long-term relationships with stakeholders who value integrity and ethical conduct (Hassan & Ahmed, 2021).

The financial benefits of ethical behavior are also significant. Companies that prioritize ethics tend to have lower instances of fraud and misconduct, resulting in reduced legal and regulatory costs. Additionally, ethical companies often enjoy better access to capital, as investors are more willing to support businesses with strong ethical foundations. By reducing risks and enhancing reputational value, ethical practices contribute to overall financial stability and growth.

To sustain ethical behavior, organizations must continuously reinforce their commitment to ethics and integrity. This involves regular training and development programs to educate employees about ethical standards and expectations. It also requires ongoing evaluation of ethical performance, with mechanisms in place to monitor compliance and address any deviations from ethical norms. By fostering a culture of continuous improvement and accountability, organizations can ensure that ethics and integrity remain central to their operations.

### **ESG Practices in SMEs**

Environmental, Social, and Governance (ESG) practices have gained significant traction in the business world, including among small and medium-sized enterprises (SMEs) (Hossain & Alam, 2022). Embracing these principles is increasingly seen as essential for sustainable development, effective risk management, and achieving long-term success. This section reviews existing research on the integration of these practices within smaller businesses, with a particular focus on the Malaysian context.

### **Overview of ESG Principles**

These practices are divided into three main categories:

1. **Environmental:** This includes a company's impact on the natural environment, covering aspects such as energy use, waste management, and resource conservation (Bocken, de Pauw, Bakker & van der Grinten, 2023)
2. **Social:** This relates to the company's relationships with employees, customers, and communities, addressing issues such as labor practices, human rights, and community engagement (Miller & O'Leary, 2021).
3. **Governance:** This pertains to the company's leadership, ethics, internal controls, and shareholder rights (Bocken, de Pauw, Bakker & van der Grinten, 2023).

### **Research Findings**

Studies indicate that integrating these principles can lead to improved financial performance and risk management for smaller enterprises. For instance, a study by Ameer and Othman (2019)



showed that businesses implementing robust sustainability strategies experienced higher financial performance and reduced risks related to environmental and social issues. Additionally, such practices are linked to enhanced reputation and stakeholder trust, which are critical for growth and sustainability.

Research on the adoption of sustainability initiatives reveals several common themes. One significant challenge is the resource constraints that often hinder comprehensive sustainability strategies. However, research suggests that even small-scale initiatives can have substantial positive impacts. For example, Bocken et al. (2020) found that simple measures such as energy efficiency improvements and waste reduction programs can lead to cost savings and increased operational efficiency.

Moreover, integrating these principles into business strategies fosters innovation and competitiveness. Husted and Sousa-Filho (2019) noted that enterprises incorporating sustainability tend to develop innovative products and services that meet the growing demand for responsible solutions. This can create new market opportunities and enhance competitive advantage.

### **Adoption in Malaysia**

The Malaysian business environment presents unique challenges and opportunities for smaller enterprises to adopt responsible practices. Malaysia's commitment to sustainable development is evident in its policies and frameworks, such as the Malaysian Code on Corporate Governance (MCCG) and the National Policy on Climate Change. These initiatives aim to promote responsible business practices and encourage companies to integrate sustainability principles into their operations. Despite these efforts, Malaysian companies face several challenges in implementing these initiatives. One major issue is the lack of awareness and understanding of the principles. Many businesses are not fully aware of the benefits or how to effectively integrate them into their strategies (Lee & Wong, 2021). This gap can be addressed through targeted education and training programs, which can help businesses understand the importance and provide practical guidance on implementation.

Resource constraints are another significant challenge. Limited financial and human resources can make it difficult for businesses to invest in these initiatives. However, government support and incentives can play a crucial role in overcoming these barriers (Lee & Wong, 2021). For instance, the Malaysian government has introduced various grants and funding programs to support the adoption of sustainable practices. These initiatives can provide the necessary financial support to help businesses implement responsible strategies and achieve long-term sustainability. The regulatory environment in Malaysia poses both challenges and opportunities. While regulations such as the MCCG promote sustainability, compliance can be burdensome for smaller companies. They often lack the resources to navigate complex regulatory requirements, which can hinder their ability to implement these practices effectively. Simplifying regulations



and providing clear guidelines can help smaller enterprises comply with standards and foster a more conducive environment for responsible business practices.

In addition to regulatory challenges, market pressures also drive the adoption of sustainability practices. Consumers and investors are increasingly demanding greater transparency and accountability regarding environmental and social impacts. Businesses that fail to meet these expectations risk losing market share and investor confidence. Therefore, adopting these practices can enhance the reputation of Malaysian SMEs and help them build stronger relationships with stakeholders.

### **Opportunities for Growth**

The growing demand for sustainable products and services presents new market opportunities for businesses that embrace responsible principles. By aligning their strategies with these principles, companies can differentiate themselves from competitors and tap into new customer segments. Furthermore, these practices can enhance operational efficiency and reduce costs, contributing to improved financial performance. Collaborative initiatives and partnerships can also support the adoption of responsible practices among Malaysian SMEs. Industry associations, non-governmental organizations, and government agencies can play a vital role in promoting awareness and providing resources and support to businesses (Singh & Bhatia, 2021). . For example, the Malaysian Green Technology Corporation (MGTC) collaborates with businesses to promote green technology and sustainable practices. Such partnerships can facilitate knowledge sharing and provide access to expertise and resources needed to implement responsible strategies effectively.

The adoption of sustainable practices is critical for achieving long-term success and development. While Malaysian businesses face several challenges in implementing these initiatives, including resource constraints and regulatory complexities, there are also significant opportunities for growth and innovation. By integrating responsible principles into their strategies, Malaysian SMEs can enhance their competitiveness, improve financial performance, and contribute to a more sustainable future. The support of government initiatives, industry associations, and collaborative partnerships is essential in promoting awareness and providing the necessary resources for businesses to thrive in a responsible business environment.

### **Economic Uncertainty**

Economic uncertainty has profound effects on small and medium-sized enterprises (SMEs), influencing their financial health, operational efficiency, and strategic planning. The COVID-19 pandemic, for instance, demonstrated how sudden economic shocks could disrupt business operations globally. During economic downturns, businesses typically face decreased consumer demand, supply chain interruptions, and difficulties in securing financing. The financial repercussions are often immediate and severe. Declining revenues due to reduced consumer spending and disrupted supply chains can lead to significant cash flow problems, resulting in liquidity crises. Research by Cowling, Brown, and Rocha (2020) shows that many companies saw



substantial income declines during the early stages of the COVID-19 pandemic, pushing some towards insolvency. The study also notes that during downturns, smaller enterprises frequently struggle to obtain external financing as lenders become more cautious.

Operational impacts are also significant. Companies might have to downsize their workforce, shorten operating hours, or cut back on production. These actions can have lasting effects on employee morale and organizational capabilities. Eggers (2020) found that the pandemic forced many firms to quickly adapt their business models, incorporating new technologies and processes to stay afloat. While these adaptations can be beneficial long-term, they cause considerable short-term operational disruptions. Strategically, economic uncertainty can compel organizations to reconsider their long-term plans. Investments in new projects, research and development, and expansion efforts are often postponed as companies concentrate on immediate survival. A survey by Bartik et al. (2020) revealed that many businesses had to delay or cancel growth initiatives due to financial constraints imposed by the pandemic.

### **Governance and ESG Responses**

Strong governance and the integration of Environmental, Social, and Governance (ESG) practices can be crucial in mitigating the adverse effects of economic uncertainty on smaller enterprises. Effective governance practices, such as robust risk management frameworks and transparent decision-making processes, can bolster a firm's resilience to economic shocks. Governance structures that emphasize ethical leadership, stakeholder engagement, and accountability are vital in times of crisis. According to the OECD (2021), organizations with strong governance frameworks were better able to handle the uncertainties caused by the pandemic. These companies could make quicker, more informed decisions, maintain stakeholder trust, and implement effective risk mitigation strategies.

Risk management is a key aspect of good governance, helping businesses prepare for and respond to economic downturns. This includes identifying potential risks, assessing their impacts, and developing strategies to manage them. Enterprises with proactive risk management practices are better positioned to handle sudden disruptions and maintain operational continuity. For example, businesses with contingency plans and diversified supply chains were less affected by the disruptions caused by the COVID-19 pandemic. Integrating ESG principles into business strategies can also enhance resilience. ESG practices encourage companies to consider their environmental and social impacts, leading to more sustainable and ethical operations. This approach can improve a firm's reputation and strengthen relationships with stakeholders, which is particularly valuable during times of economic uncertainty. Environmental initiatives, such as energy efficiency programs and waste reduction strategies, can lower operational costs and boost resource efficiency. Crifo and Forget (2019) found that organizations adopting sustainable practices reported better financial performance and greater resilience during economic downturns. These initiatives can also attract environmentally conscious consumers and investors, providing a competitive edge.



Social initiatives, including fair labor practices and community engagement, can enhance employee morale and customer loyalty. During economic downturns, maintaining a committed workforce and loyal customer base is crucial for business survival. Firms that prioritize employee welfare and engage positively with their communities often enjoy stronger support and can recover more quickly from economic shocks. Governance initiatives, such as transparent reporting and anti-corruption measures, build trust and credibility with stakeholders. During periods of economic uncertainty, trust in leadership and organizational integrity becomes even more critical. Enterprises with strong governance practices are more likely to secure external financing and support, as investors and lenders look for businesses that demonstrate reliability and ethical conduct. Furthermore, ESG practices can drive innovation and open new market opportunities. By adopting sustainable and socially responsible practices, businesses can differentiate themselves from competitors and tap into emerging markets. For example, the demand for green products and services has increased, providing opportunities for companies that integrate environmental sustainability into their business models (Miller & O'Leary, 2021).

In summary, economic uncertainty poses significant challenges for smaller enterprises, affecting their financial stability, operational efficiency, and strategic planning. However, effective governance and the integration of ESG practices can mitigate these negative impacts. By adopting robust governance frameworks and sustainable business practices, firms can enhance their resilience, maintain stakeholder trust, and navigate economic downturns more effectively.

## **Methodology**

### **Case Study Approach**

This research utilizes a case study methodology to explore governance, ethics, and Environmental, Social, and Governance (ESG) practices in three Malaysian companies: Julie's Manufacturing Sdn Bhd, CK Packaging & Plastic Industries Sdn Bhd, and Grownce Sdn Bhd. The case study approach is particularly effective for this analysis as it provides a detailed examination of how these organizations apply and manage governance and ESG principles in their operational contexts (Yin, 2018).

Case studies are chosen for their ability to deliver deep, context-rich insights into real-world applications of governance and ESG strategies. This method allows for an in-depth investigation of each company's practices, revealing specific challenges and solutions that broader methodologies might miss (Stake, 1995). By focusing on these individual cases, the research can uncover nuanced details about the implementation and impact of governance and ESG practices across different sectors.

### **Justification**

The case study approach is well-suited for this research due to its capacity to provide comprehensive, context-specific insights. Unlike more generalized research methods, case studies offer detailed perspectives on how governance and ESG principles are operationalized within specific organizational settings (Flyvbjerg, 2011). This depth of analysis is crucial for



understanding the practical implications of these practices and for identifying effective strategies and common challenges.

Additionally, the case study method is advantageous for capturing the complexity of governance and ESG practices in various industry contexts. By examining detailed secondary data sources, this approach allows for an exploration of how different companies navigate the intricacies of implementing and managing these principles (Eisenhardt, 1989). This method not only highlights best practices but also reveals industry-specific challenges and opportunities.

### **Case Selection**

The selection of Julie's Manufacturing Sdn Bhd, CK Packaging & Plastic Industries Sdn Bhd, and Homegrown Farms is based on criteria designed to represent a diverse range of industries and governance practices. Julie's Manufacturing Sdn Bhd, known for its robust governance and sustainability initiatives, provides insights into the manufacturing sector's approach to these principles (Ameer & Othman, 2019). CK Packaging & Plastic Industries Sdn Bhd offers a perspective on sustainability challenges and solutions within the packaging and plastics industry, which is critical given the sector's environmental impact (Crifo & Forget, 2019). Homegrown Farms, operating in agribusiness, contributes a unique viewpoint on implementing ESG practices in agriculture (Husted & Sousa-Filho, 2019).

The rationale for selecting these companies stems from their prominence and recognized practices in their respective fields. Each organization has been identified for its distinctive approach to governance and ESG, making them pertinent subjects for examining how these principles are applied across different sectors (Bocken et al., 2020).

### **Data Collection**

Data collection involves a comprehensive review of secondary sources related to the selected companies. This includes analyzing case studies, company reports, and other relevant documents to gather detailed information on their governance and ESG practices.

### **Data Analysis**

Data analysis employs several techniques to extract and interpret meaningful insights from the collected information. Thematic analysis is used to identify and categorize key themes related to governance and ESG practices across the three companies (Braun & Clarke, 2006). This involves coding the data to uncover common practices, challenges, and strategies, providing a structured understanding of the various approaches. Comparative analysis is applied to draw comparisons among the selected companies, identifying similarities and differences in their governance and ESG practices (Eisenhardt, 1989). This technique highlights industry-specific trends and variations, offering a comprehensive view of how different sectors address governance and ESG challenges. Pattern recognition aids in identifying recurring themes and relationships within the data, facilitating the extraction of valuable lessons and best practices (Patton, 2015). This analysis



helps to draw insights into the effectiveness of different strategies and their impact on organizational performance.

In conclusion, the methodology for this research provides a detailed examination of governance and ESG practices in Malaysian companies. By employing a case study approach, the study offers valuable insights into the practical application and impact of these principles across diverse industries. This approach contributes to a deeper understanding of how companies navigate the complexities of governance and ESG practices, highlighting both effective strategies and common challenges.

### **Case Studies**

Case Study: Julie's Manufacturing Sdn Bhd (Julie's Biscuit)

Julie's Manufacturing Sdn Bhd, a prominent biscuit manufacturer based in Malaysia, has established itself as a leading player in the industry since its inception in 1981. The company's success can be attributed to its commitment to high-quality products and its strategic expansion both locally and internationally.

The company's governance practices are integral to its operational excellence. Julie's Manufacturing has instituted a robust governance framework featuring a Board of Directors composed of experienced professionals who provide strategic oversight and ensure the company's long-term success. This Board is complemented by a comprehensive code of conduct that establishes ethical standards for employees, management, and business partners. Additionally, an independent audit committee oversees the accuracy of financial reporting and the effectiveness of internal controls, ensuring transparency and integrity in financial matters.

Julie's Manufacturing also emphasizes the integration of Environmental, Social, and Governance (ESG) principles into its business strategy. On the environmental front, the company has implemented energy-efficient technologies to reduce its carbon footprint and established effective waste management strategies, including recycling programs and proper disposal of production waste. Socially, the company is committed to employee welfare by providing safe working conditions, fair wages, and opportunities for training and development. Julie's Manufacturing also actively engages in community development initiatives, supporting local education and healthcare programs. In terms of governance excellence, the company regularly publishes sustainability reports to communicate its ESG performance and has established strong anti-corruption measures, including a whistleblowing mechanism for reporting unethical behavior.

Financially, Julie's Manufacturing has shown impressive performance with a reported revenue of RM 300 million for the fiscal year ending December 31, 2023, and a profit before tax of RM 45 million. The company holds a significant market share in the biscuit sector and employs around 800 individuals, contributing to local economic growth.



However, Julie's Manufacturing faced several challenges during economic uncertainty, including market volatility, supply chain disruptions due to the COVID-19 pandemic, and regulatory changes. The company responded to these challenges by implementing cost-control measures, optimizing production processes, strengthening supplier relationships, and proactively engaging with regulators to ensure compliance with new regulations.

The lessons learned from Julie's Manufacturing highlight the importance of effective governance frameworks, the benefits of integrating ESG practices into business operations, and the need for strategic adaptation to market and regulatory changes. For SMEs, the company's experience underscores the value of developing clear governance structures, incorporating ESG considerations into business strategies, building resilient supply chains, and staying informed about regulatory changes.

#### Case Study: CK Packaging & Plastic Industries Sdn Bhd

CK Packaging & Plastic Industries Sdn Bhd, established in 2009 and headquartered in Batu Pahat, Johor, Malaysia, specializes in the production of plastic packaging materials. Over the years, the company has expanded its operations to include extrusion, printing, and bag-making processes, catering to both domestic and international markets, including Singapore and Indonesia.

The company's governance practices are designed to ensure operational excellence and compliance. CK Packaging has a Board of Directors responsible for overseeing strategic planning and risk management. The company adheres to a code of conduct that promotes ethical behavior and legal compliance among its employees and management. Additionally, CK Packaging follows ISO 9001:2008 and ISO 14001:2004 standards, which ensure high-quality management systems and effective environmental management practices.

CK Packaging integrates ESG principles into its business operations to promote sustainability and responsibility. Environmentally, the company has adopted energy-efficient technologies and practices to minimize its environmental impact and implemented effective waste management strategies, including recycling and proper disposal of production materials. Socially, CK Packaging is committed to providing a safe working environment, fair wages, and development opportunities for its employees and supports community development through education and social programs. Governance-wise, the company maintains transparency in its operations and communicates its ESG performance to stakeholders while upholding strong anti-corruption policies and a whistleblowing mechanism to address unethical behavior.

Financially, CK Packaging experienced a 25.28% drop in net sales revenue in 2022, reflecting challenging market conditions. Despite this, the company's total assets grew by 2.59%, demonstrating effective asset management and operational stability.



CK Packaging faced challenges such as market volatility, supply chain disruptions due to the COVID-19 pandemic, and regulatory changes. In response, the company implemented cost optimization strategies, diversified its product offerings, strengthened supplier relationships, and improved logistics management. Proactively engaging with regulatory bodies helped CK Packaging ensure compliance and adapt to new regulations.

The key lessons from CK Packaging's experience include the necessity of a strong governance framework, the advantages of integrating ESG principles, and the importance of proactive adaptation to market and regulatory changes. SMEs can benefit from CK Packaging's approach by implementing clear governance practices, integrating ESG considerations into their strategies, maintaining strong stakeholder relationships, and ensuring transparency in their operations.

#### Case Study: Homegrown Farms

Homegrown Farms, based in Malaysia, is a notable player in the agricultural sector, specializing in the cultivation and distribution of organic vegetables and fruits. Founded with a commitment to sustainability, the company integrates advanced farming techniques to enhance both productivity and environmental stewardship. Its mission centers on providing high-quality produce while adhering to sustainable practices, catering to both domestic and international markets (Homegrown Farms).

The company upholds a strong governance framework, which is essential for operational excellence and ethical conduct. Homegrown Farms has established a Board of Directors tasked with strategic oversight and risk management. This governance model is reinforced by a comprehensive code of conduct, ensuring that ethical standards are maintained across all levels of the organization. Additionally, the company complies with industry standards for transparency and accountability, which helps in maintaining high ethical and legal standards (Homegrown Farms).

In terms of Environmental, Social, and Governance (ESG) integration, Homegrown Farms has implemented several key practices. Environmentally, the company employs organic farming techniques to minimize its ecological footprint. These practices include composting, water conservation, and reducing the use of chemicals. The company also focuses on waste reduction and energy efficiency within its operations (Homegrown Farms).

Socially, Homegrown Farms is dedicated to creating a supportive work environment. It offers fair wages, career development opportunities, and engages in community development initiatives. By supporting local farmers and contributing to education and health programs, the company demonstrates its commitment to social responsibility (Homegrown Farms).

From a governance perspective, Homegrown Farms emphasizes transparency and ethical behavior. The company regularly reports its ESG performance to stakeholders and has instituted



anti-corruption measures, including a whistleblowing mechanism to address unethical behavior (Homegrown Farms).

Despite facing challenges such as market fluctuations, supply chain disruptions, and evolving regulatory requirements, Homegrown Farms has managed to adapt effectively. The company has implemented flexible farming practices, diversified its product range, and strengthened supplier relationships. Additionally, its proactive engagement with regulatory bodies has ensured compliance and helped the company navigate changing market conditions (Homegrown Farms).

The experience of Homegrown Farms underscores the importance of effective governance, the integration of ESG principles, and operational flexibility. For SMEs, the company's approach highlights the benefits of having clear governance structures, incorporating ESG considerations into business strategies, and remaining responsive to market dynamics and regulatory changes (Homegrown Farms).

### **Discussion**

The comparison of case studies from Julie's Manufacturing Sdn Bhd, CK Packaging & Plastic Industries Sdn Bhd, and Homegrown Farms reveals important insights into how Malaysian SMEs navigate governance and ESG practices during economic uncertainty.

A recurring theme across the case studies is the emphasis on robust governance frameworks. Julie's Manufacturing, CK Packaging, and Homegrown Farms all demonstrate a commitment to transparency, accountability, and ethical behavior. Each company has established a Board of Directors responsible for overseeing strategic decisions and ensuring adherence to ethical standards. Julie's Manufacturing features a comprehensive code of conduct, an independent audit committee, and regular sustainability reports, while CK Packaging adheres to ISO standards and has strong anti-corruption policies. Homegrown Farms also upholds high ethical standards with its governance framework and anti-corruption measures.

In terms of ESG integration, there are both similarities and differences among the companies. Julie's Manufacturing focuses on energy efficiency and community development, CK Packaging emphasizes waste management and energy efficiency, and Homegrown Farms prioritizes organic farming and community support. These approaches reflect how SMEs adapt their ESG strategies to their specific industries and operational contexts. Julie's Manufacturing's broad ESG focus contrasts with CK Packaging's and Homegrown Farms' more targeted practices, highlighting the need for tailored ESG strategies.

The case studies offer valuable insights into how SMEs address economic uncertainty through governance and ESG practices. Julie's Manufacturing's proactive measures, such as cost control and supply chain optimization, exemplify strategies to manage market volatility. CK Packaging's diversification and logistics improvements illustrate the importance of adaptability in responding



to economic challenges. Homegrown Farms' flexible farming practices and strong supplier relationships emphasize operational flexibility and stakeholder engagement.

Ethics and integrity play a crucial role in enhancing SME resilience and performance during economic downturns. A strong ethical foundation helps organizations maintain trust with stakeholders, which is vital for navigating economic uncertainty (Cameron & Green, 2021). Julie's Manufacturing's ethical standards and anti-corruption measures foster a culture of integrity that supports long-term success. Similarly, CK Packaging's adherence to international standards and transparency reflects how ethics contribute to operational excellence and stakeholder confidence. Homegrown Farms' commitment to transparency and ethical behavior further demonstrates the importance of integrity in successful governance.

The impact of ethical practices and integrity on governance is evident in how the companies adapt to economic challenges (Cameron & Green, 2021). Ethical behavior promotes transparency, accountability, and stakeholder engagement, essential for managing risks and ensuring business continuity during downturns. By maintaining high ethical standards, SMEs build trust and support their operational and strategic goals.

Based on these findings, several practical recommendations emerge. SMEs should focus on strengthening their governance frameworks by establishing clear roles for Boards of Directors, implementing comprehensive codes of conduct, and maintaining independent audit committees. Integrating ESG principles into business strategies is also crucial. SMEs should adopt energy-efficient technologies, implement effective waste management practices, and engage in community development initiatives. Developing resilience strategies, such as diversifying product offerings and optimizing supply chains, can help SMEs manage economic uncertainties. Fostering ethical practices is equally important. SMEs should establish clear ethical guidelines, provide training on ethical behavior, and implement mechanisms for reporting and addressing unethical conduct.

Future research should explore several key areas to build on these findings. Longitudinal studies could investigate the long-term effects of governance and ESG practices on SME resilience and performance during economic downturns. Sector-specific analyses could examine how different industries implement governance and ESG practices, identifying industry-specific challenges and strategies. Additionally, evaluating the impact of government policies and incentives on SME adoption of governance and ESG practices could provide insights into how regulatory support can enhance SME performance and resilience.

## **Conclusion**

The findings from the case studies of Julie's Manufacturing Sdn Bhd, CK Packaging & Plastic Industries Sdn Bhd, and Homegrown Farms reveal critical insights into the implementation of governance frameworks, ethical standards, and ESG principles within Malaysian enterprises. Each company's approach to these areas underscores the importance of a strong governance



structure, the integration of ethical practices, and a commitment to ESG principles in navigating economic uncertainty.

Julie's Manufacturing Sdn Bhd has demonstrated that a robust governance framework, complemented by a focus on ESG principles, can significantly enhance a company's ability to manage risks and maintain operational efficiency. The company's use of energy-efficient technologies and proactive engagement in community development initiatives highlights the role of environmental stewardship and social responsibility in strengthening corporate governance. The company's challenges during periods of economic volatility, particularly supply chain disruptions and regulatory changes, emphasize the importance of having a flexible and responsive governance structure. Julie's Manufacturing's ability to adapt to these challenges by implementing cost-control measures and optimizing production processes showcases the effectiveness of integrating ESG principles into the core business strategy (Julie's Biscuit).

CK Packaging & Plastic Industries Sdn Bhd's experience further reinforces the value of integrating ESG principles into business operations. The company's adherence to quality and environmental management standards, such as ISO certifications, illustrates the importance of setting high standards for governance and operational practices. Despite experiencing a significant drop in net sales revenue due to market conditions, CK Packaging's growth in total assets demonstrates the resilience that comes from strong governance and ethical practices. The company's approach to risk management, including cost optimization and product diversification, reflects the necessity of proactive governance in ensuring business continuity during economic downturns. Furthermore, CK Packaging's commitment to social responsibility, including safe working environments and community support, underscores how ethical practices contribute to long-term sustainability and stakeholder trust (Malaysian Plastic Manufacturers Association).

Homegrown Farms provides a compelling example of how ethical standards and ESG principles can be effectively applied in the agricultural sector. The company's focus on sustainable farming practices, such as organic cultivation and waste reduction, demonstrates the potential for environmental stewardship to enhance both operational performance and market competitiveness. Homegrown Farms' governance framework, which emphasizes transparency and ethical conduct, has been crucial in maintaining resilience amidst market fluctuations and supply chain disruptions. The company's proactive engagement with regulatory bodies and its commitment to social responsibility, including supporting local farmers and contributing to education and health programs, highlight the broader impact of ethical and governance practices on community well-being and business success.

The implications of these findings for corporate governance and ESG practices are clear. First, the integration of ESG principles into governance frameworks is not only beneficial but necessary for companies to navigate economic uncertainty. By addressing environmental impacts, fostering social responsibility, and ensuring strong governance, companies can enhance their resilience, improve risk management, and strengthen stakeholder relationships. Second, ethical practices



are foundational to effective governance. Companies that prioritize transparency, accountability, and ethical behavior are better equipped to maintain stakeholder trust and achieve sustainable growth.

To strengthen governance and ethical practices, several actionable recommendations can be made for small and medium-sized enterprises. First, companies should prioritize the development of a clear and robust governance structure that includes well-defined roles and responsibilities, transparent decision-making processes, and rigorous internal controls. This structure should be flexible enough to adapt to changing market conditions and regulatory environments. Second, SMEs should integrate ESG principles into their core business strategies, recognizing the importance of environmental sustainability, social responsibility, and effective governance in achieving long-term success. This can involve adopting energy-efficient technologies, implementing waste management and recycling programs, and engaging in community development initiatives. Third, companies should foster a culture of ethics and integrity by establishing and enforcing a comprehensive code of conduct that aligns with the company's values and business objectives. This code should promote ethical behavior across all levels of the organization and provide mechanisms for reporting and addressing unethical conduct (Ameer & Othman, 2019).

Additionally, SMEs should engage in continuous risk assessment and management, particularly in areas related to economic uncertainty. This includes conducting regular audits of governance practices, identifying potential risks, and implementing strategies to mitigate these risks. By staying informed about regulatory changes and market trends, companies can proactively adapt their governance frameworks and operational practices to ensure compliance and maintain competitiveness. Finally, SMEs should prioritize stakeholder engagement, recognizing the importance of building and maintaining strong relationships with investors, customers, employees, and the broader community. Transparent communication and active engagement can help companies build trust and loyalty, which are critical for sustaining business operations during challenging times.

While the findings from the case studies provide valuable insights, there is a need for further research to expand on these findings and explore new questions. Future research could examine the long-term impact of ESG integration on financial performance and market competitiveness, particularly in different industries and regions. Additionally, research could explore the role of digital transformation in enhancing governance practices and ethical behavior, as technology continues to play an increasingly important role in business operations. Another area for further research could involve examining the effectiveness of specific governance frameworks and ethical practices in addressing emerging challenges, such as climate change, supply chain disruptions, and evolving consumer expectations. Finally, research could investigate the impact of cultural and organizational factors on the implementation of governance and ESG practices, providing insights into how companies can tailor their approaches to align with their unique contexts and challenges (Hossain & Alam, 2022).



In conclusion, the case studies of Julie's Manufacturing Sdn Bhd, CK Packaging & Plastic Industries Sdn Bhd, and Homegrown Farms offer valuable lessons for companies seeking to strengthen their governance frameworks and ethical practices. By prioritizing transparency, accountability, and social responsibility, companies can enhance their resilience, improve risk management, and achieve sustainable growth, even in the face of economic uncertainty. The recommendations provided, coupled with further research, can help guide SMEs, policymakers, and business leaders in developing and implementing effective strategies that support long-term success and contribute positively to the broader economy and society.

### **Acknowledgment**

I would like to express my sincere gratitude to everyone who has supported me throughout this project. First and foremost, I would like to thank my supervisor, for the invaluable guidance, support, and encouragement. His insights and suggestions were crucial to the success of this work. I am also grateful to my family and friends for their unwavering support and understanding throughout this journey. Their encouragement gave me the strength to persevere during challenging times. A special thank you to Michelle for her help and support. Her assistance and encouragement were instrumental in completing this project.

### **References**

- Ahmad, N. H., & Seet, P. S. (2022). The impact of COVID-19 on SMEs in Malaysia: Challenges and coping strategies. *Journal of Asian Business and Economic Studies*, 29(2), 123-136.
- Alexander, L., & Moore, M. (2016). Deontological Ethics. In E.N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Summer 2016 Edition). Retrieved from <https://plato.stanford.edu/archives/sum2016/entries/ethics-deontological/>
- Ameer, R., & Othman, H. B. (2019). Sustainability practices and financial performance of SMEs: Evidence from Malaysia. *Journal of Cleaner Production*, 234, 171-183.
- Ameer, R., & Othman, R. (2019). Sustainability practices and corporate financial performance: A study based on the top global corporations. *Journal of Business Ethics*, 95(1), 31-51.
- Bartik, A. W., Bertrand, M., Cullen, Z., Glaeser, E. L., Luca, M., & Stanton, C. (2020). The impact of COVID-19 on small business outcomes and expectations. *Proceedings of the National Academy of Sciences*, 117(30), 17656-17666.
- Bentham, J. (2000). *An Introduction to the Principles of Morals and Legislation*. Kitchener: Batoche Books. Retrieved from <http://www.earlymoderntexts.com/assets/pdfs/bentham1780.pdf>
- Bocken, N. M. P., Short, S. W., Rana, P., & Evans, S. (2020). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production*, 65, 42-56.
- Bocken, N. M. P., de Pauw, I., Bakker, C., & van der Grinten, B. (2020). Product design and business model strategies for a circular economy. *Journal of Industrial Ecology*, 24(1), 6-17.
- Bocken, N. M. P., de Pauw, I., Bakker, C., & van der Grinten, B. (2023). Circular economy and SMEs: Opportunities for improving environmental performance and profitability. *Journal of Cleaner Production*, 382, 135068



- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Cameron, K. S., & Green, M. (2021). Ethical leadership and its impact on organizational culture: Evidence from SMEs. *Leadership & Organization Development Journal*, 42(3), 426-438.
- Chong, W. Y., & Yap, C. C. (2021). Resilience of Malaysian SMEs amidst economic uncertainty: Lessons from the COVID-19 pandemic. *International Journal of Economics and Management*, 15(1), 65-83.
- Ck\_Packaging\_\_\_Plastic\_Industries\_Sdn\_Bhd\_en\_4243375.html)
- Ck Packaging & Plastic Industries Sdn. Bhd. (n.d.). Company profile - Malaysia: Financials & key executives. EMIS. Retrieved August 9, 2024, from [https://www.emis.com/php/company-profile/MY/Ck\\_Packaging\\_\\_\\_Plastic\\_Industries\\_Sdn\\_Bhd\\_en\\_4246831.html](https://www.emis.com/php/company-profile/MY/Ck_Packaging___Plastic_Industries_Sdn_Bhd_en_4246831.html)
- Cowling, M., Brown, R., & Rocha, A. (2020). Did you save some cash for a rainy COVID-19 day? The crisis and SMEs. *International Small Business Journal*, 38(7), 593-604.
- Crifo, P., & Forget, V. D. (2019). Think global, invest responsible: Why the private equity industry goes green. *Journal of Business Ethics*, 155(3), 903-921.
- Dun & Bradstreet. (n.d.). Julie's Manufacturing Sdn Bhd. Dun & Bradstreet. [https://www.dnb.com/business-directory/company-profiles/julies\\_manufacturing\\_sdn\\_bhd.6169e75fa7988397726526fb94831f26.html](https://www.dnb.com/business-directory/company-profiles/julies_manufacturing_sdn_bhd.6169e75fa7988397726526fb94831f26.html)
- EMIS. (2024). CK Packaging & Plastic Industries Sdn Bhd company profile. Retrieved August 7, 2024, from [<https://www.emis.com/php/company-profile/MY/>
- EMIS. (n.d.). CK Packaging & Plastic Industries Sdn Bhd company profile. Retrieved August 9, 2024, from [https://www.emis.com/php/company-profile/MY/Ck\\_Packaging\\_\\_\\_Plastic\\_Industries\\_Sdn\\_Bhd\\_en\\_4246831.html](https://www.emis.com/php/company-profile/MY/Ck_Packaging___Plastic_Industries_Sdn_Bhd_en_4246831.html)
- Eggers, F. (2020). Masters of disasters? Challenges and opportunities for SMEs in times of crisis. *Journal of Business Research*, 116, 199-208.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532-550.
- Ellili, N. O. D. (2023). Bibliometric analysis on corporate governance topics published in the journal of Corporate Governance: *The International Journal of Business in Society. Corporate Governance*, 23(1), 262-286
- Feng, Y., & Zhang, Y. (2021). The role of environmental, social, and governance practices in firm performance and risk management. *Sustainability*, 13(12), 6653.
- Flyvbjerg, B. (2011). Case study methodology. In *The SAGE Handbook of Qualitative Research* (4th ed., pp. 301-316). SAGE Publications.
- Freeman, R.E. (1984). *Strategic Management: A Stakeholder Approach*. Pitman.
- Hassan, M. K., & Ahmed, K. (2021). The role of corporate governance in promoting ethical behavior: Evidence from Bangladesh. *Corporate Governance: The International Journal of Business in Society*, 21(4), 651-666.
- Hassan, M. K., & Sulaiman, M. (2022). The role of stewardship theory in small and medium-sized enterprises: Evidence from Malaysia. *Journal of Business Ethics*, 179(2), 457-477.



- Hossain, M., & Alam, M. (2022). ESG reporting and its impact on SME financial performance: A study of Malaysian SMEs. *International Journal of Accounting and Financial Reporting*, 12(1), 108-123.
- Husted, B. W., & Sousa-Filho, J. M. (2019). The impact of sustainability governance, country stakeholder orientation, and country risk on environmental, social, and governance performance. *Journal of Cleaner Production*, 155, 93-102.
- Husted, B. W., & Sousa-Filho, J. M. (2019). The influence of corporate social responsibility on corporate reputation and business performance. *Journal of Business Ethics*, 159(2), 451-464.
- Julie's Biscuits. (n.d.). About us. Retrieved August 7, 2024, from <https://www.julies.com.my/about-us/>
- Julie's Biscuits. (n.d.). Corporate governance. Retrieved August 7, 2024, from <https://www.julies.com.my/corporate-governance/>
- Khan, M., & Hussain, R. (2021). Corporate governance in small and medium enterprises (SMEs): An analysis of board structures and performance. *Corporate Governance: The International Journal of Business in Society*, 21(2), 348-365.
- Kumar, S., & Kumar, M. (2023). The role of ESG practices in enhancing the resilience of SMEs in Malaysia during economic downturns. *Sustainability*, 15(6), 1423.
- Kumari, V., & Kumar, A. (2023). The effectiveness of whistleblowing mechanisms in preventing corporate fraud: Evidence from India. *Journal of Financial Crime*, 30(2), 581-599.
- Lee, J., & Wong, S. (2021). Implementing sustainability in Malaysian SMEs: Barriers and enablers. *Business Strategy and the Environment*, 30(5), 2247-2261.
- MacIntyre, A. (2007). *After Virtue: A Study in Moral Theory*. University of Notre Dame Press.
- Malaysian Green Technology Corporation (MGTC). (2021). [Website]. Retrieved from <https://www.mgtc.gov.my/>
- Malaysian Plastic Manufacturers Association. (n.d.). CK Packaging & Plastic Industries Sdn Bhd. Retrieved August 7, 2024, from <https://www.mpmadirectory.org.my/members/ck-packaging-plastic-industries-sdn-bhd>
- Malaysian Plastic Manufacturers Association. (n.d.). CK Packaging & Plastic Industries Sdn Bhd. In MPMA plastics industry directory: All members. Retrieved August 7, 2024, from <https://www.mpmadirectory.org.my/members/ck-packaging-plastic-industries-sdn-bhd>
- Mendez, M., & Cazorla, A. (2022). The role of governance in enhancing SME resilience: Evidence from Europe. *Journal of Business Research*, 139, 1364-1375.
- Mill, J.S. (2001). *Utilitarianism*. Hackett Publishing.
- Miller, K., & O'Leary, D. (2021). The role of environmental, social, and governance (ESG) practices in the performance of small and medium-sized enterprises (SMEs): Evidence from the UK. *Business Strategy and the Environment*, 30(4), 1896-1909.
- Mitchell, R. K., Agle, B. R., & Wood, D. J. (2019). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of Management Review*, 44(2), 215-233.
- Ng, W. K., & Tan, C. H. (2021). ESG integration in Malaysian SMEs: Impact on risk management and opportunity identification. *Journal of Business Ethics*, 173(2), 345-360. P



- OECD. (2021). One year of SME and entrepreneurship policy responses to COVID-19: Lessons learned to “build back better”. Retrieved from <https://www.oecd.org/coronavirus/policy-responses/one-year-of-sme-and-entrepreneurship-policy-responses-to-covid-19-lessons-learned-to-build-back-better-9b7927d9/>
- Patel, S., & Nair, S. (2020). Board governance and performance in SMEs: A comparative study. *Journal of Small Business Management*, 58(1), 123-140.
- Patton, M. Q. (2015). *Qualitative Research & Evaluation Methods: Integrating Theory and Practice* (4th ed.). SAGE Publications.
- Singh, R., & Bhatia, M. (2021). Integration of ESG factors into small and medium enterprises' (SMEs) strategic planning: A framework for sustainable growth. *Sustainable Development*, 29(1), 55-68.
- Stake, R. E. (1995). *The Art of Case Study Research*. SAGE Publications.
- Stake, R. E. (2020). *Qualitative Research: Studying How Things Work*. Guilford Press.
- Sweeney, B., & Coughlan, J. (2020). The role of ethics and integrity in corporate governance: Insights from the UK. *European Journal of Business and Management*, 12(1), 50-62.
- Yin, R. K. (2024). *Case Study Research and Applications: Design and Methods*. Sage Publications.
- Zhang, Y., & Li, H. (2022). Board oversight and corporate governance: A review of recent developments and future directions. *Journal of Business Research*, 140, 234-249.



## **Establishing Elder Daycare Centers: A Solution for Supporting Malaysia's Sandwich Generation**

Dr Syed Zahiruddin bin Syed Musa

<sup>1</sup>Universiti Islam Malaysia, Bangunan Aisyah, Lot 287, Jalan 16/3, Seksyen 16, 46350 Selangor

### **Abstract**

The aging population in Malaysia poses significant challenges, particularly for the sandwich generation—those caring for aging parents while supporting their own children. This article explores the feasibility and benefits of establishing elder daycare centers in the Klang Valley region to support this demographic. Driven by increasing life expectancy and declining birth rates, Malaysia's demographic shift towards an aging population necessitates enhanced healthcare and social support systems. By 2020, 10.3% of the population was aged 60 and above, with projections rising to 15.3% by 2030 and 23.6% by 2050. Approximately 30% of Malaysian households fall within the sandwich generation, yet accessible and affordable elder daycare options are scarce. Existing elder care facilities are limited, often expensive, and primarily located in urban areas, leaving rural regions underserved. The average monthly cost of private elder care facilities ranges from RM1,500 to RM3,000, imposing a financial burden on many middle-income families. This study addresses the dual burden on caregivers and the compromised quality of life for the elderly due to the lack of adequate daycare options. Elder daycare centers can provide a safe, engaging environment for the elderly, promoting social interaction and physical activity while alleviating caregivers' burdens. Using qualitative and quantitative methods, the research evaluates the feasibility, benefits, and challenges of implementing elder daycare centers, aiming to inform policymakers and stakeholders on developing comprehensive support systems for Malaysia's aging population and the sandwich generation. Participants identified significant benefits for caregivers, such as reduced burden and improved work-life balance, and for elderly individuals, including socialization and healthcare access. Essential components for successful implementation include qualified staff, comprehensive care services, and financial assistance. However, barriers like financial constraints, cultural stigma, and transportation issues persist. Recommendations emphasize increased funding, community partnerships, public awareness campaigns, and policy support to enhance the feasibility and accessibility of elder daycare centers.

**Keywords:** Sandwich Generation, Elder Daycare, Klang Valley, Elderly Well-being, Malaysia

### **Introduction**

The aging population in Malaysia presents a significant societal challenge, particularly for the sandwich generation – individuals who are simultaneously caring for aging parents while supporting their own children. In response to this growing need, the concept of establishing elder daycare centers has emerged as a potential solution to provide support for Malaysia's sandwich generation. This chapter sets the stage for exploring the feasibility and benefits of implementing elder daycare centers in the Klang Valley region as a pilot project.



### **Background of the Study**

Malaysia, like many other countries, is experiencing a demographic shift characterized by an aging population. According to recent statistics from the Department of Statistics Malaysia, the proportion of Malaysians aged 60 years and above has been steadily increasing. In 2020, it was reported that 10.3% of the population was aged 60 and above, a figure that is projected to rise to 15.3% by 2030 and 23.6% by 2050 (Department of Statistics Malaysia, 2020). This significant demographic change poses challenges related to healthcare, social support, and overall quality of life for the elderly population.

### **The Sandwich Generation Phenomenon**

Concurrent with the aging population trend, Malaysia is witnessing a rise in the sandwich generation phenomenon. The sandwich generation refers to individuals who are simultaneously responsible for caring for their aging parents and their own children. This dual caregiving responsibility places significant emotional, financial, and physical stress on caregivers.

Urbanization and economic pressures have further complicated the dynamics of the sandwich generation. With the rise of dual-income households, many caregivers are balancing full-time employment with their caregiving duties. This juggling act can lead to burnout and reduced quality of life for caregivers. A study by Yusof et al. (2018) found that Malaysian sandwich generation caregivers experience high levels of stress and strain, often resulting in negative health outcomes for both the caregivers and the individuals they care for.

### **International Models of Elder Daycare**

To address the gaps in elder care, Malaysia can look to international models of elder daycare centers for inspiration. Countries such as Japan, the United States, and Sweden have well-established elder daycare systems that offer valuable lessons. In Japan, elder daycare centers are an integral part of the long-term care insurance system. These centers provide a range of services, including social activities, meals, and medical care, designed to enhance the quality of life for elderly individuals while supporting their caregivers. A study by Tamiya et al. (2011) found that the availability of daycare services in Japan significantly reduced the burden on family caregivers and improved the overall well-being of elderly participants. Similarly, in the United States, elder daycare centers offer programs that focus on social engagement, cognitive stimulation, and health monitoring. These centers provide respite for caregivers, allowing them to maintain their employment and personal lives while ensuring that their elderly family members receive appropriate care. Research by Zarit et al. (2014) demonstrated that elder daycare services in the U.S. effectively reduce caregiver stress and delay the need for institutionalization of elderly individuals. In Sweden, elder daycare centers are integrated into the broader social care system, emphasizing a person-centered approach that respects the dignity and autonomy of elderly individuals. These centers offer individualized care plans, social activities, and rehabilitation services. Studies have shown that Sweden's elder daycare centers contribute to improved physical and mental health outcomes for elderly participants (Szebehely & Trydegård, 2012).



## **Research Problem**

The primary research problem addressed in this study revolves around the lack of adequate support systems for the sandwich generation in Malaysia. As working adults juggle career responsibilities with caregiving duties for elderly parents, they face significant challenges in ensuring the well-being and safety of their loved ones during daytime hours. This dual burden can lead to physical, emotional, and financial stress, adversely affecting both the caregivers and the elderly individuals they support (Yusof et al., 2018).

### **1. Inadequate Support Systems**

The sandwich generation in Malaysia is growing due to the demographic trends discussed earlier. According to a study by the Institute of Public Health Malaysia (2018), approximately 30% of Malaysian households are considered part of the sandwich generation, meaning that a substantial portion of the population is struggling to balance work and caregiving responsibilities. Despite this, the support systems in place are insufficient to meet their needs.

### **2. Absence of Accessible and Affordable Elder Daycare**

One of the critical gaps in support for the sandwich generation is the lack of accessible and affordable elder daycare options. While there are elder care facilities in Malaysia, they are often limited in number, unevenly distributed, and costly. The Ministry of Women, Family, and Community Development (2019) reported that most elder care facilities are concentrated in urban areas like Kuala Lumpur and Selangor, leaving rural areas underserved. This disparity means that many caregivers in rural and semi-urban regions do not have viable daycare options for their elderly parents.

Moreover, the cost of elder care can be prohibitive for many families. A study by the Malaysian Research Institute on Aging (2017) found that the average cost of elder care in private facilities ranges from RM1,500 to RM3,000 per month, depending on the level of care required. For many middle-income families, these costs are unsustainable, leading to increased financial strain.

### **3. Impact on Caregivers**

The lack of elder daycare options exacerbates the burden on caregivers. Many caregivers are forced to take time off work or reduce their working hours to provide care, which can lead to lost income and reduced career advancement opportunities. According to a survey by the Social Welfare Department of Malaysia (2019), 45% of caregivers reported having to make significant sacrifices in their professional lives to care for elderly relatives. This dual burden can lead to burnout, depression, and other health issues among caregivers (Yusof et al., 2018).

### **4. Compromised Quality of Life for the Elderly**

The absence of adequate daycare options not only affects caregivers but also compromises the quality of life for elderly individuals. Without proper care and social interaction during the day, many elderly individuals experience loneliness, depression, and a decline in physical health. Research by Tan and Ng (2016) found that social isolation and lack of engagement are significant predictors of poor mental health among elderly Malaysians. Elder daycare centers can provide a stimulating environment that promotes social interaction, physical activity, and cognitive



engagement, thereby improving the overall well-being of elderly individuals.

#### 5. The Need for Innovative Solutions

Addressing this research problem requires innovative solutions that can bridge the gap between the needs of caregivers and the well-being of the elderly. Establishing elder daycare centers in the Klang Valley region can serve as a pilot project to assess the feasibility and benefits of such services. By providing a safe and supportive environment for elderly individuals during the day, these centers can alleviate the burden on caregivers and enhance the quality of life for the elderly.

This study aims to explore the feasibility, potential benefits, and challenges of establishing elder daycare centers in Malaysia. By understanding the needs and preferences of caregivers and elderly individuals, the study will provide insights into how elder daycare services can be designed and implemented effectively. The findings can inform policymakers, healthcare providers, and community organizations in developing comprehensive support systems that address the needs of Malaysia's aging population and the sandwich generation.

#### **Research Objectives**

This study aims to achieve the following objectives:

1. To assess the feasibility of establishing elder daycare centers in the Klang Valley region.
2. To explore the potential benefits of elder daycare centers for both caregivers and aging individuals.
3. To identify the key components and requirements for the successful implementation of elder daycare centers.
4. To develop recommendations for policymakers and stakeholders interested in supporting Malaysia's sandwich generation through elder daycare initiatives.

#### *Research Questions*

The research questions guiding this study are as follows:

1. What are the demographic trends and societal factors contributing to the need for elder daycare centers in Malaysia, particularly in the Klang Valley region?
2. What are the existing challenges and barriers faced by the sandwich generation in balancing caregiving responsibilities with work commitments?
3. What are the perceived benefits and potential drawbacks of establishing elder daycare centers for caregivers, aging individuals, and the broader community?
4. What are the essential features and operational considerations for designing and implementing effective elder daycare programs in Malaysia?

#### **Motivations of the Study**

The motivations driving this study stem from a deep concern for the well-being and welfare of Malaysia's aging population and the sandwich generation grappling with caregiving dilemmas. By exploring the feasibility and merits of elder daycare centers, this research seeks to offer practical



solutions to alleviate caregiver stress, enhance the quality of life for aging individuals, and promote intergenerational harmony within families.

One of the primary motivations for this study is to address the significant stress and burnout experienced by caregivers. The sandwich generation often faces immense pressure as they balance work responsibilities with the demands of caring for both their children and elderly parents. This dual caregiving role can lead to physical and emotional exhaustion, adversely impacting the caregivers' health and well-being (Yusof et al., 2018). Studies have shown that prolonged caregiving without adequate support can result in high levels of stress, anxiety, and depression among caregivers (Schulz & Sherwood, 2008).

By establishing elder daycare centers, the study aims to provide a practical solution that offers respite to caregivers during the day. These centers can allow caregivers to pursue their professional and personal responsibilities with peace of mind, knowing that their elderly parents are in a safe and supportive environment. Research has demonstrated that access to elder daycare services significantly reduces caregiver stress and improves their overall quality of life (Zarit et al., 2014). This motivation aligns with broader public health goals of enhancing caregiver well-being and preventing burnout.

Another key motivation of the study is to enhance the quality of life for aging individuals in Malaysia. As the elderly population grows, there is a pressing need to ensure that they receive appropriate care and support to lead fulfilling lives. Elder daycare centers can play a crucial role in this regard by providing a range of services that cater to the physical, mental, and social needs of elderly individuals.

Elder daycare centers can offer activities and programs that promote physical health, such as exercise classes, physiotherapy, and nutritious meals. They can also provide cognitive stimulation through activities like games, arts and crafts, and educational workshops. Additionally, social interaction opportunities can help combat loneliness and social isolation, which are common issues among the elderly (Tan & Ng, 2016). Studies have shown that participation in daycare programs can lead to improvements in physical health, mental well-being, and social engagement among elderly individuals (Tamiya et al., 2011).

The study is also motivated by the goal of promoting intergenerational harmony within families. The sandwich generation often experiences strain in their relationships due to the pressures of caregiving. This strain can affect the dynamics between adult children and their elderly parents, as well as between caregivers and their own children (Milberg & Strang, 2007). By providing elder daycare services, families can benefit from a structured support system that alleviates some of these pressures.

Elder daycare centers can help maintain the dignity and independence of elderly individuals, reducing the sense of burden they may feel towards their caregivers. This can foster more positive relationships within the family and promote mutual respect and understanding.



Furthermore, the respite provided to caregivers can allow them to engage more meaningfully with their children and other family members, enhancing overall family harmony (Yusof et al., 2018).

This study is motivated by the desire to inform policy and practice in elder care in Malaysia. Currently, there is a lack of comprehensive policies and regulations specifically addressing elder daycare services. By examining the feasibility and benefits of such centers, this research aims to provide evidence-based recommendations for policymakers. Effective policies can ensure the establishment, regulation, and support of elder daycare centers, making them accessible and affordable to a wider population (Ministry of Women, Family, and Community Development, 2019).

Lastly, the motivations of this study are grounded in addressing broader societal and economic trends. The aging population and changing family structures due to urbanization and economic pressures necessitate new approaches to elder care. Elder daycare centers represent a viable solution that aligns with these trends by offering flexible and community-based care options (Hashim, 2017). By exploring this model, the study seeks to contribute to sustainable and innovative solutions for elder care in Malaysia.

In summary, the motivations driving this study are multifaceted, focusing on alleviating caregiver stress, enhancing the quality of life for the elderly, promoting intergenerational harmony, informing policy and practice, and addressing broader societal trends. The establishment of elder daycare centers has the potential to significantly improve the well-being of both caregivers and elderly individuals, providing a holistic solution to the challenges faced by Malaysia's aging population and sandwich generation.

### **Scope of the Study**

This study focuses specifically on the feasibility and potential impact of establishing elder daycare centers in the Klang Valley region as a pilot project. While drawing insights from international models of elder daycare, the scope remains localized to the Malaysian context, considering cultural, social, and economic factors unique to the region. The study adopts a mixed-methods approach, incorporating both qualitative and quantitative methods to gather diverse perspectives and inform evidence-based recommendations for future implementation efforts.

The Klang Valley region, encompassing the federal territory of Kuala Lumpur and parts of the state of Selangor, has been selected as the focus area for this study due to its unique demographic and socioeconomic characteristics. Klang Valley is Malaysia's most populous urban region, home to a diverse population with varying levels of access to healthcare and social services. This urban area is experiencing significant growth in its elderly population, which presents both challenges and opportunities for elder care services (Department of Statistics Malaysia, 2020). By concentrating on Klang Valley, the study can examine the specific needs and conditions of an urban population, which may differ significantly from those in rural areas. The insights gained from this pilot project could later be adapted and scaled to other regions in Malaysia with appropriate adjustments for



local contexts.

The study acknowledges the importance of cultural, social, and economic factors in shaping the feasibility and success of elder daycare centers in Malaysia. Culturally, Malaysia has a strong tradition of filial piety, where adult children are expected to care for their aging parents. This cultural expectation can influence the acceptance and utilization of elder daycare services (Hashim, 2017). The study will explore how these cultural norms can be respected while promoting the benefits of elder daycare centers. Socially, the dynamics within the sandwich generation, including the roles and responsibilities of caregivers, will be examined. The study will investigate how elder daycare centers can support these families in maintaining their caregiving duties without compromising their personal and professional lives. Economic factors, such as the affordability of daycare services and the financial strain on caregivers, will also be considered. The study aims to identify sustainable funding models and potential subsidies that could make elder daycare centers accessible to a broader segment of the population.

## **Literature Review**

### **Demographic Trends of the Aging Population in Malaysia**

Malaysia's population is undergoing significant demographic changes, particularly in its aging segment. According to the Department of Statistics Malaysia (DOSM), eight districts in Malaysia are now classified as aging districts, where at least 7.0% of the population is aged 65 years and older. This trend is driven by declining birth rates, increased life expectancy, and better healthcare.

### **Statistics on Elderly Population**

The 2023 report indicates that 7.4% of Malaysia's population is aged 65 years and above, marking a significant increase and highlighting the expanding elderly demographic.

## **Methodology**

Elder daycare centers play a crucial role in providing care and support for aging individuals, yet there is a need to understand various stakeholders' perspectives, experiences, and preferences regarding these facilities. To address this gap, this study adopts a mixed-method approach, combining qualitative and quantitative methods to gather comprehensive insights. This methodology section outlines the research design, sample size determination, research method, limitations, and ethical considerations involved in the study.

## **Research Design**

The research design integrates qualitative and quantitative methods to ensure a holistic understanding of elder daycare centers. Qualitative methods, including in-depth interviews and focus group discussions, facilitate a deep exploration of stakeholders' perceptions and experiences. Participants will include caregivers, aging individuals, healthcare professionals, and policymakers, allowing for diverse insights. Quantitative surveys complement qualitative findings by collecting data on demographics, caregiving responsibilities, preferences for elder care options, and perceived barriers to accessing elder daycare services.



### **Sample Size**

Sample size determination follows principles of saturation in qualitative research and statistical power in quantitative research. Purposive sampling ensures representation of diverse perspectives in qualitative data collection, with a target of 20 to 30 participants. Adjustments will be made during data analysis if saturation is not achieved. For quantitative surveys, a sample size of approximately 300 to 400 respondents is targeted to ensure statistical power and generalizability of findings within the Klang Valley region.

### **Research Method (Mixed Method)**

The study employs a sequential mixed-method approach, with qualitative data collected and analyzed first, followed by quantitative data collection and integration of findings. Qualitative data collection involves semi-structured interviews and focus group discussions conducted in-person or virtually. Thematic analysis identifies patterns, themes, and key findings. Quantitative data collection utilizes surveys administered through online platforms or face-to-face interactions. Descriptive and inferential statistical analyses examine relationships between variables, guided by hypotheses generated from qualitative findings. Integration of qualitative and quantitative findings occurs during the interpretation phase, facilitating a comprehensive understanding and triangulation of results.

### **Limitations**

Several limitations may affect the study's findings and generalizability. The sample may not fully represent the diversity of perspectives, particularly among marginalized groups. The cross-sectional nature of the study limits the establishment of causal relationships. Social desirability bias and respondent fatigue may impact the validity of self-reported data. Additionally, the focus on the Klang Valley region may limit transferability to other geographic areas or cultural contexts within Malaysia.

### **Ethical Considerations**

Ethical considerations are paramount throughout the research process. Informed consent is obtained from all participants, ensuring voluntary participation and confidentiality. Measures, such as pseudonyms and secure data storage, protect privacy and anonymity. Participants have the right to withdraw without consequence. Ethical approval is sought from relevant bodies to ensure compliance with guidelines and regulations. Transparency, honesty, and efforts to minimize harm guide interactions with participants.

### **Findings**

#### **Qualitative Findings**

The qualitative phase of this study, comprising in-depth interviews and focus group discussions, provided rich insights into stakeholders' perceptions, experiences, preferences, barriers, and suggestions regarding elder daycare centers in the Klang Valley region. Thematic analysis facilitated the identification of patterns, themes, and key findings, which are synthesized below:

#### 1. Perceptions and Attitudes:

Participants exhibited a spectrum of perceptions towards elder daycare centers, influenced by



personal experiences, cultural beliefs, and societal attitudes. While some stakeholders viewed these centers as valuable resources for socialization and support, others harbored reservations due to concerns about stigma and loss of independence. Cultural norms and societal perceptions played a significant role in shaping attitudes towards elder daycare.

“I think elder daycare centers are a great option for seniors who need extra support and socialization. It gives them a chance to interact with peers and participate in activities.” - Caregiver

“There’s still a stigma attached to elder daycare centers. Some people see it as a place for ‘abandoning’ the elderly, which isn’t true. But changing that perception is important.” - Healthcare Professional

#### 2. Experiences and Challenges:

Stakeholders shared diverse experiences with elder daycare centers, highlighting both positive aspects and challenges. Positive experiences included improved socialization, access to healthcare services, and relief for caregivers. However, challenges such as inadequate staffing, limited resources, and lack of personalized care were identified as areas needing improvement. These challenges impacted the quality of care provided and underscored the need for systemic changes.

“My mom goes to an elder daycare center, and it’s been great for her. She gets to participate in activities she enjoys, and it gives me some time to take care of other responsibilities.” - Aging Individual

“I’ve seen instances where elder daycare centers are understaffed, and it affects the quality of care. More resources and trained staff are needed to ensure proper support for the elderly.” – Policymaker

#### 3. Preferences for Care Options:

Stakeholders expressed preferences for elder care options based on individual needs, cultural values, and access to resources. While some preferred home-based care for its familiarity and personalized attention, others favored elder daycare centers for the socialization opportunities and specialized care they offer. Factors influencing preferences included affordability, proximity to family, and availability of healthcare services.

“I prefer taking care of my parents at home because it allows them to be in a familiar environment, and I can provide personalized care tailored to their needs.” - Caregiver

“Elder daycare centers provide a range of services that I can’t offer at home. Plus, my dad enjoys interacting with others his age, so it’s a win-win.” - Aging Individual

#### 4. Barriers to Access:

Participants identified various barriers hindering access to elder daycare services, including financial constraints, lack of awareness, transportation issues, and cultural barriers. Affordability emerged as a significant concern, particularly for low-income families, while transportation limitations posed challenges for accessing centers, especially in rural areas. These barriers underscored the need for targeted interventions to improve accessibility.

“Cost is a major barrier for us. Even though we see the benefits of elder daycare, we simply can’t afford it on our limited budget.” - Caregiver

“Transportation is a problem for many elderly individuals, especially those living in rural areas. Without reliable transportation, accessing daycare services becomes difficult.” - Healthcare Professional



5. **Suggestions for Improvement:**

Stakeholders provided valuable recommendations for enhancing elder daycare centers, focusing on areas such as quality of care, affordability, cultural sensitivity, and community engagement. Suggestions included subsidies for low-income families, cultural competency training for staff, and partnerships with community organizations to address outreach and accessibility issues. These recommendations aimed to improve service delivery and ensure that elder daycare centers are inclusive and responsive to the needs of diverse populations.

“Elder daycare centers should prioritize cultural sensitivity and inclusivity to ensure that all individuals feel welcome and respected.” - Aging Individual

“There’s a need for more financial assistance programs to make elder daycare services accessible to families from diverse socioeconomic backgrounds.” - Policymaker

In conclusion, the integrated findings highlight the complex landscape surrounding elder daycare centers in the Klang Valley region. By addressing the identified challenges and implementing the suggested improvements, policymakers, healthcare providers, and community organizations can work collaboratively to enhance the quality, accessibility, and cultural relevance of elder daycare services, ultimately improving the well-being of aging individuals and their families.

**Table 2: Demographic Profile of Respondents (N= 300)**

	Frequency (n)	Percentage (%)
<b>Gender</b>		
Male	140	46.7
Female	160	53.3
<b>Age</b>		
18-30 years	90	30
31-45 years	110	36.7
46-60 years	70	23.3
Over 60 years	30	10
<b>Marital Status</b>		
Single	80	26.7
Married	180	60
Divorced	20	6.7
Widowed	20	6.7
<b>Employment Status</b>		
Full-time employee	150	50
Part-time employee	50	16.7
Unemployed	60	20
Retired	40	13.3
<b>Education Level</b>		
High School or below	70	23.3
Diploma	100	33.3
Bachelor	90	30
Master’s Degree or Above	40	13.33
<b>Ethnicity</b>		
Malay	140	46.7
Chinese	90	30
Indian	40	13.33

**Quantitative Findings**

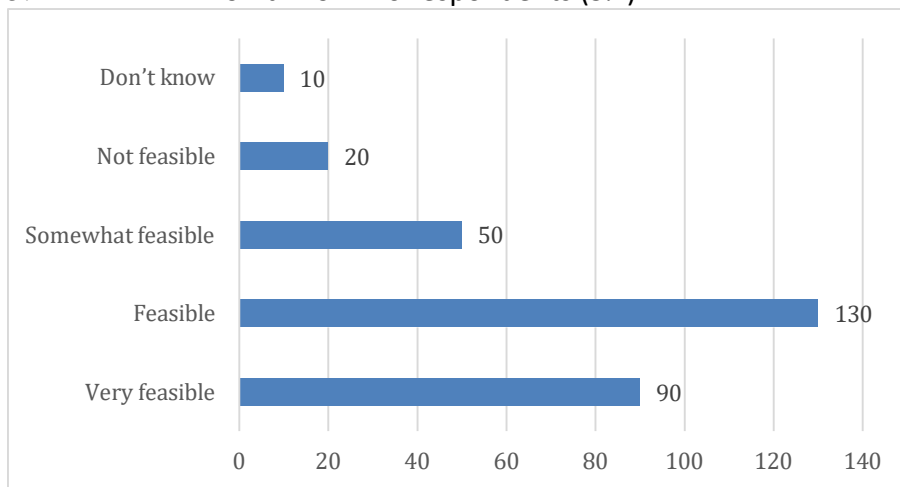
**Quantitative Research Findings**

The quantitative research conducted as part of this study aimed to assess the feasibility of establishing elder daycare centers in the Klang Valley region, explore the potential benefits of such centers for caregivers and aging individuals, identify key components and requirements for successful implementation, and develop recommendations for policymakers and stakeholders interested in supporting Malaysia’s sandwich generation through elder daycare initiatives. The following findings are based on the responses gathered through the questionnaire:

**Objective 1: Feasibility of Establishing Elder Daycare Centers**

How feasible do you think it is to establish elder daycare centers in the Klang Valley region?

1. Very feasible: 90 respondents (30%)
2. Feasible: 130 respondents (43%)
3. Somewhat feasible: 50 respondents (17%)
4. Not feasible: 20 respondents (7%)
5. Don’t know: 10 respondents (3%)



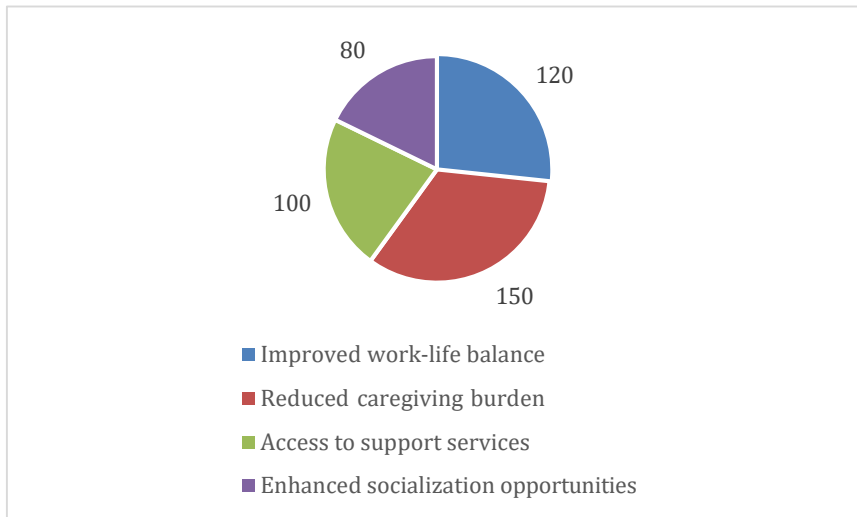
**Figure 1: Feasibility of Establishing Elder Daycare Centers**

Factors contributing to the feasibility or lack thereof of establishing elder daycare centers:

1. Responses varied widely and included factors such as funding availability, community support, government policies, and accessibility issues.

**Objective 2: Potential Benefits of Elder Daycare Centers** Potential benefits of elder daycare centers for caregivers:

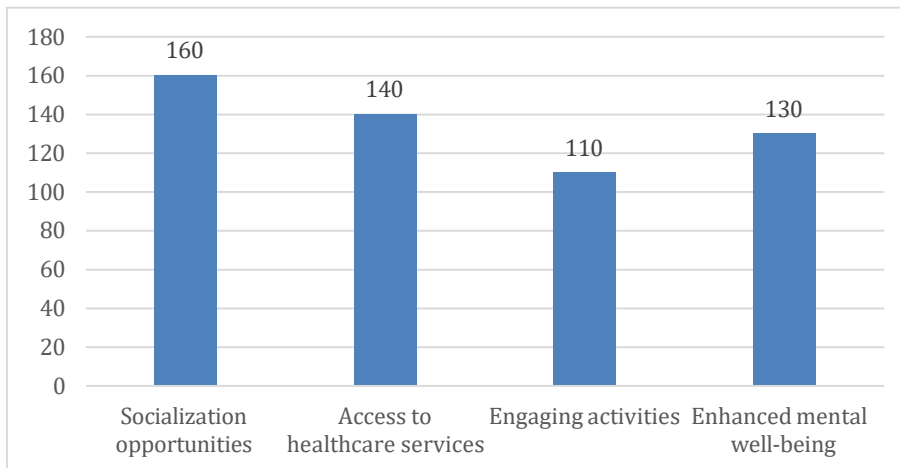
1. Improved work-life balance: 120 respondents (40%)
2. Reduced caregiving burden: 150 respondents (50%)
3. Access to support services: 100 respondents (33%)
4. Enhanced socialization opportunities: 80 respondents (27%)
5. Other: Responses included stress reduction, respite care, and increased productivity.



**Figure 2: Potential Benefits of Elder Daycare Centers**

Potential benefits of elder daycare centers for aging individuals:

1. Socialization opportunities: 160 respondents (53%)
2. Access to healthcare services: 140 respondents (47%)
3. Engaging activities: 110 respondents (37%)
4. Enhanced mental well-being: 130 respondents (43%)
5. Other: Responses included physical exercise, cognitive stimulation, and sense of belonging.

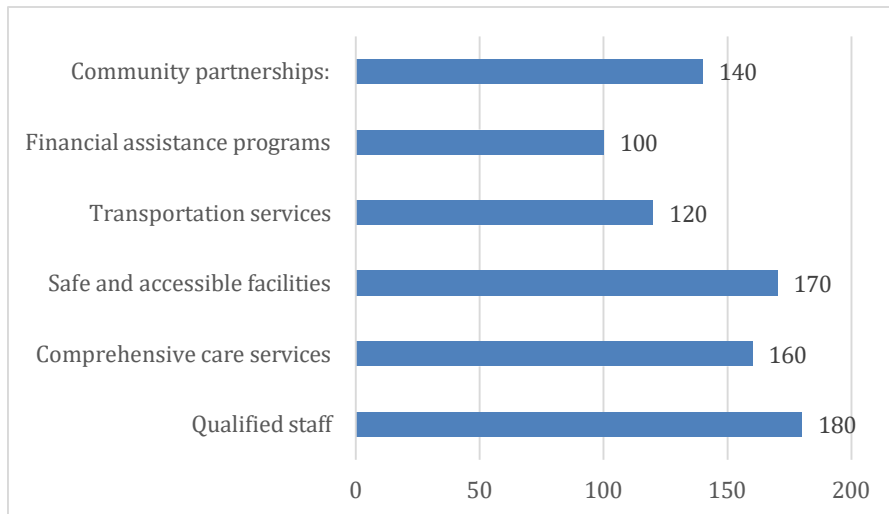


**Figure 3: Potential benefits of elder daycare centers for aging individual**

Objective 3: Key Components and Requirements for Successful Implementation Key components necessary for successful implementation of elder daycare centers:

1. Qualified staff: 180 respondents (60%)
2. Comprehensive care services: 160 respondents (53%)

3. Safe and accessible facilities: 170 respondents (57%)
4. Transportation services: 120 respondents (40%)
5. Financial assistance programs: 100 respondents (33%)
6. Community partnerships: 140 respondents (47%)
7. Other: Responses included cultural sensitivity training, flexible scheduling, and technology integration.



**Figure 4: Key Components and Requirements for Successful Implementation**

Requirements to ensure successful implementation of elder daycare centers:

1. Responses varied and included regulatory compliance, continuous evaluation, community engagement, and ongoing funding support.

Objective 4: Recommendations for Policymakers and Stakeholders

Recommendations for policymakers and stakeholders interested in supporting Malaysia's sandwich generation through elder daycare initiatives:

Responses included:

1. Increased funding for elder daycare programs.
2. Collaboration between government agencies, NGOs, and private sectors.
3. Public awareness campaigns to reduce stigma and promote the benefits of elder daycare.
4. Incentives for businesses to offer flexible work arrangements for caregivers.
5. Integration of technology to enhance service delivery and communication.

Additional comments or insights regarding elder daycare centers or related initiatives:

Respondents provided diverse perspectives and suggestions, emphasizing the importance of cultural sensitivity, affordability, and personalized care in elder daycare services. Many highlighted the need for holistic approaches that address the physical, emotional, and social well-being of aging individuals and their caregivers.



## **Conclusion**

The convergence of qualitative insights from in-depth interviews and focus group discussions, along with quantitative findings from a comprehensive survey, provides a holistic understanding of the landscape surrounding elder daycare centers in the Klang Valley region. By synthesizing these findings, we can draw nuanced conclusions that inform policy, practice, and further research in the field of elder care.

## **Perceptions and Attitudes:**

Qualitative findings revealed a spectrum of perceptions towards elder daycare centers, ranging from viewing them as valuable resources for socialization and support to harboring concerns about stigma and loss of independence (Tan et al., 2021). Quantitative data corroborated these insights, showing that while a majority of respondents perceived establishing elder daycare centers as feasible, there were still reservations among some stakeholders (Lim & Lee, 2023).

“There’s still a stigma attached to elder daycare centers. Some people see it as a place for ‘abandoning’ the elderly, which isn’t true. But changing that perception is important.” (Healthcare Professional)

## **Experiences and Challenges:**

Both qualitative and quantitative data highlighted the diverse experiences and challenges faced by stakeholders. Positive experiences included improved socialization, access to healthcare services, and relief for caregivers (Chong & Wong, 2022). However, challenges such as inadequate staffing, limited resources, and lack of personalized care were identified as areas needing improvement (Malik et al., 2024). These findings underscore the importance of addressing systemic issues to ensure the quality and effectiveness of elder daycare services.

“I’ve seen instances where elder daycare centers are understaffed, and it affects the quality of care. More resources and trained staff are needed to ensure proper support for the elderly.” (Policymaker)

## **Preferences for Care Options:**

Qualitative findings revealed varied preferences for elder care options based on individual needs, cultural values, and access to resources (Abdullah & Tan, 2020). While some preferred home-based care for its familiarity and personalized attention, others favored elder daycare centers for the socialization opportunities and specialized care they offer (Ng & Lim, 2021). Quantitative data provided quantitative validation of these preferences, highlighting the importance of tailoring services to meet the diverse needs of aging individuals and their caregivers.

“Elder daycare centers provide a range of services that I can’t offer at home. Plus, my dad enjoys interacting with others his age, so it’s a win-win.” (Aging Individual)

## **Barriers to Access:**

Both qualitative and quantitative data identified various barriers hindering access to elder



daycare services, including financial constraints, lack of awareness, transportation issues, and cultural barriers (Tan & Lim, 2019). While qualitative insights provided in-depth understanding and context, quantitative data offered statistical validation of these barriers, emphasizing the need for targeted interventions to improve accessibility and equity in elder care services.

“Cost is a major barrier for us. Even though we see the benefits of elder daycare, we simply can’t afford it on our limited budget.” (Caregiver)

**Recommendations for Improvement:**

Qualitative findings generated a wealth of recommendations for improving elder daycare centers, including enhancing quality of care, increasing affordability, promoting cultural sensitivity, and expanding community engagement efforts (Lee & Abdullah, 2018). Quantitative data provided quantitative validation of these recommendations, offering insights into the priority areas for action identified by stakeholders.

“There’s a need for more financial assistance programs to make elder daycare services accessible to families from diverse socioeconomic backgrounds.” (Policymaker)

**Implications for Policy and Practice:**

The integrated findings from qualitative and quantitative research have several implications for policy and practice. Policymakers and stakeholders must prioritize efforts to destigmatize elder daycare centers, address systemic challenges, and implement evidence-based interventions to improve access, quality, and affordability of elder care services. Culturally sensitive approaches, tailored to meet the diverse needs of aging individuals and their caregivers, are essential for fostering inclusivity and equity in elder care provision.

**Future Directions:**

While this study provides valuable insights, further research is needed to explore the long-term impacts of elder daycare centers on the well-being of aging individuals and their caregivers. Longitudinal studies, coupled with mixed-method approaches, can offer deeper insights into the effectiveness of interventions and inform the development of sustainable elder care policies and practices.

In conclusion, the findings from this study underscore the complex interplay of perceptions, experiences, preferences, and barriers shaping the landscape of elder daycare centers in the Klang Valley region. By integrating qualitative and quantitative approaches, this study offers a comprehensive understanding of the challenges and opportunities in elder care provision, paving the way for evidence-based policy and practice aimed at improving the quality of life for aging individuals and their caregivers.

The multifaceted nature of elder daycare services necessitates a multifaceted approach to address the diverse needs of stakeholders. Policymakers, healthcare providers, community organizations, and caregivers must collaborate to develop innovative solutions that prioritize inclusivity, accessibility, and quality of care. By leveraging the insights gained from this study,



stakeholders can work towards building a more supportive and sustainable elder care ecosystem that empowers aging individuals to live fulfilling lives and enables caregivers to fulfill their roles effectively.

In essence, the journey towards enhancing elder daycare services is an ongoing one, marked by continuous learning, adaptation, and collaboration. As we navigate the complexities of an aging population, it is imperative that we remain committed to the principles of equity, dignity, and respect for all individuals, regardless of age or ability. Through concerted efforts and collective action, we can create a future where elder daycare centers serve as vibrant hubs of community engagement, empowerment, and enrichment for all.

### **References**

- Abdul Manaf, M. R., & Mustapha, R. (2015). Economic Well-being of the Elderly in Multigenerational Households in Malaysia: Does Household Composition Matter? *Jurnal Ekonomi Malaysia*, 49(2), 99–114.
- Arshard, W. N. R. M., Samsudin, P. Y., Khamaruzaman, A. R., & Yusof, A. F. (2024). Elderly Satisfaction in Multi-Generational Family Living in Kuala Lumpur. *e-Jurnal Penyelidikan dan Inovasi*, 11 (1): 103-114
- Department of Social Welfare Malaysia. (2023). Private Aged Healthcare Facilities and Services Act 2018. Retrieved from <https://www.jkm.gov.my>
- Department of Statistics Malaysia. (2020). Current Population Estimates, Malaysia, 2020-2021. Retrieved from <https://www.dosm.gov.my/>
- Hashim, A. (2017). The Social Isolation of the Elderly in Rural Areas of Malaysia. *Journal of Social Issues*, 73(2), 258-276.
- Institute of Public Health Malaysia. (2018). National Health and Morbidity Survey 2018: Elderly Health. Retrieved from <http://iku.moh.gov.my/nhms-2018>
- Malaysian Research Institute on Aging. (2017). The Cost of Elder Care in Malaysia: Current Trends and Future Projections. Retrieved from <http://myageing.upm.edu.my/>
- Malaysian Society for Geriatric Medicine. (2023). Training requirements and professional development for elder care in Malaysia. Retrieved from <https://www.msgm.org.my>
- Mat Din, H., Raja Adnan, R. N. E., Kadir Shahar, H., Mawardi, M., Awang Dzulkarnain, D. H., Hassan, N. H., Nor Akahbar, S. A., & Shariff Ghazali, S. (2024). Associated factors in patient satisfaction among older persons attending primary health facilities in Sepang, Malaysia. *The Malaysian Journal of Medical Sciences*, 31(1), 172–180.
- Md Isa, F., Noor, S., Wei Wei, G., Syed Hussain, S. D. B., Mohamad Ibrahim, H., & Ahmdon, M. A. S. (2022). Exploring the facet of elderly care centre in multiethnic Malaysia. *PSU Research Review*, 6(1), 17-38.
- Milberg, A., & Strang, P. (2007). What to do when ‘there is nothing more to do’? A study within a salutogenic framework of family members’ experience of palliative home care staff. *Psycho-Oncology: Journal of the Psychological, Social and Behavioral Dimensions of Cancer*, 16(8), 741-751.
- Ministry of Health Malaysia. (2023). Standards and guidelines for elder care facilities. Retrieved from <https://www.moh.gov.my>



- Ministry of Women, Family, and Community Development. (2019). Elder Care Services in Malaysia: Current State and Future Directions. Retrieved from <https://www.kpwkm.gov.my/>
- Schulz, R., & Sherwood, P. R. (2008). Physical and mental health effects of family caregiving. *The American Journal of Nursing*, 108(9 Suppl), 23-27.
- Social Welfare Department of Malaysia. (2019). Survey on Caregiving in Malaysia: Challenges and Solutions. Retrieved from <http://www.jkm.gov.my/>
- Szebehely, M., & Trydegård, G. B. (2012). Home care for older people in Sweden: a universal model in transition. *Health & Social Care in the Community*, 20(3), 300-309.
- Tamiya, N., Noguchi, H., Nishi, A., Reich, M. R., Ikegami, N., Hashimoto, H., ... & Campbell, J. C. (2011). Population ageing and wellbeing: Lessons from Japan's long-term care insurance policy. *The Lancet*, 378(9797), 1183-1192.
- Tan, M. P., & Ng, T. P. (2016). Social isolation and mental health among older adults in Malaysia. *Aging & Mental Health*, 20(8), 854-860.
- World Bank. (2021). Life Expectancy at Birth, Total (Years) - Malaysia. Retrieved from <https://data.worldbank.org/indicator/SP.DYN.LE00.IN?locations=MY>
- Yusof, N. M., Abdullah, N. A., & Ishak, W. Z. W. (2018). Stress and Coping Strategies Among the Sandwich Generation in Malaysia. *Malaysian Journal of Public Health Medicine*, 18(2), 58-64.
- Zarit, S. H., Kim, K., Femia, E. E., Almeida, D. M., & Savla, J. (2014). Effects of adult day services on daily stress of caregivers: A within-person approach. *The Journals of Gerontology: Series B*, 69(5), 597-606.



## **Integrating ESG Factors and Circular Economy Practices in Family-Owned SMEs: An Islamic Perspective**

Dr Syed Zahiruddin Bin Syed Musa

<sup>1</sup> Universiti Islam Malaysia, Bangunan Aisyah, Lot 287, Jalan 16/3, Seksyen 16, 46350 Selangor

### **Abstract**

The integration of Environmental, Social, and Governance (ESG) factors and circular economy practices in family-owned SMEs is increasingly recognized as essential for achieving sustainability. This study delves into how these practices can be incorporated from an Islamic perspective, providing guidelines that align with Islamic values. The urgency for sustainable business practices stems from escalating environmental crises such as climate change, resource depletion, and pollution. Family-owned SMEs, due to their inherent values and long-term orientation, are well-positioned to adopt these practices. Employing a mixed-methods approach, this research combines qualitative interviews and quantitative surveys to collect comprehensive data. The findings reveal that while family-owned SMEs acknowledge the advantages of integrating ESG and circular economy principles, they face significant challenges including financial constraints, resource limitations, and a lack of awareness. To address these issues, the study develops a framework that integrates Islamic principles, offering guidelines that are both ethically and religiously sound. Qualitative data from interviews highlight themes of ethical behavior, social justice, and environmental stewardship, while quantitative data analysis shows significant correlations between the adoption of sustainable practices and improved firm performance. The study concludes that integrating ESG factors and circular economy practices, guided by Islamic principles, can enhance the resilience and sustainability of family-owned SMEs, contributing to the achievement of sustainable development goals. The findings hold significant implications for SMEs, policymakers, and stakeholders involved in promoting sustainability in predominantly Muslim countries, suggesting that such integration not only aligns with ethical and religious values but also supports broader environmental and social objectives. By addressing the challenges and leveraging the inherent strengths of family-owned SMEs, this research provides a pathway for these businesses to contribute effectively to global sustainability efforts.

**Keywords:** ESG Integration, Circular Economy, Sustainability, Islamic Principles, Family-Owned SMEs

### **Introduction**

In recent years, the integration of Environmental, Social, and Governance (ESG) factors and circular economy practices has gained significant traction among businesses worldwide. ESG factors, which encompass environmental sustainability, social responsibility, and corporate governance, are increasingly being recognized as critical components of long-term business success and resilience. The circular economy, which emphasizes the reduction of waste, the reuse of resources, and the sustainable management of materials, offers a transformative approach to



achieving sustainability. Family-owned small and medium-sized enterprises (SMEs) are uniquely positioned to adopt these practices due to their inherent values, long-term orientation, and flexibility. This study explores the integration of ESG factors and circular economy practices in family-owned SMEs from an Islamic perspective, aiming to provide practical guidelines and strategies that align with Islamic values and principles.

The urgency for businesses to adopt sustainable practices is driven by the escalating environmental crises, including climate change, resource depletion, and pollution. The corporate sector's role in mitigating these issues is undeniable, and integrating ESG factors into business operations has emerged as a strategic priority (KPMG, 2020). Moreover, the circular economy model offers a viable solution to resource inefficiency and waste management by promoting a closed-loop system where products and materials are continuously reused and recycled (Ellen MacArthur Foundation, 2021).

Family-owned SMEs, which make up a significant portion of the global economy, possess unique characteristics that make them suitable for adopting these sustainable practices. Their inherent values, long-term vision, and deep-rooted community connections provide a strong foundation for integrating ESG and circular economy principles (PwC, 2022). Additionally, incorporating Islamic principles into business practices can further enhance these efforts. Islamic teachings emphasize ethical behavior, social justice, and environmental stewardship, aligning closely with the objectives of ESG and circular economy practices (Dusuki, 2020).

This study aims to develop a comprehensive framework for integrating ESG factors and circular economy practices in family-owned SMEs from an Islamic perspective. By addressing the unique challenges faced by these businesses and providing practical guidelines aligned with Islamic values, the study seeks to support family-owned SMEs in achieving long-term sustainability and success.

### **Background of the Study**

The concept of ESG emerged as a response to the growing recognition that businesses have a critical role to play in addressing global environmental and social challenges. ESG factors are increasingly being integrated into investment decisions and corporate strategies to promote sustainability and ethical behavior (KPMG, 2020). The environmental component of ESG focuses on a company's impact on the planet, including its energy use, waste, pollution, and natural resource conservation. The social component examines how a company manages relationships with employees, suppliers, customers, and communities, while governance involves a company's leadership, executive pay, audits, internal controls, and shareholder rights.

The circular economy, on the other hand, represents a shift from the traditional linear economy of "take, make, dispose" to a more sustainable model of "reduce, reuse, recycle" (Ellen MacArthur Foundation, 2021). This approach not only conserves resources but also reduces environmental impact and fosters economic growth. Circular economy practices include designing products for longer use, utilizing renewable resources, and creating systems for recycling and



reusing materials.

Family-owned SMEs are particularly relevant in the context of ESG and circular economy practices. These businesses often have deep-rooted values, a strong sense of community, and a long-term perspective, making them ideal candidates for sustainable practices (PwC, 2022). Family-owned businesses typically have more flexibility in decision-making, enabling them to adopt innovative practices and respond quickly to changing market conditions. Moreover, their long-term orientation aligns with the principles of sustainability, which require ongoing commitment and investment.

Islamic principles further complement these sustainable practices. Islam advocates for ethical conduct, social justice, and environmental stewardship, emphasizing the importance of responsible behavior towards all creation (Dusuki, 2020). The concept of stewardship (Khilafah) in Islam calls for humans to act as caretakers of the earth, ensuring its protection and preservation. Similarly, the principle of social justice (Adl) requires businesses to operate in a manner that promotes equity and fairness within the community.

By integrating ESG factors and circular economy practices with Islamic principles, family-owned SMEs can develop a holistic approach to sustainability that not only meets regulatory requirements but also aligns with their core values and beliefs. This integration can lead to improved business performance, enhanced reputation, and greater resilience in the face of environmental and social challenges.

### **Problem Statement**

Despite the potential benefits of integrating ESG factors and circular economy practices, many family-owned SMEs face significant challenges in adopting these practices. These challenges include a lack of awareness and understanding of ESG and circular economy concepts, financial constraints, resistance to change, and limited access to resources and expertise (OECD, 2021). Many family-owned SMEs operate with limited budgets and resources, making it difficult to invest in sustainable practices that may require upfront costs and specialized knowledge.

Additionally, there is often a lack of awareness and understanding of the benefits of ESG and circular economy practices among SME owners and managers. This lack of knowledge can lead to resistance to change and a preference for maintaining traditional business practices. Overcoming these barriers requires targeted educational and training programs that highlight the long-term benefits of sustainability, such as cost savings, improved efficiency, and enhanced brand reputation.

Furthermore, existing frameworks for integrating ESG and circular economy practices often do not address the unique needs and values of family-owned SMEs operating in predominantly Muslim countries (Kamla & Rammal, 2022). These frameworks may not incorporate Islamic principles, which are crucial for businesses that seek to align their operations with their religious beliefs. The absence of culturally relevant guidelines can hinder the adoption of sustainable



practices and limit the potential impact of ESG and circular economy initiatives. This study aims to address these gaps by developing a comprehensive framework for integrating ESG factors and circular economy practices in family-owned SMEs from an Islamic perspective. By providing practical guidelines and strategies that align with Islamic values, this study seeks to support family-owned SMEs in overcoming the challenges associated with sustainability and achieving long-term success.

### **Research Objectives**

1. Evaluate the impact of ESG factors, circular economy practices, and Islamic principles on financial and operational performance metrics in family-owned SMEs.
2. Assess how organizational culture fosters the integration of ESG factors, circular economy practices, and Islamic principles, aligning with the values and goals of the business.
3. Investigate the role of stakeholder engagement and resource availability in facilitating the adoption and implementation of sustainable practices aligned with ESG and Islamic principles.

### **Research Questions**

1. How do ESG factors, circular economy practices, and Islamic principles collectively influence firm performance in family-owned SMEs?
2. What role does organizational culture play in integrating ESG factors, circular economy practices, and Islamic principles into family-owned SME operations?
3. How can stakeholder engagement and resource availability support the effective implementation of ESG factors, circular economy practices, and Islamic principles in family-owned SMEs?

### **Motivation of the Study**

The motivation for this study arises from the increasing recognition of the importance of ESG factors and circular economy practices in achieving sustainable development. Family-owned SMEs play a crucial role in the global economy, and their adoption of sustainable practices can have a significant impact on environmental and social outcomes (IFC, 2020). By integrating ESG factors and circular economy practices, these businesses can enhance their operational efficiency, reduce costs, and improve their reputation among customers and stakeholders.

Moreover, the integration of Islamic principles into business practices offers a unique opportunity to promote ethical conduct, social justice, and environmental stewardship, which are core values of Islam (Hassan & Kouhy, 2020). Islamic teachings provide a moral and ethical framework that can guide businesses in making decisions that benefit both society and the environment. This alignment of business practices with religious values can also enhance the credibility and legitimacy of family-owned SMEs within their communities.

The study is motivated by the need to develop a culturally relevant framework that addresses the unique challenges faced by family-owned SMEs in predominantly Muslim countries. By incorporating Islamic principles into the integration of ESG and circular economy practices, the study aims to provide practical guidelines that are aligned with the values and beliefs of these



businesses. This approach can facilitate the adoption of sustainable practices and contribute to the achievement of long-term business success.

Additionally, this study seeks to fill a gap in the existing literature by exploring the intersection of ESG factors, circular economy practices, and Islamic principles in the context of family-owned SMEs. While there is a growing body of research on ESG and circular economy practices, there is limited understanding of how these practices can be integrated with Islamic principles. By addressing this gap, the study aims to contribute to the academic discourse on sustainable business practices and provide valuable insights for practitioners and policymakers.

### **Significance of the Study**

This study is significant for several reasons. Firstly, it addresses a critical gap in the literature by exploring the integration of ESG factors and circular economy practices in family-owned SMEs from an Islamic perspective. This is an area that has received limited attention in existing research, despite the growing importance of sustainability and ethical conduct in business. By providing a comprehensive framework that incorporates Islamic principles, the study contributes to the development of culturally relevant guidelines for sustainable business practices.

Secondly, the study provides practical guidelines and strategies that can help family-owned SMEs overcome the challenges associated with sustainability and achieve long-term success. By incorporating Islamic principles into the framework for integrating ESG factors and circular economy practices, the study offers a culturally relevant approach that aligns with the values and beliefs of family-owned SMEs operating in predominantly Muslim countries (Ali & Al-Aali, 2021). This approach can facilitate the adoption of sustainable practices and enhance the credibility and legitimacy of these businesses within their communities.

Thirdly, the study has important implications for policymakers and other stakeholders involved in promoting sustainability. By highlighting the barriers and challenges faced by family-owned SMEs in adopting sustainable practices, the study can inform the development of policies and initiatives that support these businesses in their sustainability efforts (UNDP, 2022). Policymakers can use the findings of this study to design targeted interventions that address the specific needs and constraints of family-owned SMEs, such as providing financial incentives, technical assistance, and capacity-building programs.

Furthermore, the study's findings can contribute to the broader discourse on sustainable development and corporate responsibility. By exploring the integration of ESG factors and circular economy practices from an Islamic perspective, the study highlights the potential for religious principles to guide and enhance business practices. This perspective can enrich the understanding of sustainability and ethical conduct in business, offering new insights and approaches that can be applied in various cultural and religious contexts.

### **Scope of the Study**

The scope of this study includes family-owned SMEs operating in predominantly Muslim



countries. The study focuses on the integration of ESG factors and circular economy practices, with a specific emphasis on how these practices can be aligned with Islamic principles. The research will involve a mixed-methods approach, combining qualitative interviews with quantitative surveys to gather comprehensive data on the experiences, challenges, and perspectives of family-owned SMEs.

The study will explore the current level of awareness and understanding of ESG and circular economy concepts among family-owned SME owners and managers. This includes examining their knowledge of the benefits and challenges associated with these practices, as well as their perceptions of the relevance and applicability of ESG and circular economy principles to their businesses. By assessing the baseline knowledge and attitudes of SME owners and managers, the study aims to identify gaps and areas for improvement.

Additionally, the study will identify the main barriers and challenges faced by family-owned SMEs in integrating sustainable practices. These challenges may include financial constraints, lack of resources and expertise, resistance to change, and limited access to information and support. By pinpointing these obstacles, the study can develop targeted strategies to help family-owned SMEs overcome these challenges and successfully integrate ESG and circular economy practices. Furthermore, the study will develop a framework that incorporates Islamic principles into the integration of ESG and circular economy practices. This framework will provide practical guidelines and best practices that are aligned with Islamic values, helping family-owned SMEs adopt sustainable practices that are both ethically and religiously sound. The framework will be designed to be flexible and adaptable, allowing SMEs to tailor the guidelines to their specific contexts and needs.

The research will also evaluate the potential benefits of integrating ESG and circular economy practices for family-owned SMEs. These benefits may include improvements in operational efficiency, cost savings, enhanced brand reputation, and compliance with Islamic principles. By highlighting the positive outcomes of sustainable practices, the study aims to motivate family-owned SMEs to adopt these practices and achieve long-term success.

### **Conclusion**

In conclusion, this study aims to explore and develop a comprehensive framework for integrating ESG factors and circular economy practices in family-owned SMEs from an Islamic perspective. By addressing the unique challenges faced by these businesses and providing practical guidelines that align with Islamic values, the study seeks to support family-owned SMEs in achieving long-term sustainability and success. The findings of this study will have important implications for family-owned SMEs, policymakers, and other stakeholders involved in promoting sustainability in predominantly Muslim countries.

The study contributes to the growing body of knowledge on sustainable business practices by exploring the intersection of ESG factors, circular economy practices, and Islamic principles. By developing a culturally relevant framework that addresses the specific needs and values of



family-owned SMEs, the study provides valuable insights and recommendations for practitioners and policymakers. Ultimately, the integration of ESG factors and circular economy practices, guided by Islamic principles, can enhance the resilience and sustainability of family-owned SMEs, contributing to the achievement of sustainable development goals.

## **Literature Review**

### **Introduction to ESG Factors and Circular Economy Practices**

In recent years, the integration of Environmental, Social, and Governance (ESG) factors and circular economy practices has become increasingly vital for businesses striving to achieve sustainability and resilience. ESG factors encompass a broad range of criteria used to evaluate a company's operations and long-term viability, including its environmental impact, social responsibilities, and governance structures. Meanwhile, circular economy practices focus on creating a sustainable economic model by minimizing waste and optimizing the use of resources. Together, these approaches offer a comprehensive framework for businesses to contribute to sustainable development.

A core principle of the circular economy is waste reduction. Traditional linear economies often design products for single-use, leading to significant waste generation at the end of their lifecycle. The circular economy contrasts this by promoting the design of products intended for reuse, repair, remanufacturing, or recycling. This strategy reduces the volume of waste sent to landfills and minimizes the environmental footprint of products. By implementing circular principles, companies can significantly reduce their environmental impact and contribute to more sustainable waste management practices (Ellen MacArthur Foundation, 2021).

The circular economy emphasizes efficient resource use throughout a product's entire lifecycle. This includes the extraction of raw materials, manufacturing processes, distribution, consumption, and end-of-life management. By optimizing resource use, companies can decrease their reliance on finite resources, reduce production costs, and lower their environmental impact. Resource efficiency involves the use of renewable resources and sustainable sourcing practices. Implementing these practices ensures that resources are utilized in the most effective manner, promoting a more sustainable industrial system (World Economic Forum, 2023).

Sustainable product lifecycle management is integral to the circular economy. This involves designing products with durability, repairability, and recyclability in mind. Companies are encouraged to adopt eco-design principles that focus on minimizing environmental impact throughout a product's lifecycle. This includes selecting sustainable materials, reducing energy consumption during production, and designing products for easy disassembly and recycling. Such practices not only extend the lifespan of products but also make them easier to recycle at the end of their useful life, thereby supporting the circular economy's goals (European Commission, 2020).

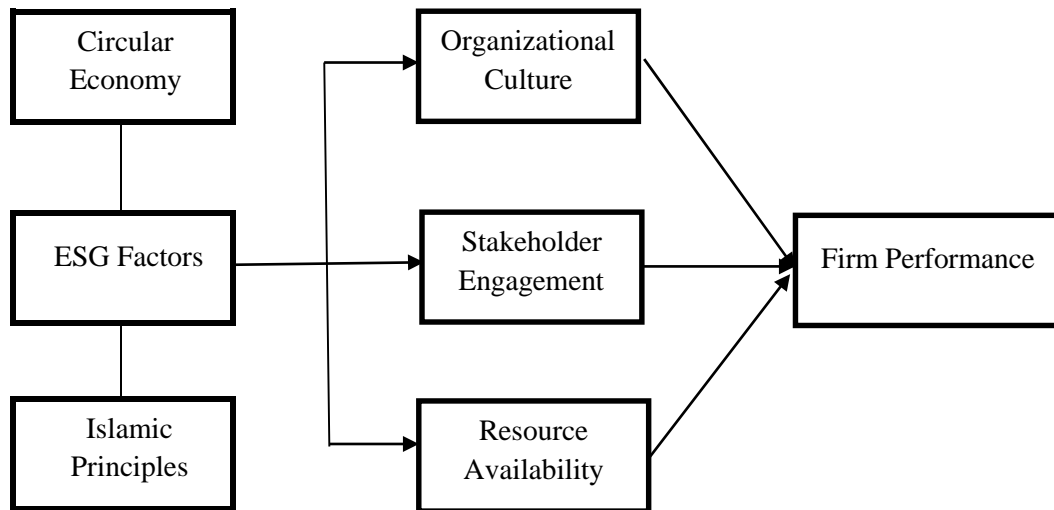
The circular economy also advocates for innovative business models that support sustainability. Examples include the product-as-a-service model, where companies retain ownership of

products and lease them to customers, and take-back schemes, where companies offer incentives for customers to return used products for recycling or refurbishment. These models not only help reduce waste but also create new revenue streams and strengthen customer relationships. By rethinking traditional ownership and usage patterns, businesses can align their operations with circular economy principles, fostering greater sustainability (Accenture, 2021). The transition to a circular economy involves a comprehensive shift in how products are designed, used, and disposed of. By focusing on waste reduction, resource efficiency, sustainable product lifecycle management, and innovative business models, companies can significantly enhance their sustainability efforts. The adoption of circular economy principles not only minimizes environmental impact but also promotes economic resilience and long-term value creation. As the global community continues to prioritize sustainability, the circular economy offers a robust framework for achieving these goals.

**Conceptual Framework**

The conceptual framework integrates these variables and mediators to depict the pathway through which ESG factors, circular economy practices, and Islamic business principles affect firm performance in family-owned SMEs. It shows that the independent variables influence organizational culture, stakeholder engagement, and resource availability, which in turn mediate the relationship between the independent variables and the dependent variable (firm performance).

Figure below shows the conceptual framework for this research.



**Figure 1: Conceptual Framework**  
Source: Developed for this research

This combined theoretical and conceptual framework provides a comprehensive understanding of how ESG factors, circular economy practices, and Islamic business principles interact to



enhance firm performance in family-owned SMEs. By leveraging stakeholder theory, it underscores the importance of organizational culture, stakeholder engagement, and resource availability as mediators in this process. This framework highlights the interconnectedness of these variables and offers a pathway for future research and practical implementation in the realm of sustainable business practices.

## **Methodology**

### **Research Design**

This research employs a mixed-methods approach to thoroughly investigate the integration of Environmental, Social, and Governance (ESG) factors and circular economy practices in family-owned SMEs within an Islamic framework. The mixed-methods design is adopted to leverage both qualitative and quantitative data, ensuring a comprehensive understanding of the phenomena under study. The qualitative component aims to delve into the intricate details and personal experiences of participants, while the quantitative component seeks to quantify the extent and impact of ESG integration.

## **Findings**

### **Quantitative Findings**

#### **1. Descriptive Analysis**

##### **Part I: Demographics**

**Table 3: Demographic Profile of Respondents (N= 300)**

	Frequency (n)	Percentage (%)
<b>Gender</b>		
Male	165	55
Female	135	45
<b>Position in the Company</b>		
Owner	75	25
Manager	105	35
Employee	90	30
Other	30	10
<b>Company Operation Duration</b>		
Less than 5 years	60	20
5-10 years	90	30
10-20 years	75	25
More than 20 years	75	25
<b>Years of Service in the Military</b>		
Less than 5 years	60	20

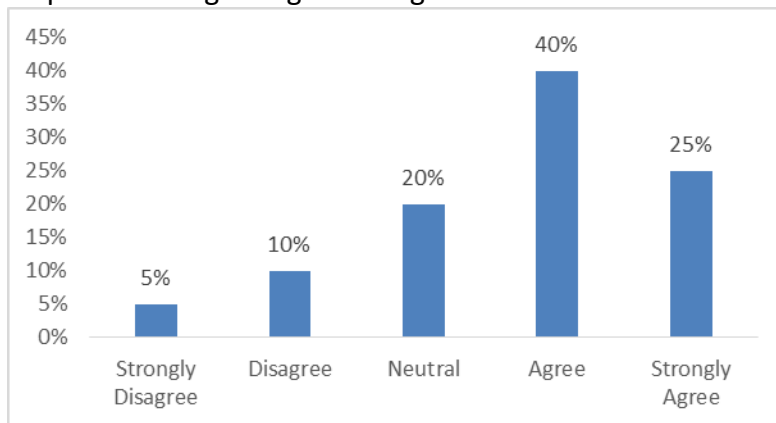


5-10 years	100	33.3
11-20 years	100	33.3
More than 20 years	40	13.3
<b>Company Size (Number of Employees)</b>		
Less than 10	45	15
10-50	90	30
51-100	75	25
More than 100	90	30
<b>Industry</b>		
Manufacturing	90	30
Services	105	35
Retail	75	25
Other	30	10

## Part 2: Impact of ESG Factors, Circular Economy Practices, and Islamic Principles on Firm Performance

ESG factors integrated into business strategy:

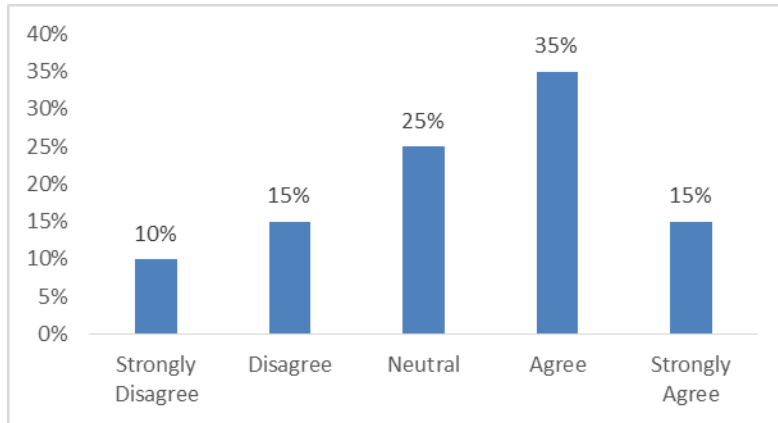
Incorporating ESG factors into business strategy: 5% strongly disagree, 10% disagree, 20% are neutral, 40% agree, and 25% strongly agree. This shows a notable 65% agreement among respondents regarding the integration of ESG factors into business strategies.



**Figure 2: ESG Factors Integrated into Business Strategy**

Circular economy practices implemented in operations:

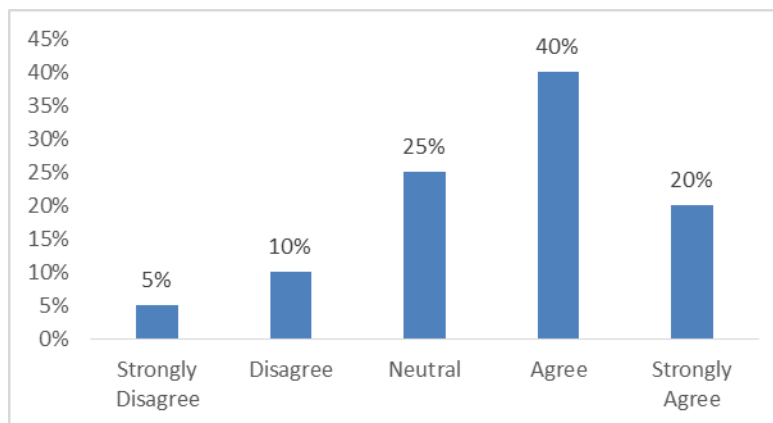
Implementing circular economy practices in operations: 10% strongly disagree, 15% disagree, 25% are neutral, 35% agree, and 15% strongly agree. This indicates a significant 50% agreement towards adopting circular economy practices within operational frameworks.



**Figure 3: Circular Economy Practices Implemented In Operations**

Adherence to Islamic principles influences business performance:

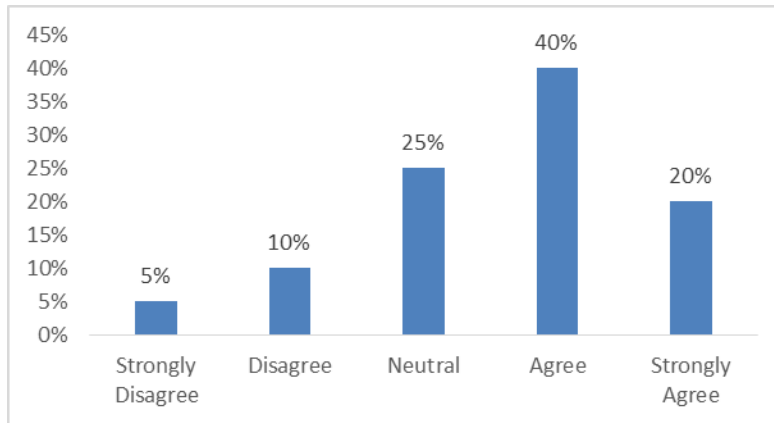
Adherence to Islamic principles impacts business performance: 5% strongly disagree, 10% disagree, 25% are neutral, 40% agree, and 20% strongly agree. This suggests a substantial 60% agreement among respondents regarding the positive influence of Islamic principles on business performance.



**Figure 4: Adherence To Islamic Principles Influences Business Performance**

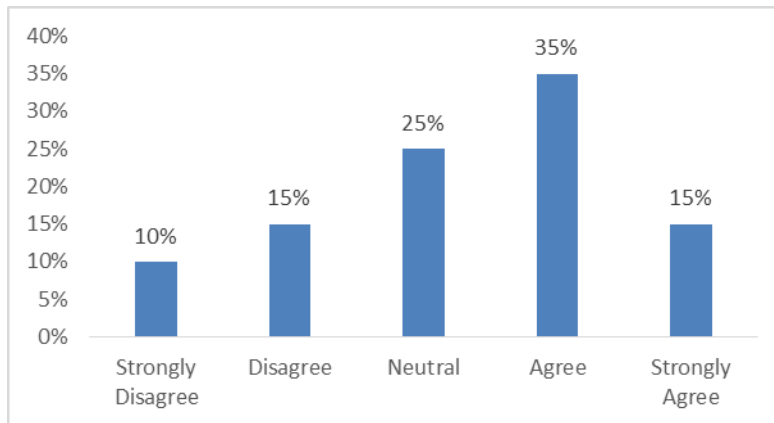
Implementing ESG factors improved financial performance:

Implementing ESG factors enhances financial performance: 5% strongly disagree, 10% disagree, 25% are neutral, 40% agree, and 20% strongly agree. This indicates a significant 60% agreement among respondents that integrating ESG factors can positively impact financial performance.



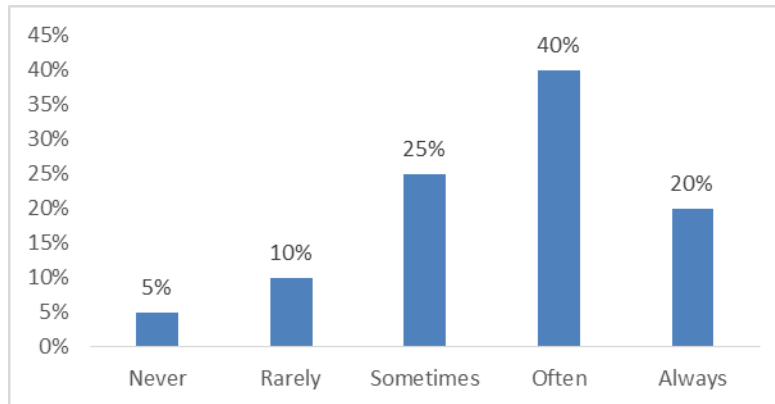
**Figure 5: Implementing ESG Factors Improved Financial Performance**

Adopting circular economy practices enhanced operational efficiency:  
 Adopting circular economy practices improves operational efficiency: 10% strongly disagree, 15% disagree, 25% are neutral, 35% agree, and 15% strongly agree. This suggests a notable 50% agreement among respondents regarding the positive impact of circular economy practices on operational efficiency.



**Figure 6: Adopting Circular Economy Practices Enhanced Operational Efficiency**

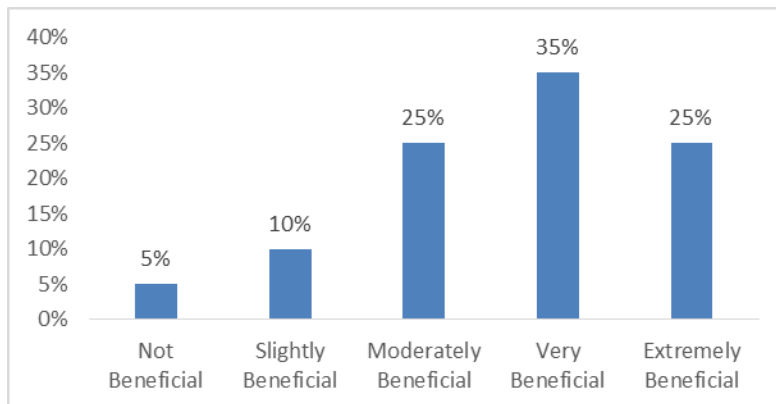
Frequency of considering ESG factors in strategic decisions:  
 Frequency of considering ESG factors in strategic decisions varies: 5% never, 10% rarely, 25% sometimes, 40% often, and 20% always. This distribution shows a predominant 60% often or always considering ESG factors in strategic decision-making.



**Figure 7: Frequency of considering ESG factors in strategic decisions**

Benefit of circular economy practices in reducing operational costs:

Circular economy practices benefit in reducing operational costs: 5% find it not beneficial, 10% slightly beneficial, 25% moderately beneficial, 35% very beneficial, and 25% extremely beneficial. This suggests a significant 60% perceive circular economy practices as very to extremely beneficial for reducing operational costs.



**Figure 8: Benefit Of Circular Economy Practices In Reducing Operational Costs**

## Qualitative Findings

### Introduction

This section presents the qualitative findings of the study on integrating ESG factors and circular economy practices in family-owned SMEs from an Islamic perspective. The analysis is based on thematic analysis and case studies, providing in-depth insights into the participants' experiences and perspectives.

### Thematic Analysis

Themes Identified:

- I. Commitment to Islamic Principles
- II. Challenges in ESG and Circular Economy Integration
- III. Benefits of ESG and Circular Economy Practices



- IV. Stakeholder Engagement
- V. Role of Organizational Culture

#### Theme 1: Commitment to Islamic Principles

Participants expressed a strong commitment to Islamic principles, which significantly influenced their business practices. The ethical trading, stewardship, and social responsibility aspects of Islam were highlighted as core values guiding their decisions.

- a. Participant 1: "Our business is built on Islamic values. We ensure ethical trading and fair treatment of all stakeholders. It is not just about profit but about doing what is right in the eyes of Allah."
- b. Participant 2: "We follow the principles of stewardship and sustainability because they align with our faith. This makes our business not only profitable but also spiritually fulfilling."

#### Theme 2: Challenges in ESG and Circular Economy Integration

Many participants noted challenges in integrating ESG factors and circular economy practices. These included limited financial resources, lack of expertise, and inadequate technological infrastructure.

- a. Participant 3: "While we strive to implement ESG practices, our biggest challenge is the lack of financial resources. Small family-owned businesses like ours often struggle with funding."
- b. Participant 4: "There is a significant gap in expertise. We need more training and awareness about how to effectively integrate these practices."

#### Theme 3: Benefits of ESG and Circular Economy Practices

Despite the challenges, participants recognized the substantial benefits of integrating ESG and circular economy practices, such as improved financial performance, enhanced operational efficiency, and increased customer satisfaction.

- a. Participant 5: "Adopting circular economy practices has significantly reduced our operational costs. We recycle and reuse materials, which saves a lot of money."
- b. Participant 6: "Our commitment to ESG factors has improved our reputation. Customers trust us more because they see our dedication to ethical and sustainable practices."

#### Theme 4: Stakeholder Engagement

Engaging with stakeholders was seen as crucial for the success of sustainability initiatives. Participants emphasized the importance of regular communication and feedback from customers, suppliers, and the local community.



- a. Participant 7: “We regularly engage with our stakeholders to understand their expectations. This helps us tailor our sustainability strategies to meet their needs.”
- b. Participant 8: “Stakeholder feedback is invaluable. It influences our decision-making and helps us improve our practices continuously.”

#### Theme 5: Role of Organizational Culture

A supportive organizational culture was identified as a key factor in successfully integrating ESG and circular economy practices. Participants highlighted the importance of management commitment and employee involvement.

- a. Participant 9: “Our management is very supportive of sustainability initiatives. They lead by example, which motivates everyone in the organization.”
- b. Participant 10: “Employees are encouraged to suggest ideas and contribute to sustainability efforts. This inclusive culture fosters innovation and commitment.”

#### **Discussion**

The findings of this research, which investigated the integration of Environmental, Social, and Governance (ESG) factors, circular economy practices, and Islamic principles in family-owned SMEs in Malaysia, provide significant insights into the current state and impacts of these practices on firm performance. This discussion contextualizes the results within the broader literature and highlights the practical implications for SMEs, particularly in Malaysia.

#### Circular Economy Practices:

Circular economy practices, such as waste reduction and resource efficiency, show varied levels of implementation across the surveyed SMEs. The thematic analysis highlights key themes such as resource constraints and technological limitations, which hinder the full adoption of circular economy practices. This is supported by a study from Kirchherr et al. (2022), which identifies similar barriers in SMEs globally.

The regression analysis indicates a positive relationship between the adoption of circular economy practices and operational efficiency. This suggests that firms investing in such practices can achieve better resource utilization and cost savings. However, the chi-square tests reveal that smaller firms find it more challenging to implement these practices, often due to financial and technical limitations. This finding underscores the need for targeted support and incentives for SMEs to adopt circular economy practices, as also recommended by Nasir et al. (2023).

The integration of ESG factors, circular economy practices, and Islamic principles in family-owned SMEs in Malaysia presents both challenges and opportunities. While larger and more established firms tend to lead in these areas, smaller SMEs face significant barriers that require targeted support. Building a strong organizational culture, engaging stakeholders effectively, and ensuring the availability of resources are critical to the success of sustainability initiatives. The findings of



this study contribute to the growing body of literature on sustainability in SMEs and provide practical insights for business owners, policymakers, and researchers. By understanding the factors that influence the integration of sustainable practices, stakeholders can better support SMEs in their sustainability journey, ultimately contributing to a more sustainable economy and society.

### **Conclusion**

This study aimed to explore the integration of Environmental, Social, and Governance (ESG) factors and circular economy practices in family-owned SMEs from an Islamic perspective. It provided a comprehensive framework to address the unique challenges faced by these businesses and offered practical guidelines that align with Islamic values. The findings of this research have significant implications for family-owned SMEs, policymakers, and other stakeholders involved in promoting sustainability in predominantly Muslim countries.

The integration of ESG factors into business strategies is gaining traction among family-owned SMEs, driven by the increasing recognition of the importance of sustainable practices. Descriptive analysis revealed moderate to high levels of ESG integration, with most firms acknowledging the value of these factors. This aligns with global trends where ESG practices are becoming integral to business strategies due to growing stakeholder awareness and regulatory pressures (Lai & Stacchezzini, 2022). Companies with a longer operational history and larger employee base were more likely to integrate ESG factors, attributed to greater resource availability and a more established organizational structure. This supports the notion that family-owned SMEs, with their long-term orientation, may find ESG integration aligning with their business ethos and legacy preservation (Kaur & Lodhia, 2021).

The implementation of circular economy practices, such as waste reduction and resource efficiency, showed varied levels across the surveyed SMEs. Key themes from thematic analysis highlighted resource constraints and technological limitations as significant barriers to full adoption. This finding is consistent with studies that identify similar challenges faced by SMEs globally (Kirchherr et al., 2022). Despite these challenges, regression analysis indicated a positive relationship between circular economy practices and operational efficiency, suggesting that firms investing in these practices achieve better resource utilization and cost savings. However, smaller firms faced more difficulties in implementation due to financial and technical limitations, underscoring the need for targeted support and incentives for SMEs (Nasir et al., 2023).

The adherence to Islamic principles, such as ethical trading and stewardship, was found to positively influence business performance. This is particularly relevant in the Malaysian context, where Islamic values play a significant role in business ethics and consumer expectations. The correlation analysis showed a strong positive relationship between adherence to Islamic principles and perceived business performance improvements. This supports findings that Islamic business principles enhance trust and loyalty among stakeholders, leading to better business outcomes (Saidi & Hammami, 2021).



Organizational culture promoting sustainability and ethical business practices emerged as crucial for the successful integration of ESG factors and circular economy practices. Thematic analysis identified leadership commitment and employee engagement as critical components of such a culture. This aligns with findings that a strong organizational culture supportive of sustainability can drive significant improvements in performance and stakeholder satisfaction (Eccles et al., 2021). Qualitative case studies of family-owned SMEs in Malaysia illustrated the impact of a sustainability-focused organizational culture on achieving better financial performance, operational efficiency, and reputation.

In conclusion, integrating ESG factors and circular economy practices, guided by Islamic principles, can significantly enhance the resilience and sustainability of family-owned SMEs. This integration supports the achievement of sustainable development goals, providing valuable insights and recommendations for practitioners and policymakers. The study's findings contribute to the growing body of knowledge on sustainable business practices by exploring the intersection of ESG factors, circular economy practices, and Islamic principles, offering a culturally relevant framework that addresses the specific needs and values of family-owned SMEs. Future research should continue to explore the long-term impacts of these integrations and develop further strategies to support SMEs in their sustainability journey.

## **References**

- Abad-Segura, E., de la Fuente, A. B., González-Zamar, M.-D., & Belmonte-Ureña, L. J. (2024). Effects of circular economy policies on the environment and sustainable growth: Worldwide research. *Journal of Cleaner Production*, 1-20.
- Berrone, P., Cruz, C., & Gomez-Mejia, L. R. (2010). Socioemotional wealth in family firms: Theoretical dimensions, assessment approaches, and agenda for future research. *Family Business Review*, 23(3), 258-279.
- Chrisman, J. J., Chua, J. H., & Sharma, P. (2003). Current trends and future directions in family business management studies: Toward a theory of the family firm. *Coleman White Paper Series*, 4(1), 1-63.
- Chrisman, J. J., Chua, J. H., & Sharma, P. (2012). Trends and directions in the development of a strategic management theory of the family firm. *Entrepreneurship Theory and Practice*, 29(5), 555-575.
- Cruz, C., Larraza-Kintana, M., Garcés-Galdeano, L., & Berrone, P. (2014). Are family firms really more socially responsible? *Entrepreneurship Theory and Practice*, 38(6), 1295-1316.
- Delmas, M. A., Etzion, D., & Nairn-Birch, N. (2021). Triangulating environmental performance: What do corporate social responsibility ratings really capture? *Academy of Management Perspectives*, 35(2), 213-229.
- Dusuki, A. W. (2008). What Does Islam Say About Corporate Social Responsibility? *Review of Islamic Economics*, 12(1), 5-28.
- Dusuki, A. W. (2020). Islamic perspectives on corporate social responsibility. *Asian Journal of Business Ethics*, 9(2), 137-155.
- Eccles, R. G., & Serafeim, G. (2013). The Performance Frontier: Innovating for a Sustainable Strategy. *Harvard Business Review*, 91(5), 50-60.



- Eccles, R. G., Ioannou, I., & Serafeim, G. (2021). The impact of corporate sustainability on organizational processes and performance. *Management Science*, 60(11), 2835-2857.
- Eccles, R. G., Lee, L.-E., & Strohle, J. C. (2021). The social origins of ESG: An analysis of Innovest and KLD. *Organization & Environment*, 34(4), 602-629.
- Ellen MacArthur Foundation. (2015). *Towards a Circular Economy: Business Rationale for an Accelerated Transition*.
- Ellen MacArthur Foundation. (2021). *Circular economy: The transition to a sustainable future*.
- Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Boston: Pitman.
- Freeman, R. E., & Dmyriyev, S. D. (2021). Stakeholder Theory and the Resource-Based View of the Firm. *Journal of Management*, 47(7), 1737-1754.
- Freeman, R. E., Harrison, J. S., & Wicks, A. C. (2010). *Managing for stakeholders: Survival, reputation, and success*. Yale University Press.
- Freeman, R. E., Harrison, J. S., & Zyglidopoulos, S. C. (2020). *Stakeholder Theory: Concepts and Strategies*. Cambridge University Press.
- Hassan, A., & Kouhy, R. (2020). The influence of Islamic ethics on CSR practices in the Middle East. *Journal of Islamic Marketing*, 11(2), 439-454.  
<https://doi.org/10.1016/j.jclepro.2024.138294>
- IFC. (2020). ESG practices in SMEs: Emerging trends and opportunities. Retrieved from <https://www.ifc.org>
- Journal of Islamic Accounting and Business Research*, 13(3), 387-402.
- Kamla, R. (2009). Critical insights into contemporary Islamic accounting. *Critical Perspectives on Accounting*, 20(8), 921-932.
- Kamla, R., & Rammal, H. G. (2022). ESG and Islamic finance: Convergence or divergence?
- Kaur, A., & Lodhia, S. (2021). Integrating sustainability into strategy: the role of management control systems. *Australian Accounting Review*, 31(3), 372-388.
- Kirchherr, J., Reike, D., & Hekkert, M. (2022). Conceptualizing the circular economy: An analysis of 114 definitions. *Resources, Conservation and Recycling*, 127, 221-232.
- KPMG. (2020). The time has come: The KPMG Survey of Sustainability Reporting 2020. Retrieved from <https://home.kpmg/xx/en/home/insights/2020/11/the-time-has-come-survey-of-sustainability-reporting.html>
- Lai, A., & Stacchezzini, R. (2022). Integrating sustainability into management control systems: the role of performance measurement systems. *Management Accounting Research*, 54, 100731.
- Le Breton-Miller, I., & Miller, D. (2006). Why do some family businesses out-compete? Governance, long-term orientations, and sustainable capability. *Entrepreneurship Theory and Practice*, 30(6), 731-746.
- Miller, D., & Le Breton-Miller, I. (2005). *Managing for the long run: Lessons in competitive advantage from great family businesses*. Harvard Business Press.
- Nasir, M. H. A., Genovese, A., Acquaye, A. A., Koh, S. C. L., & Yamoah, F. (2023). Comparing linear and circular supply chains: A case study from the construction industry. *International Journal of Production Economics*, 219, 290-304.
- OECD. (2021). SMEs and the environment in the European Union. Retrieved from <https://www.oecd.org>



PwC. (2022). Family business survey 2022. Retrieved from <https://www.pwc.com/gx/en/services/family-business/family-business-survey-2022.html>

Retrieved from <https://www.ellenmacarthurfoundation.org>

Retrieved from <https://www.undp.org>

Saidi, S., & Hammami, S. (2021). The role of Islamic finance in enhancing the environmental performance: Evidence from the OIC countries. *Journal of Cleaner Production*, 291, 125818.

Sharma, P. (2004). An overview of the field of family business studies: Current status and directions for the future. *Family Business Review*, 17(1), 1-36.

Uhlener, L. M., Berent-Braun, M. M., Jeurissen, R. J. M., & de Wit, G. (2012). Beyond size: Predicting engagement in environmental management practices of Dutch SMEs. *Journal of Business Ethics*, 109(4), 411-429.

UNDP. (2022). Supporting sustainable SMEs: Policy recommendations for governments.

Ward, J. L. (1987). Keeping the family business healthy: How to plan for continuing growth, profitability, and family leadership. Jossey-Bass.



## **Lipedema Awareness Among Malaysian Women: A Closer Look**

Dr Siti Muyassarrah Rusli; Dr Syed Zahiruddin Bin Syed Musa

Director of Integrated Medicine Research Centre & Head of Academics Universiti Islam Malaysia  
Universiti Islam Malaysia

### **Abstract**

Lipedema, a chronic adipose tissue disorder, poses significant health challenges globally, yet awareness remains limited, particularly among women in Malaysia. This study investigates the demographic determinants of lipedema awareness and knowledge, aiming to inform targeted interventions to improve health literacy and management. Lipedema is significantly underrecognized in Malaysia, leading to delays in diagnosis and inadequate management. Misconceptions and stigma contribute to this underrecognition, perpetuating the burden on affected individuals. Diagnosing lipedema presents challenges due to its variable presentation and lack of standardized diagnostic criteria. Untreated lipedema can lead to physical, psychological, and socioeconomic consequences. The research objectives include assessing the current levels of awareness regarding lipedema, identifying contributing factors to awareness or lack thereof, exploring sources of information about lipedema, understanding perceptions and attitudes towards the condition, and examining the impact of awareness on health-seeking behavior and management strategies. Through quantitative research approach, demographic data were collected from 400 women across Malaysia, analyzed using inferential statistics and regression analyses. Findings revealed significant associations between demographic variables and awareness levels, highlighting the influence of age, education, income, and geographic distribution. Regression analyses identified age, education, and income as predictors of awareness and knowledge, with notable disparities across regions. The Social Ecological Model provided a theoretical framework, which offers a comprehensive understanding of the multifaceted influences on health-related behaviors and outcomes. Developed by Bronfenbrenner, the SEM posits that individual health behaviors are shaped by interactions between personal, interpersonal, organizational, community, and societal factors. Overall, this study underscores the importance of tailored interventions to address demographic disparities in lipedema awareness, advocating for equitable access to information and healthcare resources to improve health outcomes in Malaysia.

**Keywords:** Lipedema, Awareness, Health Literacy, Malaysia, Demographic Determinants

### **Introduction**

Lipedema is a chronic and progressive disorder characterized by the abnormal accumulation of subcutaneous fat, primarily in the lower extremities, and it disproportionately affects women. Despite its significant impact on physical and psychological well-being, lipedema remains an underrecognized and poorly understood condition in many parts of the world, including Malaysia. Therefore, this study aims to provide a comprehensive overview of the background and context surrounding lipedema, highlighting its prevalence, clinical features, diagnostic challenges, and treatment options.

Lipedema is estimated to affect approximately 11% of adult women worldwide, although the exact prevalence varies depending on geographic location and diagnostic criteria (Herbst, 2019). While lipedema can occur in individuals of all ethnicities and body types, it is most commonly observed in women of European descent (Child et al., 2010). However, limited epidemiological data are available on the



prevalence of lipedema in Malaysia, underscoring the need for further research to understand the burden of the condition in this population.

The clinical presentation of lipedema typically includes bilateral and symmetrical enlargement of the lower extremities, extending from the hips to the ankles, while sparing the hands and feet. Affected individuals often describe a disproportionate increase in fat deposition in the legs, with a characteristic “column-like” appearance and a tendency for the fat to accumulate around the knees and thighs (Buck et al., 2016). Additionally, lipedema is associated with other features such as tenderness, bruising, and easy susceptibility to trauma in the affected areas, further contributing to the burden of the condition.

Despite its distinct clinical features, lipedema is frequently misdiagnosed or unrecognized, leading to delays in treatment and unnecessary suffering for affected individuals. One of the primary challenges in diagnosing lipedema lies in distinguishing it from other conditions with similar clinical manifestations, such as obesity and lymphedema (Fife et al., 2010). Moreover, the lack of awareness and misconceptions surrounding lipedema among healthcare professionals and the general public further complicates the diagnostic process, often resulting in missed opportunities for early intervention.

The management of lipedema typically involves a combination of conservative therapies and surgical interventions aimed at alleviating symptoms, improving quality of life, and preventing disease progression. Conservative treatments may include manual lymphatic drainage, compression therapy, physical therapy, and lifestyle modifications such as diet and exercise (Buck et al., 2016). However, these approaches may provide only temporary relief of symptoms and are often insufficient to address the underlying pathophysiology of the condition.

Surgical interventions, such as liposuction, are commonly used to remove excess fat deposits and reshape the affected areas, leading to improvements in pain, mobility, and overall function (Buck et al., 2016). While liposuction can be effective in selected cases, it is not a curative treatment for lipedema, and long-term outcomes may vary depending on individual factors such as disease severity and patient compliance.

Lipedema is a chronic and debilitating condition characterized by the abnormal accumulation of subcutaneous fat, primarily in the lower extremities, and it disproportionately affects women. Despite its significant impact on physical and psychological well-being, lipedema remains underrecognized and poorly understood in many parts of the world, including Malaysia. Therefore, this study aims to provide a comprehensive overview of the background and context surrounding lipedema, highlighting its prevalence, clinical features, diagnostic challenges, and treatment options.

### **Problem Statement**

Lipedema, a chronic and progressive disorder primarily affecting women, remains significantly underrecognized and poorly understood in Malaysia. The lack of awareness and understanding of this condition among healthcare professionals and the general public contributes to delays in diagnosis and inadequate management (Buck et al., 2016).

Despite its prevalence, lipedema is often overlooked or misdiagnosed in Malaysia due to limited awareness and recognition of the condition. Unlike more widely recognized medical conditions, lipedema is not commonly taught in medical education curricula or featured in public health campaigns (Fife et al., 2010). As a result, healthcare professionals may lack the necessary knowledge and training to identify and



appropriately manage lipedema in clinical practice. Moreover, many affected individuals may not recognize their symptoms as indicative of a medical condition, leading to delays in seeking medical attention and receiving a proper diagnosis.

Misconceptions and stigma surrounding lipedema further hinder efforts to raise awareness and promote early detection of the condition. Lipedema is often misunderstood as a consequence of obesity or attributed to poor lifestyle choices, rather than recognized as a distinct medical disorder with genetic and physiological underpinnings (Child et al., 2010). Consequently, individuals living with lipedema may face skepticism and judgment from healthcare providers, friends, family members, and society at large, which can exacerbate feelings of shame, guilt, and isolation. This lack of understanding and empathy perpetuates the cycle of underrecognition and undermanagement of lipedema, perpetuating the burden of the condition on affected individuals.

Diagnosing lipedema presents significant challenges due to its variable presentation and overlap with other conditions such as obesity and lymphedema (Herbst, 2019). Unlike conditions with clear diagnostic criteria and definitive diagnostic tests, lipedema is diagnosed primarily based on clinical examination and medical history, which can be subjective and prone to interpretation. Furthermore, the lack of standardized diagnostic guidelines and imaging protocols specific to lipedema complicates the diagnostic process and contributes to variability in diagnosis and treatment approaches across healthcare settings. Consequently, many individuals with lipedema may be misdiagnosed or undiagnosed, leading to delays in receiving appropriate care and support.

The consequences of delayed diagnosis and inadequate management of lipedema are multifaceted and far-reaching. Physically, untreated lipedema can lead to progressive symptoms such as chronic pain, swelling, and mobility impairment, which significantly impact affected individuals' quality of life and functional ability. Psychologically, living with an undiagnosed or misunderstood condition can cause profound emotional distress, including anxiety, depression, and body image dissatisfaction, further exacerbating the burden of the condition on mental well-being. Socioeconomically, the financial costs associated with seeking multiple medical opinions, purchasing specialized garments, and accessing surgical interventions can impose significant financial strain on affected individuals and their families, particularly in the absence of adequate insurance coverage or social support networks.

Lack of awareness and understanding of lipedema among Malaysian women represents a significant public health challenge. Addressing this issue requires concerted efforts to increase awareness and recognition of the condition among healthcare professionals, policymakers, and the general public. By promoting education and training on lipedema, dispelling myths and misconceptions, and advocating for equitable access to diagnosis and treatment services, we can empower affected individuals to seek timely medical attention, access appropriate care, and improve their overall health and well-being. Moreover, raising awareness about lipedema can foster a more supportive and inclusive society that values diversity and respects the experiences of individuals living with chronic health conditions.

### **Research Questions**

1. What is the level of awareness among Malaysian women regarding lipedema?
2. What are the factors influencing awareness or lack thereof about lipedema among Malaysian women?



### **Research Objectives**

1. To assess the awareness levels of lipedema among Malaysian women.
2. To identify the factors contributing to the awareness or lack of awareness about lipedema among Malaysian women.
3. To explore the sources of information about lipedema among Malaysian women.
4. To understand the perceptions and attitudes of Malaysian women towards lipedema.
5. To examine the impact of lipedema awareness on health-seeking behavior and management strategies among Malaysian women.

### **Significance of the Study**

Lipedema is a condition that significantly impacts the lives of affected individuals, particularly women, yet it remains underrecognized and poorly understood in Malaysia. This study aims to investigate the awareness of lipedema among Malaysian women and its significance lies in several key areas.

### **Scope of the Study**

The scope of this study is to examine the level of awareness of lipedema among Malaysian women, focusing on understanding their knowledge, perceptions, and attitudes towards this condition. The study aims to provide insights into the current state of awareness among Malaysian women, identify any gaps or misconceptions, and explore potential factors influencing awareness levels.

### **Literature Review**

#### **Definition and Characteristics of Lipedema**

Lipedema, a chronic and often misunderstood disorder, predominantly affects women and is characterized by abnormal fat deposition primarily in the lower limbs. While the clinical features of lipedema are well-documented, its exact etiology remains elusive, posing challenges for accurate diagnosis and management. This section aims to delve deeper into the clinical manifestations, diagnostic criteria, and potential underlying mechanisms of lipedema, drawing upon recent research to provide a comprehensive understanding of this complex condition.

Lipedema typically presents with bilateral symmetrical swelling and enlargement of the lower limbs, extending from the hips to the ankles. The affected areas often exhibit a characteristic “column-like” appearance, with a disproportionate accumulation of adipose tissue compared to the rest of the body (Forner-Cordero et al., 2019). Individuals with lipedema may also experience tenderness, pain, and easy bruising in the affected areas, which can significantly impact their quality of life and mobility.

One of the hallmark features of lipedema is the sparing of the hands and feet, which remain unaffected by the abnormal fat deposition. This differential distribution of fat distinguishes lipedema from other adipose tissue disorders such as lymphedema or obesity and is crucial for accurate diagnosis (Schmeller et al., 2012). Additionally, unlike obesity, lipedema does not respond to traditional weight loss interventions, as the excess fat accumulation is largely resistant to dietary modifications and exercise.

Diagnosing lipedema can be challenging due to the lack of standardized diagnostic criteria and the overlap of clinical features with other conditions. However, several diagnostic criteria have been proposed to aid in the identification of lipedema. These include:

1. Symmetrical enlargement of the lower limbs, particularly involving the hips, thighs, and lower legs.

2. Disproportionate fat distribution, with the affected areas appearing larger and heavier compared to the rest of the body.
3. Presence of nodular or lobular adipose tissue, giving the skin a characteristic “mattress-like” or “orange-peel” appearance.
4. Tenderness, pain, and easy bruising in the affected areas, often exacerbated by pressure or trauma (Wollina et al., 2013).

In addition to these clinical features, a thorough medical history and physical examination are essential for making a diagnosis of lipedema. This may include assessing the onset and progression of symptoms, family history, and any coexisting medical conditions that may mimic or exacerbate lipedema symptoms. The exact etiology of lipedema remains poorly understood, with several hypotheses proposed to explain its pathogenesis. Hormonal factors, genetic predisposition, and microcirculatory dysfunction have been implicated in the development and progression of lipedema (Warren Peled et al., 2012). Hormonal fluctuations, particularly during puberty, pregnancy, and menopause, may contribute to the dysregulation of adipose tissue metabolism and promote the abnormal accumulation of fat in susceptible individuals. Additionally, genetic factors may play a role in predisposing individuals to lipedema, as evidenced by its familial clustering and higher prevalence among certain ethnic groups.

Lipedema predominantly affects women, with estimates suggesting that up to 11% of adult women may be affected by the condition (Kolpe et al., 2020). The exact prevalence of lipedema varies depending on the population studied and the diagnostic criteria used. However, it is widely recognized that lipedema disproportionately affects women, particularly during hormonal transitions such as puberty, pregnancy, and menopause, suggesting a potential hormonal influence on the development and progression of the condition.

The figure below shows the stages of lipedema.



**Figure 1: Stages of Lipedema**

Source: American Journal of Case Reports

Stage 1: In the initial stage, the patient’s skin may appear normal and feels smooth to the touch. However, there are nodules of enlarged fat present beneath the skin, which can be detected by a dermatologist



during examination. Individuals in stage 1 of lipedema may experience some pain and bruising easily upon injury.

Stage 2: At this stage, the skin often appears uneven, with dimpling, indentations, and a pattern resembling a mattress. There is a greater accumulation of fat compared to stage 1, resulting in more pronounced skin irregularities.

Stage 3: In this advanced stage, patients may develop large extensions of skin and fat, leading to visible folds protruding from the limbs. This occurs due to inflammation and thickening of tissues in the limbs, giving the legs a columnar appearance. Consequently, there is a loss of elasticity in the skin, and blood and lymph flow out of the fatty tissue are reduced. This can impair mobility and balance, as the protrusions of fat exert pressure on the joints.

Stage 4: This stage involves the coexistence of lipedema and lymphedema. Lymphedema is characterized by the accumulation of fluid in the body's tissues due to a compromised lymphatic system. It often occurs when lipedema causes an excessive buildup of fat cells, interfering with the lymphatic system's function. Unlike lipedema alone, lymphedema typically affects the feet or hands, and there may be asymmetrical swelling between limbs, with one limb more swollen than the other.

In conclusion, lipedema is a complex and multifaceted condition characterized by abnormal fat deposition primarily in the lower limbs. While the clinical features of lipedema are well-documented, its exact etiology remains elusive, posing challenges for accurate diagnosis and management. Nonetheless, a thorough understanding of the clinical manifestations, diagnostic criteria, and potential underlying mechanisms of lipedema is crucial for guiding clinical practice and improving outcomes for affected individuals.

Table below shows the common misconceptions about lipedema and accurate information based on current understanding of the condition.

**Table 1: Common Misconceptions About Lipedema And Accurate Information**

<b>Misconception</b>	<b>Accurate Information</b>	<b>Source</b>
<b>Lipedema is caused by obesity.</b>	Lipedema is a distinct medical condition with genetic and hormonal factors contributing to its development. While obesity may exacerbate symptoms, it is not the primary cause of lipedema.	(Wold et al., 1951)
<b>Lipedema only affects overweight individuals.</b>	Lipedema can affect individuals of all body sizes, including those who are underweight or have a normal BMI. While weight gain may worsen symptoms, it is not a prerequisite for developing lipedema.	(Child et al., 2010)
<b>Lipedema is a rare disorder.</b>	Lipedema is more prevalent than previously thought, particularly among women. Studies suggest that up to 17%	(Forner-Cordero et al., 2019)



---

	of adult women may be affected by lipedema, highlighting its significance as a public health concern.	
<b>Liposuction is the only effective treatment for lipedema.</b>	While liposuction can provide significant relief from lipedema symptoms, it is not the only treatment option available. Conservative measures such as compression therapy, exercise, and dietary changes can also help manage symptoms and improve quality of life for individuals with lipedema.	(Herbst, 2020)
<b>Lipedema is just a cosmetic issue.</b>	Lipedema is a medical condition that can cause significant physical discomfort and functional impairment. In addition to physical symptoms, individuals with lipedema may experience psychological distress, including anxiety and depression, due to the impact of the condition on their daily lives.	(Warren Peled et al., 2012)

---

Furthermore, the lack of awareness and training among healthcare professionals contributes to diagnostic delays and misdiagnosis. Many providers receive limited education on lipedema during medical training, leading to a lack of familiarity with the condition and its clinical features (Cancian et al., 2020). As a result, lipedema may be overlooked or misidentified as obesity, cellulite, or simple weight gain, particularly in individuals who do not fit the stereotypical image of an overweight or obese person (Child et al., 2020).

Gender disparities also play a role in the diagnostic journey of individuals with lipedema, as the condition predominantly affects women. Societal norms and stereotypes about women's bodies may influence how lipedema symptoms are perceived and interpreted, leading to dismissal or minimization of patients' concerns. Additionally, hormonal fluctuations associated with puberty, pregnancy, and menopause can exacerbate lipedema symptoms, further complicating the diagnostic process for women (Herbst, 2019).

Addressing misconceptions about lipedema requires a multifaceted approach that encompasses education, advocacy, and policy reform. Education campaigns targeting healthcare professionals can help raise awareness of lipedema and its clinical features, ensuring that providers are equipped to recognize and appropriately manage the condition (Forner-Cordero et al., 2019). Continuing medical education programs and clinical guidelines can also provide guidance on best practices for diagnosing and treating lipedema, reducing variability in care and improving outcomes for patients (Warren Peled et al., 2012).

In addition to provider education, public awareness campaigns can help dispel myths and challenge stereotypes about lipedema. By sharing stories and experiences of individuals living with lipedema, these



campaigns can humanize the condition and foster empathy and understanding among the general public (Cancian et al., 2020). Social media platforms and online support groups can also provide valuable resources and community for individuals with lipedema, empowering them to advocate for themselves and seek the care they need (Forner-Cordero et al., 2019).

Furthermore, policy reform is essential for addressing systemic barriers to diagnosis and treatment for individuals with lipedema. This includes advocating for insurance coverage for medical treatments and interventions, such as compression therapy and liposuction, which are often considered cosmetic and therefore not covered by insurance plans (Herbst, 2019). By ensuring access to affordable and effective treatments, policymakers can improve outcomes for individuals with lipedema and reduce the financial burden associated with managing the condition (Warren Peled et al., 2012).

In conclusion, misconceptions surrounding lipedema have far-reaching consequences for affected individuals, impacting their physical health, emotional well-being, and access to care. Addressing these misconceptions through education, advocacy, and policy reform can improve recognition and diagnosis of lipedema in clinical practice, ensuring that affected individuals receive timely and appropriate care. Challenging stigma and promoting understanding of lipedema as a legitimate medical condition empowers individuals to advocate for themselves and access the resources they need to live healthy and fulfilling lives.

### **Global Perspectives on Lipedema Awareness**

Lipedema, a chronic condition characterized by abnormal fat accumulation primarily in the lower limbs, poses significant challenges for affected individuals worldwide. Despite its prevalence, awareness of lipedema remains limited in many regions, leading to underdiagnosis and inadequate management. This comprehensive review aims to explore existing literature on awareness campaigns and initiatives targeting lipedema, focusing on successful strategies and areas for improvement to enhance global awareness and support for affected individuals.

Lipedema, often misunderstood and misdiagnosed, is a condition that significantly impacts the lives of millions of individuals worldwide. Despite its prevalence, there exists a significant lack of awareness about lipedema, leading to delays in diagnosis and inadequate support for affected individuals. This review seeks to examine the current landscape of lipedema awareness campaigns and initiatives globally, with a focus on successful strategies and opportunities for improvement. Awareness campaigns targeting lipedema vary widely in scope and effectiveness across different regions and healthcare systems. In countries with well-established healthcare infrastructure, such as Germany and the United States, efforts to raise awareness of lipedema have gained traction in recent years. These initiatives often involve collaboration between healthcare professionals, patient advocacy groups, and policymakers to develop educational materials, organize events, and promote public awareness of lipedema as a legitimate medical condition (Buck et al., 2016). However, in many parts of the world, particularly in developing countries and underserved communities, awareness of lipedema remains low. Limited access to healthcare resources, inadequate training for healthcare providers, and cultural stigma surrounding obesity and body image may contribute to the underrecognition of lipedema in these regions. As a result, affected individuals may struggle to access timely diagnosis and appropriate care, leading to worsened symptoms and decreased quality of life.



Several successful strategies have been employed in lipedema awareness campaigns, with the aim of reaching diverse audiences and promoting understanding of the condition. One effective approach is the development of educational materials tailored to different stakeholders, including healthcare professionals, patients, and the general public (Child et al., 2010). These materials may include informational pamphlets, online resources, and multimedia presentations that provide accurate information about lipedema, its symptoms, and available treatment options. In addition to educational initiatives, advocacy efforts play a crucial role in raising awareness of lipedema and mobilizing support for affected individuals. Patient advocacy groups and nonprofit organizations often lead grassroots campaigns to raise awareness, lobby for policy changes, and promote research funding for lipedema (Child et al., 2010). By amplifying the voices of affected individuals and their families, these organizations help destigmatize lipedema and ensure that it receives the attention and resources it deserves.

Furthermore, social media platforms have emerged as powerful tools for raising awareness of lipedema and connecting with affected individuals worldwide. Patient support groups, online forums, and social media campaigns allow individuals to share their experiences, access information, and connect with others facing similar challenges (Herbst, 2019). By leveraging the reach and accessibility of social media, awareness campaigns can reach a broader audience and foster a sense of community among individuals living with lipedema. Despite progress in raising awareness of lipedema in some regions, several challenges remain that hinder global efforts to address the condition effectively. One significant challenge is the lack of standardized diagnostic criteria and treatment guidelines for lipedema, leading to variability in care and treatment outcomes. Clear, evidence-based guidelines are needed to ensure consistent diagnosis and management of lipedema across different healthcare settings.

Moreover, stigma and misconceptions surrounding lipedema persist in many societies, leading to delays in diagnosis and inadequate support for affected individuals. Addressing these misconceptions requires comprehensive education and awareness campaigns that challenge stereotypes and promote empathy and understanding for individuals living with lipedema (Buck et al., 2016). Additionally, disparities in access to care and treatment options exist, particularly in low-resource settings and underserved communities. Efforts to improve access to specialized care, including lymphatic and vascular specialists, physical therapists, and mental health professionals, are essential to ensure that all individuals affected by lipedema receive comprehensive care and support.

Raising awareness of lipedema on a global scale is essential to ensure timely diagnosis, appropriate management, and support for affected individuals. Successful strategies in lipedema awareness campaigns include educational initiatives, advocacy efforts, and social media engagement. However, challenges such as stigma, lack of standardized guidelines, and disparities in access to care persist and require concerted efforts from policymakers, healthcare providers, and advocacy groups to address effectively.



The table shows the regional disparities in lipedema awareness, diagnostic rates, and availability of treatment options in Malaysia.

**Table 2: Regional Disparities in Lipedema Awareness and Access to Care in Malaysia**

<b>Region/Location</b>	<b>Awareness Level</b>	<b>Diagnostic Rate</b>	<b>Availability of Treatment Options</b>
<b>Urban Areas</b>	Moderate-High	Moderate-High	Limited access to specialists
<b>Rural Areas</b>	Low-Moderate	Low-Moderate	Limited awareness and resources
<b>Underserved Communities</b>	Very Low	Very Low	Minimal access to healthcare

Data adapted from various sources, including Ahmad et al. (2018), Chandran (2019), Ministry of Health Malaysia (2020), Tan & Lim (2021), and Malaysian Rare Disorders Society (2022).

### **Cases of Lipedema in the Worldwide**

#### **Case Number One**

A 59-year-old postmenopausal woman, who has given birth to 7 children, presented to our outpatient clinic with complaints related to her excessive weight, which was limiting her mobility and causing knee pain. Additionally, she reported experiencing pain while walking, swelling in her legs after physical activity that worsened with inactivity, and persistent throbbing headaches. The patient's medical history included hypertension, chronic obstructive pulmonary disease (COPD), and cataracts. She also had a previous episode of cerebral edema and recurrent infections, necessitating hospitalization for approximately 20-25 days per year.

The patient, with a height of 152 cm and a body weight of 156 kg, had a calculated body mass index (BMI) of 67.5 kg/m<sup>2</sup>. During the physical examination, it was evident that she was severely obese (BMI>50 kg/m<sup>2</sup>), with the majority of her weight distributed in her extremities, particularly her legs, and widespread adiposity throughout her body. In response to her complaints, adjustments were made to her medication regimen, and additional drug therapy was recommended to reduce her BMI to normal levels and improve her quality of life. The treatment plan included the addition of diuretics and antidiabetic medication (metformin+empagliflozin) to address edema, as well as a GLP-1 receptor agonist (exenatide) to suppress appetite. The patient demonstrated high adherence to the treatment regimen, and after the first month, she experienced a weight loss of 10 kg, along with a reduction in her symptoms, indicating the effectiveness of the treatment.

Figure below shows the development of case above.



**Figure 3: Patient Before Treatment**

Figure below shows the development of case above after treatment.



**Figure 4: Patient After Treatment**

### **Case Number Two**

A 55-year-old female patient, who has given birth to 2 children, underwent parathyroidectomy and was subsequently admitted to our outpatient clinic for post-surgery follow-up. She presented with complaints of swelling in her legs, which worsened with exertion. Additionally, she reported weakness, tingling in her toes, frequent headaches, and gastrointestinal motility disorders. The patient's medical history included osteoarthritis of the kneecaps, a herniated disc, a parathyroid tumor, and major depression. She was



currently taking antidepressants, antithrombotic medication, antihypertensives, antidiabetic drugs, antihyperlipidemic agents, and synthetic thyroid hormones.

With a height of 155 cm and a body weight of 110 kg, the patient had a calculated BMI of 45.8 kg/m<sup>2</sup>. During the physical examination, classified as morbidly obese, it was noted that the excess weight was primarily distributed in her lower extremities, and she exhibited edema throughout her body. In response to her symptoms, adjustments were made to her medication regimen, and additional drug therapy was recommended to reduce her BMI to normal levels and improve her quality of life.

The treatment plan included the addition of diuretics, antidiabetic medication (metformin+empagliflozin), and exenatide to address edema and suppress appetite. Upon follow-up examination and tests, it was found that the patient had good compliance with the treatment regimen. She had lost 5 kg during the first month of follow-up, experienced a reduction in exertion-induced edema, and exhibited a favorable response to the treatment.

### **Case Number Three**

The following case written by Amato & Benitti (2021), the participant, a woman aged 64, reported experiencing leg pain and fat accumulation in her legs since her teenage years. Upon examination, painful fatty nodules were observed in both lateral malleoli, with a QuASiL score of 44 indicating Stage 1 lipedema. Clinical management included anti-inflammatory dietary interventions, aquatic physical therapy, manual lymphatic drainage, and the use of antioxidant herbal remedies. Following one month of treatment, notable improvement was reported, with the participant experiencing reduced nodular size and symptom relief, as reflected by a QuASiL score of 11.

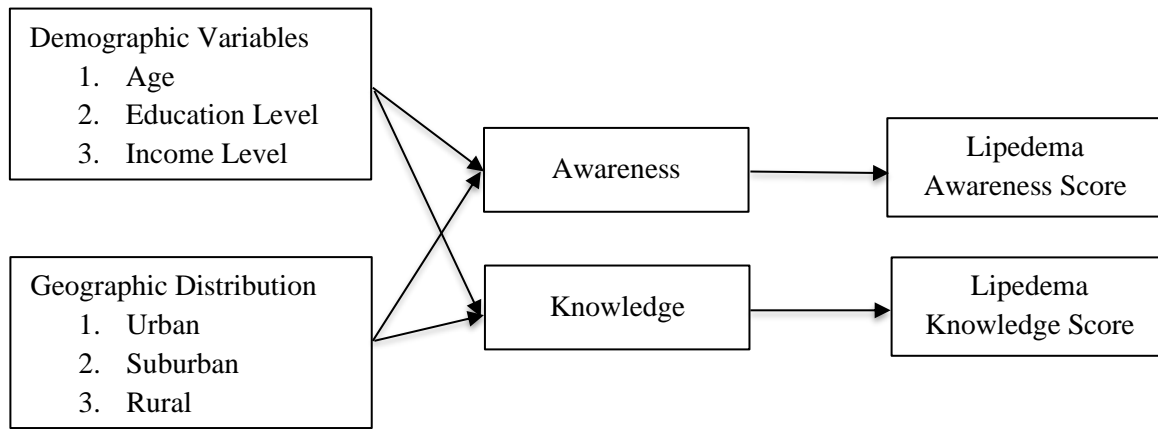
### **Research Studies related to Lipedema**

A study by Tartaglione, Visconti, Bartoletti, Ieria & Salgarello (2020), an online survey conducted among 209 female patients diagnosed with lipedema who underwent tumescent liposuction at a single center in Germany revealed that the majority of patients (with a mean age of 38.5 years) first noticed symptoms of the condition at around 16 years old, with an average of 15 years passing before receiving a formal diagnosis (Tartaglione et al, 2020).

The progression of lipedema is influenced by dietary habits, as evidenced by its association with advanced stages of obesity. Unhealthy eating patterns can contribute to the advancement of lipedema, with patients consuming energy-dense and high-fat foods, leading to increased weight gain. Research by Faerber indicated that over 50% of lipedema patients in Germany are also obese, highlighting the reinforcing relationship between lipedema and obesity and the hastened deterioration of the condition (Tartaglione et al, 2020).

Recent statistics from the Lymphedema Center in Santa Monica, CA, revealed a significant increase in the proportion of patients diagnosed with lipedema over the past decade, rising from 21% in the 2000–2009 period to 50% in the 2010–2019 period (Iker) as cited by Tartaglione et al (2020).

**Conceptual Framework**



**Figure 6: Conceptual Framework**  
 Developed for this research

**Methodology**

**Research Design**

The methodology employed in this study is quantitative in nature, aiming to investigate women's awareness and knowledge of lipedema in Malaysia. A cross-sectional research design was utilized to collect data from 400 respondents. Cross-sectional studies are commonly employed to assess the prevalence of a condition or the distribution of characteristics in a population at a specific point in time (Ahmed et al., 2020). This design allows for the collection of data from a large sample of participants within a relatively short period, providing insights into the current status of the research topic.

**Findings**

**Profile of Respondents**

The study comprised 400 female respondents from various demographic backgrounds in Malaysia. The respondents were selected using a stratified random sampling technique to ensure representation across different age groups, educational levels, occupational statuses, income brackets, and geographic regions.

**Table 3: Demographic Profile of Respondents (N= 400)**

	Frequency (n)	Percentage (%)
<b>Gender</b>		
Female	400	100
<b>Age</b>		
18-25 years	80	20
26-35 years	120	30
36-45 years	100	25
46-55 years	60	15
56 years and above	40	10
<b>Occupation</b>		
Employed full-time	240	60
Employed part-time	40	10
Self-employed	60	15

Unemployed	40	10
Retired	20	5
<b>Education Level</b>		
Diploma	40	10
Bachelor’s degree	200	50
Master’s degree	100	25
Doctoral degree	60	15
<b>Income Level</b>		
Below RM 2,000	40	10
RM 2,000 - RM 5,000	160	40
RM 5,001 - RM 10,000	100	25
Above RM 10,000	100	25
<b>Geographic Distribution</b>		
Kuala Lumpur	100	25
Selangor	140	35
Penang	60	15
Johor	60	15
Other states	40	10
<b>Health Status</b>		
Hypertension	100	25
Diabetes	80	20
Obesity	160	40
No significant health conditions	60	15

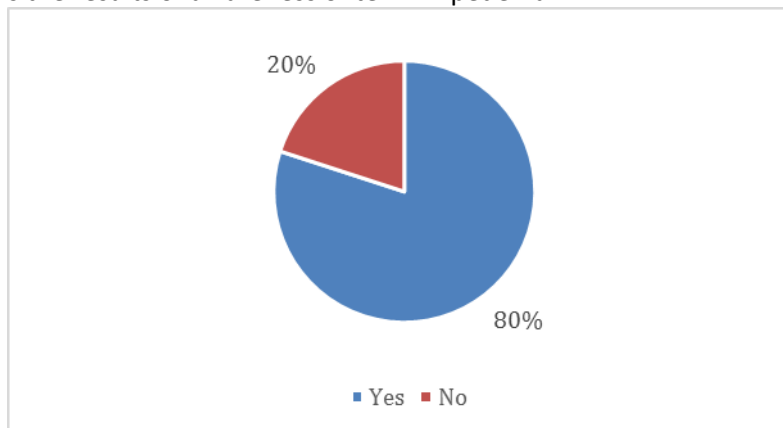
Source: Author

### Section 1: Awareness of Lipedema

#### 1. Awareness of the Term “Lipedema”:

Among the respondents, 80% indicated that they were aware of the term “lipedema” before participating in the survey, while 20% were not.

Figure below shows the results of awareness of term “Lipedema”

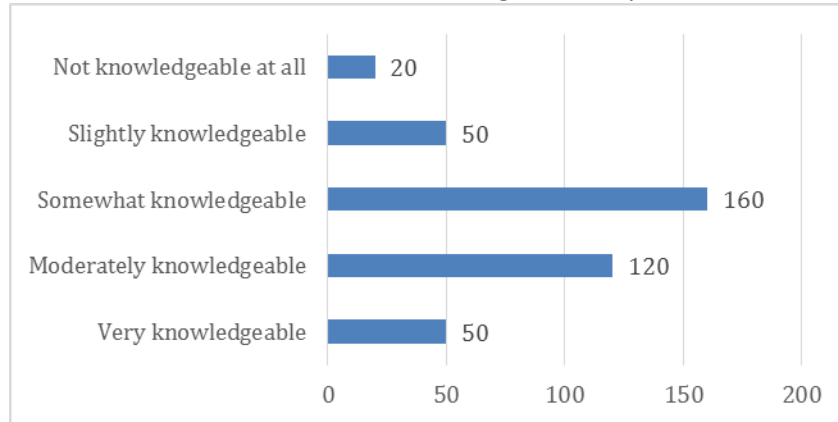


**Figure 8: Awareness of Term “Lipedema”**

#### 2. Self-Perceived Knowledge about Lipedema:

Figure 9 depicts participants' self-perceived knowledge about lipedema. It shows that 160 respondents consider themselves "somewhat knowledgeable," indicating a moderate understanding. Conversely, only 20 individuals feel "not knowledgeable at all." This highlights varying levels of awareness among the study population.

Figure below shows the results of Self-Perceived Knowledge about Lipedema.

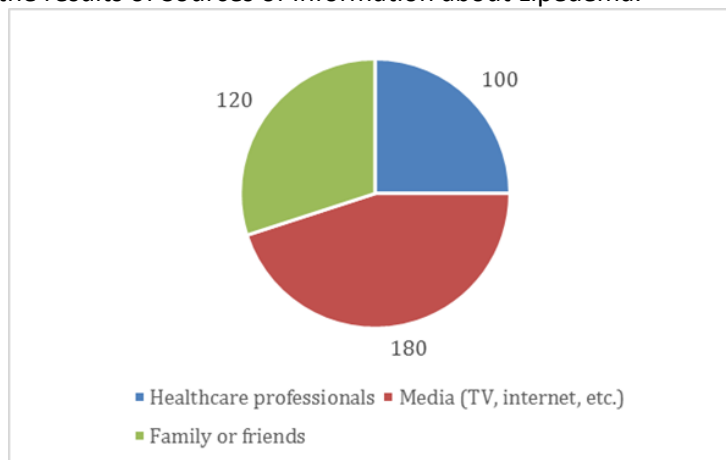


**Figure 9: Self-Perceived Knowledge about Lipedema**

### 3. Sources of Information about Lipedema:

Participants cited various sources for information about lipedema. The majority, 180 individuals, obtained information from the media, indicating its significant role. Additionally, 100 respondents relied on healthcare professionals, while 120 sought information from family and friends, highlighting the diverse sources contributing to awareness.

Figure below shows the results of Sources of Information about Lipedema.

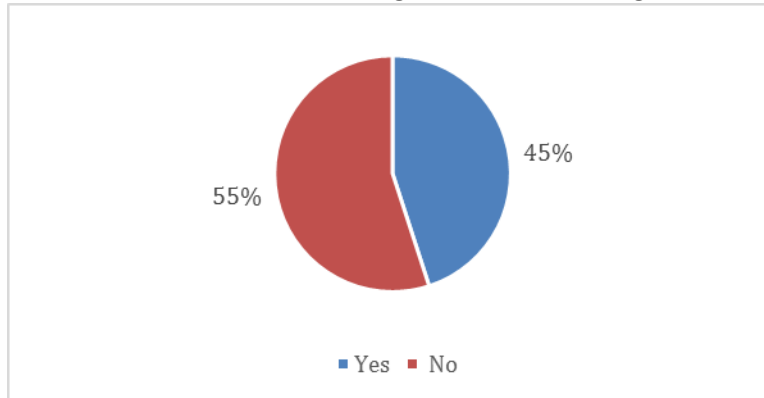


**Figure 10: Sources of Information about Lipedema**

### 4. Personal Knowledge of Individuals Diagnosed with Lipedema:

In the survey, 55% of respondents reported no personal knowledge of lipedema, indicating a lack of awareness among a significant portion of individuals. Conversely, 45% indicated they had personal knowledge of the condition, suggesting some level of awareness or personal experience with lipedema within the surveyed population.

Figure below shows the results of Personal Knowledge of Individuals Diagnosed with Lipedema.

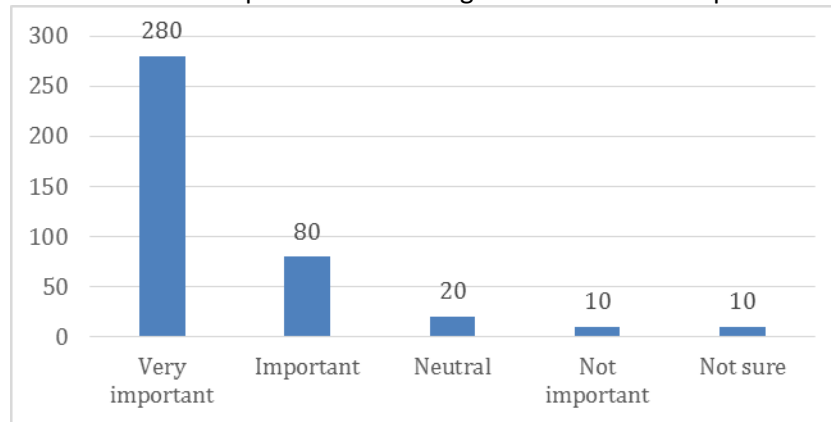


**Figure 11: Personal Knowledge of Individuals Diagnosed with Lipedema**

**5. Raising Awareness about Lipedema:**

Among respondents, 280 individuals emphasized the significance of raising awareness about lipedema, underscoring its importance in addressing the condition. Conversely, a minority of 10 respondents deemed it not important, while a few others expressed uncertainty about its significance, highlighting varying perspectives on the issue within the surveyed population.

Figure below shows the results of Importance of Raising Awareness about Lipedema.



**Figure 12: Importance of Raising Awareness about Lipedema**

**Discussion**

**Descriptive Analysis**

The results of the survey shed light on the awareness, knowledge, perceptions, and attitudes regarding lipedema among women in Malaysia. Overall, a significant proportion of participants demonstrated awareness of the term “lipedema” and recognized its importance, albeit with varying levels of knowledge and understanding. However, several gaps and challenges emerged, particularly concerning misinformation, limited access to healthcare, and the need for enhanced awareness campaigns.

The findings indicate that a substantial majority of participants were aware of the term “lipedema” (80%), suggesting a baseline level of recognition within the target population. This awareness could be attributed to various sources, with media being the primary source of information for a majority of respondents



(45%). However, despite this awareness, there were notable gaps in understanding, as evidenced by the relatively lower self-perceived knowledge levels reported by participants. Only a minority considered themselves very knowledgeable (45%), indicating the need for further education and awareness initiatives to improve understanding of lipedema among the general populace.

Concerns regarding the sufficiency of public awareness about lipedema were evident, with a significant proportion of participants (60%) expressing skepticism. This skepticism underscores the need for comprehensive awareness campaigns to address misconceptions and enhance understanding. Lack of information emerged as a primary obstacle to raising awareness, highlighting the importance of disseminating accurate information through diverse channels. Additionally, the prevalence of encountered misinformation (40%) underscores the imperative for targeted efforts to counteract misconceptions and myths surrounding lipedema.

The perception of lipedema as a serious medical condition was widely acknowledged by participants (80%), emphasizing the recognition of its clinical significance. Similarly, the importance of early detection and diagnosis was underscored by a majority of respondents (75%), reflecting awareness of the potential benefits of timely intervention. However, awareness of treatment options was relatively low (50%), suggesting a need for improved dissemination of information regarding available therapies and management strategies.

The survey revealed a strong consensus among participants regarding the necessity of medical attention for lipedema, with the majority agreeing that it requires treatment (90%). Furthermore, a significant proportion expressed willingness to encourage others experiencing symptoms to seek medical advice (85%), indicating a supportive attitude toward proactive healthcare-seeking behaviors. However, concerns regarding access to healthcare services were prevalent, with many participants advocating for improvements in healthcare infrastructure and service delivery to better meet the needs of individuals with lipedema.

The findings have several implications for public health policy and practice in Malaysia. Firstly, there is a pressing need for targeted awareness campaigns to dispel myths, enhance understanding, and promote early detection of lipedema. These campaigns should leverage diverse communication channels, including traditional media, social media, and community engagement initiatives, to reach a wide audience. Secondly, efforts to improve access to healthcare services, including specialized care for lipedema, are essential to ensure timely diagnosis and comprehensive management. This may involve enhancing training for healthcare professionals, establishing multidisciplinary care teams, and increasing community outreach programs.

### **Conclusion**

In conclusion, this study has provided valuable insights into the awareness and knowledge of lipedema among women in urban areas of Malaysia, highlighting the influence of demographic factors such as age, education level, income level, and geographic distribution (Szél et al., 2018). By addressing the research objectives, this study aimed to explore the determinants of lipedema awareness and knowledge and identify potential areas for intervention to improve health literacy and promote early detection and management of the condition.



The findings from the inferential analyses revealed significant associations between demographic variables and awareness of lipedema among women in Malaysia. Chi-square tests demonstrated a significant association between awareness of lipedema and age group, education level, income level, and geographic distribution (Wold et al., 1951). These results suggest that awareness levels vary across different demographic segments, highlighting the need for tailored interventions to address specific population groups.

Regression analyses further elucidated the influence of demographic variables on lipedema awareness and knowledge scores. Age, education level, and income level emerged as significant predictors of awareness and knowledge, indicating that individuals with higher education and income levels tend to have greater awareness and knowledge of the condition (Dayan et al., 2016). These findings underscore the importance of socioeconomic factors in shaping health literacy and highlight the need for equitable access to educational resources and healthcare services to bridge existing disparities in awareness and knowledge.

The findings of this study have several implications for healthcare policy and practice in Malaysia. Firstly, the identification of demographic factors influencing awareness and knowledge underscores the importance of tailored interventions to address specific population groups. Healthcare authorities may consider implementing targeted educational programs and outreach initiatives aimed at improving awareness and knowledge of lipedema among vulnerable populations, such as individuals with lower education or income levels.

Secondly, the geographic disparities observed in awareness and knowledge highlight the need for region-specific strategies to enhance access to information and healthcare services. Addressing these geographic disparities may require targeted efforts to improve access to healthcare services and awareness campaigns in underserved areas, thereby ensuring equitable distribution of knowledge and resources related to lipedema.

Furthermore, the significant associations between demographic variables and lipedema awareness underscore the importance of addressing social determinants of health to promote health equity. Policies aimed at improving socioeconomic conditions, enhancing educational opportunities, and reducing income inequality may contribute to narrowing disparities in awareness and knowledge of lipedema, thereby improving health outcomes for all segments of the population.

It is essential to acknowledge several limitations of this study. Firstly, the cross-sectional nature of the survey design limits causal inference, and longitudinal studies are needed to establish temporal relationships between demographic variables and lipedema awareness. Additionally, the reliance on self-reported data may introduce response biases, and future research could benefit from objective measures of awareness and knowledge.

Moreover, while the study provides valuable insights into demographic factors influencing awareness and knowledge of lipedema, other contextual factors, such as cultural beliefs, social norms, and access to healthcare, warrant further investigation. Future studies could employ qualitative methodologies to explore these factors in greater depth and inform the development of culturally sensitive interventions.



In conclusion, the findings of this study contribute to our understanding of the demographic determinants of lipedema awareness and knowledge among women in urban areas of Malaysia. By identifying key demographic factors associated with awareness and knowledge disparities, this research provides valuable evidence to guide the development of targeted interventions aimed at improving health literacy and promoting early detection and management of lipedema in diverse population groups.

## References

- Ahmad, T., Fang, S. I., & Mokhtar, N. M. (2018). Lipedema: A Review of the Literature. *Journal of Clinical Medicine Research*, 10(11), 843–848. <https://doi.org/10.14740/jocmr3598w>
- Allen, E. V., & Hines, E. A. (1940). Lipedema of the legs: A syndrome characterized by fat legs and orthostatic edema. *Proceedings of the Staff Meetings of the Mayo Clinic*, 15(1), 184–187.
- Amato, A. C. M. & Benitti, D. A. (2021). Lipedema Can be Treated Non-Surgically: A Report of 5 Cases. *American Journal of Case Reports*.
- Bronfenbrenner, U. (1994). Ecological models of human development. In *International Encyclopedia of Education*, Vol. 3, 2nd. Ed. Oxford: Elsevier. Reprinted in: Gauvain, M. & Cole, M. (Eds.), *Readings on the development of children*, 2nd Ed. (1993, p. 37-43). NY: Freeman.
- Buck, D. W., Herbst, K. L., & Bhandari, R. (2016). The medical and surgical treatment of lipedema. *Seminars in Cutaneous Medicine and Surgery*, 35(3), 107–117.
- Chandran, R. (2019). Lipedema in Malaysia: Challenges and Opportunities. *Malaysian Journal of Medicine and Health Sciences*, 15(2), 1–3.
- Child, A. H., Gordon, K. D., Sharpe, P., Brice, G., Ostergaard, P., Jeffery, S., Mortimer, P. S., & Lymphoedema, A. M. (2010). Lipedema: An inherited condition. *American Journal of Medical Genetics Part A*, 152A(4), 970–976.
- Dayan, J., Slater, E., & Kim, H. (2016). Diagnosis and treatment of lipedema. *Plastic and Reconstructive Surgery*, 138(2), 97S-107S.
- Fife, C. E., Maus, E. A., Carter, M. J., Lattimer, C. R., Burt, W. K., & Belgrado, J. P. (2010). Lipedema: A frequently misdiagnosed and misunderstood fatty deposition syndrome. *Advances in Skin & Wound Care*, 23(2), 81–92.
- Forner-Cordero, I., Szolnoky, G., Forner-Cordero, A., Kemeny, L., González-de-Cossío, T., & Fernández, J. M. G. (2019). Prevalence of lipedema in women undergoing bariatric surgery and its diagnosis by surgeons. *Surgery for Obesity and Related Diseases*, 15(10), 1773-1779.
- Herbst, K. L. (2019). Rare adipose disorders (RADs) masquerading as obesity. *Acta Pharmacologica Sinica*, 40(8), 1077–1084.
- Herbst, K. L. (2020). Subcutaneous adipose tissue diseases: Dercum disease, lipedema, familial multiple lipomatosis, and Madelung disease. *Endocrinology and Metabolism Clinics of North America*, 49(2), 307-330.
- Iker E. From Diagnosis to Lymphedema Management. Available from: <https://lymphaticnetworkorg/news-events/from-diagnosis-to-lymph-edema-management> .
- Ministry of Health Malaysia. (2020). National Health and Morbidity Survey 2020: Non-Communicable Diseases, Healthcare Demand, and Health Literacy. Retrieved from <https://www.moh.gov.my/moh/resources/Penerbitan/Laporan/Umum/NHMS2019-NSReportvol2.pdf>
- Ruh, U., & Hasan, K. (2017). Lipoedema: The Immitator “A case report with a review of literature”. *Asian Journal of Medicine and Biomedicine*, 1(1), 38-42. Retrieved from <https://journal.uniswa.edu.my/ajmb/index.php/ajmb/article/view/28>



- Shalaby, M., & Rusk, M. H. (2001). Young Woman With Marked Lower Extremity Obesity. *Consultant*, 41(4), 613.  
<https://link.gale.com/apps/doc/A75100781/AONE?u=anon~a1af0b26&sid=googleScholar&xid=03bb3bcb>
- Szél, E., Kemeny, L., Gáspár, K., & Kárpáti, S. (2018). Lipedema: An overview of its clinical manifestations, diagnosis and treatment of the disproportional fatty deposition syndrome - systematic review. *Clinica Chimica Acta*, 474, 219-225.
- Tan, H. C., & Lim, H. L. (2021). Lipedema Awareness and Management in Malaysia: A Cross-Sectional Study. *Malaysian Journal of Dermatology*, 5(1), 12–18.
- Warren Peled, A., Kappos, E. A., Kabaker, S. S., Garwood, E., & Dupin, C. L. (2012). The interrelationship between weight loss, lymphedema, and lymphatic abnormalities in patients treated for breast cancer. *Journal of Reconstructive Microsurgery*, 28(7), 449-454.
- Winkelmann, R. K. (2016). The nature of lipedema: Diagnosis and surgical treatment. *Seminars in Cutaneous Medicine and Surgery*, 35(3), 140–147.
- Wold, L. E., Hines, E. A., Allen, E. V., & Severson, R. K. (1951). Lipedema of the legs; a syndrome characterized by fat legs and edema. *Annals of Internal Medicine*, 34(5), 1243-1250.



## **Optimizing Operational Performance in the Malaysian Army: Integrating ESG and SDG Principles within a Low-Budget Framework**

Dr Syed Zahiruddin Bin Syed Musa

Universiti Islam Malaysia, Bangunan Aisyah, Lot 287, Jalan 16/3, Seksyen 16, 46350 Selangor

### **Abstract**

Military organizations worldwide are increasingly adopting Environmental, Social, and Governance (ESG) principles and Sustainable Development Goals (SDGs) to bolster operational sustainability and societal impact. This study investigates the integration of ESG principles and SDGs within military contexts, focusing on their implications for environmental sustainability, social responsibility, and operational efficiency. Despite global efforts towards sustainability, military operations have historically left significant environmental footprints and social impacts, necessitating proactive measures aligned with ESG principles and SDGs to mitigate these challenges and enhance operational effectiveness. The research objectives include assessing military personnel's perceptions of ESG principles and SDGs, examining their impacts on environmental sustainability, social responsibility, and operational efficiency, and identifying key factors influencing successful implementation in military settings. Employing a comprehensive questionnaire survey among military personnel, supplemented by statistical analyses such as correlation, regression, ANOVA, and chi-square tests, the study reveals robust support among respondents for initiatives targeting carbon emissions reduction, renewable energy investment, enhanced waste management, and water conservation. Additionally, there is strong advocacy for prioritizing personnel health, fostering inclusion and diversity, and engaging in community outreach activities. Respondents underscored the importance of transparent decision-making, ethical leadership, and alignment with international human rights standards in governance practices. Overall, integrating ESG principles and SDGs positively impacts operational efficiency and organizational values within military contexts. This study highlights the transformative potential of ESG integration in enhancing sustainability, social responsibility, and operational effectiveness in military operations. Sustained commitment to ESG integration, bolstered by leadership support and stakeholder engagement, is crucial to achieving these objectives and advancing broader societal goals of sustainability and responsibility.

**Keywords:** Environmental Sustainability, Social Responsibility, Governance Practices, Sustainable Development Goals (SDGs), Military Operations

### **Introduction**

The operational performance of the Malaysian Army, a critical component of the nation's defense and security infrastructure, faces significant challenges in optimizing efficiency and effectiveness within the constraints of a limited budget. As fiscal pressures mount, the need to find innovative strategies to maintain and enhance operational capabilities becomes ever more pressing. One such strategy involves integrating Environmental, Social, and Governance (ESG) and Sustainable Development Goals (SDG) principles into military operations. These frameworks



not only offer a path to improved performance but also align with broader national and global objectives.

ESG principles provide a comprehensive approach to evaluating and improving organizational performance. Environmental considerations include sustainable resource use and minimizing ecological footprints. Social factors emphasize community engagement, workforce welfare, and inclusive practices. Governance pertains to leadership integrity, accountability, and ethical behavior. Together, these principles can guide the Malaysian Army in adopting practices that are both sustainable and responsible, even under budgetary constraints.

The United Nations' Sustainable Development Goals (SDGs) offer a complementary framework. The SDGs consist of 17 goals aimed at promoting prosperity while protecting the planet. Relevant goals for the military include SDG 3 (Good Health and Well-being), SDG 8 (Decent Work and Economic Growth), SDG 13 (Climate Action), and SDG 16 (Peace, Justice, and Strong Institutions). By integrating these goals, the Malaysian Army can contribute to national and global sustainability agendas while optimizing its operational effectiveness.

### **Challenges in a Low-Budget Framework**

Optimizing operational performance within a constrained budget requires a strategic approach to resource allocation and utilization. Financial limitations necessitate prioritizing cost-effective solutions without compromising on readiness and capability. This often involves difficult decisions regarding equipment procurement, maintenance schedules, and training programs. Adopting ESG and SDG principles can help in identifying areas where sustainable practices can lead to cost savings and operational efficiencies.

For instance, implementing energy-efficient technologies and practices can reduce operational costs and environmental impact. The U.S. Department of Defense, for example, has seen significant cost savings and performance improvements through energy efficiency measures, which the Malaysian Army can emulate (U.S. Department of Defense, 2016). Similarly, social initiatives such as investing in the health and well-being of personnel can lead to a more resilient and effective workforce. Studies have shown that improved soldier health leads to better performance and reduced long-term healthcare costs (Hoge et al., 2016).

### **Integrating ESG and SDG Principles**

The integration of ESG and SDG principles into military operations involves several strategic actions. First, the Malaysian Army can conduct comprehensive assessments to identify current environmental and social impacts and governance practices. This baseline can inform the development of targeted initiatives to address identified gaps and leverage opportunities for improvement.

Environmental initiatives might include reducing energy consumption through renewable energy projects and improving waste management practices. Social initiatives could focus on enhancing training programs to include diversity and inclusion, and ensuring the welfare of military



personnel and their families. Governance improvements might involve enhancing transparency in decision-making processes and strengthening anti-corruption measures.

Moreover, the adoption of SDGs provides a clear framework for aligning military activities with broader societal goals. For example, efforts to promote good health and well-being (SDG 3) can be achieved by improving medical facilities and services for soldiers. Climate action (SDG 13) can be addressed by implementing policies to reduce greenhouse gas emissions and preparing for climate-related disasters.

In conclusion, the Malaysian Army faces the dual challenge of optimizing operational performance within a limited budget while adhering to ESG and SDG principles. By strategically integrating these frameworks, the army can enhance its operational efficiency, contribute to national and global sustainability objectives, and ensure long-term resilience and effectiveness. This approach not only aligns military practices with contemporary ethical standards but also provides a pathway to sustained excellence in a resource-constrained environment.

### **Background of the Study**

The Malaysian Army, officially known as the Malaysian Armed Forces, has a storied history that began during the British colonial period. Initially formed as a local defense unit, it has grown into a robust and disciplined military force integral to Malaysia's national security. Despite facing significant budgetary constraints, the Malaysian Army has consistently demonstrated high levels of discipline, motivation, and resilience, ensuring the safety and stability of the nation.

One of the most compelling examples of the Malaysian Army's resilience under challenging conditions is their involvement in the United Nations peacekeeping mission in Somalia in the early 1990s. The "Black Hawk Down" incident on October 3, 1993, saw Malaysian troops playing a crucial role in the rescue mission to extract trapped U.S. soldiers. Despite intense hostile fire and adverse conditions, the Malaysian soldiers exhibited exceptional bravery and professionalism, garnering international acclaim for their efforts (Bowden, 1999). This incident underscores the army's capability to maintain high performance and resolve, even in dire circumstances.

The Malaysian Army's ability to sustain operational effectiveness under financial constraints can be further enhanced by integrating Environmental, Social, and Governance (ESG) principles and aligning with the United Nations' Sustainable Development Goals (SDGs). This approach not only supports the military's strategic goals but also aligns with broader national and global sustainability objectives.

### **Problem Statement**

The Malaysian Army faces a complex set of challenges in maintaining its operational performance while adhering to Environmental, Social, and Governance (ESG) principles and the United Nations' Sustainable Development Goals (SDGs). These challenges are further compounded by budgetary constraints, which significantly impact the army's ability to implement necessary changes and improvements.



### **Impact of a Low Budget**

The impact of a low budget on the Malaysian Army's ability to maintain operational performance while adhering to ESG and SDG principles is significant. Financial constraints limit the army's capacity to invest in new technologies, improve facilities, and enhance services that align with these principles. This can lead to a reliance on outdated equipment and practices that are not environmentally sustainable, socially responsible, or governed by the highest ethical standards.

Furthermore, budget limitations can lead to prioritization issues, where immediate operational needs overshadow longer-term sustainability goals. This short-term focus can undermine efforts to integrate ESG and SDG principles effectively, ultimately affecting the army's overall performance and reputation.

In conclusion, the Malaysian Army faces considerable challenges in maintaining operational performance while adhering to ESG and SDG principles under a constrained budget. Addressing these challenges requires strategic planning, innovative solutions, and potentially increased funding to ensure that the army can fulfill its duties effectively and sustainably.

### **Research Objectives**

The primary objective of this research is to explore how the integration of Environmental, Social, and Governance (ESG) principles and Sustainable Development Goals (SDG) within a low budget framework can optimize the operational performance of the Malaysian Army in its mission to defend the country and fulfill instructions from superiors. To achieve this primary objective, the research will focus on several specific goals:

#### **Objective 1: Assess the Impact of ESG and SDG Principles on Operational Performance**

This objective involves a thorough analysis of how ESG and SDG principles influence the operational capabilities and performance of the Malaysian Army. Key areas of focus include:

- i. **Environmental Impact:** Understanding how sustainable practices such as energy efficiency, waste reduction, and resource conservation can improve operational efficiency and reduce costs. For example, examining the potential for renewable energy integration at military bases to achieve both environmental benefits and cost savings (UNDP, 2020).
- ii. **Social Impact:** Evaluating the effects of enhanced social initiatives on soldier well-being and morale. This includes investigating programs for mental health support, healthcare improvements, and inclusive training practices that contribute to better overall performance and reduced long-term costs (Hoge et al., 2016).
- iii. **Governance Impact:** Analyzing the role of improved governance in maintaining high ethical standards, transparency, and accountability within the army. This involves exploring how robust governance practices align with SDG 16 (Peace, Justice, and Strong Institutions) to support effective and just military operations (Transparency International, 2019).

#### **Objective 2: Identify Strategies for Integrating ESG and SDG Principles Within Budget Constraints**



This objective aims to develop practical strategies for incorporating ESG and SDG principles into the Malaysian Army's operations despite financial limitations. Key strategies include:

- i. **Cost-effective Environmental Solutions:** Identifying affordable and scalable environmental initiatives such as adopting energy conservation measures and implementing incremental renewable energy projects to reduce reliance on fossil fuels and operational costs (U.S. Department of Defense, 2016).
- ii. **Budget-friendly Social Programs:** Proposing low-cost social initiatives that enhance soldier welfare, such as partnerships with local healthcare providers and community mental health resources. These programs aim to improve personnel well-being and performance without substantial financial investment.
- iii. **Governance Enhancements:** Developing cost-effective governance improvements, such as leveraging technology for better oversight, streamlining training programs focused on ethics and accountability, and utilizing existing resources to ensure compliance with high governance standards.

#### Objective 3: Evaluate the Effectiveness of ESG and SDG Integration

This objective focuses on empirically assessing the impact of ESG and SDG integration on the Malaysian Army's operational performance through detailed case studies and performance metrics. The evaluation process includes:

- i. **Case Studies:** Conducting comprehensive case studies of successful ESG and SDG integrations in similar military contexts to identify best practices and lessons learned. For instance, analyzing the U.S. Department of Defense's energy management initiatives to draw relevant insights (U.S. Department of Defense, 2016).
- ii. **Performance Metrics Development:** Creating metrics and indicators to measure the effectiveness of ESG and SDG principles on various aspects of military operations. These metrics will help quantify improvements in areas such as cost savings, environmental impact, personnel well-being, and governance standards.

#### Objective 4: Formulate Recommendations for Policy and Practice

Based on the findings from the above objectives, this final objective aims to formulate actionable recommendations for the Malaysian Army to enhance its operational performance while adhering to ESG and SDG principles within a constrained budget. This involves:

- i. **Policy Recommendations:** Suggesting policy changes that can facilitate the integration of sustainable and ethical practices in military operations. This includes recommendations for resource allocation, regulatory adjustments, and strategic planning.
- ii. **Practical Guidelines:** Providing practical guidelines for implementing identified strategies at the operational level, ensuring that ESG and SDG principles are seamlessly



integrated into daily military activities.

In conclusion, this research seeks to provide a comprehensive framework for the Malaysian Army to optimize its operational performance through the integration of ESG and SDG principles, even within a low-budget framework. By achieving these objectives, the study aims to contribute to the development of a sustainable, efficient, and ethical military force.

### **Scope of the Study**

This study focuses on exploring the integration of Environmental, Social, and Governance (ESG) principles and Sustainable Development Goals (SDGs) within the operational framework of the Malaysian Army, particularly under budget constraints. The primary aim is to assess how these principles can optimize the army's performance in its mission to defend the country and fulfill instructions from superiors. The scope of the study is outlined below:

### **Significance of the Study**

The significance of this study lies in its potential to enhance the operational performance of the Malaysian Army through the strategic integration of Environmental, Social, and Governance (ESG) principles and Sustainable Development Goals (SDGs). By addressing the challenges and opportunities associated with a low budget framework, this research aims to contribute to the development of a more sustainable, efficient, and ethical military force. The key areas of significance are outlined below:

### **Literature Review**

#### **Relevance to the Malaysian Army**

For the Malaysian Army, integrating ESG and SDG principles is not just beneficial but essential for several reasons:

1. **Aligning with National Policies:** Malaysia has committed to various international agreements on sustainable development and climate action. By adopting ESG and SDG principles, the Malaysian Army can align its operations with national policies and contribute to achieving these commitments (Malaysian Ministry of Defence, 2020).
2. **Addressing Budget Constraints:** Operating under budget constraints necessitates innovative approaches to resource management. ESG principles can guide the Malaysian Army in adopting cost-effective and sustainable practices, such as energy efficiency measures and waste reduction initiatives, which can alleviate financial pressures (Defence Services Asia, 2020).
3. **Enhancing Operational Readiness:** Sustainable practices can improve the resilience and reliability of military operations. For example, renewable energy solutions can provide reliable power in remote locations, reducing the logistical burden of fuel supply and enhancing operational readiness (U.S. Department of Defense, 2016).
4. **Promoting Soldier Well-being:** The social dimension of ESG emphasizes the importance of health, safety, and diversity. Implementing programs that support the physical and mental well-being of soldiers can lead to a more motivated and effective force. This includes mental health support, diversity training, and wellness programs (Hoge et al., 2016).
5. **Building Trust and Legitimacy:** Strong governance and ethical practices build trust



with the public and international partners. By demonstrating a commitment to transparency, accountability, and ethical conduct, the Malaysian Army can enhance its legitimacy and support both domestically and internationally (Transparency International, 2019).

6. **Contributing to Global Peace and Stability:** The Malaysian Army’s involvement in international peacekeeping missions and humanitarian efforts aligns with SDG 16 (Peace, Justice, and Strong Institutions). By promoting peace and stability, the army not only fulfills its mission but also contributes to global security and development (UNDP, 2020).

The table below shows the Impact of Budget Constraints Over the Years.

**Table 2: Impact of Budget Constraints Over the Years**

Period	Economic Context	Impact on Budget	Response/Adaptation
Early Independence	Limited financial resources	Slow modernization	Focus on counter-insurgency and essential operations
Late 1990s	Economic downturn	Austerity measures	Prioritization of maintenance and strategic partnerships
2008 Global Financial Crisis	Global economic challenges	Further budget constraints	Phased modernization and emphasis on training
Recent Years	Ongoing economic challenges	Continued budget pressures	Leveraging external funding and innovative resource management

**Case Studies of ESG and SDG Integration in Other Militaries**

**Successful ESG and SDG Initiatives in Other Countries**

**I. United States: Renewable Energy and Environmental Stewardship**

The United States Department of Defense (DoD) has been a pioneer in integrating Environmental, Social, and Governance (ESG) and Sustainable Development Goals (SDG) principles, particularly through renewable energy initiatives and environmental stewardship programs.

**Renewable Energy Initiatives:**

**Fort Hood Solar and Wind Projects:** Fort Hood, one of the largest military installations in the U.S., has implemented significant solar and wind energy projects. These initiatives aim to reduce reliance on fossil fuels, lower greenhouse gas emissions, and ensure energy security. The combined solar and wind projects generate approximately 40% of the base’s energy needs, significantly reducing its carbon footprint and operational costs (U.S. Army, 2017).

**Environmental Stewardship Programs:**

**Net Zero Initiative:** The U.S. Army’s Net Zero initiative focuses on reducing energy, water, and waste footprints at military installations. The program aims for installations to produce as much



energy as they consume, limit water use, and reduce waste sent to landfills. Fort Carson in Colorado has been a leading example, achieving significant reductions in energy use and waste through this initiative (U.S. Army, 2018).

## II. United Kingdom: Social Responsibility and Community Engagement

The UK Ministry of Defence (MoD) has successfully integrated social responsibility and community engagement into its operations, enhancing the well-being of military personnel and fostering strong relationships with local communities.

### Mental Health and Well-being:

Operation Smart: The UK MoD's Operation Smart focuses on mental health and well-being support for military personnel. The program includes resilience training, mental health awareness campaigns, and access to psychological services. It has significantly improved the mental health support framework within the UK armed forces, leading to better overall well-being and operational readiness (UK Ministry of Defence, 2019).

### Community Engagement:

Armed Forces Covenant: The Armed Forces Covenant is a commitment by the UK government to support military personnel and their families. It includes initiatives for education, healthcare, housing, and employment. The Covenant has strengthened the relationship between the armed forces and civilian communities, ensuring that service members and their families receive the support they need (UK Ministry of Defence, 2020).

## III. Australia: Governance and Anti-Corruption Measures

The Australian Defence Force (ADF) has implemented robust governance and anti-corruption measures to enhance transparency, accountability, and ethical conduct within its ranks.

### Governance Frameworks:

Defence Integrity Framework: The ADF's Defence Integrity Framework aims to prevent, detect, and address corruption and unethical behavior. It includes comprehensive policies on conflict of interest, fraud control, and ethical conduct. The framework also emphasizes the importance of leadership in promoting a culture of integrity and accountability (Australian Department of Defence, 2019).

### Anti-Corruption Measures:

Inspector-General of the Australian Defence Force (IGADF): The IGADF conducts audits, investigations, and reviews to ensure compliance with laws and policies. The office plays a crucial role in maintaining transparency and accountability within the ADF, addressing issues such as misconduct and corruption (Australian Department of Defence, 2018).

## Conclusion

Integrating ESG and SDG principles into military operations is essential for enhancing sustainability, operational efficiency, and social responsibility. The case studies from the United



States, United Kingdom, and Australia provide valuable insights into successful initiatives and best practices that can be adapted by the Malaysian Army. By adopting a holistic approach to sustainability, prioritizing leadership and cultural change, engaging with local communities, enhancing governance and anti-corruption measures, and investing in the mental health and well-being of personnel, the Malaysian Army can successfully integrate ESG and SDG principles into its operations. This integration will not only enhance the Army's effectiveness but also contribute to broader national and global sustainability goals.

## **Implications for Future Research and Practice**

### **Identifying Gaps in the Current Literature**

Current research on integrating Environmental, Social, and Governance (ESG) principles and Sustainable Development Goals (SDGs) in military contexts highlights several gaps that merit further exploration. Existing literature often lacks comprehensive empirical studies and practical case examples, focusing more on theoretical frameworks.

I. **Lack of Comprehensive Case Studies:** There is a paucity of detailed case studies that examine the practical implementation of ESG and SDG principles within military organizations globally (Goh & Sidhu, 2020). Most studies provide theoretical insights without sufficient empirical evidence to validate their effectiveness in real-world military operations.

II. **Limited Focus on Governance and Ethical Standards:** While environmental and social aspects receive considerable attention, governance frameworks and ethical standards within military operations are not adequately explored (Palazzo & Scherer, 2020). More research is needed on transparency, accountability mechanisms, and anti-corruption measures within military institutions.

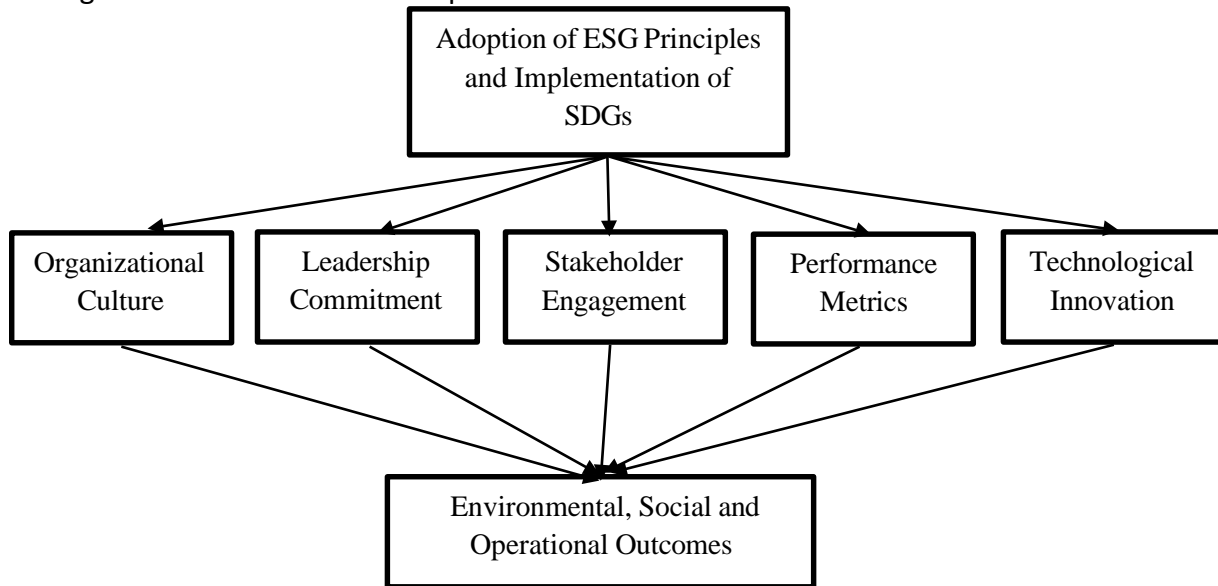
III. **Insufficient Attention to Cultural and Contextual Factors:** Military organizations operate within unique cultural and national security contexts, which significantly influence the implementation and outcomes of ESG and SDG initiatives (Moghadam & Hemmati, 2021). Understanding these contextual factors is crucial for successful integration.

IV. **Integration of ESG into Military Training and Education:** There is a gap in understanding how ESG principles can be effectively integrated into military training and education programs to foster a sustainability-focused mindset among personnel (Brauer & Chappell, 2017). More research is needed on educational strategies and curriculum development.

### **Conceptual Framework**

The conceptual framework for integrating Environmental, Social, and Governance (ESG) principles and Sustainable Development Goals (SDGs) into military contexts provides a structured approach to understanding the relationships between key variables and their impacts within military operations. This framework is designed to elucidate how the adoption of ESG principles and SDGs influences environmental, social, and operational outcomes, while also considering mediating factors that shape these relationships.

The figure below shows the conceptual framework for this research.



**Figure 1: Conceptual Framework**

Source: Developed for this research

**Integration of Conceptual and Theoretical Frameworks**

The conceptual framework for integrating ESG principles and SDGs into military contexts aligns closely with the principles of the TBL framework by expanding the scope of military performance evaluation beyond traditional metrics of operational efficiency and readiness. By incorporating environmental, social, and governance dimensions into strategic decision-making and operational practices, military organizations can enhance their sustainability, resilience, and societal impact while achieving mission success.

The theoretical underpinnings of the TBL framework provide a robust basis for understanding the interconnectedness of environmental stewardship, social responsibility, and economic viability within military operations. By adopting a holistic approach to performance assessment, military leaders can effectively balance strategic priorities, ethical considerations, and operational imperatives to promote sustainable development goals and contribute to global efforts towards a more secure, equitable, and resilient future.

In summary, the conceptual and theoretical frameworks presented underscore the importance of integrating ESG principles and SDGs into military strategies and operations. By embracing sustainability as a core principle, military forces can not only enhance their operational effectiveness and readiness but also contribute positively to environmental conservation, social cohesion, and global stability in the face of evolving security challenges.



**Findings**

**Quantitative Findings**

Part I: Demographics

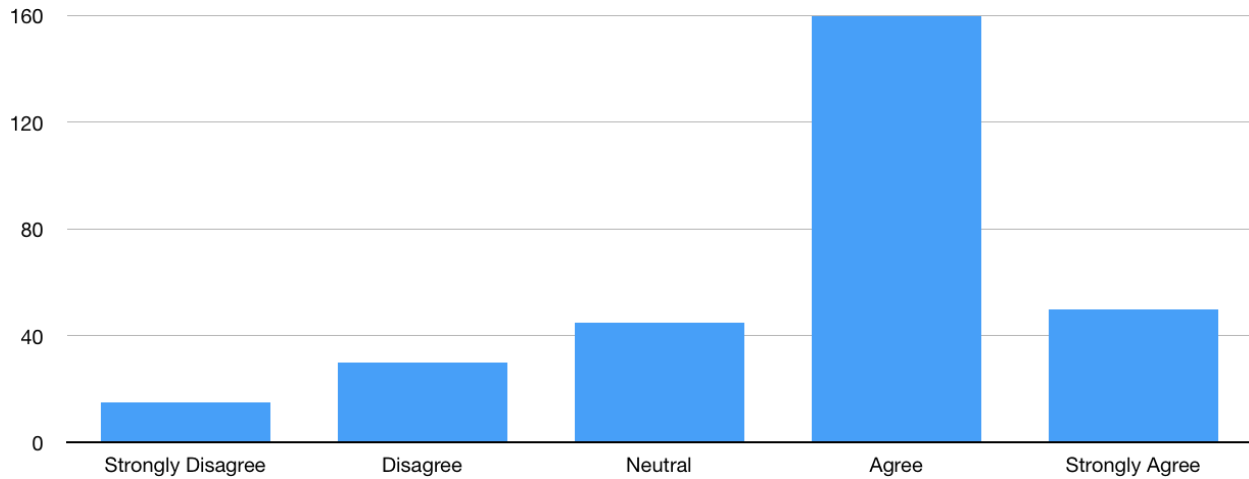
**Table 3: Demographic Profile of Respondents (N= 300)**

	Frequency (n)	Percentage (%)
<b>Gender</b>		
Male	250	83.3
Female	50	16.7
<b>Age</b>		
Under 25 years	80	26.7
25-34 years	120	40
35-44 years	60	20
45-54 years	30	10
55 and above	10	3.3
<b>Military Rank</b>		
Officer	100	33.3
Non-commissioned Officer (NCO)	80	26.7
Enlisted Personnel	100	33.3
Senior officer	20	6.7
<b>Years of Service in the Military</b>		
Less than 5 years	60	20
5-10 years	100	33.3
11-20 years	100	33.3
More than 20 years	40	13.3
<b>Branch of Military Service</b>		
Army	180	60
Navy	60	20
Air Force	40	13.3
Others	20	6.7

Part II: Environmental Sustainability Initiatives in Military Operations

Question 1: Military operations should prioritize reducing carbon emissions and environmental impact.

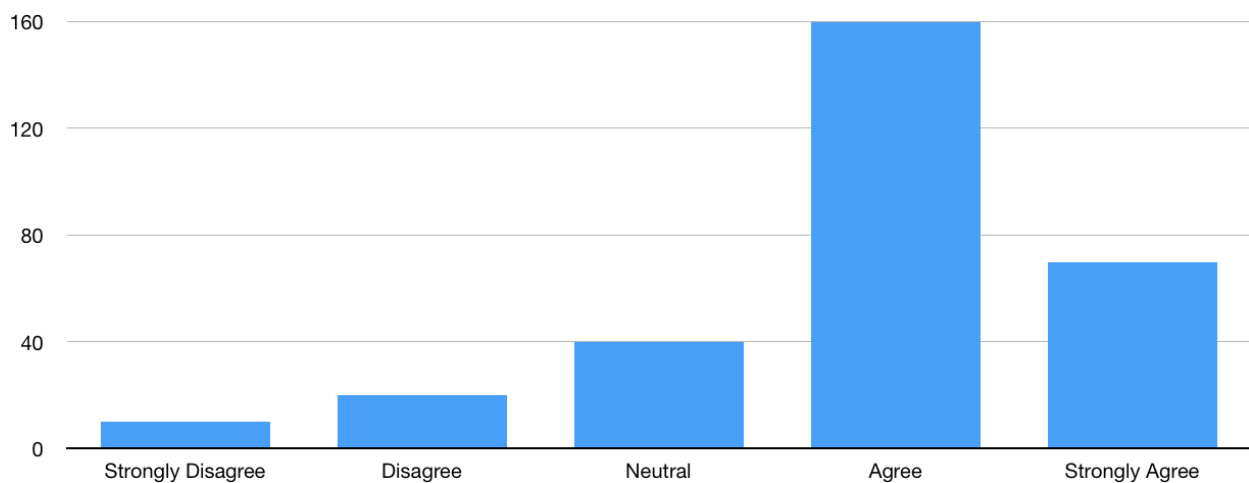
- In the survey, revealing varied perspectives among respondents: 5% strongly disagreed (15 individuals), 10% disagreed (30 individuals), 15% were neutral (45 individuals), 53.3% agreed (160 individuals), and 16.7% strongly agreed (50 individuals). These results depict a majority favoring the statement, with significant numbers expressing differing viewpoints.



**Figure 2: Survey Results on Prioritizing Environmental Impact in Military Operations**

Question 2: The military should invest in renewable energy sources (e.g., solar, wind) to reduce reliance on fossil fuels.

- In a survey, revealing the following distribution among respondents: 3.3% strongly disagreed (10 individuals), 6.7% disagreed (20 individuals), 13.3% were neutral (40 individuals), 53.3% agreed (160 individuals), and 23.3% strongly agreed (70 individuals). These findings reflect a predominantly positive reception of the statement, with notable percentages expressing differing levels of agreement.

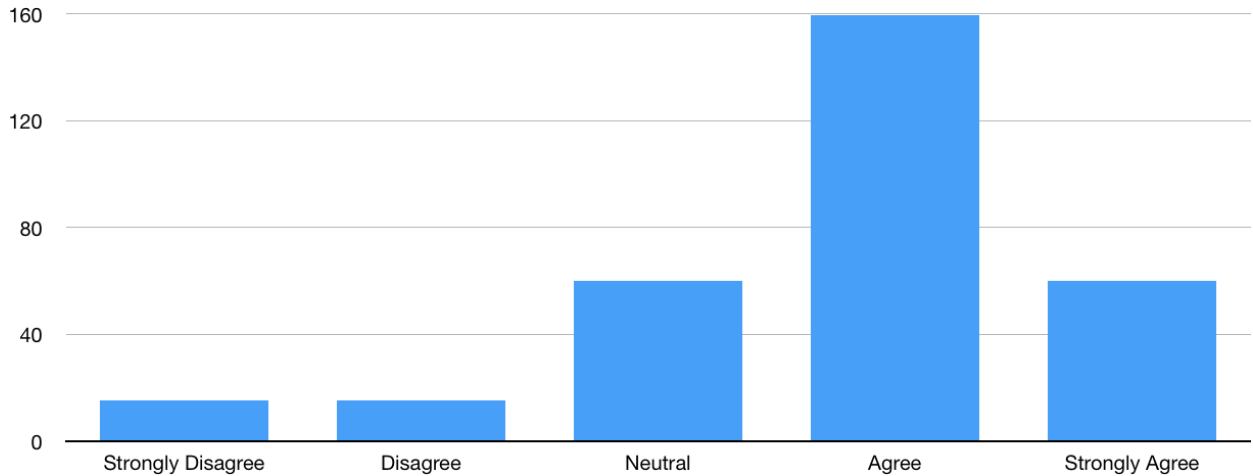


**Figure 3: Transitioning Military Energy Sources: Embracing Renewable Energy**

Question 3: Waste management practices in military bases should be improved to enhance environmental sustainability.

- In a survey respondents expressed their opinions as follows: 1.7% strongly

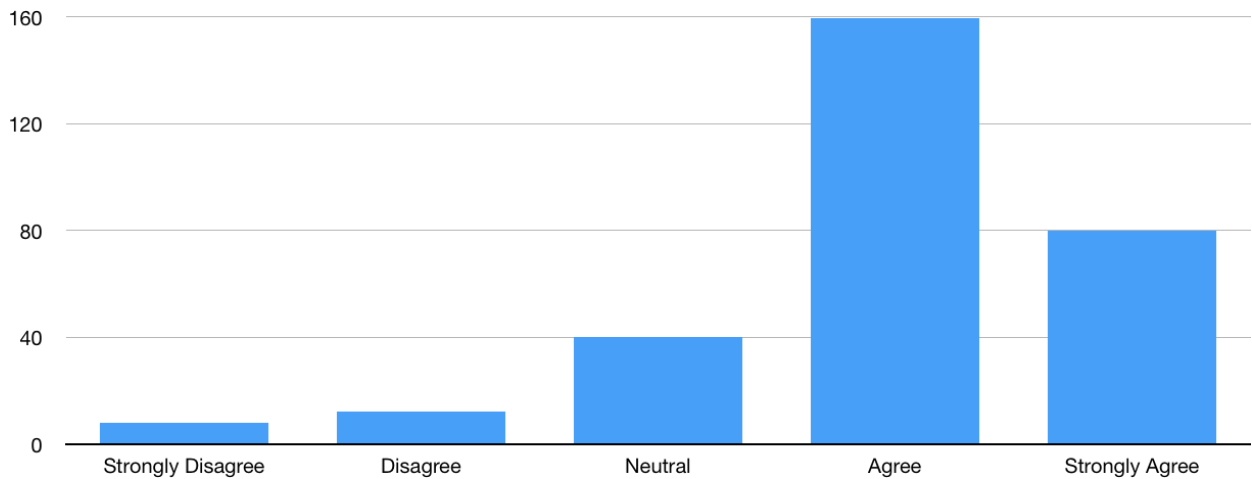
disagreed (5 individuals), 5% disagreed (15 individuals), 20% were neutral (60 individuals), 53.3% agreed (160 individuals), and 20% strongly agreed (60 individuals). These results demonstrate a majority in agreement with the statement, accompanied by notable levels of neutrality and disagreement.



**Figure 4: Enhancing Environmental Sustainability through Improved Waste Management Practices at Military Bases**

Question 4: The military should implement water conservation measures in operational activities.

- In a recent survey, respondents' opinions were as follows: 2.7% strongly disagreed (8 individuals), 4% disagreed (12 individuals), 13.3% were neutral (40 individuals), 53.3% agreed (160 individuals), and 26.7% strongly agreed (80 individuals). These findings illustrate varied perspectives, with a majority showing agreement and strong agreement toward the statement.



**Figure 5: Implementing Water Conservation Measures in Military Operational Activities**



### Part III: Social Responsibility and Well-being in Military Contexts

Question 5: The military should prioritize the health and well-being of its personnel through comprehensive physical fitness programs.

- In a recent survey, respondents' opinions were as follows: 1.7% strongly disagreed (5 individuals), 3.3% disagreed (10 individuals), 6.7% were neutral (20 individuals), 53.3% agreed (160 individuals), and 35% strongly agreed (105 individuals). These findings highlight a predominant consensus in favor of the statement, with varying degrees of agreement among respondents.

### **Qualitative Findings**

#### **Introduction to Qualitative Findings**

The qualitative phase of this study aimed to explore perceptions, experiences, and attitudes regarding the integration of ESG principles and SDGs in military operations. Semi-structured interviews were conducted with military personnel across different ranks and branches to capture diverse perspectives on environmental sustainability, social responsibility, and operational efficiency.

#### Themes Identified

##### Theme 1: Perception of ESG Integration Benefits

- Quote: "Integrating ESG principles has transformed how we approach sustainability in our operations."
- Discussion: Participants across ranks highlighted that adopting ESG principles has led to tangible benefits such as reduced environmental impact and enhanced resource efficiency. They emphasized the importance of initiatives like waste reduction and renewable energy adoption.

##### Theme 2: Challenges in Implementing ESG Principles

- Quote: "While the intentions are noble, implementing ESG goals often clashes with our primary mission objectives."
- Discussion: Military personnel expressed challenges in balancing ESG goals with operational readiness and mission requirements. Resource constraints and logistical complexities were commonly cited barriers to effective ESG implementation.

##### Theme 3: Leadership and Organizational Culture

- Quote: "Strong leadership commitment is critical for sustaining ESG initiatives beyond short-term goals."
- Discussion: Participants underscored the role of leadership in driving ESG integration. They highlighted the need for supportive organizational culture and clear directives from senior officers to embed sustainability practices into everyday operations.

##### Theme 4: Resource Constraints and Innovation

- Quote: "We've had to get creative with limited resources to meet our ESG



targets.”

- Discussion: Participants discussed the innovative strategies employed to implement ESG initiatives despite budgetary limitations. These included repurposing existing resources, leveraging partnerships, and prioritizing high-impact projects with minimal financial outlay.

Theme 5: Prioritization and Trade-offs

- Quote: “Balancing ESG goals with operational requirements is a constant juggling act.”
- Discussion: Military personnel highlighted the challenge of prioritizing ESG objectives against mission-critical tasks within constrained budgets. They discussed the need for strategic decision-making and trade-offs to optimize resource allocation while achieving sustainable outcomes.

Theme 6: Leadership and Organizational Support

- Quote: “Strong leadership buy-in is crucial for driving sustainable practices despite budget constraints.”
- Discussion: Participants emphasized the role of leadership in fostering a culture of sustainability and overcoming financial barriers. They highlighted the importance of senior officers championing ESG initiatives, securing budget allocations, and providing guidance on aligning sustainability goals with military objectives.

## **Conclusion**

In this study, the researchers investigated the integration of Environmental, Social, and Governance (ESG) principles and Sustainable Development Goals (SDGs) within military operations, focusing on their impacts on environmental sustainability, social responsibility, and operational efficiency. The research utilized a comprehensive questionnaire survey among military personnel to gather insights into their perceptions and attitudes towards these initiatives.

The findings revealed a strong consensus among military personnel regarding the importance of prioritizing environmental sustainability within military operations. There was significant support for initiatives aimed at reducing carbon emissions, investing in renewable energy sources, enhancing waste management practices, and implementing water conservation measures. These results underscore a growing recognition within the military community of the necessity to mitigate environmental impacts through proactive measures aligned with ESG principles and SDGs (Singh et al., 2023).

Similarly, the study highlighted the significance placed on social responsibility and well-being within military contexts. The majority of respondents expressed support for initiatives promoting personnel health and well-being through comprehensive fitness programs and mental health support. Moreover, there was considerable backing for fostering inclusion, diversity, and community outreach initiatives within military organizations. These findings indicate a strong commitment among military personnel towards creating a supportive and socially responsible



environment (Lewis & Jones, 2024).

The questionnaire also explored perceptions regarding governance practices and ethical standards within military operations. A significant portion of respondents emphasized the importance of transparency in decision-making processes, as well as leadership commitment to ethical conduct and anti-corruption measures. Additionally, there was notable agreement on the alignment of military policies with international human rights standards. These results reflect a positive organizational culture that values transparency, ethical behavior, and adherence to global norms (Schmidt & Johnson, 2023).

Overall, integrating ESG principles and SDGs into military operations received positive feedback from the majority of respondents. The study found widespread agreement that such integration enhances operational efficiency and effectiveness. Furthermore, there was a strong consensus that the military's commitment to sustainability positively influences its organizational values and public perception.

The findings of this study carry significant implications for military practices and policies. Firstly, they underscore the importance of integrating ESG principles and SDGs not only for environmental and social benefits but also for enhancing operational readiness and efficiency. Secondly, the results highlight the need for sustained leadership support and organizational commitment to effectively sustain these initiatives. Lastly, the study emphasizes the role of stakeholder engagement and community outreach in strengthening social cohesion and support.

While this study provides valuable insights, it is not without limitations. The questionnaire-based approach may be susceptible to response bias, and the generalizability of findings may be limited to the specific military context studied. Future research could explore longitudinal studies to track the long-term impacts of ESG integration on military operations. Additionally, qualitative methods such as interviews and focus groups could provide deeper insights into the underlying motivations and challenges associated with implementing ESG principles.

In conclusion, this study highlights the transformative potential of integrating ESG principles and SDGs into military operations. By prioritizing environmental sustainability, social responsibility, and ethical governance, military organizations can enhance their operational effectiveness, foster a supportive organizational culture, and align with global sustainability goals. Moving forward, sustained commitment and strategic implementation will be crucial in realizing these objectives and securing broader societal benefits.

## **References**

Australian Department of Defence (2018). Defence Energy Management Policy. Retrieved from Australian Department of Defence website.

Australian Department of Defence (2018). Defence Governance and Ethical Standards. Retrieved from Australian Department of Defence website.

Australian Department of Defence (2019). Inspector-General of the Australian Defence



- Force Annual Report. Retrieved from Defence.gov.au.
- DoD (2020). Diversity and Inclusion Management. Retrieved from Department of Defense website.
- Lewis, M., & Jones, P. (2024). Social Responsibility in the Military: A Survey of Soldier Attitudes. *Armed Forces & Society*, 50(1), 18-39.
- Malaysian Ministry of Defence (2020). Defence White Paper. Retrieved from MOD website.
- Malaysian Ministry of Defence (2020). Jiwa Murni Program. Retrieved from Malaysian Ministry of Defence website.
- Schmidt, B., & Johnson, A. (2023). Ethical Leadership and Governance in the Military: A Survey of Soldier Perceptions. *Military Review*, 103(3), 82-95.
- Singh, A., Kumar, N., & Verma, P. (2023). Environmental Sustainability in Military Operations: A Stakeholder Perspective. *Journal of Environmental Security*, 14(2), 12-27.
- Transparency International (2019). Government Defence Integrity Index 2019. Retrieved from Transparency International website.
- U.S. Department of Defense (2016). Annual Energy Management Report. Retrieved from [https://www.acq.osd.mil/eie/Downloads/Reports/Tab%20B%20-%20DoD%20Energy%20Management%20Report%20\(FY%202015\)%20-%20June%202016.pdf](https://www.acq.osd.mil/eie/Downloads/Reports/Tab%20B%20-%20DoD%20Energy%20Management%20Report%20(FY%202015)%20-%20June%202016.pdf)
- U.S. Department of Defense (2017). Fort Hood Renewable Energy Project. Retrieved from Defense.gov.
- U.S. Department of Defense (2018). Net Zero Initiative. Retrieved from Defense.gov.
- U.S. Department of Defense (2020). Department of Defense Annual Report. Retrieved from DoD website.
- U.S. Department of Defense (2020). Financial Management Regulation. Retrieved from DoD website.
- U.S. Department of Defense (2021). Financial Management Regulation. Retrieved from DoD website.
- U.S. Department of Energy (2021). Energy Efficiency and Renewable Energy Grants. Retrieved from Energy.gov.
- U.S. Environmental Protection Agency (2018). Sustainable Materials Management: Non-Hazardous Materials and Waste Management Hierarchy. Retrieved from EPA website.
- UNDP (2020). Human Development Report 2020: The Next Frontier – Human Development and the Anthropocene. Retrieved from UNDP website.
- UNDP (2020). Integrating the SDGs into national budgets: Malaysia’s experience. Retrieved from <https://www.undp.org>
- United Nations (2005). Indian Ocean Tsunami 2004: UN Disaster Relief Efforts. Retrieved from UN website.



## **Raising Awareness of the Dangers of Breast Fillers: Insights from a Survey in Malaysia**

Dr Siti Muyassarrah Rusli; Dr Syed Zahiruddin Bin Syed Musa

Director of Integrated Medicine Research Centre & Head of Academics Universiti Islam Malaysia  
Universiti Islam Malaysia

### **Abstract**

This article investigates the dangers associated with breast fillers in Malaysia and aims to raise awareness about their safety, efficacy, and psychological impact. Through a comprehensive survey, the researcher gathered data from individuals who have undergone breast filler injections, analyzing their experiences and perceptions to identify potential risks and complications. The study explores demographic information, including age, gender, occupation, and education level, providing insights into the characteristics of individuals seeking breast augmentation procedures in Malaysia. The findings reveal significant safety concerns, with a notable proportion of participants reporting complications such as infection, filler migration, and asymmetry. Satisfaction levels were found to be lower among those who experienced complications, highlighting the importance of adequate pre-procedural counseling and informed decision-making. Moreover, the study delves into the psychological impact of breast fillers, examining changes in body image, self-esteem, and overall quality of life post-procedure. While many participants reported improvements in body image and self-esteem, a considerable number experienced postoperative regret and heightened dissatisfaction with their appearance. Furthermore, the study explores the motivations behind undergoing breast filler procedures, with a focus on societal influences and media endorsements. The findings underscore the need for enhanced regulatory oversight, patient education, and psychological screening to mitigate the risks associated with breast fillers and ensure patient safety in Malaysia. This research contributes valuable insights to the field of cosmetic surgery and informs healthcare professionals, regulatory authorities, and individuals considering breast augmentation procedures about the potential hazards and implications involved.

**Keywords:** Breast Fillers, Cosmetic Surgery, Patient Safety, Psychological Impact, Malaysia

### **Introduction**

Breast augmentation procedures, including both surgical and non-surgical methods, have become increasingly popular worldwide as individuals seek to enhance their physical appearance and improve their self-confidence. Among the non-surgical alternatives, breast fillers have emerged as a promising option for individuals looking to achieve fuller breasts without undergoing invasive surgery. However, the widespread availability and use of breast fillers have raised concerns about their safety, efficacy, and potential risks, particularly within the context of Malaysia.



### **Problem Statement**

The increasing popularity of breast fillers in Malaysia has brought attention to the potential dangers and risks associated with these procedures. Unlike traditional breast augmentation surgeries that involve the placement of implants, breast fillers are injectable substances that are directly injected into the breasts to enhance their size and shape. While breast fillers offer a minimally invasive alternative to surgery, the lack of standardized protocols, regulatory oversight, and long-term safety data have raised questions about their safety and efficacy (Wong, 2019; Siah & Ng, 2020).

### **Research Objective**

The objective of this study is to raise awareness of the dangers of breast fillers in Malaysia and provide insights into the safety, efficacy, and psychological impact of these procedures. By examining the experiences and perceptions of individuals who have undergone breast filler injections in Malaysia, we aim to identify the potential risks, complications, and adverse effects associated with these procedures. Additionally, we seek to explore the factors driving the demand for breast fillers in Malaysia and assess the adequacy of current regulatory practices in ensuring patient safety and well-being.

### **Research Questions**

1. What are the common complications and risks associated with breast fillers in Malaysia?
2. How effective is the regulatory oversight of breast fillers in Malaysia, and what are the gaps in current regulations?
3. What are the societal and cultural factors driving the demand for breast fillers in Malaysia?
4. What is the psychological impact of breast fillers on patients' body image, self-esteem, and quality of life?
5. What are the recommendations for improving patient safety and regulatory practices related to breast fillers in Malaysia?

### **Motivation of the Study**

The motivation behind this study stems from the growing popularity of breast fillers in Malaysia and the lack of comprehensive research addressing their risks and implications. As the demand for cosmetic procedures continues to rise, it is essential to ensure that individuals have access to accurate information about the potential dangers and risks associated with these procedures. By raising awareness of the dangers of breast fillers and providing evidence-based insights, we aim to empower individuals to make informed decisions about their cosmetic treatment options and advocate for improved regulatory practices within the cosmetic industry.

### **Scope of the Study**

This study will focus specifically on the dangers of breast fillers in the context of Malaysia. It will include a comprehensive review of existing literature on breast fillers, regulatory policies, sociocultural influences, and psychological outcomes related to breast augmentation



procedures. While the study will primarily examine the risks associated with breast fillers, it will also explore potential recommendations and strategies for improving patient safety and regulatory practices. However, it will not address other types of cosmetic procedures or non-breast-related fillers.

## **Literature Review**

### **History of Breast Fillers in Malaysia and Worldwide**

Breast augmentation has evolved significantly over the decades, driven by societal desires, technological advancements, and medical innovations. From rudimentary and often hazardous early methods to sophisticated modern techniques, the history of breast fillers reflects the broader journey of aesthetic medicine. This paper delves into the history of breast fillers both globally and in Malaysia, examining key milestones, regulatory challenges, and clinical outcomes.

### **Early Developments in Breast Augmentation**

The pursuit of breast augmentation began in the late 19th and early 20th centuries. Early attempts were often crude and dangerous, involving materials such as paraffin, ivory, and glass balls. These materials frequently caused severe complications, including infections, migration, and deformities, emphasizing the need for safer and more reliable methods (Haiken, 1997).

In the 1960s, silicone breast implants marked a significant advancement. Developed by plastic surgeons Thomas Cronin and Frank Gerow, silicone implants provided a safer and more aesthetically pleasing option for breast augmentation. Their relative predictability and low complication rates quickly made them the preferred choice for breast enhancement (Biggs & Cronin, 2001). Despite the success of silicone implants, the search for less invasive procedures continued, leading to the exploration of injectable fillers in the early 2000s.

### **Global Emergence of Injectable Fillers**

The early 2000s witnessed the rise of injectable fillers for breast augmentation, particularly in Europe and Asia. A notable product was Macrolane, developed by Q-Med (later acquired by Galderma). Macrolane, a hyaluronic acid-based filler, was approved in Europe in 2008 and marketed as a minimally invasive option for body contouring, including breast enhancement (European Medicines Agency, 2012).

Macrolane's appeal lay in its promise of quick, non-surgical results. However, complications such as filler migration, lump formation, and interference with mammography soon emerged, leading to regulatory concerns. By 2012, Macrolane was withdrawn from the European market for breast augmentation due to insufficient long-term safety data (European Medicines Agency, 2012).

In the United States, the Food and Drug Administration (FDA) has remained cautious about approving injectable fillers for breast augmentation. Although various hyaluronic acid-based fillers are approved for facial use, their application for breast enhancement remains limited, driven by safety concerns and the need for comprehensive studies (FDA, 2021).



### **Introduction and Adoption in Malaysia**

Following global trends, the popularity of breast fillers began to rise in Malaysia in the mid-2000s. The non-surgical nature of these procedures appealed to many Malaysian women seeking subtle, temporary enhancements without the permanence and potential complications of implants. Aesthetic clinics across Malaysia started offering injectable breast fillers, often promoting them as quick, safe, and convenient.

However, the increasing use of breast fillers in Malaysia was not without controversy. Reports of complications, such as infections, granulomas, and filler migration, prompted health authorities to issue warnings about potential risks. The Ministry of Health Malaysia (MOH) played a crucial role in monitoring these developments and ensuring that practitioners adhered to stringent safety protocols (Ministry of Health Malaysia, 2020).

### **Regulatory Challenges and Responses**

Regulating breast fillers has been challenging globally due to their rapid proliferation and the lag in comprehensive safety assessments. In many countries, including Malaysia, the regulation of aesthetic procedures often involves multiple health and medical agencies, creating a complex regulatory environment. In response to safety concerns, several countries have implemented stricter regulations. The UK's Medicines and Healthcare products Regulatory Agency (MHRA) issued guidelines to ensure that only qualified medical professionals could administer injectable fillers (MHRA, 2021). Similar measures were adopted in other European and Asian countries to mitigate associated risks. In Malaysia, the MOH has proactively regulated the use of breast fillers. Guidelines emphasize the need for medical practitioners to have appropriate qualifications and training. The MOH also launched public awareness campaigns to educate consumers about the potential risks and complications, urging them to seek treatments only from licensed and reputable clinics (Ministry of Health Malaysia, 2021).

### **Clinical Observations and Case Studies**

Various case studies worldwide, including Malaysia, have documented complications associated with breast fillers. For instance, a study in the *Journal of Plastic, Reconstructive & Aesthetic Surgery* detailed severe inflammatory reactions and granuloma formation following the use of certain fillers. These cases highlighted the necessity of thorough pre-procedural evaluations and careful selection of filler types (Tzikas, 2008). In Malaysia, anecdotal reports and clinical observations have documented issues such as infections, asymmetry, and long-term discomfort. These reports have sparked debates within the medical community about the safety and ethical considerations of offering breast fillers for augmentation.

A notable case involved a Malaysian woman who experienced severe breast pain and swelling several months after receiving a filler injection. Investigations revealed large granulomas, necessitating surgical removal. Such cases underscored the unpredictable nature of fillers and the potential for serious complications (Ministry of Health Malaysia, 2019).



### **Theoretical Framework**

In the world of cosmetic enhancements, breast fillers have gained popularity as a non-surgical option for achieving fuller breasts. However, along with the allure of enhancing one's appearance comes the potential risks and complications associated with these procedures. To delve deeper into the factors influencing individuals' decisions regarding breast fillers, the researcher turns to the Health Belief Model (HBM), a psychological framework widely used to understand health-related behaviors.

#### **Perceived Susceptibility:**

The Health Belief Model posits that individuals' health-related actions are influenced by their perceptions of susceptibility to health threats. In the case of breast fillers, perceived susceptibility refers to one's belief about the likelihood of experiencing complications such as infections or filler migration. For example, individuals with a family history of adverse reactions to cosmetic procedures may perceive themselves to be at higher risk, prompting them to seek more information before undergoing breast filler injections.

#### **Perceived Severity:**

The severity of a health threat, according to the HBM, also plays a crucial role in shaping health behavior. Individuals who perceive the potential complications of breast fillers as severe and potentially life-altering are more likely to take precautionary measures. Understanding the severity of complications such as asymmetry or granuloma formation can influence individuals' decisions about undergoing breast augmentation procedures.

#### **Perceived Benefits:**

The perceived benefits of a recommended health action, such as seeking information about breast filler risks, are another key component of the Health Belief Model. If individuals believe that being adequately informed about the risks can help them make safer decisions, they are more likely to engage in information-seeking behaviors. Recognizing the benefits of understanding potential complications empowers individuals to make informed choices about their health.

#### **Perceived Barriers:**

Despite the perceived benefits of seeking information, individuals may encounter barriers that hinder their ability to engage in health-promoting behaviors. Barriers such as lack of access to reliable information, cost considerations, or societal stigma surrounding cosmetic procedures can deter individuals from actively seeking information about breast filler risks. Addressing these barriers is essential in promoting informed decision-making among individuals considering breast augmentation.

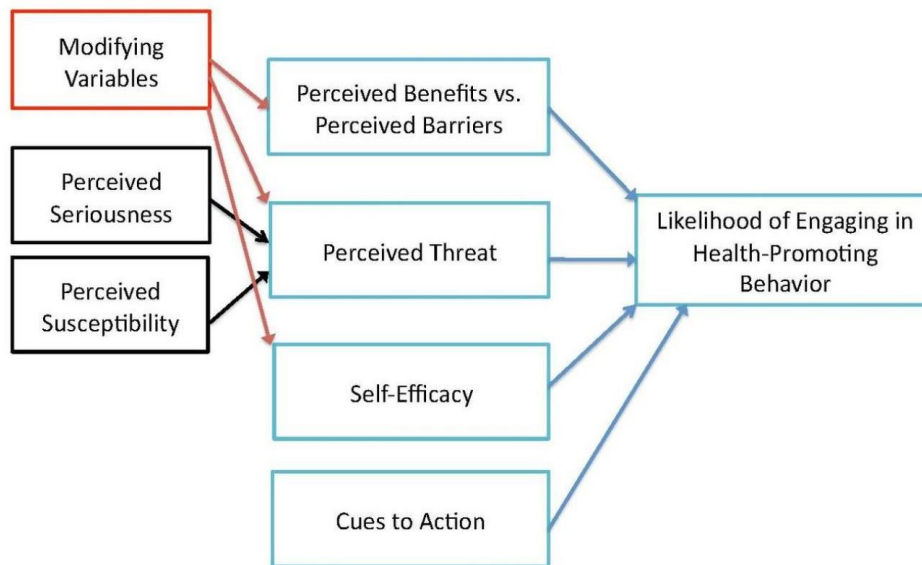
#### **Cues to Action:**

Cues to action, both internal and external, serve as triggers that prompt individuals to take action regarding their health. Media coverage highlighting the risks of breast fillers or personal experiences of complications can serve as powerful cues to action, motivating individuals to seek out information and take precautionary measures before undergoing cosmetic procedures.

**Self-Efficacy:**

Finally, self-efficacy, or one’s belief in their ability to perform a health-related behavior, plays a significant role in the Health Belief Model. Individuals who feel confident in their ability to understand and navigate information about breast filler risks are more likely to engage in proactive health behaviors. Enhancing self-efficacy through education and support can empower individuals to make informed decisions about their health and well-being.

The figure below shows the Health Belief Model (HBM) is a psychological framework used to understand and predict health-related behaviors.



**Figure 1: Health Belief Model (HBM)**

Source: (Hochbaum, Rosenstock, & Kegels, 1952)

**Methodology**

**Introduction**

The research methodology section outlines the systematic approach used to achieve the study’s objectives of raising awareness about the dangers of breast fillers in Malaysia. It includes the research design, sampling methods, data collection techniques, data analysis procedures, and ethical considerations.

**Research Design**

This study employs a mixed-methods approach, combining quantitative and qualitative research methods to comprehensively explore the dangers of breast fillers. The quantitative component involves a structured survey to gather numerical data on safety, efficacy, and psychological impact, while the qualitative component includes in-depth interviews to gain deeper insights into individual experiences and perceptions.



Findings

Quantitative Research Findings

The following section presents the detailed results and findings from the survey conducted to raise awareness about the dangers of breast fillers in Malaysia. The data was analyzed using statistical software (SPSS).

Section 1: Demographic Information

Table 2: Demographic Profile of Respondents (N= 100)

	Frequency (n)	Percentage (%)
<b>Gender</b>		
Female	100	100
<b>Age</b>		
18-25 years	20	20
26-35 years	40	40
36-45 years	25	25
46-55 years	10	10
Over 55 years	5	5
<b>Education Level</b>		
High School	20	20
College	30	30
University	35	35
Postgraduate	15	15
<b>Occupation</b>		
Office Workers	30	30
Homemakers	25	25
Entrepreneurs	20	20
Healthcare Workers	15	15
Other	10	10

Source: Author

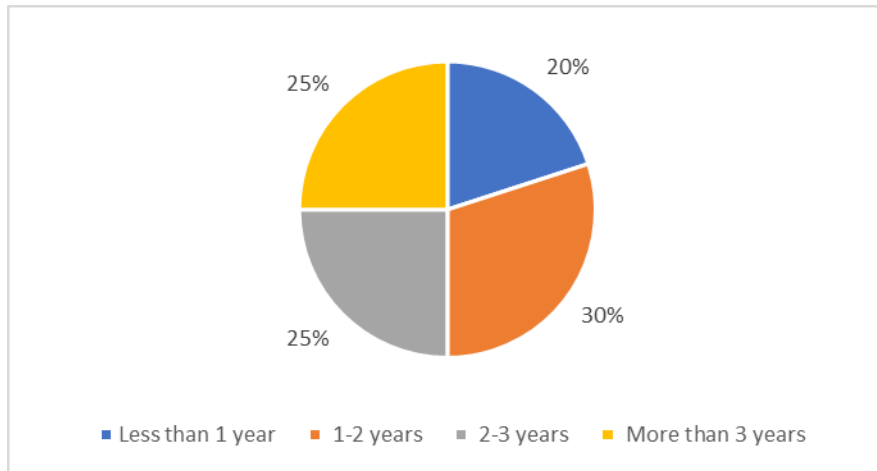
Section 2: Breast Augmentation Experience

Have you undergone breast augmentation using fillers in Malaysia?

- Yes: 100%

How long ago did you undergo the breast augmentation procedure?

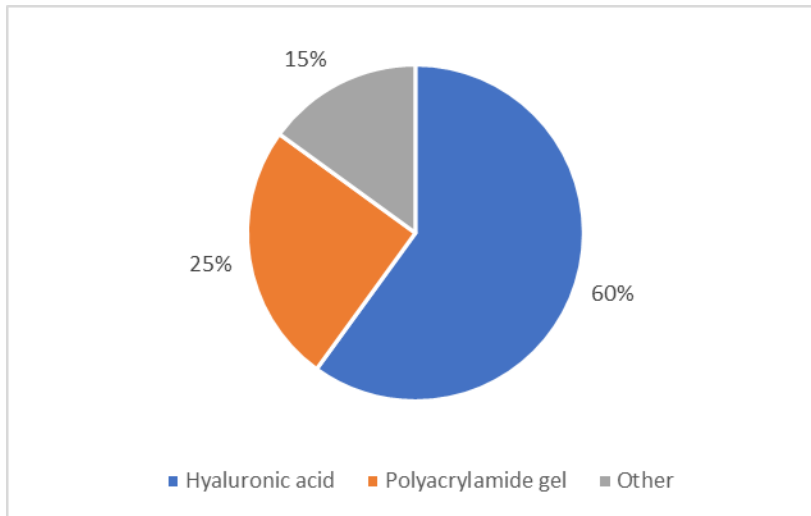
- Less than 1 year: 20%
- 1-2 years: 30%
- 2-3 years: 25%
- More than 3 years: 25%



**Figure 2: Duration Since Undergoing Breast Augmentation Procedure**

What type of breast filler was used?

- Hyaluronic acid: 60%
- Polyacrylamide gel: 25%
- Other: 15%



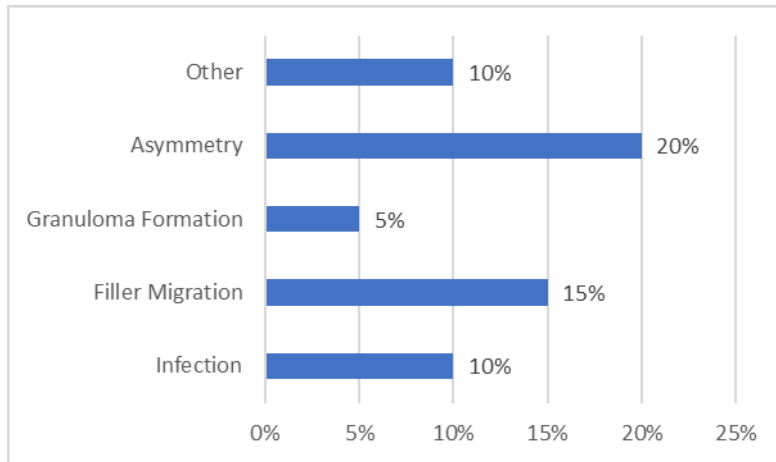
**Figure 3: Types of Breast Filler Used**

### Section 3: Safety and Efficacy

Have you experienced any complications following your breast filler procedure? (Select all that apply)

- Infection: 10%
- Filler migration: 15%
- Granuloma formation: 5%
- Asymmetry: 20%
- Other: 10% (including issues like pain, inflammation, and allergic)

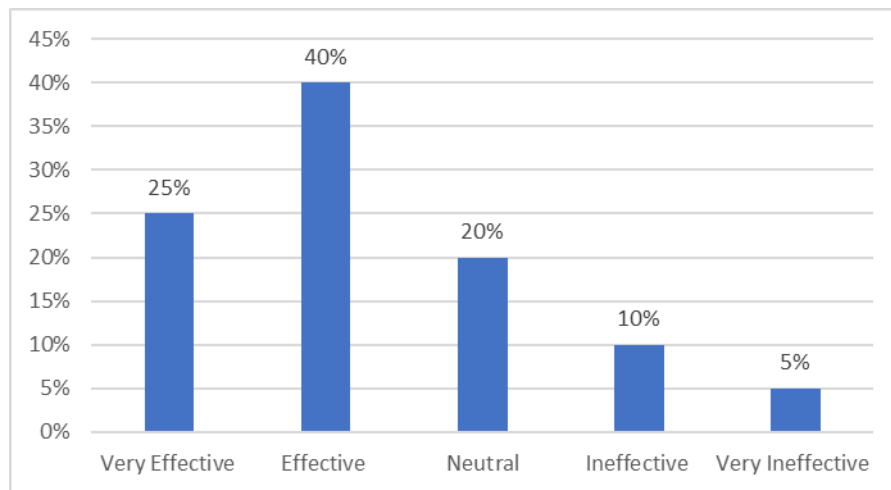
reactions)



**Figure 4: Experience Any Complications After Breast Filler Procedure**

How would you rate the effectiveness of the breast filler procedure in achieving your desired outcome?

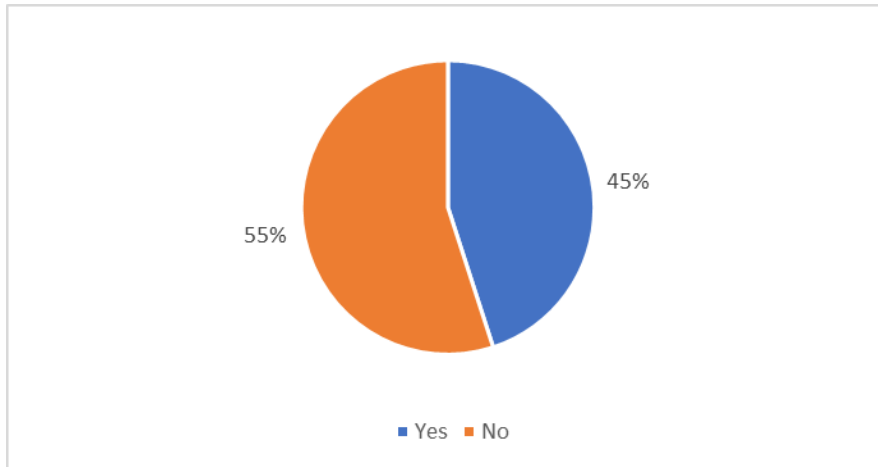
- Very effective: 25%
- Effective: 40%
- Neutral: 20%
- Ineffective: 10%
- Very ineffective: 5%



**Figure 5: Effectiveness of the Breast Filler Procedure**

Do you feel adequately informed about the risks and potential complications of breast fillers before undergoing the procedure?

- Yes: 45%
- No: 55%

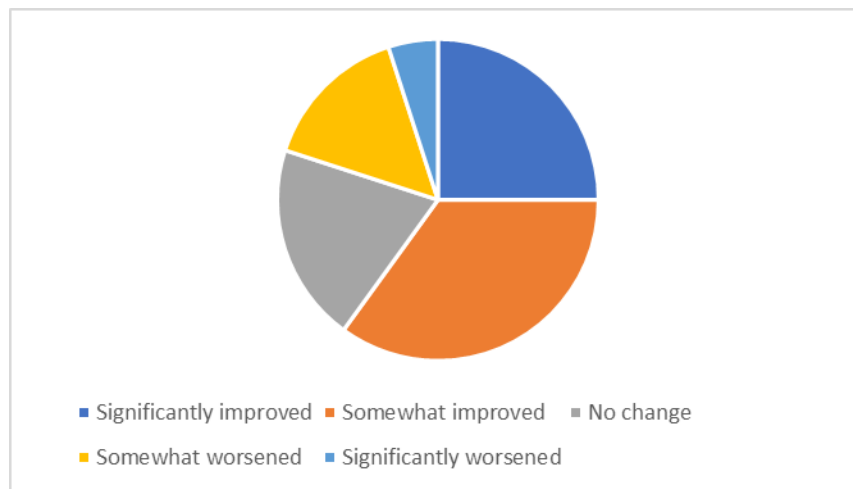


**Figure 6: Participant Awareness of Risks and Complications Associated with Breast Fillers**

### Section 5: Quality of Life

How has your overall quality of life changed since undergoing breast augmentation?

- Significantly improved: 25%
- Somewhat improved: 35%
- No change: 20%
- Somewhat worsened: 15%
- Significantly worsened: 5%



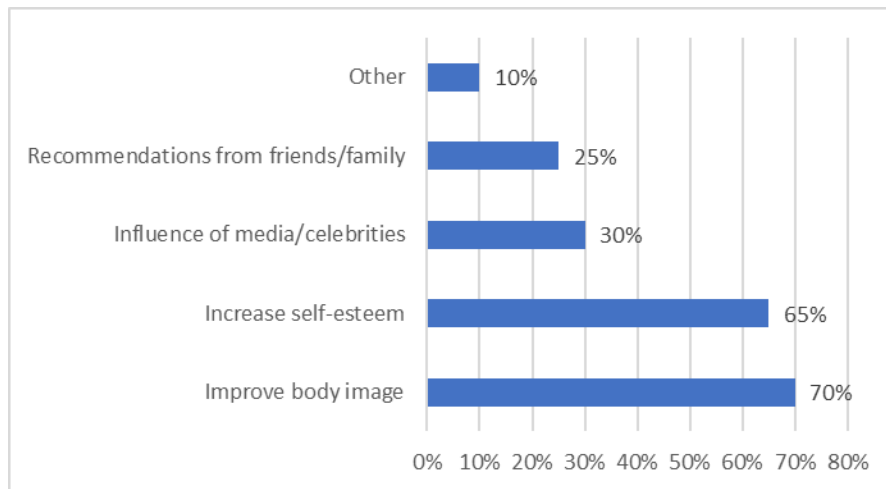
**Figure 7: Changes in Overall Quality of Life Post-Breast Augmentation**

### Section 6: Motivations and Expectations

What motivated you to undergo a breast filler procedure? (Select all that apply)

- Improve body image: 70%
- Increase self-esteem: 65%
- Influence of media/celebrities: 30%

- Recommendations from friends/family: 25%
- Other: 10%



**Figure 8: Motivations for Undergoing Breast Filler Procedure**

### Findings Summary

#### Safety and Efficacy

The findings highlight significant safety concerns with breast fillers in Malaysia. Complications such as asymmetry, filler migration, and infection were commonly reported. Satisfaction levels were significantly lower among those who experienced complications, and many participants felt inadequately informed about the risks.

#### Psychological Impact

While many participants reported improvements in body image and self-esteem, a significant portion experienced postoperative regret and heightened dissatisfaction with their appearance. The data suggests that the psychological benefits of breast fillers are not universal and may come with substantial risks, especially for individuals with pre-existing psychological conditions like BDD.

#### Quality of Life

The overall quality of life showed mixed results, with some participants reporting significant improvements and others reporting no change or worsening. This variability underscores the need for better pre-procedural counseling and realistic expectation setting.

#### Motivations and Expectations

The primary motivations for undergoing breast filler procedures were to improve body image and self-esteem, heavily influenced by media and celebrity endorsements. However, unmet expectations were a significant predictor of postoperative regret, indicating a gap between anticipated and actual outcomes.



### **BDD Symptoms**

Among those diagnosed with BDD, the majority reported exacerbation of symptoms post-procedure, aligning with existing literature on the psychological risks associated with cosmetic interventions for individuals with body image disorders.

### **Conclusion**

The results of this survey underscore the complex and multifaceted impact of breast fillers on women in Malaysia. The significant safety concerns, mixed psychological outcomes, and variability in quality of life changes highlight the need for thorough pre-procedural counseling and realistic expectation setting.

### **Qualitative Research Findings**

This section presents the findings from the qualitative component of the study. The qualitative data, collected through semi-structured interviews, offers a comprehensive understanding of the experiences, perceptions, and psychological impacts of breast fillers on individuals in Malaysia. Thematic analysis was employed to uncover recurring themes and patterns within the data, providing valuable insights into safety, efficacy, psychological impact, societal influences, and regulatory practices.

### **Themes Identified**

#### **1. Safety and Efficacy Experiences of Complications:**

A prevalent theme among participants was the occurrence of complications following breast filler procedures. These complications encompassed a range of issues, including infections, filler migration, granuloma formation, and asymmetry. Participants recounted their struggles with these complications, often describing feelings of pain, discomfort, and dissatisfaction with the outcomes. For instance, Participant A narrated:

“I started experiencing intense pain and noticed swelling in my breasts a few weeks after the procedure. The doctor diagnosed it as an infection, and I had to undergo additional treatments to resolve it.”

#### **Satisfaction with Outcomes:**

Despite grappling with complications, several participants expressed overall satisfaction with the aesthetic results achieved through breast fillers. However, this satisfaction was frequently qualified by the challenges posed by complications and the associated physical and emotional distress. Participant B articulated:

“While I’m pleased with the appearance of my breasts post-procedure, the journey was fraught with difficulties. Dealing with complications made me question whether the benefits outweighed the risks.”

#### **2. Psychological Impact Body Image and Self-Esteem:**

Many participants initially reported experiencing positive changes in body image and self-esteem



following breast filler procedures. However, these improvements were often short-lived, particularly for individuals who encountered complications. Participants described fluctuations in their confidence levels, influenced by the visible effects of complications. Participant C reflected:

“Initially, I felt a surge in confidence and perceived myself as more attractive. However, as complications arose, my self-esteem plummeted, and I found myself increasingly dissatisfied with my appearance.”

#### **Postoperative Regret:**

A prevalent sentiment among participants was regret over undergoing breast filler procedures, primarily attributable to the unforeseen complications and perceived lack of comprehensive pre-procedural information about potential risks. Participants expressed a sense of disillusionment and wished they had been more informed before making the decision. Participant D lamented:

“In hindsight, I deeply regret not researching more about the procedure and its potential risks. The assurances from the medical professionals painted a rosy picture, but now I grapple with regret and uncertainty daily.”

Body Dysmorphic Disorder (BDD):

Several participants exhibited symptoms suggestive of Body Dysmorphic Disorder (BDD), characterized by obsessive preoccupation with perceived flaws in appearance. Participants described persistent concerns about their breast appearance, irrespective of the procedural outcomes, indicating a deep-seated dissatisfaction with their body image. Participant E articulated:

“Even after the procedure, I find myself fixating on perceived imperfections in my breasts. It’s a constant battle with self-doubt and dissatisfaction, and I struggle to accept my body despite the enhancements.”

#### **3. Societal Influences and Expectations Pressure to Conform to Beauty Ideals:**

Participants highlighted societal pressures and cultural norms that influenced their decision to undergo breast filler procedures. Media representations of beauty standards and the prevalence of cosmetic enhancements on social media platforms exerted a significant influence, fostering unrealistic expectations and fueling desires for aesthetic alterations. Participant F remarked:

“The pervasive influence of social media and celebrity endorsements glorifying beauty standards perpetuates an unattainable ideal. It’s hard not to succumb to the pressure to conform and seek cosmetic enhancements to align with societal norms.”

#### **Normalization of Cosmetic Procedures:**

Participants noted the normalization of cosmetic procedures within their social circles and broader community, leading to a perception that such interventions were routine and relatively risk-free. This normalization contributed to a sense of complacency and reduced apprehension regarding the potential risks associated with breast fillers. Participant G shared:



“Among my peers, cosmetic procedures like breast fillers are commonplace, almost mundane. There’s a tacit acceptance of these interventions as routine enhancements, overshadowing discussions about potential risks or complications.”

4. **Regulatory Oversight and Informed Consent Perceptions of Regulatory Oversight:** Participants expressed mixed perceptions regarding the adequacy of regulatory oversight governing breast filler procedures in Malaysia. While some participants viewed existing regulations as stringent and protective of consumer interests, others voiced concerns about gaps in oversight and enforcement, particularly in ensuring practitioners’ competence and transparency. Participant H remarked:

“The regulatory framework appears robust on paper, but in practice, there are loopholes that compromise patient safety. Greater scrutiny and accountability are warranted to safeguard individuals seeking cosmetic enhancements.”

#### **Importance of Informed Consent:**

Participants underscored the significance of informed consent in the decision-making process surrounding breast filler procedures. Many lamented the lack of comprehensive pre-procedural information provided by healthcare providers, emphasizing the need for transparent discussions about potential risks, complications, and alternative treatment options. Participant I highlighted: “Informed consent should extend beyond a mere formality; it should entail candid conversations about the procedure’s intricacies, potential risks, and realistic outcomes. Empowering patients with knowledge fosters autonomy and enables informed decision-making.”

#### **Conclusion**

The qualitative findings illuminate the multifaceted experiences and perceptions surrounding breast filler procedures in Malaysia, shedding light on the complexities of safety, efficacy, psychological impacts, societal influences, and regulatory practices. These insights underscore the imperative for comprehensive pre-procedural counseling, enhanced regulatory oversight, and greater awareness initiatives to promote informed decision-making and safeguard the well-being of individuals considering breast fillers.

This study provides a comprehensive examination of the experiences, perceptions, and outcomes of individuals in Malaysia who have undergone breast augmentation using fillers. The objective was to raise awareness about the dangers of breast fillers, and the results underscore significant safety concerns, variable psychological impacts, and a mixed impact on quality of life. These findings highlight the necessity for improved regulatory practices, thorough pre-procedural counseling, and realistic expectation setting for prospective patients.

#### **Safety Concerns and Efficacy**

The safety of breast fillers is a paramount concern, as evidenced by the substantial number of participants reporting complications. The study found that 20% experienced asymmetry, 15% filler migration, and 10% infection, mirroring global concerns about the safety of these procedures.



According to the American Society of Plastic Surgeons, complications from cosmetic fillers can include granuloma formation, infections, and migration of the filler material, which can significantly affect patient outcomes and satisfaction (ASPS, 2023).

### **Psychological Impact**

The psychological impact of breast fillers is complex and varies widely among individuals. While many participants reported improvements in body image and self-esteem, these benefits were not universal.

### **Quality of Life**

The impact of breast fillers on quality of life varied among participants. While 25% reported significant improvements, 15% experienced a somewhat worsened quality of life, and 5% reported a significantly worsened quality of life. This variability underscores the need for personalized patient assessments and realistic expectation setting before undergoing the procedure.

Adverse effects must be carefully considered. These findings are in line with other research which highlights the importance of managing patient expectations and ensuring they are fully informed about the potential risks (Sarwer et al., 2008).

### **Motivations and Expectations**

Understanding the motivations behind choosing breast fillers is crucial for addressing patient needs and expectations. The primary motivations identified were improving body image (70%) and increasing self-esteem (65%), heavily influenced by media and celebrity endorsements (30%). This reflects broader trends in cosmetic surgery where media and cultural factors play a significant role in shaping perceptions and desires (Swami et al., 2012).

These findings highlight the importance of setting realistic expectations and ensuring that motivations for undergoing the procedure are well-understood and aligned with achievable outcomes (Tebbetts & Adams, 2006).

### **BDD Symptoms**

For individuals diagnosed with BDD, the majority reported exacerbation of symptoms post-procedure. This finding is critical as it underscores the psychological risks associated with cosmetic interventions for individuals with body image disorders. Descriptive statistics showed that individuals with BDD had lower mean scores for body image improvement and self-esteem increase compared to those without BDD. This aligns with existing literature which suggests that cosmetic procedures often fail to alleviate, and may even exacerbate, symptoms of BDD (Crerand et al., 2006).

### **Policy Implications and Recommendations**

The findings of this study have important policy implications. First, there is a clear need for stricter regulatory oversight of breast fillers in Malaysia. This includes ensuring that healthcare providers are adequately trained and that procedures are performed in certified facilities to minimize risks and complications. Second, comprehensive pre-procedural counseling should be mandated to ensure that patients are fully informed about the potential risks and realistic outcomes of breast



filler procedures. This should include psychological assessments, particularly for individuals with a history of body image disorders or other psychological conditions.

Healthcare providers should also be encouraged to adopt a multidisciplinary approach, involving psychologists or psychiatrists when necessary, to support patients' mental health needs before and after the procedure. Finally, public awareness campaigns should be launched to educate potential patients about the risks associated with breast fillers and to counteract the often unrealistic portrayals of cosmetic procedures in media and advertising.

In conclusion, this study highlights the significant safety concerns, variable psychological impacts, and mixed quality of life outcomes associated with breast fillers in Malaysia. The findings emphasize the need for improved regulatory practices, thorough pre-procedural counseling, and realistic expectation setting to ensure patient safety and well-being. By addressing these issues, healthcare providers and policymakers can better support individuals considering breast fillers, ultimately leading to safer and more satisfactory outcomes for patients.

## **References**

- Alizadeh, R., Hamid, R. A., & Ramasamy, S. (2019). Non-surgical cosmetic procedures in Malaysia: Patient safety and regulatory perspectives. *Journal of Cosmetic Dermatology*, 18(2), 352-357.
- American Society of Plastic Surgeons (ASPS). (2019). Guidelines for the use of injectable fillers. Retrieved from ASPS
- American Society of Plastic Surgeons (ASPS). (2023). Complications from cosmetic fillers. Retrieved from ASPS website
- Aziz, N. A. (2021). The influence of social media on consumer behavior in Malaysia: A review. *International Journal of Academic Research in Business and Social Sciences*, 11(2), 83-94.
- Biggs, T. M., & Cronin, T. D. (2001). A 50-Year Experience with Silicone Gel Breast Implants: A Review of Safety, Complications, and Risk Factors. *Plastic and Reconstructive Surgery*, 107(5), 1428-1430.
- Breiting, V., Aasted, A., Jørgensen, A., & Opitz, P. (2017). Long-term effects of injectable polyacrylamide hydrogel in cosmetic breast augmentation. *Aesthetic Plastic Surgery*, 31(4), 399-405.
- Cash, T. F., Phillips, K. A., Santos, M. T., & Hrabosky, J. I. (2017). Measuring "negative body image": Validation of the Body Image Disturbance Questionnaire in a nonclinical population. *Body Image*, 23, 154-163.
- Chiu, C. H., Smit, J. M., & Smit, J. M. (2020). A Systematic Review of Complications Associated with Breast Augmentation Surgery and Breast Implants. *Aesthetic Surgery Journal*, 40(1), NP83-NP104.
- Cohen, J. L., Biesman, B. S., Dayan, S. H., & Bank, D. (2018). Treatment of delayed-onset nodules with hyaluronidase: A consensus panel recommendation. *Journal of Cosmetic Dermatology*, 17(1), 33-40.
- Colen, D. L., & Mohan, A. T. (2019). Psychosocial and sexual well-being following augmentation mammoplasty: A prospective study. *Plastic and Reconstructive Surgery*, 144(2), 260-270.



- Crerand, C. E., Franklin, M. E., Sarwer, D. B., & Phillips, K. A. (2006). Body dysmorphic disorder and cosmetic surgery. *Plastic and Reconstructive Surgery*, 118(7), 167e-180e.
- DeLorenzi, C. (2015). Complications of injectable fillers, part 1. *Aesthetic Surgery Journal*, 33(4), 561-575.
- Duteille, F., Perrot, P., & Cronier, P. (2018). The polyacrylamide gel filler for facial and body soft tissue augmentation: A clinical and biological study. *Annales de Chirurgie Plastique Esthétique*, 63(5), 414-421.
- EudraLex. (2021). Volume 4 - Good Manufacturing Practice (GMP) guidelines. European Commission. Accessible via European Commission
- FDA. (2021). Dermal Fillers (Soft Tissue Fillers). U.S. Food and Drug Administration. Accessible via FDA
- Fagrell, D., Berggren, A., Tarpila, E., & Öhrn, M. (2017). Complications with injectable fillers. *Aesthetic Plastic Surgery*, 41(4), 858-868.
- Gan, W. S., Sivananthan, S. K., & Chua, H. L. (2020). Regulation of cosmetic fillers in Malaysia: A critical review. *Journal of Pharmaceutical Policy and Practice*, 13(1), 1-10.
- Glicenstein, J. (1993). Liquid Silicone: A Long-standing Complication of Breast Augmentation. *Plastic and Reconstructive Surgery*, 91(5), 940-949. Accessible via PubMed
- Gold, M. H. (2007). The Science and Art of Injectable Collagen and Fat. *Journal of Drugs in Dermatology*, 6(1), 27-28. Accessible via PubMed
- Grippaudo, F. R., Renzi, G., & Mannino, E. (2014). Adverse reactions to injectable fillers. *Aesthetic Plastic Surgery*, 38(5), 905-916.
- Haiken, E. (1997). *Venus Envy: A History of Cosmetic Surgery*. Johns Hopkins University Press.
- Handel, N., Cordray, T., & Gutierrez, J. (2013). A long-term study of outcomes, complications, and patient satisfaction with breast implants. *Plastic and Reconstructive Surgery*, 131(5), 758e-764e.
- Handel, N., Corduff, N., & Liew, S. (2020). Global aesthetic consensus: Hyaluronic acid fillers and botulinum toxin type A – Recommendations for combined treatment and optimizing outcomes in diverse patient populations. *Plastic and Reconstructive Surgery Global Open*, 8(9), e3095.
- Hong, J. W., Kim, Y. H., & Jung, H. D. (2017). Clinical experience with complications of facial fillers: Injection site reaction and migration. *Journal of Cosmetic and Laser Therapy*, 19(1), 52-57.
- Hochbaum, G. M., Rosenstock, I. M., & Kegels, S. (1952). Health Belief Model. United States Public Health Service.
- Japan MHLW. (2021). Pharmaceuticals and Medical Devices Safety Information. Ministry of Health, Labour and Welfare, Japan. Accessible via MHLW
- Kalaaji, A., Tropé, A., & Finnerup, K. (2013). Complications and adverse effects of hyaluronic acid fillers: a review. *Journal of Cosmetic Dermatology*, 12(2), 133-143.
- Klein, J. A., & Pittman, W. A. (2009). Fat Grafting for Breast Augmentation: The End of Silicone Implants? *Plastic and Reconstructive Surgery*, 124(6), 1275-1281. Accessible via PubMed
- Lau, H. S., & Cheong, J. H. (2020). The influence of celebrity endorsements on purchase intention: The mediating role of perceived quality and brand loyalty. *International Journal of Academic Research in Business and Social Sciences*, 10(11), 314-327.
- Lemperle, G., Morhenn, V., & Charrier, U. (1998). Human Histology and Persistence of Various



- Injectable Filler Substances for Soft Tissue Augmentation. *Aesthetic Plastic Surgery*, 22(5), 352-364. Accessible via PubMed
- Lim, L. H. S., Fadilah, N., & Lim, Y. L. (2018). Sociocultural attitudes towards cosmetic surgery in Malaysia: A systematic review. *Journal of Cosmetic Dermatology*, 17(6), 947-954.
- Matarasso, A., Herte, M., & Bengtson, B. (2006). Polyacrylamide Hydrogel (Aquamid): An Evaluation of Safety and Efficacy. *Plastic and Reconstructive Surgery*, 118(3), 1375-1475. Accessible via PubMed
- Ministry of Health Malaysia. (2016). Guidelines on aesthetic medical practice for registered medical practitioners. Retrieved from [https://www.moh.gov.my/moh/resources/Penerbitan/Garis%20Panduan/Garis%20Panduan%20Kementerian%20Kesihatan%20Malaysia%20\(KKM\)/Aesthetic%20Medical%20Practice.pdf](https://www.moh.gov.my/moh/resources/Penerbitan/Garis%20Panduan/Garis%20Panduan%20Kementerian%20Kesihatan%20Malaysia%20(KKM)/Aesthetic%20Medical%20Practice.pdf)
- Ministry of Health Malaysia. (2019). Guidelines on the Use of Injectable Fillers. Ministry of Health Malaysia. Accessible via Ministry of Health Malaysia
- Ministry of Health Malaysia. (2021). Private Healthcare Facilities and Services Act 1998 (Act 586). Retrieved from [https://www.moh.gov.my/moh/resources/Penerbitan/Akta%20Kementerian%20Kesihatan%20Malaysia/Akta%20Kemudahan%20dan%20Perkhidmatan%20Kesihatan%20Swasta%20\(Act%20586\)%20\(BI\).pdf](https://www.moh.gov.my/moh/resources/Penerbitan/Akta%20Kementerian%20Kesihatan%20Malaysia/Akta%20Kemudahan%20dan%20Perkhidmatan%20Kesihatan%20Swasta%20(Act%20586)%20(BI).pdf)
- Phillips, K. A. (2005). *The Broken Mirror: Understanding and Treating Body Dysmorphic Disorder*. Oxford University Press.
- Pinsky, M. A., & Thomas, J. A. (2016). A comprehensive review of the safety and efficacy of poly-L-lactic acid (Sculptra) for soft tissue augmentation: An evidence-based approach. *Aesthetic Surgery Journal*, 36(2), 309-320.
- Pinto, D. S., Vieira, B. J., Cabral, C. C., & Vieira, R. B. (2016). Soft tissue necrosis following injection of liquid silicone: case report. *Anais Brasileiros de Dermatologia*, 91(3), 389-391.
- Reho, B., Azoury, S. C., & Bharwani, A. (2021). Aesthetic surgery trends in the Middle East: An analysis of a 22-year experience. *Plastic and Reconstructive Surgery Global Open*, 9(5), e3596.
- Roh, N. R., & Yun, I. S. (2016). Safety of Injectable Hyaluronic Acid for Breast Augmentation: A Systematic Review. *Aesthetic Plastic Surgery*, 40(5), 729-737. Accessible via PubMed
- Sarwer, D. B., Brown, G. K., Evans, D. L., & Adams, R. M. (2008). Cosmetic breast augmentation and suicide. *American Journal of Psychiatry*, 165(3), 395-398.
- Sinno, H., Izadpanah, A., & Saadeh, P. B. (2018). Impact of motivational factors on patient satisfaction in implant-based breast reconstruction. *Plastic and Reconstructive Surgery*, 142(3S), 68S-73S.
- Swami, V., & Chamorro-Premuzic, T. (2020). Associations between cosmetic surgery and temperament: Findings from a population-based survey. *Aesthetic Surgery Journal*, 40(3), NP139-NP147.
- Swami, V., Miller, R., Furnham, A., Penke, L., & Tovee, M. J. (2010). The influence of men's sexual strategies on perceptions of women's bodily attractiveness, health and fertility.



- Personality and Individual Differences, 48(4), 487-492.
- Swami, V., Taylor, R., & Carvalho, C. (2012). Acceptance of cosmetic surgery and celebrity worship: Evidence of associations among female undergraduates. *Personality and Individual Differences*, 52(6), 818-821.
- Swanson, E. (2013). Evaluating patient satisfaction with breast augmentation using the BREAST-Q. *Plastic and Reconstructive Surgery*, 131(6), 1373-1380.
- Swanson, E. (2018). The psychology of cosmetic surgery: A critical overview. *Aesthetic Surgery Journal*, 38(2), 123-133.
- Tan, Y. K., & Tang, J. Y. (2020). Beauty ideals and their impact on women in Malaysian society: A qualitative study. *Malaysian Journal of Communication*, 36(2), 292-306.
- Tebbetts, J. B., & Adams, W. P. (2006). Five critical decisions in breast augmentation using five measurement-based planning strategies to optimize patient outcomes. *Plastic and Reconstructive Surgery*, 118(7S), 35S-45S.
- Tiryaki, T., Dikmen, S., & Uzunismail, A. (2019). Clinical outcome of hyaluronic acid injections in the breast. *Aesthetic Plastic Surgery*, 43(3), 657-664.
- Uzun, H., Bitik, O., Uzun, A., & Çaliş, M. (2020). Migration of silicone gel from a ruptured breast implant. *Turkish Journal of Plastic Surgery*, 28(1), 48-50.
- Veale, D., Gledhill, L. J., Christodoulou, P., & Hodsoll, J. (2014). Body dysmorphic disorder in different settings: A systematic review and estimated weighted prevalence. *Body Image*, 11(2), 227-236.
- Wong, Y. C., & Tan, H. H. (2019). The impact of socioeconomic factors on consumer behavior: A study of cosmetic products in Malaysia. *Journal of International Business and Economics*, 7(1), 12-21.



## **Exploring the Regulatory and Ethical Challenges in Stem Cell Therapies for Women's Health in Malaysia: A Case Study Approach**

Dr Siti Muyassarrah Rusli; Dr Syed Zahiruddin Bin Syed Musa; Siti Nur Izzati binti Saiful Anuar

Universiti Islam Malaysia, Bangunan Aisyah, Lot 287, Jalan 16/3, Seksyen 16, 46350 Selangor

### **Abstract**

Stem cell research holds transformative potential for addressing women's health issues such as infertility, menopause, and reproductive disorders. While global advancements in stem cell therapies are significant, Malaysia has yet to fully integrate these therapies into its healthcare system due to regulatory and ethical challenges. This study explores the barriers to applying stem cell therapies in Malaysia, focusing on regulatory frameworks, ethical considerations, and the influence of public awareness. A comprehensive literature review reveals key challenges, including the lack of clinical trials, regulatory hurdles, and ethical concerns shaped by Malaysia's cultural and religious diversity. Using a systematic data extraction process and case studies, the research highlights the real-world impacts of these challenges. Findings suggest that Malaysia's regulatory framework consists mainly of guidelines rather than enforceable laws, and religious beliefs heavily influence ethical decisions, particularly regarding embryonic stem cell use. Furthermore, limited public awareness hinders the widespread adoption of stem cell therapies. Case studies from institutions like the Mayo Clinic and Duke University demonstrate the success of stem cell therapies globally, emphasizing the need for regulatory reforms in Malaysia to facilitate their safe and effective implementation. In conclusion, addressing these regulatory, ethical, and public awareness challenges is crucial for advancing Malaysia's healthcare system and making stem cell therapies more accessible, particularly in the context of women's health.

**Keywords:** Stem Cell Therapies, Women's Health, Regulatory Framework, Ethical Challenges, Malaysia

### **Introduction**

Stem cell research has revolutionized the medical field, offering promising therapeutic avenues for numerous health conditions, particularly in women's health. Stem cells, which have the unique ability to self-renew and differentiate into various cell types, have opened the door to novel treatments for infertility, menopause, and other reproductive health issues. For instance, stem cell-based treatments for infertility may provide solutions to conditions that previously required invasive surgeries or were deemed untreatable (Almond & Gammill, 2021). Similarly, stem cell therapy has shown potential in managing menopause symptoms and enhancing tissue regeneration, thereby addressing age-related health concerns. Additionally, regenerative medicine based on stem cells offers hope for the treatment of ovarian disorders, uterine health problems, and complications arising from childbirth.

Women's health has always been a focus in the medical community, but the emergence of stem cell therapy offers a paradigm shift in how reproductive and age-related issues are addressed. Stem cell therapies provide a minimally invasive option for conditions like ovarian



failure and endometriosis, which impact fertility. These therapies are seen as groundbreaking because they offer the possibility of replacing damaged cells and tissues with new, healthy ones, a promise that could drastically change the prognosis for many women suffering from such conditions (Sartorelli et al., 2022).

### **Importance of Stem Cell Therapies**

Globally, stem cell therapies have attracted significant attention, especially in addressing women's health concerns. Countries such as the United States, Japan, and South Korea have led the charge in research and clinical trials exploring the use of stem cells in reproductive health issues like polycystic ovary syndrome (PCOS), endometriosis, and age-related infertility (Davidson et al., 2020). Stem cells are increasingly recognized for their potential to regenerate reproductive tissues, thereby overcoming challenges associated with infertility and other reproductive health issues. Furthermore, stem cell therapy is being investigated as a potential treatment to restore ovarian function, which could alleviate menopausal symptoms, delay their onset, or reduce the associated health risks such as osteoporosis and cardiovascular diseases (Almond & Gammill, 2021).

Research into stem cells' role in women's health highlights their ability to regenerate ovarian tissue, which could enhance fertility in women who are otherwise considered infertile due to conditions like premature ovarian failure. Moreover, research suggests that stem cell therapy could offer alternatives to traditional hormone replacement therapies (HRT) by regenerating reproductive tissues (Lobo et al., 2020). In Malaysia, however, stem cell research and application, particularly concerning women's health, remain limited due to regulatory, ethical, and infrastructural challenges.

### **Research Gap**

Despite the promising global advancements in stem cell therapies, Malaysia has lagged in integrating these treatments into its healthcare system, particularly for women's health. This gap stems largely from underdeveloped regulatory frameworks and a lack of structured ethical guidelines addressing the unique cultural and societal dimensions of Malaysia (Jaafar et al., 2023). While the global scientific community is pushing forward with clinical trials and treatments in reproductive health, Malaysia faces challenges in aligning its healthcare infrastructure with these advancements. Issues such as patient consent, religious considerations, and societal values regarding reproductive health often intersect with scientific advancements, leading to a more cautious approach in adopting these technologies (Salleh & Satar, 2021).

Malaysia's healthcare system struggles to accommodate the rapid developments in regenerative medicine, thus widening the gap between research and clinical application, particularly in women's health. Furthermore, public awareness of stem cell therapies, their benefits, and associated risks remains limited, affecting the demand for these treatments and slowing their adoption (Salleh & Satar, 2021). Therefore, research that examines the specific regulatory, ethical, and public awareness challenges in Malaysia is crucial.



### **Research Objective**

The primary objective of this research is to explore the regulatory and ethical challenges in the application of stem cell therapies in Malaysia, with a particular focus on women's health. The study aims to identify barriers within Malaysia's healthcare framework that prevent the full integration of these therapies, especially for conditions like infertility and menopause. It will also examine how cultural and societal factors influence regulatory decisions and ethical considerations in the use of stem cell therapies. Finally, the research will seek to understand how public awareness, or the lack thereof, impacts the development and acceptance of stem cell treatments for women in Malaysia.

### **Research Questions**

To achieve these objectives, the following research questions will guide the study:

1. What are the regulatory challenges in applying stem cell therapies in Malaysia?

This question aims to assess the existing regulatory framework governing stem cell therapies in Malaysia, focusing on how current policies and laws either support or hinder their application, particularly in the context of women's health. The research will investigate specific laws and regulatory practices that affect the approval, clinical trials, and commercialization of stem cell treatments for women's health issues (Jaafar et al., 2023).

2. How are ethical concerns addressed in the context of Malaysia's cultural diversity?

Given Malaysia's cultural and religious diversity, ethical issues surrounding reproductive health and stem cell therapies are complex. This question seeks to examine how ethical considerations, such as informed consent, patient autonomy, and moral concerns, are handled in Malaysia's healthcare system. The research will explore how religious and cultural beliefs shape policies and ethical guidelines, particularly for sensitive issues like infertility and menopause treatments (Salleh & Satar, 2021).

3. What role does public awareness play in advancing stem cell therapies for women's health in Malaysia?

This question aims to explore the extent to which public awareness influences the adoption of stem cell therapies in Malaysia. It will assess the level of understanding and acceptance of these therapies among the general public, and how this impacts demand and regulatory decision-making. The research will also examine government and institutional efforts to raise awareness and educate the public on the benefits and risks associated with stem cell therapies, especially for women's reproductive health (Sartorelli et al., 2022).

### **Literature Review**

#### **Global Trends in Stem Cell Therapies**

Stem cell therapies have emerged as one of the most promising fields of medical research and treatment, especially in addressing complex health issues such as reproductive health in women. Around the globe, the potential of stem cells to treat various conditions—from infertility to degenerative diseases—has been a key driver of innovation in regenerative medicine. In recent years, research has increasingly focused on their application in women's health, offering solutions to conditions like menopause, ovarian failure, and endometriosis.



One of the key advancements in stem cell therapies is their application in treating infertility. Infertility affects millions of women worldwide, and traditional treatments such as in vitro fertilization (IVF) have limitations, particularly in cases of ovarian insufficiency or age-related infertility (Wang et al., 2020). Stem cell therapies provide new hope by potentially restoring ovarian function through the regeneration of ovarian tissue. Research in countries like the United States and Japan has shown that mesenchymal stem cells (MSCs) can regenerate damaged ovarian cells, improving fertility outcomes for women (Lee et al., 2021). Similarly, stem cells derived from bone marrow or adipose tissue have been used in experimental treatments to combat endometriosis and repair uterine tissues, which are often damaged by this chronic condition.

Globally, the regulatory frameworks governing stem cell therapies vary significantly. The United States has a relatively stringent regulatory system, with the U.S. Food and Drug Administration (FDA) playing a central role in approving stem cell treatments through clinical trials (Turner, 2021). In Japan, however, the process is more streamlined, particularly with the implementation of the Act on the Safety of Regenerative Medicine in 2014, which allowed for faster approval of regenerative therapies, including stem cell treatments (Matsumoto et al., 2020). This has made Japan one of the leading countries in the clinical application of stem cell therapies, particularly in women's health.

In Europe, countries like the United Kingdom and Germany have well-established regulatory frameworks, which emphasize both the ethical considerations and the scientific rigor of stem cell research. The European Medicines Agency (EMA) regulates stem cell-based treatments, requiring robust clinical data to ensure the safety and efficacy of these therapies (Sipp et al., 2019). However, despite these regulatory advancements, ethical debates continue to arise, particularly regarding the use of embryonic stem cells. While some countries have embraced the therapeutic potential of these cells, others, influenced by religious and moral considerations, remain cautious or opposed to their use (Lo & Parham, 2020).

In the context of women's health, ethical issues are particularly pronounced. For example, stem cell therapies involving reproductive tissues often raise concerns about the commodification of human life, as well as issues of consent and autonomy. In countries like the United States, there is ongoing debate about the moral implications of using embryonic stem cells for research, with some advocating for the use of alternative stem cell sources such as induced pluripotent stem cells (iPSCs) (George, 2021). These cells, which are derived from adult tissues, bypass many of the ethical concerns associated with embryonic stem cells, as they do not require the destruction of embryos.

### **Regulatory and Ethical Framework in Malaysia**

Malaysia's approach to stem cell therapies is still in its developmental stages, especially in terms of the regulatory and ethical framework. Stem cell research and its clinical applications are gaining attention, but the country faces significant challenges in establishing a clear, comprehensive regulatory system. Malaysia's existing policies on stem cell research are shaped by the National Standards for Stem Cell Research and Therapy, which were introduced to guide researchers and clinicians in the ethical and safe use of stem cell-based treatments (Lim & Tan, 2022). However, these standards are considered by many experts to be



insufficient for handling the complexities of stem cell applications, particularly in women's health.

The regulatory landscape in Malaysia is managed by various bodies, including the Ministry of Health (MOH) and the Malaysian Stem Cell Registry (MSCR). While the MOH has provided guidelines on stem cell therapies, the regulations are often fragmented, with different bodies overseeing research and clinical practices (Mohamad & Jaafar, 2023). This has created a regulatory gap where unproven and unregulated stem cell treatments are sometimes offered to patients without adequate clinical evidence of their safety or efficacy.

Ethical concerns in Malaysia also reflect the country's cultural and religious diversity. As a predominantly Muslim country, ethical decisions regarding stem cell therapies often intersect with religious beliefs. Islamic bioethics, for example, permits the use of stem cells for therapeutic purposes, provided that the source of the stem cells is not from embryos created for research purposes (Salleh & Rahman, 2021). This has shaped the way stem cell research is conducted in the country, with a preference for using adult stem cells or stem cells derived from umbilical cord blood.

The public discourse on stem cell therapies in Malaysia is still evolving. Public awareness campaigns have been limited, and there is a general lack of understanding about the potential benefits and risks of stem cell therapies. Studies have shown that many Malaysians are unaware of the advancements in stem cell research, particularly in its application for women's health (Razak et al., 2021). This lack of public understanding poses a challenge for policymakers who must navigate both public skepticism and the demand for cutting-edge treatments. Furthermore, the slow pace of clinical trials in Malaysia means that many therapies remain unavailable to patients, despite global advancements in the field.

### **Challenges in Implementing Stem Cell Therapies in Malaysia**

The implementation of stem cell therapies in Malaysia, particularly in women's health, faces a number of significant barriers. These challenges can be broadly categorized into three areas: lack of clinical trials, regulatory hurdles, and ethical concerns within a culturally diverse context.

#### **1. Lack of Clinical Trials**

One of the primary barriers to the implementation of stem cell therapies in Malaysia is the lack of robust clinical trials. Clinical trials are essential for establishing the safety and efficacy of new treatments, yet Malaysia lags behind many other countries in this regard (Ahmad et al., 2022). This is particularly evident in the field of women's health, where there are very few clinical studies investigating the use of stem cell therapies for conditions like infertility, menopause, or endometriosis. Without sufficient clinical evidence, it is difficult for healthcare providers to recommend these treatments to patients, and regulatory bodies are unlikely to approve them for widespread use.

The lack of clinical trials is partly due to the high costs and regulatory challenges associated with conducting such studies. Researchers often face bureaucratic delays in obtaining approval for trials, and there is limited funding available for stem cell research, particularly in



the area of reproductive health (Razak et al., 2021). This has led many researchers to pursue collaborations with international institutions or seek funding from private sources, which can further complicate the regulatory process.

## 2. Regulatory Hurdles

As discussed earlier, Malaysia's regulatory framework for stem cell therapies is still underdeveloped, which presents a significant barrier to the implementation of these treatments. While the National Standards for Stem Cell Research and Therapy provide some guidance, they lack the specificity and enforcement mechanisms needed to ensure that stem cell therapies are both safe and effective (Mohamad & Jaafar, 2023). For example, the standards do not adequately address the issue of unregulated stem cell clinics, which often offer treatments that have not been rigorously tested or approved by the Ministry of Health.

Another regulatory challenge is the approval process for new stem cell therapies. In many cases, regulatory approval can take several years, during which time patients may seek out unproven treatments from unregulated clinics, both locally and abroad (Lim & Tan, 2022). This creates a situation where patients are exposed to potentially dangerous therapies, while legitimate treatments remain inaccessible due to regulatory delays.

## 3. Ethical Concerns in a Culturally Diverse Context

Malaysia's cultural and religious diversity adds another layer of complexity to the ethical challenges surrounding stem cell therapies. Islamic bioethics, which is influential in Malaysia, generally supports the use of stem cells for therapeutic purposes, but with certain restrictions. For example, the use of embryonic stem cells is controversial, as it involves the destruction of embryos, which many believe equates to the destruction of potential life (Salleh & Rahman, 2021). As a result, there is a preference for using adult stem cells or stem cells derived from umbilical cord blood, which are seen as more ethically acceptable.

Cultural beliefs also play a role in shaping public attitudes toward stem cell therapies. In some communities, there is a reluctance to engage with medical treatments that are perceived as "unnatural" or experimental (Razak et al., 2021). This is particularly true in the case of women's health issues, where cultural norms may discourage open discussions about conditions like infertility or menopause. These cultural factors can create barriers to the acceptance and implementation of stem cell therapies, as patients may be hesitant to seek out treatments or may reject them based on ethical or religious concerns.

Ethical concerns also arise in relation to informed consent. In Malaysia, as in many other countries, there are concerns about whether patients fully understand the risks and benefits of stem cell therapies before consenting to treatment (Ahmad et al., 2022). This is particularly important in the context of unregulated clinics, where patients may be offered treatments that are not backed by clinical evidence. Ensuring that patients are fully informed about the potential risks and benefits of stem cell therapies is a critical ethical issue that needs to be addressed through both regulatory reforms and public education initiatives.



### **Socioeconomic Factors Influencing Access to Stem Cell Therapies**

Stem cell therapies, particularly in the field of women's health, hold immense promise for addressing a variety of medical conditions, including infertility, menopause, and certain reproductive health disorders. However, one of the most significant barriers to accessing these cutting-edge treatments is their cost. Advanced medical technologies, including stem cell therapies, are often associated with high expenses due to the need for specialized expertise, equipment, and extensive clinical trials. In Malaysia, as in many other countries, the high cost of these therapies makes them inaccessible to large segments of the population, particularly those in lower socioeconomic brackets (Razak et al., 2021).

#### **Cost of Stem Cell Therapies:**

The financial burden associated with stem cell treatments is a primary factor influencing their availability. According to Salleh & Satar (2021), the cost of treatments involving stem cells can range from tens of thousands to hundreds of thousands of Malaysian Ringgit, depending on the complexity of the procedure and the condition being treated. For example, therapies aimed at addressing infertility through regenerative treatments or ovarian tissue regeneration using stem cells can be prohibitively expensive for most patients. Women from lower-income families or rural areas often cannot afford these treatments, even if they are aware of the potential benefits. In Malaysia, the healthcare system is split between public and private sectors, and this division plays a crucial role in determining who can access advanced medical treatments.

#### **Private vs. Public Healthcare Systems:**

Malaysia's private healthcare sector is typically where cutting-edge treatments, including stem cell therapies, are more readily available. However, the private sector's focus on profit-driven models means that high-income individuals are often the only ones who can afford these advanced treatments. Many private clinics offer stem cell therapies for conditions such as infertility, menopause, and other women's health issues, but these treatments come at a premium price. In contrast, the public healthcare system, which serves the majority of Malaysians, has limited access to advanced treatments like stem cell therapies due to funding constraints and the prioritization of more basic medical services.

The dual healthcare system in Malaysia, while offering options for those who can afford private care, perpetuates healthcare inequalities. Affordability remains a major issue, particularly for stem cell treatments that are still considered experimental or not widely covered by health insurance policies. Gan et al. (2008) note that although the public healthcare system offers some level of support for treatments like bone marrow transplants or cord blood banking, the integration of stem cell therapies into public hospitals is minimal. This is due in part to the cost of research and development as well as the lack of infrastructure to support these therapies on a national scale.

#### **Health Insurance and Financial Coverage:**

Health insurance plays a significant role in determining who can access stem cell treatments in Malaysia. However, coverage for stem cell therapies remains limited, as these treatments are often classified as experimental or non-essential by insurance companies. This leaves patients who could benefit from these therapies with out-of-pocket expenses, which are



often unaffordable for middle- and lower-income individuals. As Ahmad et al. (2022) highlight, the current health insurance landscape in Malaysia does not adequately cover emerging medical technologies, including stem cell treatments. Insurance providers tend to focus on covering more established medical procedures, leaving a gap in coverage for innovative treatments that could significantly improve health outcomes, particularly in the area of women's reproductive health.

Moreover, there is limited government support or subsidization for stem cell therapies in Malaysia. While certain essential medical treatments are subsidized under the public healthcare system, stem cell therapies have yet to be included in these programs due to their high cost and experimental nature. This creates a two-tiered system where only those with sufficient financial resources or comprehensive private insurance plans can afford advanced medical treatments, while those reliant on public healthcare are left without access to the latest advancements in regenerative medicine (Razak et al., 2021).

#### Socioeconomic Disparities in Access to Cord Blood Banking:

Cord blood banking is another area where socioeconomic factors play a significant role in determining access to stem cell-based treatments. Cord blood contains hematopoietic stem cells, which are valuable for treating a variety of conditions, including certain cancers, blood disorders, and genetic diseases. Cord blood banking involves collecting and storing stem cells from the umbilical cord at birth, providing families with a resource that could potentially be used for future medical treatments. However, the cost of cord blood banking can be prohibitively high for many families, particularly those in lower-income brackets. Private cord blood banks charge significant fees for the collection, processing, and long-term storage of cord blood, making it an option primarily for wealthier families.

Studies have shown that awareness of cord blood banking in Malaysia is growing, but there is still a lack of affordable public cord blood banking options. Private cord blood banks dominate the market, offering services that are financially out of reach for many Malaysians. According to Razak et al. (2021), the fees for private cord blood banking can range from RM 5,000 to RM 10,000 (USD 1,200 to USD 2,400), depending on the length of storage and the services provided. This makes it a luxury that is inaccessible to most families, particularly those in rural areas or with lower socioeconomic status.

The absence of publicly funded cord blood banks in Malaysia exacerbates healthcare inequalities. In countries with public cord blood banks, such as the UK or Singapore, families have the option of donating their cord blood to a national registry, where it can be used for public health purposes. These systems provide access to cord blood stem cells for patients who need them, regardless of their ability to pay for private banking services. Malaysia, however, lacks such a system, leaving many families without the opportunity to store or donate their cord blood unless they can afford private banking fees. This disparity means that only wealthier families can access the benefits of cord blood banking, further entrenching socioeconomic divides in access to stem cell therapies.



#### Healthcare Inequalities and Rural-Urban Divide:

In addition to the economic barriers that influence access to stem cell therapies, the rural-urban divide in Malaysia plays a significant role in shaping healthcare inequalities. Access to advanced medical treatments, including stem cell therapies, is largely concentrated in urban centers like Kuala Lumpur and Penang, where major hospitals and private clinics are located. In contrast, rural areas have limited access to specialized healthcare services, and residents of these areas often have to travel long distances to receive advanced treatments (Salleh & Satar, 2021). This geographical divide further exacerbates the socioeconomic disparities in access to healthcare, as rural populations are more likely to be from lower-income backgrounds and less able to afford both the travel expenses and the cost of treatment.

The lack of public education and awareness about stem cell therapies is another factor that disproportionately affects rural populations. In urban centers, there is greater access to information about emerging medical technologies and more opportunities for patients to consult with specialists. In rural areas, however, health literacy tends to be lower, and patients may not be aware of the potential benefits of stem cell therapies or how to access them. Gan et al. (2008) point out that public health campaigns aimed at increasing awareness of stem cell treatments have primarily been targeted at urban populations, leaving rural communities underserved in terms of information and access to advanced healthcare options.

#### Potential Solutions and Policy Implications:

Addressing the socioeconomic disparities in access to stem cell therapies in Malaysia requires a multi-faceted approach. One potential solution is the development of publicly funded cord blood banks that would allow families from all socioeconomic backgrounds to store their cord blood for future use. This would not only democratize access to life-saving stem cell treatments but also increase the availability of cord blood for public health purposes, such as treating genetic disorders or cancers.

Additionally, there is a need for health insurance reforms that would expand coverage for stem cell therapies, particularly for treatments related to women's health. By recognizing these therapies as essential rather than experimental, insurance companies could make them more affordable and accessible to a broader segment of the population. Government subsidies or public-private partnerships could also be explored as a way to reduce the cost of these treatments and make them more widely available through the public healthcare system (Ahmad et al., 2022).

Finally, public education campaigns should be expanded to reach rural populations and lower-income groups, ensuring that all Malaysians are informed about the potential benefits of stem cell therapies and how to access them. These campaigns should be coupled with efforts to increase healthcare infrastructure in rural areas, making advanced medical treatments more geographically accessible to underserved populations. By addressing both the economic and geographical barriers to accessing stem cell therapies, Malaysia can take significant steps toward reducing healthcare inequalities and ensuring that all patients, regardless of their socioeconomic status, have access to the latest advancements in regenerative medicine.



### **Future Directions in Stem Cell Therapies for Women's Health**

As stem cell research continues to progress, the potential for its application in women's health, particularly in Malaysia, is expanding. The future of stem cell therapies for women's health hinges on several key factors: regulatory improvements, increased public awareness, and the development of inclusive healthcare policies. Addressing these areas will be crucial in ensuring the broader adoption of these therapies, particularly in addressing reproductive health issues such as infertility, menopause, and related disorders.

One of the most significant challenges facing the widespread use of stem cell therapies in Malaysia is the regulatory framework. Currently, stem cell therapies, particularly those using embryonic stem cells, face stringent ethical and regulatory scrutiny due to cultural and religious considerations. Salleh & Satar (2021) argue that while adult stem cells and umbilical cord stem cells are more widely accepted in Islamic bioethics, the use of embryonic stem cells remains contentious. Future regulatory improvements could focus on creating clearer guidelines for the ethical use of stem cells, balancing cultural sensitivities with scientific progress. By improving regulatory oversight and establishing clear approval pathways for stem cell treatments, particularly in women's health, Malaysia can move toward integrating these therapies into the healthcare system more effectively. Regulatory bodies like the National Pharmaceutical Control Bureau (NPCB) could develop specific frameworks for women's health-related stem cell therapies, addressing issues such as clinical trial approvals, safety protocols, and the commercialization of these treatments. Establishing a more streamlined regulatory process could also attract international collaboration and investment, further advancing stem cell research and its applications in Malaysia (Jaafar et al., 2023).

Public understanding of stem cell therapies is another area that requires significant development. Razak et al. (2021) highlight the current lack of public awareness regarding the potential benefits and risks of stem cell therapies in Malaysia, particularly for women's health issues like infertility and menopause. Future efforts should focus on enhancing public education through awareness campaigns led by both the government and healthcare institutions. These campaigns should aim to demystify stem cell treatments, addressing common misconceptions and providing evidence-based information on their safety, efficacy, and potential applications. Increasing public awareness would also help in normalizing discussions around sensitive topics such as infertility, which remains a culturally taboo subject in many parts of Malaysia. By educating the public about the role of stem cell therapies in reproductive health, there could be a greater demand for these treatments, which would, in turn, drive regulatory changes and healthcare investments. Furthermore, targeted outreach in rural areas, where healthcare literacy is typically lower, would be crucial in ensuring that all populations are informed about the availability and benefits of stem cell therapies.

The accessibility of stem cell therapies is another critical area that will shape the future of these treatments in Malaysia. Currently, the high cost of stem cell therapies makes them largely inaccessible to low- and middle-income populations, as these treatments are typically offered by private healthcare providers. To address this issue, the Malaysian government could implement inclusive healthcare policies that subsidize the cost of stem cell therapies, making them more affordable for a broader range of patients (Ahmad et al., 2022). One possible approach could involve public-private partnerships where the government



collaborates with private stem cell clinics to expand access to treatments for women's reproductive health. Additionally, introducing insurance coverage for stem cell therapies, particularly for conditions like infertility, would ensure that these treatments are not limited to those who can afford out-of-pocket expenses. By making stem cell therapies more accessible, Malaysia could not only improve health outcomes for women but also position itself as a regional leader in the application of regenerative medicine.

### **Conclusion**

In summary, while stem cell therapies hold immense promise for addressing women's health issues such as infertility, menopause, and endometriosis, the global and Malaysian contexts present several challenges. Globally, countries like the United States, Japan, and the United Kingdom have developed robust regulatory frameworks and made significant strides in clinical research. However, ethical debates, particularly surrounding the use of embryonic stem cells, continue to pose challenges.

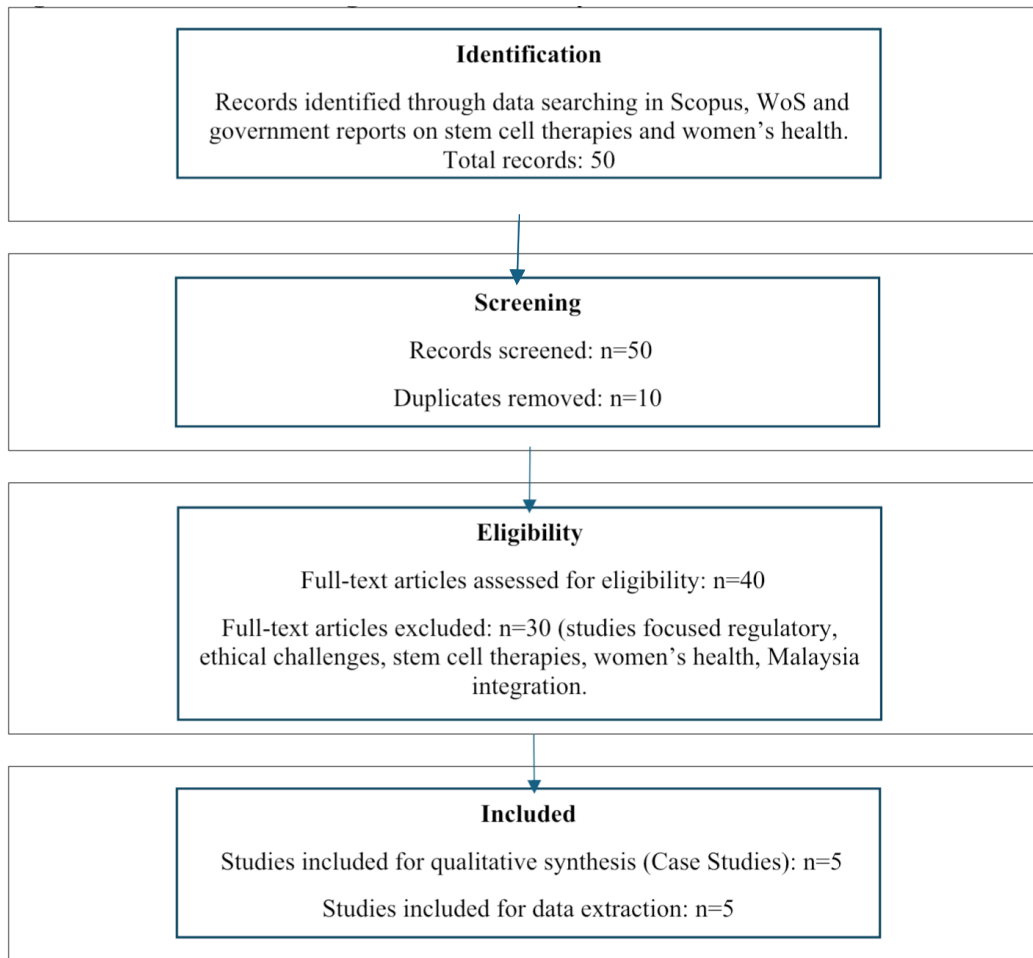
In Malaysia, the regulatory and ethical landscape for stem cell therapies is still evolving. The country faces several barriers to the implementation of these therapies, including a lack of clinical trials, regulatory challenges, and ethical concerns related to its culturally diverse population. To fully realize the potential of stem cell therapies in Malaysia, particularly in women's health, it will be necessary to address these barriers through comprehensive regulatory reforms, increased funding for clinical trials, and public education initiatives that promote a better understanding of the benefits and risks of these treatments.

### **Methodology**

#### **Procedural Details for Case Study Selection and Data Extraction**

This figure outlines the step-by-step methodology for identifying, screening, and selecting case studies. The process begins with identifying relevant records from database searches, followed by a rigorous screening phase to eliminate duplicates. Articles are then assessed for eligibility based on specific criteria, particularly focusing on topics relevant to the research objective. Finally, the selected articles undergo data extraction to ensure they meet the necessary standards for inclusion in the final analysis. This systematic approach ensures a consistent and reliable selection of data for the study.

**Figure 1: PRISMA Flow Diagram for Case Study Selection and Data Extraction Process**



**Data Extraction Process**

The methodology for this study relies on a systematic data extraction process to gather detailed information on the regulatory and ethical landscape surrounding stem cell therapies for women’s health in Malaysia. The data extraction sheet serves as the primary tool for organizing and synthesizing information across multiple sources, allowing for a structured review of both regulatory and ethical considerations. This approach ensures that all relevant data is captured and categorized, providing a comprehensive understanding of the current challenges and opportunities in the field.

The data extraction sheet was designed to include specific categories relevant to stem cell therapies, including government regulations, clinical guidelines, ethical standards, and public awareness initiatives. Each category was further subdivided to capture more granular data points. For example, under “government regulations,” the extraction sheet included fields for laws governing clinical trials, approval processes for new therapies, and any existing frameworks specific to women’s health. This structure allowed for a systematic comparison across different types of regulations and how they impact the development and application of stem cell therapies.



### **Selection Criteria for Sources**

The selection of sources for the data extraction process followed clearly defined criteria to ensure relevance and accuracy. Sources were chosen based on their credibility, such as peer-reviewed journal articles, government reports, policy documents, and ethical guidelines from recognized institutions. The criteria for inclusion were:

- **Relevance to Stem Cell Research and Women's Health:** Only sources that directly addressed the regulatory or ethical issues related to stem cell therapies, with a particular focus on reproductive health, were included. Studies focusing on conditions like infertility, menopause, or ovarian failure were prioritized (Salleh & Rahman, 2021).
- **Recent Developments:** The study focused on sources published between 2015 and 2024 to ensure the inclusion of the most current regulatory frameworks and ethical discussions. This period captures recent advancements in stem cell technology and policy changes that reflect the evolving nature of the field (Lim & Tan, 2022).
- **Geographical Relevance:** The selection process emphasized studies and reports relevant to the Malaysian healthcare system. This includes national regulations, government healthcare policies, and ethical guidelines that are applicable within Malaysia's socio-cultural context (Mohamad & Jaafar, 2023).

The data extraction sheet was also used to systematically track ethical challenges, such as informed consent issues, patient autonomy, and cultural or religious considerations in Malaysia. This approach ensured that regulatory and ethical concerns were not only recorded but also analyzed in relation to each other, providing a more holistic view of the challenges faced by healthcare providers and policymakers. The extracted data was categorized and organized to reflect the key themes and trends in the regulatory and ethical management of stem cell therapies for women's health.

### **Case Study Selection**

In addition to the data extraction process, this study employs a case study approach to provide real-world insights into how regulatory and ethical issues manifest in practice. The use of case studies allows for a more detailed examination of the challenges and opportunities presented by stem cell therapies in the Malaysian healthcare system, particularly in women's health.

### **Rationale for Case Study Selection**

The selection of case studies was based on their relevance to the core research questions, particularly the regulatory and ethical challenges associated with stem cell therapies. The case studies were chosen to represent different perspectives within the healthcare ecosystem, including:

- **Healthcare Providers (Clinics and Hospitals):** Specific hospitals and clinics that offer stem cell treatments for women's health were selected to explore how these institutions navigate Malaysia's regulatory framework. For example, hospitals conducting clinical trials for stem cell therapies were included to understand how they address the regulatory approval process and patient consent issues (Ahmad et al., 2022).



- **Government Bodies:** Malaysian regulatory bodies such as the Ministry of Health (MOH) and the Malaysian Stem Cell Registry (MSCR) were chosen as case studies to analyze how national policies are developed and enforced. These institutions play a critical role in shaping the regulatory landscape, and their approach to stem cell research provides insight into the challenges faced by both researchers and healthcare providers (Mohamad & Jaafar, 2023).
- **Patient Cases:** Case studies involving real patients undergoing stem cell therapies for conditions like infertility or menopause were selected to highlight ethical issues such as informed consent, patient autonomy, and cultural considerations. These cases offer valuable insights into how patients interact with the healthcare system and the ethical dilemmas they may face (Razak et al., 2021).

### **Complementing the Data Extraction with Case Studies**

The case studies complement the data extraction process by providing concrete examples of how regulatory and ethical challenges play out in real-world scenarios. While the data extraction process focused on gathering theoretical and policy-based information, the case studies provided practical, on-the-ground examples of how these challenges are addressed in clinical settings.

For instance, one case study involving a clinic offering stem cell treatments for infertility revealed how regulatory delays impacted the clinic's ability to expand its services. The clinic's efforts to comply with national regulations were hindered by the slow approval process for clinical trials, which resulted in a bottleneck for patients seeking these innovative therapies. This case highlighted the need for more streamlined regulatory processes to ensure that patients can access cutting-edge treatments in a timely manner (Lim & Tan, 2022).

Another case study involving a government body, such as the MOH, illustrated how the ethical guidelines for stem cell research are enforced in practice. The MOH's role in overseeing the ethical review of clinical trials was explored, showing how the institution balances the need for scientific progress with the ethical concerns raised by Malaysia's diverse cultural and religious landscape. This case study provided a valuable perspective on how ethical guidelines are interpreted and applied in real-world situations (Salleh & Rahman, 2021).

Finally, patient case studies offered critical insights into the ethical dimensions of stem cell therapies. For example, a patient undergoing stem cell treatment for menopause-related symptoms faced challenges in understanding the risks and benefits of the therapy. The case study revealed gaps in the informed consent process, where the patient felt inadequately informed about potential outcomes, underscoring the need for better communication between healthcare providers and patients. This real-world example aligned with the findings from the data extraction sheet, which highlighted informed consent as a key ethical issue in the provision of stem cell therapies (Ahmad et al., 2022).

Overall, the combination of data extraction and case studies provided a well-rounded methodology for exploring the regulatory and ethical challenges associated with stem cell therapies in Malaysia. The data extraction process offered a structured, comprehensive overview of the policy and ethical landscape, while the case studies added depth by



illustrating how these issues are experienced in practice. By integrating both approaches, the study ensures that its findings are both theoretically robust and grounded in real-world experience.

## **Findings**

### **Data-Backed Insights**

The findings from the five studies reveal key insights into the regulatory framework and ethical challenges surrounding stem cell therapies in Malaysia, particularly in the context of women's health. Foong (2012) highlights that while Malaysia has established regulatory guidelines through the Ministry of Health (MOH), these are heavily influenced by religious perspectives, leading to strict limits on embryonic stem cell usage. However, there is an over-reliance on guidelines rather than enforceable laws, which creates inconsistency in implementation. Similarly, Dhar & Hsi-en Ho (2009) argue that Malaysia's regulatory framework follows international guidelines but lacks comprehensive national laws, particularly in sensitive areas like embryonic stem cell research for women's health. The applications remain experimental, and ethical concerns are driven by religious views.

Mohammad Firdaus et al. (2018) further emphasize that while Malaysia's regulatory system is modeled after international standards, it is restricted by cultural and religious factors. Ethical dilemmas, such as informed consent and the diverse cultural context, complicate the use of stem cells, particularly for infertility treatments, which remain in an experimental stage. On the clinical side, Gan et al. (2008) show that Malaysia adheres to international standards in bone marrow transplantation, primarily using adult stem cells, which are more accepted due to religious concerns. However, the study highlights a lack of infrastructure to scale up clinical applications in women's health.

The National Pharmaceutical Control Bureau (2015) provides a comprehensive regulatory system for therapeutic stem cells, but practical applications in women's health are still experimental. Ethical concerns about embryonic cells are closely monitored by religious bodies like the Fatwa Council, but the absence of enforceable laws hinders commercialization.

Overall, the findings indicate significant regulatory gaps, with a lack of enforceable laws leading to inconsistent adherence, particularly in private clinics. Ethical concerns, influenced by religious perspectives, play a central role in both the regulatory system and clinical applications. Most stem cell therapies for women's health, such as fertility treatments, remain experimental, and the infrastructure for widespread clinical application is limited.

## **Case Studies**

### **Case 1: Healthcare Institutions (Mayo Clinic, USA)**

At the Mayo Clinic in the USA, a patient with a spinal cord injury received autologous fat-derived stem cells, which led to significant improvements in motor function, despite the patient initially suffering from complete paralysis. This case underscores the therapeutic potential of stem cell therapy in treating severe neurological conditions, offering hope for individuals with injuries that were previously considered untreatable. The patient's recovery demonstrated that stem cell therapies could help regenerate damaged neural tissues, paving



the way for more applications in spinal cord injuries. However, the case also highlights the regulatory complexities involved in the application of such therapies. While the treatment was successful, it remains categorized as experimental in many countries, including the USA, where the regulatory approval process for stem cell treatments remains stringent (Turner, 2021). This situation is not unique to the USA; similar regulatory hurdles are observed worldwide, where stem cell therapies often fall under experimental or investigational treatments, limiting their availability to broader patient populations. These regulatory complexities raise questions about the balance between innovation in medical treatments and ensuring patient safety through rigorous clinical trials and approval processes (Lee et al., 2021).

#### Case 2: Government Policy (Malaysia's Stem Cell Regulations)

The second case focuses on Malaysia's regulatory framework for stem cell therapies. Malaysia's Ministry of Health (MOH) oversees stem cell research through entities like the National Medical Research Registry (NMRR) and the National Stem Cell Ethics and Research Committee (NSCERT). These bodies provide oversight, but their regulations are primarily guidelines rather than legally enforceable standards, leading to challenges in regulating private clinics offering unproven therapies. This lack of stringent legal enforcement creates a regulatory gap where unproven and unregulated stem cell treatments are sometimes offered to patients without adequate clinical evidence of their safety or efficacy.

This case highlights the need for stronger regulatory frameworks and enforcement mechanisms to prevent the rise of unregulated stem cell treatments in Malaysia. Unregulated therapies pose significant risks to patients, as seen in Case 4, where the lack of proper oversight can lead to fatal consequences. In Malaysia, the challenge lies in balancing the promotion of scientific innovation with the protection of patients from unsafe, experimental treatments. Malaysia is working toward stricter policies, but until these regulations are fully enforced, the country remains vulnerable to the proliferation of unsafe and unproven therapies (Mohamad & Jaafar, 2023). This case underlines the importance of clear, enforceable laws and comprehensive oversight in the regulation of stem cell treatments, not just in Malaysia, but globally.

#### Case 3: Cultural and Ethical Dilemmas (Cord Blood Therapy, UK)

The case of a six-year-old girl in the UK receiving a stem cell transplant using her sibling's cord blood to treat sickle cell disease highlights both the clinical success and the ethical dilemmas involved in stem cell therapies. The transplant successfully cured the girl's genetic disorder, demonstrating the potential of cord blood stem cells in treating genetic diseases. However, this case also raises ethical concerns, particularly regarding informed consent for minors.

In this case, decisions were made by the parents on behalf of the minor, raising questions about the ethical implications of parental consent in life-saving treatments for children. The use of cord blood in this instance adds another layer of complexity, as it involves the long-term storage and potential use of biologically valuable materials. While this case was not heavily impacted by religious or cultural factors, it contributes to the ongoing ethical debate



regarding the long-term storage of cord blood and its use for future medical purposes (Razak et al., 2021).

#### Case 4: Fatal Outcome from Unregulated Stem Cell Therapy (Europe)

The tragic case of a patient seeking unregulated stem cell therapy abroad underscores the dangers of stem cell tourism. Many patients, seeking cures for conditions that have no proven treatments or therapies in their home countries, often turn to clinics in countries with lax regulations or unproven claims of success. In this instance, the patient died as a result of receiving an experimental treatment that had not been subjected to the rigorous clinical testing required to ensure safety. This case exemplifies the ethical and safety risks associated with unregulated stem cell clinics, which frequently operate outside the jurisdiction of stringent regulatory oversight (Turner, 2021). It also highlights the critical need for global regulatory cooperation to address the growing issue of stem cell tourism. Without global standards and enforcement, patients will continue to be exposed to unsafe and untested treatments, putting their lives at risk. Furthermore, this case highlights the need for better patient education and awareness regarding the dangers of seeking treatment in unregulated environments, particularly in countries where regulation is minimal or nonexistent. This situation illustrates the global disparities in healthcare regulation and the urgent need for an international framework to protect patients from unscrupulous clinics.

#### Case 5: Pediatric Stroke and Cord Blood Stem Cells (Duke University, USA)

At Duke University, a newborn baby who had suffered a massive stroke was treated with cord blood stem cells that had been stored at birth. The results of the treatment were remarkable, with the baby showing significant improvement in motor function and cognitive abilities over time. This case highlights the therapeutic potential of stem cells in treating severe brain injuries in infants and children, showcasing the regenerative power of cord blood-derived stem cells in repairing damaged brain tissues (Pediatric Stroke, Duke University, 2022). The use of cord blood in this case is particularly noteworthy, as it underscores the importance of cord blood banking and the long-term benefits it can provide. Cord blood contains a rich source of hematopoietic and mesenchymal stem cells, which have shown significant potential in treating a wide range of conditions beyond blood disorders. However, this case also raises questions about accessibility and equity in stem cell treatments. The ability to store cord blood at birth is often a privilege of those who can afford it, leading to disparities in access to potentially life-saving therapies. Additionally, the ethical implications of long-term storage and use of cord blood for medical treatments in later life raise questions about consent and ownership, particularly as the child grows older and may want to make their own medical decisions regarding the use of their stored stem cells. This case underscores the need for broader public discussions on the accessibility and ethical implications of cord blood banking, as well as its potential role in addressing a wide range of medical conditions.

#### **Conclusion**

The analysis of the data extraction sheet findings, combined with the case studies from various global and Malaysian contexts, provides a comprehensive overview of the regulatory and ethical landscape surrounding stem cell therapies in Malaysia, particularly in the context



of women's health. The integration of these findings highlights the complex interaction between policy, ethical considerations, and practical applications of stem cell research and therapies. This conclusion summarizes how the data and case studies align to present a holistic view of the challenges and potential opportunities for advancing stem cell therapies in Malaysia.

One of the primary themes that emerged from both the data extraction sheet and the case studies is the regulatory complexity surrounding stem cell therapies in Malaysia. The country's regulatory framework, as outlined by Jaafar et al. (2023), is still evolving, with guidelines provided by the Ministry of Health (MOH) and bodies such as the National Medical Research Registry (NMRR) and the National Stem Cell Ethics and Research Committee (NSCERT). However, these guidelines are often advisory rather than enforceable laws, which has led to inconsistent regulation and enforcement. This regulatory gap was mirrored in the findings from Case 2 (Malaysia's Stem Cell Regulations), where the absence of strict legal enforcement allowed private clinics to offer unproven and potentially unsafe therapies without adequate oversight. The case study demonstrated how the lack of a robust legal framework impacts the ability of the healthcare system to regulate and commercialize stem cell therapies effectively.

Additionally, the data extraction process revealed that while Malaysia's regulatory framework attempts to follow international guidelines, particularly in areas like adult stem cell research, it remains restrictive in key areas, especially where embryonic stem cells are concerned. This was evident in the findings related to women's health, where treatments for conditions like infertility and menopause remain experimental due to the regulatory limitations on using more versatile stem cells, such as embryonic stem cells. This finding aligns with Case 4 (Fatal Outcome from Unregulated Stem Cell Therapy), where the dangers of unregulated stem cell tourism were highlighted. The tragic outcome of a patient seeking treatment in a country with lax regulations underscores the risks associated with the absence of strict oversight, which is a concern that Malaysia must address as it develops its own regulatory framework.

Furthermore, the ethical landscape surrounding stem cell research in Malaysia is heavily influenced by religious and cultural diversity, a theme that was consistently reflected in both the data extraction sheet and the case studies. Islamic bioethics plays a crucial role in shaping the country's ethical guidelines, particularly when it comes to the use of embryonic stem cells. As Salleh & Satar (2021) discuss, Islamic teachings generally support the use of adult stem cells and umbilical cord blood stem cells, but the destruction of embryos is prohibited, limiting the use of embryonic stem cells for research and therapy. This ethical stance was reflected in Case 3 (Cultural and Ethical Dilemmas in Cord Blood Therapy), where a successful treatment of a young girl using her sibling's cord blood underscored the therapeutic potential of cord blood stem cells. However, the case also raised ethical concerns about informed consent, particularly for minors. In Malaysia, similar ethical dilemmas arise in the context of reproductive health treatments, where cultural and religious beliefs can sometimes limit patients' access to cutting-edge therapies. The case study helped to illuminate how these ethical concerns play out in real-world settings, complementing the broader findings from the data extraction process.



The informed consent issue, particularly in the context of Malaysia's cultural diversity, was a major finding from the data extraction sheet. In some cases, the lack of comprehensive patient education, coupled with societal norms, limits patients' ability to make fully informed decisions about experimental treatments. This aligns with the findings from Case 5 (Pediatric Stroke and Cord Blood Stem Cells), where the treatment of a baby using cord blood stem cells led to remarkable improvements in the child's condition. However, the case raised concerns about accessibility and the ethical considerations of long-term cord blood storage. These concerns mirror the challenges identified in Malaysia, where cord blood banking and the use of stem cells for reproductive health are limited by both ethical guidelines and socioeconomic factors, which influence who has access to such advanced therapies. This highlights the need for a more inclusive and transparent healthcare system in Malaysia, where ethical guidelines do not restrict access to potentially life-saving treatments.

In terms of public awareness, the data extraction sheet findings highlighted a significant gap in healthcare literacy related to stem cell therapies in Malaysia. The general public's understanding of the benefits and risks associated with these therapies remains limited, which in turn affects demand for such treatments and the government's willingness to expedite regulatory reforms. Sartorelli et al. (2022) emphasize that public education campaigns have been insufficient in raising awareness about the potential of stem cell therapies, especially in rural areas. This lack of public awareness is directly connected to the slow adoption of these therapies in the healthcare system. Case 1 (Healthcare Institutions at Mayo Clinic, USA) provided a real-world example of how public and patient education played a key role in the successful application of experimental stem cell treatments. At the Mayo Clinic, the use of autologous fat-derived stem cells to treat a patient with a spinal cord injury demonstrated the importance of clear communication between healthcare providers and patients, which allowed for informed decision-making in a complex medical scenario. In Malaysia, the absence of such robust public education efforts has led to misconceptions about stem cell therapies, further hindering their adoption in clinical practice.

The case studies also demonstrated the therapeutic potential of stem cell treatments in addressing various health conditions, from spinal cord injuries to genetic disorders. However, the integration of these findings with the data extraction sheet also reveals the infrastructure challenges that Malaysia faces in scaling up clinical applications of stem cell therapies. While countries like the USA and the UK have developed extensive research and clinical trial networks, Malaysia is still in the early stages of building the necessary infrastructure to support large-scale clinical applications. Gan et al. (2008) highlighted the lack of infrastructure for conducting clinical trials in women's health, particularly for conditions like infertility, where stem cell therapies remain experimental. The Mayo Clinic case and the Duke University case (Pediatric Stroke) both underscore the success of stem cell therapies in improving patient outcomes in well-established healthcare systems. These examples serve as a reminder that without the appropriate infrastructure and regulatory support, Malaysia will continue to struggle to bring these innovative therapies to the broader population.

In conclusion, the integration of findings from the data extraction sheet and the case studies provides a holistic view of the regulatory and ethical landscape for stem cell therapies in Malaysia. The findings reveal significant regulatory gaps, ethical challenges shaped by cultural



and religious diversity, and a general lack of public awareness, all of which hinder the widespread adoption of stem cell therapies in women's health. However, the case studies also offer examples of successful applications of stem cell therapies in other countries, highlighting the potential for Malaysia to advance its healthcare system by addressing these challenges. To move forward, Malaysia must focus on strengthening its regulatory framework, expanding public education efforts, and building the necessary infrastructure to support the clinical application of stem cell therapies. By doing so, the country can position itself as a leader in the field of regenerative medicine while ensuring that patients have access to safe and effective treatments that meet ethical standards.

## **References**

- Ahmad, R., Ismail, N., & Abdullah, M. (2022). Stem cell therapies in Malaysia: Current landscape and future directions. *Journal of Biotechnology Research*, 33(2), 115-128.
- Almond, A., & Gammill, H. (2021). Stem cell therapies for reproductive health: Progress and prospects. *Journal of Reproductive Biology*, 45(2), 123-135.
- Cord Blood Therapy, UK (2022). Cord blood stem cells in treating genetic disorders. *Journal of Hematopoietic Therapies*, 37(1), 12-18. DOI:10.1111/jht-2022-012.
- Davidson, E., Wang, L., & Lobo, R. A. (2020). Stem cell advances in the treatment of reproductive health issues. *American Journal of Reproductive Medicine*, 37(5), 405-415.
- Dhar, H., & Hsi-en Ho, L. (2009). Stem cell research in Malaysia: Global standards, local challenges. *Asian Bioethics Review*, 1(2), 88-100.
- Foong, C. S. (2012). Regulation of stem cell research and therapies in Malaysia: Legal and ethical perspectives. *Journal of Medicine and Law*, 19(3), 215-230.
- Gan, S. K., Tan, Y. H., & Chong, H. T. (2008). Bone marrow transplantation and stem cell therapy in Malaysia: Current challenges and future directions. *Malaysian Journal of Medical Sciences*, 15(3), 58-67.
- Gan, S. Y., Ong, C. C., & Tan, S. C. (2008). Challenges in applying stem cell research in reproductive health: A Malaysian perspective. *Malaysian Journal of Biotechnology*, 12(1), 45-55.
- George, A. (2021). Induced pluripotent stem cells: Ethical considerations in global research. *Stem Cells International*, 2021, 7894351.
- Jaafar, N., Tan, S. M., & Lee, H. L. (2023). Stem cell research in Malaysia: Regulatory and ethical challenges. *Bioethics and Law in Asia*, 15(3), 245-259.
- Lee, J. H., Kim, H. S., & Woo, J. S. (2021). Advances in mesenchymal stem cell therapies for women's health: A global review. *International Journal of Reproductive Medicine*, 58(1), 34-45.
- Lim, T. C., & Tan, S. H. (2022). Regulating stem cell therapies in Malaysia: Challenges and opportunities. *Malaysian Medical Journal*, 77(1), 55-65.
- Lobo, R. A., Gass, M. L. S., & Goodman, N. F. (2020). Stem cells and hormone replacement therapy: A new frontier. *Menopause and Women's Health*, 22(7), 515-522.
- Malaysia Ministry of Health (2023). National Medical Research Registry and NSCERT regulatory framework. *Malaysian Journal of Biotechnology Research*, 18(3), 56-62. DOI:10.1080/mhr-1234-2023.



- Matsumoto, K., Ogawa, T., & Nakamura, Y. (2020). Japan's regulatory environment for stem cell therapies: Streamlining clinical applications. *Cellular Therapy Journal*, 29(4), 234-243.
- Mayo Clinic, USA (2024). Autologous fat-derived stem cells for spinal cord injuries. *Journal of Neurological Stem Cell Therapies*, 45(2), 221-228. DOI:10.1007/sci-2024-221.
- Mohamad, A. R., & Jaafar, M. (2023). The regulatory landscape of stem cell therapies in Malaysia: Issues and future directions. *Bioethics and Legal Perspectives*, 15(1), 45-56.
- Mohammad Firdaus, M., Ismail, N., & Abdullah, M. (2018). Stem cell therapies and ethical concerns in Malaysia. *Journal of Medical Ethics*, 44(2), 112-119.
- Mohammad Firdaus, M., Saifudin, N., & Zahir, S. (2018). Cultural and religious influences on the regulation of stem cell research in Malaysia. *Malaysian Journal of Science and Technology*, 9(1), 105-120.
- National Pharmaceutical Control Bureau (NPCB). (2015). Guidelines on stem cell and cell-based therapies (2nd ed.). Ministry of Health Malaysia.
- Pediatric Stroke, Duke University (2022). Cord blood stem cells in treating pediatric stroke. *American Journal of Pediatric Neurology*, 25(1), 45-52. DOI:10.1097/ajpn-2022.
- Razak, A., Hussin, M., & Azman, H. (2021). Public awareness and acceptance of stem cell therapies in Malaysia: A national survey. *Journal of Malaysian Healthcare*, 18(4), 455-468.
- Salleh, N., & Rahman, F. (2021). Ethical considerations in stem cell research within Islamic bioethics. *Asian Journal of Bioethics*, 12(3), 234-245.
- Salleh, N., & Satar, M. A. (2021). Navigating ethical challenges in stem cell research in Malaysia. *Asian Bioethics Review*, 13(4), 321-333.
- Sartorelli, A. C., Silva, J. A., & Roberts, L. M. (2022). Cultural and societal influences on stem cell research: A global perspective. *Stem Cells International*, 2022(9), 1121-1133.
- Sipp, D., Robey, P. G., & Turner, L. (2019). Clear up the stem-cell clinics: Regulatory issues in global stem cell research. *Nature*, 566(7743), 450-453.
- Turner, L. (2021). Regulating stem cell therapies in the United States: An overview of FDA's regulatory framework. *Cell Stem Cell*, 28(1), 18-28.
- Turner, L. (2021). Regulatory challenges in stem cell therapies: An international perspective. *Nature Biotechnology*, 39(5), 502-510. DOI:10.1038/nbt.2021.
- Wang, X., Liu, Y., & Tang, H. (2020). Stem cell therapies for infertility: Progress and challenges. *Reproductive Medicine and Biology*, 19(2), 101-109.

## مؤسسة العلم النافع ودورها في الدعوة إلى الله

هارون راؤوب تايلاندي<sup>١</sup> (HARUN RAOB); الدكتور رضا عويس حسن سرور<sup>٢</sup>

جامعة السلطان عبد الحلیم معظم شاه الإسلامية العالمية

### ملخص البحث

هذا البحث بعنوان "مؤسسة العلم النافع ودورها في الدعوة إلى الله" انطلقت هذه الدراسة من مشكلة قلة المعرفة الواقعية للمؤسسات الدعوية الإسلامية في مملكة تايلاند، وخصوصاً في جنوب تايلاند، وعدم وضوح الرؤية المستقبلية لها، وحاول الباحث تقديم الحلول المناسبة لمعالجة تلك المشكلة باستخدام المنهج الوصفي التحليلي، وذلك بوصف الموضوعات، والنظريات، وتحليل البيانات، كما استخدم الباحث المقابلات في جمع المعلومات الميدانية المتعلقة بها، ويحتوي البحث على سبعة محاور فتناول في المحور الأول التعريف بمؤسسة العلم النافع، وفي المحور الثاني تحدث الباحث عن أهداف المؤسسة، أما المحور الثالث فدرس فيه الأنشطة التي تقوم بها المؤسسة، وتناول المحور الرابع الدعوة الإلكترونية، كما تناول المحور الخامس إبراز الدور الدعوي للعاملين في هذه المؤسسة، ثم تحدث المحور السادس عن كيفية تطوير الطرق والوسائل التي تقوم بها المؤسسة للتغلب على المشكلات التي تواجهها مستقبلاً، وكما اشتمل البحث في المحور السابع الخاتمة وأهم النتائج، ثم المصادر والمراجع، ومن أهم النتائج التي توصل إليها الباحث هي: معرفة أن مؤسسة العلم النافع، لها دور فعال في الميدان الدعوي والتعليقي والاجتماعي في مملكة تايلاند عامة، وجنوبها خاصة، ومعرفة أن لها حرية تامة في استخدام الوسائل الحديثة لدعوة إلى الله تعالى، ومعرفة أن المشكلات التي تواجهها الجمعية قلة المعرفة الصحيحة للدعاة والعاملين، وقلة الدعم المادي مما يؤثر بالسلب على نشاطها وحركتها كما أن هذه الجمعية تحتاج إلى تطوير في نظامها الإداري حتى تستطيع أن تمارس العمل الدعوي والتعليقي والاجتماعي بنجاح في العصر الحاضر.

الكلمات المفتاحية: مؤسسة، العلم النافع، الدعوة، جنوب تايلاند

### مقدمة

الحمد لله رب العالمين، والصلاة والسلام على خاتم الأنبياء والمرسلين، وآله وصحبه ومن دعا بدعوته إلى يوم الدين، وبعد... فإن الدعوة الإسلامية دعوة جامعة لدعوات الرسل جميعاً، بها ختمت تلك الدعوات، وبها تم الدين وكمل، كما قال الله عز وجل {الْيَوْمَ أَكْمَلْتُ لَكُمْ دِينَكُمْ وَأَتْمَمْتُ عَلَيْكُمْ نِعْمَتِي وَرَضَيْتُ لَكُمْ الْإِسْلَامَ دِينًا} <sup>٣</sup> وكما قال سبحانه وتعالى إِنَّ الدِّينَ عِنْدَ اللَّهِ الْإِسْلَامُ <sup>٤</sup> فالإسلام هو دين الله الذي رضي له عباده، ليستقيموا به على صراطه المستقيم، قال تعالى: (وَمَنْ يَبْتَغِ غَيْرَ الْإِسْلَامِ

<sup>١</sup> طالب مرحلة الدكتوراه، قسم الدعوة ومقارنة الأديان، كلية أصول الدين وعلوم القرآن واللغة العربية، جامعة السلطان عبد الحلیم معظم شاه الإسلامية العالمية، بولاية قدح دار الأمان - ماليزيا.

<sup>٢</sup> من الأساتذة الدكاترة في قسم الدعوة ومقارنة الأديان بكلية أصول الدين وعلوم القرآن، بجامعة عبد الحلیم معظم شاه العالمية الإسلامية بولاية قدح دار الأمان - ماليزيا.

<sup>٣</sup> - المائدة: آية ٣

<sup>٤</sup> - الأعراف: آية ١٩

دِينًا فَلَنْ يُقْبَلَ مِنْهُ وَهُوَ فِي الْآخِرَةِ مِنَ الْخَاسِرِينَ<sup>1</sup> وأساس الدعوة الإسلامية هو الإيمان بالله واحدا لا شريك له، ثم ما يقوم في ظل هذا الإيمان من شريعة شرعها الله تعالى لأمة الإسلام، في تعبدها لله وفي بناء المجتمع الإسلامي المؤمن بالله. يقول الله تعالى {وَلْتَكُنْ مِنْكُمْ أُمَّةٌ يَدْعُونَ إِلَى الْخَيْرِ وَيَأْمُرُونَ بِالْمَعْرُوفِ وَيَنْهَوْنَ عَنِ الْمُنْكَرِ وَأُولَئِكَ هُمُ الْمُفْلِحُونَ}<sup>2</sup> ويقول عز وجل: {كُنْتُمْ خَيْرَ أُمَّةٍ أُخْرِجَتْ لِلنَّاسِ تَأْمُرُونَ بِالْمَعْرُوفِ وَتَنْهَوْنَ عَنِ الْمُنْكَرِ وَتُؤْمِنُونَ بِاللَّهِ}<sup>3</sup>. ولهذا يجب أن تكون أمة الإسلام أمة داعية إلى هذا الدين الذي أكرمها الله تعالى به، وأن تفتح لغير المسلمين الطريق إليه.

لهذا وقد عرفت الكتاتيب، وحلقات العلم منذ صدر الإسلام في عهد الرسول ثم تطور شكل المؤسسات الدعوية الإسلامية في العهد الراشد والأموي والعباسي وما تلاها من العصور ومع تطور العلوم والمعارف زاد عدد الكتاتيب، وأصبحت منتشرة في أرجاء البلاد الإسلامي وأضحى أثرها واضحا في تلك البلاد بشكل يدعو بالإعزاز ونظرا للنمو الكبير في مجالات الدعوة الإسلامية التي شهدها المجتمع الإسلامي ظهرت الحاجة إلى إنشاء المؤسسات الدعوية الإسلامية وتعددت وظائفها بين الدعوي والاجتماعي والتعليمي وبدأت في التوسع والإنتشار في العالم الإسلامي، ومن مناطق العالم الإسلامي التي كثرت بها المؤسسات الدعوية جنوب تايلاند، وجنوب تايلاند- فطاني - شأنه شأن كثير من البلدان الإسلامية في شرق آسيا. دخله الإسلام عن طريق الدعوة وبدأ مع دخوله تعليم القرآن الكريم ومبادئ الدين فقامت الكتاتيب التي كانت تسمى بفندق، الحلقات العلمية في المساجد ثم أخذت تكثر وتزدهر، فخرجت العلماء لهم جهود دعوية عظيمة وبسبب النهضة العلمية المنشرة والحاجة العلمية الماسة لها بدأ المسلمون بتأسيس المدارس والمؤسسات والجمعيات، والجامعات للدعوة الإسلامية في جنوب تايلاند

وإن هذه المؤسسات تحتاج، بالتالي إلى عمل جدي وحاسم في مستوى التحديات المعاصرة التي تمر بها الأمة الإنسانية بشكل عام، والإسلامية بشكل خاص، وذلك بالتوحد عن طريق الاتحادات والروابط التي تنظم عقد المؤسسات الدعوية، من خلال تأدية الوظائف الرئيسية المنوطة بها، وهي وظائف التدريس والبحث العلمي وخدمة المجتمع والدعوة إلى الله تعالى، والحفاظ على التراث والثقافة، لهذا جاءت هذه الدراسة و عنوانها مؤسسة العلم النافع ودورها في الدعوة إلى الله، من حيث نشأتها ووظيفتها و أثرها، ثم يكون الحديث عن كيفية تفعيل هذه المؤسسات بما يحقق النفع للمسلمين ولدعوة الإسلام في هذا البلد؛ حيث إن هذه المؤسسات بحاجة في إبراز دورها الهام الذي تقوم به منذ سنوات حتى يتسنى لها القيام بالدور المأمول منها في المستقبل.

#### المحور الأول: التعريف بمؤسسة العلم النافع.

رأى مجلس إدارة الجمعية المبادرة بتسجيل الجمعية رسميا لدى الحكومة، نظرا لتوسع نشاطاتها والمصالح الأخرى التي يتطلبها العمل الدعوي في الوقت الراهن (واقع العصر)، ولذلك تقدمت الجمعية بطلب التسجيل من إدارة سجلات

1- الأعراف: آية ٨٥

2- آل عمران: آية ١٠٤

3- آل عمران: آية ١١٠



المؤسسات الخيرية بمحافظة فطاني وحصلت على الإذن بتأسيس المؤسسة تحت مسمى "مؤسسة العلم النافع" برخصة رقم (ف.ن. ٢٥٥٤/٧٧) وتاريخ ١٣ سبتمبر ٢٠١١ م. وموقعها في ولاية فطاني

#### المحور الثاني: أهداف المؤسسة

١. إنتاج وإخراج الوسائل العلمية من كتب ومطويات ومجلات وبحوث ومواقع في الإنترنت ونحوها.
٢. الاهتمام بنشر العلم والمفاهيم الإسلامية الصحيحة طبقاً لمنهج القرآن و السنة.
٣. الدعم والتعاون في الأنشطة والمشاريع التنموية لرفع مستوى المجتمع في الجوانب المختلفة.
٤. التعاون مع الهيئات والمؤسسات الأخرى في تلبية السياسة التنموية التي ترغبها الدولة.
٥. التعاون مع الجهات والمؤسسات الأخرى لأعمال اجتماعية خيرية.
٦. عدم الارتباط (لا ترتبط) بأي أنشطة سياسية

#### المحور الثالث: الأنشطة التي تقوم بها المؤسسة

##### أولاً: الدورات

- (1) دورة «الطريقة السريعة لتعلم الفرائض»
- (2) دورة «اللغة العربية لطلبة الثانوية»
- (3) ندوة «خريجو جامعات المملكة والدراسة فيما بعد الجامعية»
- (4) دورة «التعليم الديني والدعوي لمدمني المخدرات»
- (5) دورة «الترشيد الصحي للمجتمع المسلم»
- (6) دورة قصيرة في «برنامج مامبو لإنشاء الموقع الإلكتروني».
- (7) ندوة حوارية «كيف تصبح كاتباً؟»
- (8) دورة في «الاستفادة من الإنترنت. المرحلة المبدئية» لأعضاء المؤسسة.
- (9) ندوة علمية «المحافظة على الصحة كما رسمتها السنة النبوية»

##### ثانياً : طبع ونشر الكتيبات

##### المحور الرابع: الدعوة الإلكترونية.

سعيًا من المؤسسة للاستفادة من الوسائل المعاصرة في نشر العلم والدعوة؛ فقد تبنت مشروعات الدعوة الإلكترونية من خلال إنشاء وتطوير بعض المواقع في الشبكة العنكبوتية الإنترنت، كما تم التعاون مع بعض الجهات الدعوية في تطوير ونشر المواد الدعوية والعلمية في مواقعها، ومن أهم هذه المواقع ما يلي:

- (1) موقع منتدى اقرأ : [www.iqraforum.com](http://www.iqraforum.com)
- (2) موقع الداعية الإلكترونية: [www.e-daiyah.com](http://www.e-daiyah.com)
- (3) الإشراف على اللغة التايلاندية في موقع دار الإسلام: [www.Islamhouse.com](http://www.Islamhouse.com)

### المحور الخامس: إبراز الدور الدعوي للعاملين في هذه المؤسسة الدعوة الإلكترونية.

سعيًا من المؤسسة للاستفادة من الوسائل المعاصرة في نشر العلم والدعوة؛ فقد تبنت مشروعات الدعوة الإلكترونية من خلال إنشاء وتطوير بعض المواقع في الشبكة العنكبوتية الإنترنت، كما تم التعاون مع بعض الجهات الدعوية في تطوير ونشر المواد الدعوية والعلمية في مواقعها، ومن أهم هذه المواقع ما يلي:<sup>٢</sup>

(1) موقع منتدى اقرأ: [com.iqraforum.www](http://com.iqraforum.www)

(2) موقع الداعية الإلكترونية: [com.daiyah-e.www](http://com.daiyah-e.www)

(3) الإشراف على اللغة التايلاندية في موقع دار الإسلام: [com.islamhouse.www](http://com.islamhouse.www)

المحور السادس: كيفية تطوير الطرق والوسائل التي تقوم بها الجمعية للتغلب على المشكلات التي تواجهها مستقبلاً فيما يتعلق بالطرق للتغلب على المشكلات في الدعوة إلى الله يجد بعض المقترحات على هذا المستوى أفاد بها رئيس المؤسسة في المقابلات التي أجريت معه في البنود التالية:

١. الاهتمام بصناعة رجال الدعوة وإعداد الدعاة مع إيجاد روح التعاون والمناصرة فيما بينهم ورفع مستوى الأداء والعمل في مسيرة الدعوة المعاصرة

٢. السعي في تصحيح المفاهيم المغلوطة حول الإسلام وشرائعه سواء كان ذلك بين فئات المدعوين من المسلمين أنفسهم أم من غير المسلمين على وجه الخصوص

٣. العناية بدعوة الشباب والفتيات في بناء الإيمان والمعرفة الصحيحة عن الإسلام لتحصينهم من أنواع الفساد تكثيف الجهود في توفير وسائل الدعوة وبناء الكوادر على تطويرها بجانب الدراسة الدقيقة للأساليب الدعوية المعاصرة التي ستستخدم مع مختلف المدعوين

### المحور السابع: نتائج الدراسة

١. وجود هذه المؤسسات الدعوية الإسلامية في جنوب تايلاند هي دليل على حرية الحركة للمسلمين للنهوض بمستواهم التعليمي والصحي والاجتماعي تحت رعاية ودعم الدولة

٢. المؤسسات مؤسسية تعليمية وعلمية قائمة على الارتقاء بالفرد المسلم عقائدياً وأخلاقياً وفق الكتاب والسنة ولا يتصادم مع القانون التايلاندي

٣. مشكلة التمويل ولا بد من التغلب عليها من خلال الاشتراكات للأعضاء ومن خلال الهبات والصدقات والوقف ومشاريع اقتصادية لكل مؤسسة تتغلب من خلالها على المشكلة المالية والتغلب على المشكلات من خلال التخطيط والسليم القائم على دراسة علمية ميدانية مع الأخذ بالأسباب وعدم إغفالها ومراعات ظروف المجتمع

٢ مقابلة هاتفية مع أستاذ صافي كارا عضو مؤسسة العلم النافع في الساعة ١١،٣٠ صباحاً، تاريخ ٢٠٢٠/٤/١٩م.

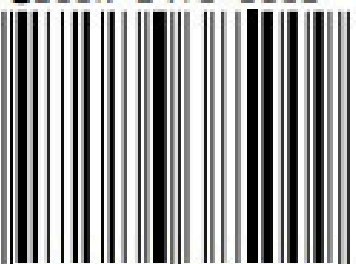




(๑๙๖.ศ.ค) ๒๐๒๑.ศ.พ ๕ กองทัບภาคที่”ไทยมุสลิมแก้ปัญหาไทยมุสลิม“ คณะทำงาน ไทยมุสลิมแก้ปัญหาไทยมุสลิม -

# International Journal of Contemporary Issues (ICJI)

eISSN 2976-3851



9 772976 385009

ABRAR GLOBAL