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MJHE accepts contribution from all discipline of social sciences such as childhood & adolescent development, adulthood & ageing, family well-being, community development, social psychology, politics & government, philosophy and civilization, consumer well-being, family economics & finance, music & well-being.

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THE ROLE OF SOCIAL CAPITAL AND TECHNOLOGY ADOPTION ON SUSTAINABILITY AMONG SMALLHOLDER TEA FARMERS IN SRI LANKA

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ABSTRACT

This study examines how social capital and technology adoption influence the sustainability of smallholder tea farms in Sri Lanka. Networks and trust that facilitate cooperation and technology adoption in advanced sustainable farming practices are examined for their impact on farm sustainability. The research explores three types of social capital that include bonding capital (within the communities), bridging capital (with other people outside the community), and linking capital (with institutions). The results show that all the social capital dimensions and technology adoption significantly influence farmer sustainability with technology adoption being the most influential ($\beta = 0.375$). The above variables account for 74.7% (R^2) variance in farmer sustainability, with social capital and technology adoption being strong predictors of sustainable farming practices. The study supports a dual strategy to improve the sustainability of Sri Lanka's smallholder tea sector. This work supports technology uptake through social capital and capacity development, improves social networks within the communities, increases access to external sources of information, and links research with government and community organizations. These results can be useful to policymakers and development practitioners in formulating strategies that ensure a sustainable future for the Sri Lankan tea industry that is socially just, economically viable and environmentally friendly.

Keywords: Social capital, technology adoption, sustainability, smallholder tea farming, Sri Lanka

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INTRODUCTION

The sustainability of smallholder tea farming is crucial for rural communities' economic and social stability in Sri Lanka. This research investigates how social capital and technology adoption contribute to the sustainability of these farmers, aiming to inform policies and practices that enhance their resilience and productivity. Tea (*Camellia sinensis* (L)) is Sri Lanka's principal agricultural export crop, generating approximately USD 1.258 billion through the export of 251.5 million kilograms in 2022 (Central Bank of Sri Lanka, 2022). The industry employs around 1.2 million people and spans 267,000 hectares, with smallholders managing 158,060 hectares (Central Bank of Sri Lanka, 2022). The tea industry is segmented into smallholdings (less than 10 acres), proprietor estates (10-50 acres), and large estates (more than 50 acres). Notably, the smallholder sector contributes 75.5% to national tea production, highlighting its vital role as corporate sector tea production has declined (Tea Small Holding Authority, 2022). Despite its importance, smallholder tea farmers face numerous challenges, including low productivity, high production costs, poor quality, limited technology adoption, small land size, ageing tea bushes, inadequate state services, weak infrastructure, labour issues, and low green leaf prices (Mahindapala, 2020). Addressing these issues necessitates collaboration among a variety of stakeholders, including farmers, government agencies, non-governmental organizations (NGOs), and business sector companies.

In response to these challenges, several interventions in Sri Lanka focus on promoting social capital and technology adoption. The networks, norms, and trust enabling collaboration

and collective action between individuals and groups are collectively called social capital. Technology adoption involves using advanced planting materials, improved agronomic practices, pest and disease management strategies, irrigation systems, sustainable soil conservation practices, appropriate machinery use and better harvesting and post-harvest handling.

However, there has been a notable lack of extensive study into the collective impact of these interventions on the sustainability of smallholder tea farming communities. Existing research frequently focuses on single issues, such as the impact of social capital on technological adoption, without investigating the connections and synergies between various interventions or their combined effect on overall sustainability.

Furthermore, traditional agriculture is increasingly viewed as unsustainable from current global and local development perspectives. "There is a growing need for value addition in agriculture to generate income for farmers and the food industry" (Malkanathi, 2012). Comprehensive scientific research on the innovation adoption process in the tea business and the technical divide between tea smallholder farmers is still lacking, although extension models have been created to address problems in the plantation industry (Amarathunga, et al., 2008). By examining how social capital and technology adoption interact to enhance the sustainability of smallholder tea farming in Sri Lanka, this study aims to address this research gap.

LITERATURE REVIEW

Three forms of social capital, bonding, bridging, and linking, are networks and linkages that permit group activity. Each type serves a distinct purpose in facilitating farmers' exchange of knowledge and resources, which is essential for sustainable farming practices that strike a balance between economic success, environmental health, and social justice. The significance of social capital in building sustainable communities has come under more attention as research has demonstrated how important it is for encouraging broad participation in decision-making processes and bolstering local development initiatives (Almedom & Glandon, 2008).

Sustainability, defined as the sense of development that meets the needs of the present without compromising the ability of future generations to meet their own, became a global concept with the Brundtland report (WCED, 1987). This concept encompasses three imperatives, namely ecological, social, and economic impacts. The UN Food and Agriculture Organization has defined four principles of sustainable agriculture that are economic viability, social viability, technical viability and ecological viability (Izac & Swift, 1994). Sustainability in agriculture which is essential for small farm viability, leads to the development of non-farm income-generating activities and local consumption (Flora & Hall, 2018). These practices are versatile, depending on the financial and other resources and conditions, and are geographically bound. Farmers are always seeking new ways of doing things which are part of inclusive networks that have internal resources, promote entrepreneurship, and develop social capital (Flora & Hall, 2018).

Natural resource conservation is a globally recognized requirement, and people have always joined together to govern resource conservation for a very long time. However, there has been much controversy on which system is more appropriate for effective utilisation of resources; the private sector or collective control (Pretty, 2003). Sustainable development of communities usually results from the bottom up, unlike some other approaches. Local knowledge and efforts are crucial for sustained growth, as participatory democracy empowers people to control their destiny and fosters community connections (Bridger & Luloff, 2001).

The sustainability issue in Sri Lanka's tea industry makes looking for solutions that would benefit smallholder farmers vital. These smallholders are imperative to the industry's future, accounting for 75% of tea production (Munasinghe et al., 2017). However, their growth is limited by economic factors, limited resources, and environmental conditions. Furthermore, it has been argued that enhancing the link and contact in smallholder societies helps participants gain knowledge and support, which may improve their production and earnings (International Labour Organization, 2018). Also, mobile technologies and extension services are a source of vital information on best practices, markets, and prices, allowing smallholders to make decisions in their best interest. By addressing these challenges and promoting farmer sustainability across economic, social, and environmental spheres, Sri Lanka's tea industry can achieve long-term viability and contribute to the UN's Sustainable Development Goals (UNDP, 2019). by strengthening social Capital (SDG 10: Through improved knowledge sharing and collaboration of the smallholders, there is a potential to enhance productivity and income (SDG 1: No Poverty).

Social Capital, rooted in family welfare and community integration, facilitates cooperation and collective action, which is essential for sustainable development (Jalil & Mia, 2021; Craig et al., 2022). It motivates community members to work together towards common goals, correlating with higher levels of collective action (Auer & Böhme, 2020). However, development projects perceived as ecologically or socially incongruous can disrupt social capital and livelihoods (Maziku, 2021).

The notion of social capital, which emphasises collaboration and trust, is appealing for developing voluntary solutions to issues not handled by market forces, government efforts, or legal regulations. Consequently, government and academics support building social capital as essential for developing sustainable communities. However, there are still a lot of unsolved concerns about how social capital and sustainable community development interact, which means that before any policies incorporating both elements are enacted, conceptual work must be done.

It is crucial to draw on previous research and emphasize how this study builds on it to fill the knowledge gap about the interrelated impacts of social capital, technology adoption, and sustainability in smallholder farming.

According to (Mahaliyanarachchi (1996), the lack of information on the gaps in the technologies used in agriculture contributes significantly to the problem. Also, it has been observed that technology use enhances household income and thus, the economic viability of farming households (Chandio & Jiang, 2018). For instance, Jeewanthi & Shantha (2021) found that even the smallholder tea farmers in Sri Lanka can

boost production without additional resources, which presents a socioeconomic opportunity for technology.

Some of the contemporary research indicates that social capital can greatly influence technology transfer (Van Rijn et al., 2015) improve the uptake of rural development interventions (Firouzjaie et al., 2007), and spread knowledge (Katungi et al., 2008). Social capital creates cooperation for sharing expertise and equipment, cooperating on lending, and adopting new technologies necessary for sustainable agriculture (Ntume et al., 2015).

While there is increasing awareness of the significance of social capital and technology adoption in increasing the sustainability of smallholder tea farming, there is little empirical evidence of the relationships between social capital, technology adoption and rural development in Sri Lanka. Most current research tends to concentrate on elements of the two constructs, for example, the effects of social capital on technology uptake or the advantages of certain technologies, but do not examine how they are related and work together to influence sustainability. Also, most of the studies are confined to specific geographical areas and time horizons, and, therefore, do not reflect the evolution of these linkages over time. In this regard, there is little systematic and detailed understanding of how social capital and technology adoption can be best managed to help smallholder tea farmers in Sri Lanka overcome a range of multifaceted difficulties.

Previous studies have mainly focused on the outcomes of embracing technology or social capital on sustainability. For instance, social capital can enhance farmers' and other

stakeholders' economic returns as well as resource use efficiency through the enhancement of access to resources, information and markets through networks, trust and collective action (Pretty & Ward, 2001; Isham, 2002). Consequently, other research has focused on how the use of technology increases the levels of productivity in agriculture, improves the utilization of resources and reduces environmental impacts (Rogers, 2003). However, such research fails to capture the interaction between social capital and technology in use and the overall effects on sustainability outcomes.

This study aims to explore the co-relationship between social capital and technology adoption in the improvement of the sustainability of smallholder tea farming communities in Sri Lanka. This research explores the direct and

indirect effects of social capital and technology adoption on sustainability performance using economic, environmental and social factors. The research also examines which forms of social capital (bonding, bridging, or linking) are most useful for supporting technology uptake and the realization of sustainability impacts. It focuses on how social capital and technology combine in the utilization of resources including knowledge, trust, collaboration and resources. Furthermore, the study also identifies the challenges that smallholder tea farmers face in implementing sustainable technologies and recommends ways of fighting through these hurdles. The findings of the study are intended to inform policy and practical strategies for the enhancement of social capital and technology adoption for the improvement of the sustainability and resilience of these communities.

THEORETICAL FRAMEWORK

This study integrates the Social Capital Theory (SCT) and the Theory of Planned Behavior (TPB) to understand how social connections and farmers' perceptions influence technology adoption and contribute to the sustainability of Sri Lankan tea farming communities.

Social Capital Theory (SCT) posits that robust social networks, including bonding, bridging, and linking, significantly benefit sustainable development, especially in developing countries like Sri Lanka. Social Capital, encompassing relationships among family, friends, colleagues, and communities, alongside shared values and norms, promotes knowledge sharing and collective learning (Katungi, et al., 2008; Narayan & Cassidy, 2001; Coleman, 1988). Trust, reciprocity, and shared understanding within these networks are crucial for improving livelihoods.

The Theory of Planned Behaviour (TPB), which analyses why tea producers use sustainable technologies, looks at the variables that affect behaviour adoption. TPB considers farmers' attitudes towards new technologies, subjective norms (social pressure from peers, advisors, and community leaders), and perceived behavioural control (confidence in adopting new technologies and the support received from extension services) (Ajzen, 2002; Bergevoet, 2014).

To strengthen the resilience and long-term viability of Sri Lankan tea growing communities, this study integrates SCT and TPB to understand the role social networks and individual perspectives play in adopting sustainable technology.

The proposed framework identifies social capital and technology adoption as potential factors that may enhance the sustainability of small tea-farming communities in Sri Lanka. Social capital may also help small tea farmers improve their access to and use of knowledge and assets and their coping strategies for risks and difficulties. This study argues that three types of social capital can play an essential role in supporting small tea farmers to get information and resources that may enable them to practice sustainable farming, enhance their production, and increase their income. Further, this study argues that technology adoption enables small tea farmers to overcome the constraints associated with conventional farming and enhance their resilience to environmental and economic risks.

Further explaining, Social Capital Theory (SCT) suggests that social networking and bonds are vital for attaining specific objectives for individuals or organizations. It postulates three types of social capital – bonding social capital, bridging social capital, and linking social capital which can be useful to individuals and communities (Putnam, 2000). The first type of social capital is bonding which includes the strong ties within a close circle such as family and friends in which the tea farmers may share information among themselves owing to trust. Bridging social capital is the kind of social capital that is held with those outside the family and friends' networks, including other tea farmers in other areas or farmer cooperatives through which farmers can access new information and best practices in sustainability. The linking social capital entails relations that farmers have with institutions like extension services, government departments or NGOs that offer farmers information, knowledge, and other resources on sustainable agriculture. As SCT looks at the various forms of social capital in small tea-growing communities, how these linkages

promote the flow of information, build trust and cooperation, and improve resource endowment is discussed. Social capital refers to the confidence that is created and the feeling of belongingness which makes people work together to do beneficial things, like water conservation, pest control, and sharing agri-equipments. Also, social capital networks can link farmers to factors that are beyond their control, including extension services, markets, and financial institutions, which are critical for the implementation of sustainable practices, including the adoption of new technologies, which may be costly at the beginning.

As pointed out by Bergevoet et al. (2004), the Theory of Planned Behavior posits that an individual's behaviour is due to goals, intentions, attitudes, subjective norms, and perceived control over the behaviour. A person's attitude is determined by the beliefs that are most important to the person in question. It is defined as "an attitude, which is a global judgment that a person has about any given object, concept or topic" (Ajzen, 2002). These assessments are defined as knowledge items, and they are grounded in three categories of information: That is cognitive, affective, and behaviourally relevant past data (Allen et al., 2003). This study aims to understand the extent and nature of sustainability in tea farming among smallholder farmers. To this end, the Theory of Planned Behavior (TPB) by Ajzen (1991) can be useful in explaining the determinants of farmers' intentions towards technology diffusion. TPB posits that three key determinants shape an individual's intention to engage in a specific behaviour. In this study arguments TPB consists of attitude, subjective norm, and perceived behavioural control.

The framework also provides for essential relationships and interconnections of these

components. For instance, social capital can help communicate information about new technologies and conservation agriculture, thus leading to their uptake. Extension services for agriculture can benefit from social capital to

enhance their coverage and effects, and information communication technologies can help small farmer tea producers increase their yields and incomes as well as their living standards.

METHODOLOGY

This study investigates the role of social capital in enhancing technology adoption and sustainability among smallholder tea farmers in Sri Lanka's mid-country region.

Data Collection: A multi-stage stratified random sampling technique ensured proportional representation from both districts. Farmer lists were obtained from Divisional Secretariat (DS) divisions, and participants were randomly selected until the target sample size of 452 was reached.

The participants in the study were selected from Kandy and Badulla districts (Mid-country region). Kandy District (Stratum 1) consists of 20 DS divisions, of which 18 are in tea growing. The sampling frame was based on a divisional representation of more than 2% of the tea-growing population; this provided 12 DS divisions. Like Kandy, Badulla (Stratum 2) has 15 DS divisions, of which 13 are involved in tea cultivation. The selection criteria were again based on divisions comprising more than 2% of the tea-growing population. Thus, 12 DS divisions were selected. Furthermore, the following figure (3.1) illustrates the sampling technique described above.

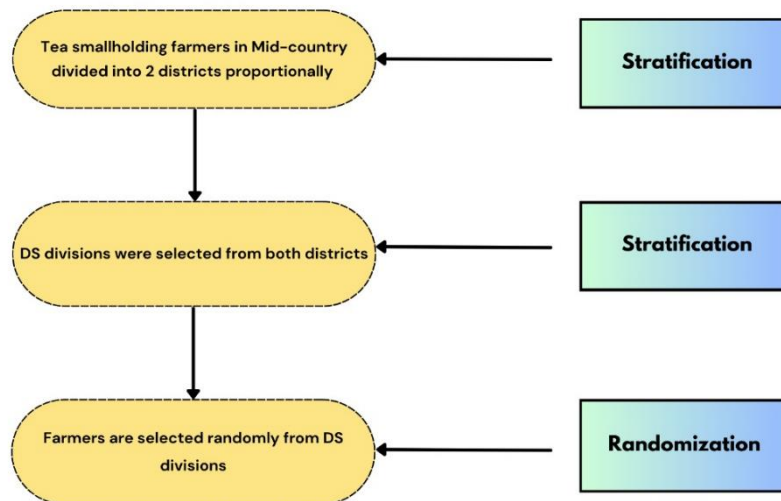


Figure 1: Multi-stage Stratified Random Sampling

According to the Tea Smallholding Authority records (2022), Kandy and Badulla district's tea smallholders' population is 59,061 (representing

97% of the mid-country population and 14% of the national tea farmer population). Sufficient sample size is crucial to ensure generalizable

results. Dillman's (2007) formula was employed, aiming for a 95% confidence level and a 5% margin of error. This calculation yielded a required sample size of 384 (Equation 1).

$$N_s = N_p p / (1 - p) + (Z^2 p(1-p)) / e^2$$

Equation 1: Formula for Estimating Desired Sample Size by Dillman (2007)

Where; "Ns= completed sample size needed (notation often used is n); Np= Size of the population (notation often used is N); P= proportion expected to answer a certain way (50% or 0.5 is most conservative), B= acceptable level of sampling error (0.05 = ±5%; 0.03 = ±3%), C= Z statistic associate with confidence interval (1.645 = 90% confidence level; 1.960 = 95% confidence level; 2.576 = 99% confidence level)".

Calculations show that 384 samples are needed to reach a 95% confidence level with a 5% sampling error of the actual population. Below is a computation using Dillman's equation.

$$N_s = 59,061 / 0.51 + (1.96^2 \times 0.51 \times 0.49) / 0.05^2 = 384$$

Equation 2: Application of Formula by Dillman (2007)

Given that there might be some incomplete or unanswered questionnaires, Thus, the size of the sample was put at 452, which is appropriate because using a slightly larger sample size reduces sampling error (Vaske, 2008). While a 400-sample size is recommended for human behaviour studies (Vaske, 2008), the chance of incomplete response requires a 452-sample size.

Questionnaires were offered in both Sinhala and English to accommodate participant preferences. Data was gathered using an organized approach that combined open-ended and closed-ended (multiple choice, yes/no) questions (Bryman, 2016). The questionnaire design was adapted from existing research with established reliability (Cronbach's alpha > 0.7) (Pallant, 2001). Social capital was measured using a modified 30-item tool adapted from Usman & Ahmad, (2018) and (Grootaert & Van Bastelaer, 2002). Technology adoption was assessed through a 21-item instrument adapted from (Abdekhoda et al., 2015; Sidhakaran, 2008). Finally, a 27-item questionnaire adapted from (Haq & Boz, 2018) evaluated economic, social, and environmental factors to create a composite sustainability score. Data collection occurred from September 2023 to April 2024.

Data Analysis: Smart PLS 4 software performed Partial Least Squares Structural Equation Modelling (PLS-SEM) (Hair et al., 2022). This approach is particularly suited for this study due to its focus on maximizing the explained Variance (R^2) between the exogenous (social capital) and endogenous (technology adoption, sustainability) latent variables (Hair et al., 2022).

Measurement Model Assessment: The measurement model was assessed for collinearity, factor loadings, reliability, and validity. The variance inflation factor (VIF) was used to determine the degree of collinearity; values less than 5 indicated no significant issues (Hair et al., 2022). To guarantee good construct representation, items with factor loadings less than 0.40 were eliminated (Hair, et al., 2022). Composite Reliability (CR) exceeding 0.70 was used to establish internal consistency due to its superiority over Cronbach's Alpha in SEM analysis (Hair et al., 2022). Average Variance

Extracted (AVE) was used to evaluate convergent validity and AVE values greater than 0.5 are traditionally favoured (Hair et al., 2022). However, Lam (2012) states that an AVE of 0.31 or greater hypothesis testing can proceed when Composite Reliability (CR) is greater than 0.6 and α is higher than 0.7. In this study, the CR for all constructs exceeded the recommended threshold. Discriminant validity was confirmed through HTMT analysis, ensuring all constructs were distinct (Henseler et al., 2015).

RESULTS AND DISCUSSION

This study investigated the relationships between social Capital (bonding, bridging, linking), technology adoption, and the sustainability of smallholder tea farmers in Sri Lanka using Partial Least Squares Structural Equation Modeling (PLS-SEM). Several sub-hypotheses (H1a, H1b, H1c, H1d, H1e) are formulated and examined to explore the specific relationships within the model. These hypotheses focus on the individual effects of different types of social capital and technology adoption on the sustainability of farmers. Specifically, H1a posits a significant relationship between bonding social capital and sustainability, H1b explores the link between bridging social capital and sustainability, and H1c investigates the impact of linking social capital on sustainability. Additionally, H1d examines the relationship between technology adoption and sustainability among smallholder tea farmers in Sri Lanka.

Measurement Model Results:

Internal consistency and convergent validity tests, factor loading assessment, and collinearity

Structural Model Assessment: The structural model analysis will involve calculating path coefficients to assess the strength and significance of the relationships between social capital, technology adoption, and farmer sustainability. Bootstrapping analysis will also be employed to determine the Variance explained by the exogenous latent variable (social capital) on the endogenous latent variables (Hair, et al., 2022).

diagnostics were used to evaluate the measurement model's quality. All constructs' variance inflation factors (VIFs) fell below the suggested level of five (see Table 1), suggesting that multicollinearity is not a significant cause for the proceed to analysis data (Hair et al., 2022).

Following Hair et al. (2022), items with factor loadings below 0.40 were removed ($n=3$). However, indicators with loadings between 0.4 and 0.7 were retained if they maintained acceptable levels of internal consistency (Cronbach's Alpha > 0.70). All constructs demonstrated adequate internal consistency (Cronbach's Alpha > 0.728) and convergent validity (AVE > 0.333). Therefore, considering the acceptable levels of CR and Cronbach's Alpha, the convergent validity of the constructs can be regarded as adequate (Table 2). Finally, discriminant validity was confirmed using the HTMT ratio analysis, with all values below the recommended threshold of 0.85 (Henseler et al., 2015) (See Table 3).

Table 1: Collinearity Results

Model Variables	Collinearity Statistics
	VIF
Bonding -> Sustainability	2.334
Bridging -> Sustainability	2.333
Linking -> Sustainability	2.395
TA -> Sustainability	2.096
Bonding -> Sustainability	

Table 2: Reliability and Convergent Validity of Constructs

	Cronbach Alpha	Composite Reliability	Average Variance Extraction (AVE)
Bonding	0.837	0.872	0.408
Bridging	0.828	0.869	0.458
Linking	0.832	0.87	0.404
Sustainability	0.859	0.887	0.333
Technology Adoption	0.848	0.879	0.403

Table 3: HTMT Discriminant Validity Result

Model Variables	1	2	3	4	5
1 Bonding social capital					
2 Bridging social Capital	0.733				
3 Linking social Capital	0.805	0.656			
4 Sustainability	0.784	0.748	0.837		
5 Technology Adoption	0.780	0.718	0.716	0.839	

Structural Model Results:

The path analysis model (Figure 1) revealed significant positive relationships between all independent variables and farmer sustainability.

Technology adoption emerged as the variable with the most substantial direct effect on sustainability ($\beta = 0.375$), followed by linking social capital ($\beta = 0.279$), bonding social capital ($\beta = 0.214$), and bridging social capital ($\beta =$

0.134). All path coefficients were statistically significant (p-value < 0.001), supporting the overall hypothesis (H1) that social capital

dimensions and technology adoption positively influence farmer sustainability.

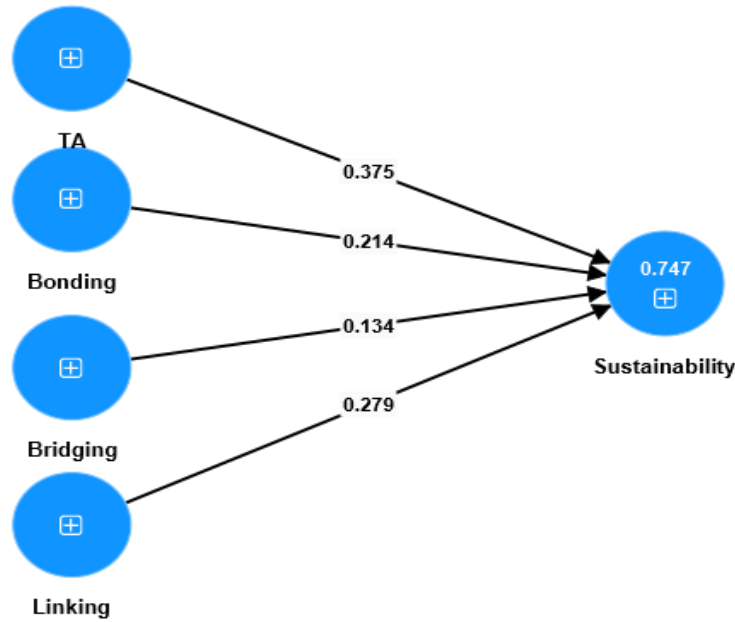


Figure 2: PLS Algorithm for the social capital, extension service, technology adoption, and sustainability

Table 4 presents the detailed path coefficients for the model.

Table 4: Path coefficients for Farmer sustainability

Relationship	Std. Beta	Std. deviation	Std. Error	t-value	p-value	result
Bonding -> Sustainability	0.040	0.040	0.002	5.298	0.000	Significant**
Bridging -> Sustainability	0.036	0.036	0.002	3.761	0.000	Significant**
Linking -> Sustainability	0.048	0.048	0.002	5.800	0.000	Significant**
TA -> Sustainability	0.036	0.036	0.002	10.543	0.000	Significant**

*Significant <0.05 level, **Significant <0.01 level

Detailed Discussion of Relationships

The study's path analysis revealed a network of positive relationships between social capital (bonding, bridging, and linking) and technology adoption, all contributing to the sustainability of tea smallholders in Sri Lanka. Technology adoption emerged as the strongest driver of sustainability ($\beta = 0.375$), suggesting that the direct impact of implementing advanced and sustainable farming practices has the most significant influence. This aligns with the understanding that specific technologies, such as improved irrigation systems, resource-efficient processing methods, or organic fertilizers, can increase efficiency, reduce environmental impact, and potentially increase yields (Shariff et al., 2022).

However, the study also highlights social capital's crucial role in facilitating technology adoption and farm sustainability. Among the three types of social capital examined, linking social capital ($\beta = 0.279$) had the second strongest positive influence. This study suggests that strong connections with institutions like research institutes, extension services, or government bodies and non-government organizations empower farmers by providing access to knowledge about new technologies, best practices, and potential financial support for implementing sustainable practices (Pretty, 2003;

Rivera et al., 2019). Similarly, bonding social Capital ($\beta = 0.214$) – the strength of community relationships – fosters knowledge sharing and resource exchange among farmers, potentially facilitating the spread of information about new technologies and encouraging their adoption by peers (Adger, 2003). Bridging social capital ($\beta = 0.134$), representing connections with external actors beyond the immediate community, also contributes positively. This can expose farmers to new ideas and innovations from external sources, potentially leading to the exploration and adoption of novel sustainable technologies.

Overall, the findings paint a picture of a mutually reinforcing relationship. Stronger social capital facilitates technology adoption, which in turn enhances farmer sustainability. This highlights the importance of a multi-pronged approach to promoting sustainable practices in the smallholder tea sector. Policies and interventions should focus on developing and disseminating new technologies and consider strategies to strengthen social capital within communities and facilitate linkages with relevant institutions. By fostering these connections, policymakers can create an environment that empowers smallholder tea farmers to embrace sustainable practices and contribute to a blooming environmentally responsible and ethically acceptable tea industry in Sri Lanka.

CONCLUSION

This study contributes to understanding how social capital and technology adoption effect the sustainability of smallholder tea farming in Sri Lanka. Based on the research objectives, four variables which include bonding social capital, bridging social capital, linking social capital and technology adoption had a significant positive relationship ($P < 0.01$) with sustainability. The

findings highlight the importance of fostering bonding social networks within communities (bonding social capital), facilitating connections with external knowledge sources (bridging social capital), and strengthening linkages with institutions (linking social capital). Additionally, promoting technology adoption through targeted extension services and capacity-building programs is crucial for enhancing the sustainability of smallholder tea production.

Policymakers and development experts may help smallholder tea farmers combine social equity, environmental preservation, and economic

viability for a more sustainable future by implementing these ideas.

IMPLICATIONS FOR POLICY AND PRACTICE

To improve the sustainability of smallholder tea farming in Sri Lanka, the study emphasizes social capital and technological adoption's vital role. The following policy and practice implications are derived from the research findings.

Strengthening Farmer Organizations: There is a need for the government to encourage and enhance the formation of farmer organizations. These organisations act as important tools for coordination, sharing of resources and strengthening the Members' capabilities. Allocating budgets to enhance these organizations can significantly boost social capital among farmers.

Investing in Social Capital Projects: Support the construction of projects that will foster unity among farmers. Some of the activities that may be provided under such projects may encompass community development, networking, and linkages with NGOs, Universities and research institutions.

Raising Awareness on Sustainable Practices: Promoting adequate campaigns for sustainable agriculture practices should be put in place. These programs should focus on the positive effects of sustainable farming; and the economic and environmental returns, and should prompt farmers to embrace them.

Enhancing Agricultural Extension Services: Policies must be established to improve agricultural extension services' effectiveness. Extension workers should be trained and equipped with the latest knowledge of sustainable farming technologies. This study will provide insights to help them help farmers adopt new technologies and practices.

Developing Supportive Policies: Establish policies that are an enabler of social capital and technology in the agricultural sector. There is a need to ensure that there are policies that enhance the relationship between farmers and other players, encourage fair trade practices and encourage the farmers to form groups.

PRACTICAL GUIDELINES

Training for Extension Workers: Establish special training packages for extension workers to enhance their ability in the dissemination of technologies and sustainable agriculture practices. Some of these training needs include; sustainable farming practices, communication skills, and social capital development among farmers.

Resource Provision: Ensure extension workers have access to the necessary resources, including educational materials, demonstration tools, and

technological support, to effectively assist farmers in adopting sustainable practices.

Community Engagement: Encourage extension workers to deeply engage with farming communities, build trust, and understand smallholder farmers' unique challenges and needs. This engagement will enhance opportunities to provide more relevant and efficient support programs.

Monitoring and Evaluation: Social capital and technology adoption activities impact assessment is crucial and thus requires effective monitoring

and evaluation tools. To continually achieve improvement in sustainable tea growing, it is possible to evaluate the best practices for implementation and possible shortcomings.

LIMITATIONS AND FUTURE RESEARCH

The following are the limitations of this study: The first is the use of cross-sectional design which limits the ability to make causal inferences. Subsequent work could take up longitudinal research to examine the effects between social capital, technology, and sustainability. Furthermore, it would have been useful to examine, which technologies are most effective for smallholder tea farmers, and how social capital influences their adoption.

If these policies and practices are adopted in Sri Lanka, the smallholder tea farming communities will be able to withstand any shocks and sustain their economy and environment for the long term.

Further studies should examine the durability of the social capital, and particularly the effects of using technology by smallholder tea farmers. Research questions could explore how the utilization of technology can support social capital and sustainable behaviours. Furthermore, further studies should be made on the effectiveness of the interventions and how they could be implemented across other areas and on other crops. Finally, more longitudinal research that examines the combined impact of policy changes on the sustainability of farmers is useful for policy recommendation and improvement.

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PENDEKATAN HOLISTIK DALAM PENGURUSAN KESIHATAN MENTAL DEMI KESEJAHTERAAN PEKERJA

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ABSTRACT

Kesihatan mental telah menjadi kebimbangan utama di tempat kerja, dengan organisasi mengakui kesannya terhadap kesejahteraan dan produktiviti pekerja. Seiring dengan meningkatnya kebimbangan awam terhadap kesihatan mental, intervensi tempat kerja sedang dibangunkan untuk menyokong pekerja dalam memenuhi keperluan psikologi asas mereka. Kajian ini membincangkan kepentingan pengurusan kesihatan mental di tempat kerja dan menekankan keperluan pendekatan holistik untuk meningkatkan kesejahteraan pekerja. Dengan mengintegrasikan pertimbangan tentang tekanan, tabiat kesihatan, dan pemahaman tentang cara tekanan berfungsi dalam organisasi, matlamatnya adalah untuk menyediakan pendekatan menyeluruh dalam mengurus kesihatan mental di tempat kerja. Berdasarkan penemuan kajian terdahulu, kajian ini menekankan hasil positif daripada latihan pengurusan tekanan dan gaya hidup dalam organisasi. Selain itu, ia menangani kekurangan bukti empirikal mengenai pengurusan isu kesihatan tingkah laku dalam proses kemasukan program Sarjana Kerja Sosial dan mencadangkan kajian lanjut untuk mengisi kekosongan ini. Kajian ini menyoroti kebimbangan yang semakin meningkat terhadap kesihatan mental di tempat kerja dan menekankan keperluan pendekatan holistik untuk meningkatkan kesejahteraan pekerja. Dengan mengakui kesan kesihatan mental terhadap kesejahteraan dan produktiviti pekerja, organisasi kini melaksanakan intervensi tempat kerja yang menyokong kepuasan keperluan psikologi asas pekerja. Tambahan pula, kajian ini mengakui kadar tinggi masalah kesihatan mental dalam kalangan pelajar dan keperluan untuk model sosial kecacatan yang memprioritaskan hak dan sokongan rakan sebaya dalam menangani isu-isu ini. Kajian ini meneroka kepentingan melaksanakan pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja, dengan fokus pada meningkatkan kesejahteraan pekerja.

Keywords: *pengurusan kesihatan, pendekatan holistik, kesejahteraan, kesihatan mental, produktiviti pekerja*

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INTRODUCTION

Pendekatan holistik terhadap penjagaan pesakit semakin diiktiraf sebagai aspek penting dalam penjagaan kesihatan. Pendekatan ini mengakui bahawa pesakit bukan sekadar jumlah sistem tubuh individu mereka, tetapi juga entiti kompleks dengan keperluan emosi, sosial, dan spiritual. Pendekatan ini menekankan integrasi aspek fizikal, mental, sosial, dan spiritual untuk menyediakan penjagaan menyeluruh (Zamanzadeh et al., 2015). Dengan menangani semua dimensi kesejahteraan pesakit, termasuk keperluan emosi, pendidikan, dan fizikal mereka, pendekatan holistik memastikan pesakit menerima penjagaan yang menyeluruh dan peribadi yang mengambil kira keunikan individu mereka. Menggunakan penjagaan holistik sebagai kerangka membolehkan penyedia penjagaan kesihatan lebih memahami kesan penyakit terhadap keseluruhan kehidupan seseorang dan keperluan sebenar mereka (holisticacare.com, 2023), yang akhirnya membawa kepada hasil pesakit yang lebih baik dan kepuasan keseluruhan.

Program holistik professional kesihatan akan meningkatkan kepentingan kepelbagaian dalam penjagaan kesihatan. Hal ini bertujuan untuk menilai kesesuaian pemohon dimana ia lebih daripada sekadar metrik akademik. Ini termasuk mempertimbangkan kapasiti penjagaan pemohon, yang sering diabaikan dalam model kemasukan tradisional. Selain itu, mengiktiraf penentu sosial kesihatan dan menangani keperluan sosial yang tidak dipenuhi pesakit telah menjadi keutamaan dalam penjagaan kesihatan. Organisasi kesihatan semakin berusaha untuk

menangani penentu ini dalam persekitaran klinik.

Untuk berjaya menangani keperluan sosial pesakit, adalah penting untuk mewujudkan model tenaga kerja yang dilengkapi dengan baik untuk peranan ini. Model-model ini harus merangkumi pelbagai anggota staf yang mempunyai kemahiran dan pengetahuan yang diperlukan untuk menyaring dan memberi respons kepada keperluan sosial yang tidak dipenuhi pesakit di persekitaran ambulatori. Kajian yang disebutkan menumpukan pada meneroka pelbagai model tenaga kerja yang digunakan untuk menangani keperluan sosial yang tidak dipenuhi pesakit dalam persekitaran ambulatori. Kajian ini bertujuan untuk memberikan pandangan mengenai pengurusan isu-isu kesihatan tingkah laku semasa proses kemasukan Pekerja Sosial Perubatan (MSW), menangani kebimbangan yang dibangkitkan oleh pendidik dan sarjana kerja sosial. Kajian ini bertujuan untuk mengisi kekosongan bukti empirikal mengenai bagaimana isu-isu kesihatan tingkah laku diuruskan dalam proses kemasukan MSW, mengiktiraf potensi kesan isu-isu ini terhadap fungsi profesional.

Sistem manusia adalah integrasi kompleks pelbagai komponen, termasuk komponen subperibadi yang terdiri daripada sistem saraf. Adalah penting untuk mempertimbangkan bukan sahaja disfungsi neurobiologi dalam individu tetapi juga aspek psikososial, seperti sokongan sosial, dinamika keluarga, dan faktor budaya, yang memainkan peranan penting dalam gangguan psikiatri dan proses rawatan.

Usaha untuk menangani keperluan pelbagai warga tua dalam rawatan penyalahgunaan bahan memerlukan intervensi yang peka terhadap usia yang mengambil kira keterbatasan fungsional, deria, dan kognitif selain perbezaan jantina dan budaya. Untuk berjaya menangani keperluan pelbagai warga tua dalam rawatan penyalahgunaan bahan, intervensi yang peka terhadap usia adalah disyorkan. Matlamatnya adalah untuk menyediakan intervensi yang menyokong dan tidak konfrontasi yang fleksibel, responsif, dan adaptif kepada keperluan unik warga tua. Intervensi ini harus fokus pada membantu warga tua membangunkan strategi coping adaptif dan kemahiran yang diperlukan untuk melaksanakannya (Freire et al., 2020).

Untuk menangani keperluan sosial pesakit secara berkesan dalam persekitaran ambulatori, organisasi penjagaan kesihatan harus mewujudkan model tenaga kerja yang merangkumi pelbagai anggota staf yang mempunyai kemahiran yang diperlukan untuk menyaring dan memberi respons kepada keperluan tersebut. Kajian skop yang dijalankan bertujuan untuk mengenal pasti model tenaga kerja yang digunakan untuk menyaring dan memberi respons kepada keperluan sosial yang tidak dipenuhi pesakit dalam persekitaran ambulatori. Kajian ini meneliti literatur untuk mencirikan pelbagai model tenaga kerja yang digunakan dalam persekitaran ambulatori untuk menyaring dan memberi respons kepada keperluan sosial yang tidak dipenuhi pesakit (*Addressing Health-Related Social Needs via Community Resources: Lessons from the Accountable Health Communities Model*, 2023).

Untuk mengkaji halangan yang dilaporkan pesakit untuk mengakses sumber untuk

keperluan sosial dan meneroka perbezaan halangan sebelum dan semasa pandemik COVID-19, pengurus kes klinik menyaring pesakit untuk keperluan sosial yang tidak dipenuhi menggunakan alat *Protocol for Responding to and Assessing Patient Assets, Risks, and Experiences (PRAPARE)* (Sandhu et al., 2022). Untuk memastikan keperluan pesakit dipenuhi, klinik penjagaan primer harus fokus pada mewujudkan prosedur susulan yang berkesan dan menangani halangan untuk mengakses sumber bagi keperluan sosial.

Selepas meneliti pelbagai sumber, adalah jelas bahawa menangani penentu sosial kesihatan memerlukan pendekatan yang menyeluruh. Ini termasuk memahami kerentanan warga tua terhadap ketagihan, menyediakan intervensi yang peka terhadap usia, mewujudkan model tenaga kerja untuk menangani keperluan sosial dalam organisasi penjagaan kesihatan, menyaring dan memberi respons kepada keperluan sosial yang tidak dipenuhi pesakit, dan memastikan susulan dan koordinasi penjagaan yang berkesan.

Menangani penentu sosial kesihatan memerlukan pendekatan yang menyeluruh yang merangkumi pemahaman tentang kerentanan warga tua terhadap ketagihan, menyediakan intervensi yang peka terhadap usia, mewujudkan model tenaga kerja, dan memastikan susulan dan koordinasi penjagaan yang berkesan. Pendekatan menyeluruh untuk menangani penentu sosial kesihatan dalam warga tua termasuk memahami kerentanan mereka terhadap ketagihan, menyediakan intervensi yang peka terhadap usia yang menangani keperluan dan keterbatasan khusus mereka, dan mewujudkan model tenaga kerja yang dilengkapi untuk menangani penentu sosial

kesihatan. Usaha untuk menangani penentu sosial kesihatan dalam warga tua harus merangkumi pemahaman tentang kerentanan mereka terhadap ketagihan, serta penyediaan intervensi yang peka terhadap usia yang menangani keperluan dan keterbatasan khusus mereka (Scott et al., 2020).

Kesimpulannya, menangani penentu sosial kesihatan dalam warga tua memerlukan pendekatan yang menyeluruh yang merangkumi pemahaman tentang

kerentanan mereka terhadap ketagihan, menyediakan intervensi yang peka terhadap usia yang menangani keperluan dan keterbatasan khusus mereka, mewujudkan model tenaga kerja yang dilengkapi untuk menangani penentu sosial kesihatan, menyaring dan memberi respons kepada keperluan sosial yang tidak dipenuhi pesakit dalam persekitaran ambulatori, dan memastikan susulan dan koordinasi penjagaan yang berkesan dengan penyedia penjagaan kesihatan yang lain (Pittman et al., 2021).

METHODOLOGY

Tempat kerja telah semakin diiktiraf sebagai persekitaran yang penting untuk promosi kesihatan mental dan pencegahan penyakit mental. Walau bagaimanapun, pembangunan dan pelaksanaan strategi pengurusan kesihatan mental yang komprehensif di tempat kerja masih terhad. Kertas kerja ini meneroka pendekatan holistik untuk meningkatkan kesejahteraan pekerja dengan menangani pelbagai faktor psikososial yang mempengaruhi kesihatan mental di tempat kerja.

Masalah kesihatan mental sangat berleluasa di kalangan penduduk bekerja, dengan anggaran 5% mengalami gangguan mental yang teruk dan 15% lagi terjejas oleh gangguan mental sederhana (LaMontagne et al., 2014). Isu-isu ini boleh memberi kesan yang ketara ke atas produktiviti pekerja, ketidakhadiran, dan prestasi organisasi secara keseluruhan. Oleh itu, terdapat kes perniagaan yang kukuh bagi organisasi untuk mengutamakan kesihatan mental dan kesejahteraan pekerja mereka (LaMontagne et al., 2014; Attridge, 2005).

Secara tradisinya, campur tangan kesihatan mental di tempat kerja telah memfokuskan pada pendekatan peringkat individu, seperti program bantuan pekerja (EAP) dan inisiatif kesejahteraan. Walaupun usaha ini bernilai, pendekatan yang lebih komprehensif dan pelbagai aspek diperlukan untuk menangani faktor kompleks yang saling berkaitan yang membentuk kesihatan mental di tempat kerja. Pendekatan holistik melibatkan menangani kedua-dua peringkat organisasi dan peringkat individu penentu kesihatan mental, termasuk reka bentuk kerja, persekitaran kerja, kepimpinan, dan budaya organisasi (Sivris & Leka, 2015).

Penyelidikan terkini telah menyerlahkan kepentingan mengguna pakai perspektif peringkat sistem dalam mempromosikan kesihatan mental di tempat kerja. Ini melibatkan penyepaduan pelbagai program dan perkhidmatan, seperti bantuan pekerja, kehidupan kerja, dan inisiatif kesejahteraan, untuk mewujudkan pendekatan yang lebih padu dan sinergi. Dengan menyelaraskan komponen berbeza ini, organisasi boleh memanfaatkan sumber

mereka dengan lebih berkesan dan menyediakan sokongan yang lebih komprehensif untuk kesejahteraan pekerja (Feringa, 2018; Sivris & Leka, 2015; Devassy et al., 2019; Davenport et al., 2016; Nebbs et al., 2023). Penyepaduan campur tangan ini boleh membawa kepada kejayaan kewangan yang lebih baik bagi syarikat. Pembangunan strategi pengurusan kesihatan mental holistik di tempat kerja harus mempertimbangkan elemen utama berikut:

1. Faktor peringkat organisasi:
Reka bentuk kerja dan persekitaran kerja: Memastikan permintaan, kawalan, dan sokongan pekerjaan seimbang untuk menggalakkan kesihatan mental pekerja.
Kepimpinan dan budaya organisasi: Memupuk budaya sokongan, komunikasi terbuka, dan pengurangan stigma di sekitar kesihatan mental.
2. Faktor peringkat individu:

DISCUSSION

Pengurusan kesihatan mental di tempat kerja adalah penting untuk mempromosikan kesejahteraan pekerja dan kejayaan keseluruhan organisasi. Adalah penting untuk mempertimbangkan kesan tekanan dan tabiat kesihatan ke atas pekerja, serta bagaimana tekanan berfungsi dalam organisasi moden. Dengan memahami faktor-faktor ini, organisasi boleh melaksanakan intervensi di tempat kerja yang memenuhi keperluan psikologi asas pekerja, memberikan sokongan yang diperlukan untuk mengekalkan kepuasan kerja dan mengurangkan kesan negatif tekanan terhadap kesihatan mental mereka. Selain itu, organisasi juga harus memberi tumpuan kepada pendidikan tentang kesihatan mental dan menyediakan

Program bantuan pekerja: Menyediakan akses kepada kaunseling sulit, perkhidmatan kesihatan mental, dan rujukan.

Inisiatif kesejahteraan: Melaksanakan program yang menggalakkan aktiviti fizikal, pengurusan tekanan, dan keseimbangan kehidupan kerja.

Pendekatan bersepadu: Menyelaras dan menyelaraskan pelbagai program dan perkhidmatan berkaitan kesihatan mental untuk mewujudkan sistem sokongan yang lebih padu dan sinergi untuk pekerja.

Dengan mengguna pakai pendekatan menyeluruh dan holistik terhadap pengurusan kesihatan mental, organisasi boleh meningkatkan kesejahteraan pekerja, mengurangkan beban isu kesihatan mental, dan akhirnya meningkatkan prestasi dan daya saing organisasi secara keseluruhan (Devassy et al., 2019; Attridge, 2005; Sivris & Leka, 2015; Davenport et al., 2016; LaMontagne et al., 2014).

perkhidmatan terapi serta sokongan (*COVID-19 boosted mental health at work — but not for everyone*, 2023).

Pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja adalah penting. Pendekatan ini perlu mengambil kira semua dimensi kesejahteraan, termasuk aspek fizikal, psikologi, rohani, sosial, dan persekitaran. Dengan mengiktiraf bahawa semua aspek kehidupan pekerja menyumbang kepada kesejahteraan keseluruhan mereka, organisasi boleh mewujudkan persekitaran kerja yang positif dan seimbang. Untuk mencapai ini, inisiatif berinstitusi dan kempen kesedaran kebangsaan boleh dilaksanakan dengan kerjasama antara

Kementerian Kesihatan, sektor kesihatan swasta, institusi akademik, dan penyedia perkhidmatan kesihatan. Kempen kebangsaan ini harus memberi tumpuan kepada memenuhi keperluan psikologi penduduk semasa pandemik dan kesannya terhadap kesihatan mental (*NIMH Funding History, n.d*).

Pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja mengakui bahawa kesejahteraan memerlukan komitmen sedar daripada kedua-dua individu dan organisasi. Ia melibatkan penciptaan budaya yang menghargai dan menyokong kesejahteraan pekerja, menyediakan sumber untuk pendidikan dan terapi, meningkatkan kesedaran tentang isu kesihatan mental, dan melaksanakan langkah pencegahan untuk mengurangkan tekanan dan mempromosikan kesihatan mental yang positif. Dengan melaksanakan pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja, organisasi boleh menyokong kesejahteraan pekerja mereka dan mewujudkan persekitaran kerja yang positif.

Melalui projek penyelidikan dan pembangunan yang memberi tumpuan kepada tempat kerja pusat panggilan, pendekatan holistik telah diambil untuk mengkaji pelbagai dimensi yang mempengaruhi kesejahteraan pekerja (Benninghoven et al., 2005). Ini termasuk mempertimbangkan faktor-faktor seperti tugas kerja, beban kerja, kaedah komunikasi, dan budaya organisasi. Melalui pendekatan menyeluruh ini, organisasi dapat memahami faktor-faktor yang menyumbang kepada tekanan pekerja dan melaksanakan intervensi yang menangani bidang-bidang khusus ini. Matlamatnya adalah untuk mengurangkan

kesan negatif tekanan terhadap kesihatan mental pekerja dengan mempromosikan persekitaran kerja yang seimbang dan positif melalui pendidikan, terapi, kempen kesedaran, dan inisiatif pencegahan.

Dengan mengamalkan pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja, organisasi dapat mewujudkan persekitaran kerja yang menyokong dan berkembang untuk pekerja mereka. Kesimpulannya, mengambil pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja adalah penting untuk memperbaiki kesejahteraan pekerja. Pendekatan ini melibatkan mempertimbangkan dimensi fizikal, psikologi, rohani, sosial, dan persekitaran dalam kehidupan pekerja dan memastikan dimensi-dimensi ini berada dalam keseimbangan (5 ways to improve employee mental health, 2022). Dengan berbuat demikian, organisasi dapat menyokong kesejahteraan pekerja dan mewujudkan persekitaran kerja yang positif yang mendorong produktiviti, keterlibatan, dan kejayaan keseluruhan.

Institusi harus memberi tumpuan kepada memenuhi keperluan psikologi penduduk semasa pandemik dan kesannya terhadap kesihatan mental. Salah satu cara mereka boleh melakukan ini adalah melalui inisiatif berinstitusi yang merangkumi pendidikan, terapi, kesedaran, dan pencegahan. Inisiatif-inisiatif ini boleh dilaksanakan dengan kerjasama sektor kesihatan swasta, institusi akademik, dan penyedia perkhidmatan kesihatan kerajaan. Melaksanakan pendekatan holistik dan menyeluruh dalam pengurusan kesihatan mental di tempat kerja adalah penting untuk memperbaiki kesejahteraan pekerja. Pendekatan ini memerlukan komitmen sedar daripada kedua-dua majikan dan

pekerja untuk memprioritaskan kesihatan mental dan kesejahteraan.

Ini melibatkan pengiktirafan bahawa segala yang dilakukan, difikirkan, dirasakan, dan dipercayai oleh seseorang mempunyai kesan ke atas kesejahteraan keseluruhan mereka dan kesejahteraan orang lain. Dengan melaksanakan langkah seperti mengurangkan jam kerja, mengekalkan jarak sosial, dan menyediakan sokongan untuk pengajaran dalam talian, organisasi dapat membantu mengurangkan tekanan dan meningkatkan kesejahteraan serta kesihatan mental pekerja mereka. Melaksanakan pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja boleh membawa hasil yang positif untuk pekerja, seperti mengurangkan tahap tekanan, meningkatkan kepuasan kerja, meningkatkan produktiviti, dan mengurangkan risiko gangguan kesihatan mental (Holistic Psychiatry, 2018). Adalah penting untuk organisasi memprioritaskan kesihatan mental dan kesejahteraan di tempat kerja dengan melaksanakan pendekatan holistik yang menangani semua dimensi kehidupan pekerja.

Pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja adalah penting untuk memperbaiki kesejahteraan pekerja. Melalui projek penyelidikan dan pembangunan selama dua tahun yang memfokuskan kepada tempat kerja pusat panggilan, langkah-langkah praktikal telah dibangunkan dan diuji untuk mempromosikan persekitaran kerja yang berjaya dan sihat (Benninghoven et al., 2005). Langkah-langkah ini termasuk melaksanakan strategi untuk mengurangkan tekanan, memperbaiki keseimbangan kerja-kehidupan, dan mewujudkan budaya organisasi yang

menyokong dan positif. Inisiatif-inisiatif ini termasuk latihan dalam pengurusan tekanan dan gaya hidup, yang memberikan hasil yang positif bagi sejumlah besar peserta.

Dengan mengintegrasikan pertimbangan tentang tekanan dan tabiat kesihatan dengan pemahaman tentang bagaimana tekanan berfungsi dalam organisasi moden, majikan boleh melaksanakan paradigma pengurusan kesihatan pelindung yang memprioritaskan kesejahteraan dan kesihatan mental pekerja mereka. Ini termasuk menyediakan pendidikan dan latihan tentang pengurusan tekanan, mempromosikan tabiat dan pilihan gaya hidup yang sihat, mewujudkan persekitaran kerja yang menyokong, dan menangani faktor-faktor organisasi yang menyumbang kepada tekanan dan keletihan pekerja. Dengan mengambil pendekatan holistik dalam pengurusan kesihatan mental, organisasi boleh mewujudkan persekitaran kerja yang menyokong kesejahteraan keseluruhan pekerja mereka.

Dengan menggabungkan inisiatif berinstitusi seperti pendidikan, terapi, kesedaran, dan pencegahan, organisasi boleh menangani permintaan yang semakin meningkat untuk sokongan psikologi di kalangan pekerja penjagaan kesihatan dan populasi umum semasa masa krisis, seperti pandemik COVID-19. Dengan melaksanakan pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja, organisasi boleh mewujudkan persekitaran kerja yang menyokong dan positif yang memprioritaskan kesejahteraan pekerja. Ini termasuk menyediakan sumber dan sokongan untuk pekerja, mempromosikan komunikasi terbuka dan menghilangkan stigma terhadap isu kesihatan mental, menawarkan program

bantuan pekerja, dan memupuk budaya keterbukaan, pemahaman, dan sokongan.

Selain itu, organisasi juga boleh memprioritaskan kesejahteraan holistik pekerja mereka dengan mempertimbangkan kesan faktor luaran seperti penutupan institusi pendidikan dan peralihan kepada kerja jarak jauh. Mereka boleh menyediakan sumber dan sokongan untuk membantu pekerja menyesuaikan diri dengan perubahan ini, seperti menyediakan akses kepada teknologi dan latihan untuk pengajaran dalam talian, menawarkan susunan kerja yang fleksibel, dan melaksanakan strategi untuk mengurangkan cabaran dan tekanan yang berkaitan dengan kerja jarak jauh (Pavlova, 2023).

Secara keseluruhan, pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja mengakui keterkaitan pelbagai faktor yang mempengaruhi kesejahteraan pekerja. Dengan menggabungkan pendekatan yang komprehensif dan bersepadu dalam pengurusan kesihatan mental, organisasi boleh mewujudkan persekitaran kerja yang menyokong dan inklusif yang mempromosikan kesejahteraan pekerja di semua dimensi - fizikal, psikologi, rohani, sosial, dan persekitaran. Dengan memberi tumpuan kepada dimensi fizikal, psikologi, rohani, sosial, dan persekitaran kesejahteraan, organisasi boleh menyokong pekerja mereka dalam mencapai pendekatan yang seimbang dan holistik dalam kehidupan. Pendekatan ini mengakui bahawa kesejahteraan pekerja bukan sahaja tentang menangani tekanan individu atau menyediakan sumber kesihatan mental yang berasingan, tetapi lebih kepada

mencipta budaya kerja dan amalan organisasi yang memprioritaskan kesejahteraan keseluruhan pekerja.

Dengan menggunakan pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja, organisasi boleh meningkatkan kesejahteraan pekerja dan kejayaan keseluruhan organisasi. Dengan melaksanakan pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja, organisasi boleh secara proaktif menangani keperluan psikologi pekerja mereka dan mengurangkan kesan negatif tekanan dan isu kesihatan mental. Dengan mempertimbangkan kesan pelbagai faktor terhadap kesejahteraan pekerja dan melaksanakan strategi yang komprehensif, organisasi boleh mewujudkan persekitaran kerja yang menyokong kesejahteraan keseluruhan. Projek penyelidikan dan pembangunan yang dijalankan di tempat kerja pusat panggilan menekankan kepentingan mengambil pendekatan holistik untuk mewujudkan persekitaran kerja yang berjaya dan sihat (Benninghoven et al., 2005). Dengan mempertimbangkan semua disiplin yang relevan dan melaksanakan langkah-langkah organisasi, organisasi boleh membangunkan strategi yang mampan untuk menyokong kesejahteraan pekerja di tempat kerja pusat panggilan.

Tambahan pula, pandemik COVID-19 telah menekankan keperluan untuk pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja. Pandemik ini telah menyebabkan banyak cabaran dan tekanan kepada pekerja, seperti peningkatan beban kerja, ketidakpastian, pengasingan, dan sempadan yang kabur antara kerja dan kehidupan peribadi.

IMPLICATION

Dalam persekitaran kerja yang pantas dan kompetitif pada masa kini, kesihatan mental pekerja adalah amat penting. Dengan mempertimbangkan kesan tekanan, mengintegrasikan tabiat kesihatan, dan memenuhi keperluan psikologi asas pekerja, organisasi boleh melaksanakan intervensi tempat kerja yang berkesan untuk menyokong kesejahteraan dan kepuasan pekerja. Selain itu, adalah penting bagi organisasi untuk mewujudkan inisiatif berinstitusi yang bukan sahaja menyediakan sokongan psikologi tetapi juga memberi keutamaan kepada pendidikan, terapi, kesedaran, dan pencegahan. Inisiatif-inisiatif ini boleh dibangunkan dengan kerjasama pelbagai pihak berkepentingan, seperti Kementerian Kesihatan, sektor kesihatan swasta, institusi akademik, dan penyedia perkhidmatan kesihatan kerajaan (Miscoll, 2023).

Pendekatan yang menyeluruh dan holistik dalam pengurusan kesihatan mental di tempat kerja mengiktiraf keterkaitan pelbagai dimensi kesejahteraan, termasuk kesejahteraan fizikal, psikologi, rohani, sosial, dan persekitaran. Dengan mengamalkan pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja, organisasi boleh memperbaiki kesejahteraan pekerja dengan ketara (*Wellness requires a conscious commitment and the appreciation that everything one does, thinks, feels, and believes has an impact on the well-being of self and others, Workplace Wellbeing, 2023*).

Dalam projek penyelidikan dan pembangunan selama dua tahun, pendekatan holistik digunakan dengan

mempertimbangkan semua disiplin yang relevan, dan tempat kerja pusat panggilan telah dikaji. Langkah-langkah organisasi telah dibangunkan dan diuji di lapangan untuk memperbaiki kesejahteraan pekerja (Benninghoven et al., 2005). Melaksanakan pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja pusat panggilan adalah penting untuk memperbaiki kesejahteraan pekerja dan mewujudkan strategi mampan untuk kerja yang berjaya dan sihat dalam industri pusat panggilan (Moll, 2014).

Dengan melaksanakan pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja, organisasi boleh memperbaiki kesejahteraan keseluruhan pekerja dan mencipta strategi mampan untuk persekitaran kerja yang berjaya dan sihat. Melaksanakan pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja adalah penting untuk memperbaiki kesejahteraan pekerja dan mewujudkan strategi mampan untuk persekitaran kerja yang berjaya dan sihat.

Dengan melaksanakan pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja, organisasi boleh menangani dimensi fizikal, psikologi, rohani, sosial, dan persekitaran kesejahteraan pekerja, yang membawa kepada peningkatan kepuasan dan produktiviti. Pendekatan ini mempromosikan pengalaman kerja yang seimbang dan memuaskan bagi pekerja. Melalui pendekatan ini, organisasi dapat mencipta persekitaran kerja yang menyokong dan positif yang mengutamakan kesejahteraan pekerja (Benninghoven et al., 2005).

RECOMMENDATION

Dalam persekitaran kerja masa kini, kesejahteraan pekerja adalah faktor kritikal dalam kejayaan organisasi. Masalah kesihatan mental boleh memberi kesan yang besar kepada produktiviti, kepuasan kerja, dan prestasi keseluruhan pekerja. Untuk menangani cabaran-cabaran ini dengan berkesan, penting untuk mengambil pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja. Pendekatan ini harus merangkumi inisiatif dalam pendidikan, terapi, kesedaran, dan pencegahan.

Dengan melaksanakan inisiatif berinstitusi merentasi empat domain ini, seperti menyediakan sumber pendidikan tentang kesihatan mental, menawarkan perkhidmatan terapi dan kaunseling, meningkatkan kesedaran melalui kempen dan bengkel, serta melaksanakan langkah-langkah pencegahan untuk mewujudkan persekitaran kerja yang menyokong dan sihat dari segi mental, organisasi dapat memupuk budaya kesejahteraan dan memperbaiki hasil kesihatan mental pekerja.

Menggunakan sumber yang disediakan, pendekatan komprehensif untuk pengurusan kesihatan mental di tempat kerja boleh dibangunkan. Pusat kaunseling kolej dan universiti boleh menjadi sumber penting dalam menangani isu kesihatan mental dalam kalangan pelajar (Bishop, 2006). Begitu juga, pusat kaunseling di tempat kerja boleh memainkan peranan penting dalam menyokong keperluan kesihatan mental pekerja. Normalisasi boleh memainkan peranan penting dalam mengurangkan stigma terhadap isu

kesihatan mental dan menggalakkan pekerja untuk mendapatkan bantuan.

Tambahan pula, satu projek penyelidikan dan pembangunan yang memfokuskan kepada tempat kerja pusat panggilan menekankan kepentingan mempertimbangkan semua disiplin yang relevan dalam membangunkan langkah-langkah organisasi untuk persekitaran kerja yang mampan dan sihat. Kesejahteraan memerlukan komitmen sedar dan penghargaan bahawa segala yang dilakukan, difikirkan, dirasakan, dan dipercayai mempunyai kesan ke atas kesejahteraan diri dan orang lain. Dengan mengamalkan pendekatan positif dan holistik terhadap kesejahteraan, organisasi boleh memastikan bahawa dimensi fizikal, psikologi, rohani, sosial, dan persekitaran pekerja berada dalam keseimbangan.

Ini boleh dicapai dengan menyediakan sumber dan sokongan untuk pekerja dalam setiap dimensi ini, mempromosikan budaya keseimbangan kerja dan kehidupan, dan menangani sebarang kebimbangan undang-undang dan etika yang berkaitan dengan pengurusan kesihatan mental di tempat kerja. Inisiatif berinstitusi, seperti kempen kesedaran kebangsaan dengan kerjasama sektor kesihatan swasta, institusi akademik, dan penyedia penjagaan kesihatan kerajaan, juga boleh memainkan peranan penting dalam memenuhi permintaan yang semakin meningkat untuk sokongan psikologi dalam kalangan pekerja penjagaan kesihatan dan menangani keperluan psikologi populasi semasa masa-masa mencabar seperti pandemik COVID-19 (Vizheh et al., 2020).

Oleh itu, adalah penting bagi organisasi untuk mengambil pendekatan holistik dalam menguruskan kesihatan mental di tempat kerja. Kesimpulannya, pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja adalah penting untuk memperbaiki kesejahteraan pekerja. Pendekatan ini melibatkan penggunaan pusat kaunseling kolej dan universiti, pusat kaunseling di tempat kerja, dan kempen kesedaran kebangsaan untuk menangani isu kesihatan mental dalam kalangan pelajar dan pekerja pen jagaan kesihatan. Tambahan pula, ia melibatkan normalisasi perkhidmatan kaunseling dan menyediakan pendidikan untuk mengurangkan stigma yang mengelilingi kesihatan mental.

Dengan mempertimbangkan semua disiplin yang relevan dan melaksanakan langkah-langkah organisasi, organisasi dapat

CONCLUSION

Pendekatan holistik dalam penjagaan pesakit dan pengurusan kesihatan mental di tempat kerja merupakan strategi penting yang semakin diiktiraf dalam bidang kesihatan. Pendekatan ini menganggap pesakit dan pekerja sebagai entiti yang kompleks dengan keperluan fizikal, emosi, sosial, dan spiritual yang memerlukan perhatian menyeluruh.

Dalam konteks penjagaan pesakit, pendekatan holistik memastikan bahawa pesakit menerima rawatan yang menyeluruh dan peribadi. Ia mengiktiraf keperluan emosi, pendidikan, dan fizikal pesakit, dan dengan demikian, membantu dalam mencapai hasil yang lebih baik dan kepuasan keseluruhan pesakit. Proses kemasukan holistik dalam program profesional kesihatan juga menekankan kepentingan penilaian menyeluruh

mewujudkan persekitaran kerja yang mampan dan sihat. Selain itu, mengamalkan pendekatan positif dan holistik terhadap kesejahteraan yang merangkumi dimensi fizikal, psikologi, rohani, sosial, dan persekitaran adalah kunci. Pendekatan ini memerlukan komitmen sedar dari kedua-dua organisasi dan pekerja untuk mengutamakan kesihatan mental dan mewujudkan budaya kerja yang menyokong kesejahteraan. Secara ringkas, pendekatan holistik dalam pengurusan kesihatan mental di tempat kerja melibatkan penggunaan sumber dan sistem sokongan yang ada, menangani kebimbangan undang-undang dan etika yang muncul, melaksanakan langkah-langkah praktikal, mempromosikan keseimbangan kerja dan kehidupan, serta meningkatkan kesedaran tentang kesihatan mental.

terhadap kapasiti penjagaan pemohon, selain daripada pencapaian akademik semata-mata.

Dalam pengurusan kesihatan mental di tempat kerja, pendekatan holistik melibatkan pengurusan faktor peringkat organisasi dan individu. Ini termasuk reka bentuk kerja, persekitaran kerja, kepimpinan, dan budaya organisasi yang menyokong. Di peringkat individu, program bantuan pekerja, inisiatif kesejahteraan, dan pendidikan tentang kesihatan mental adalah penting. Strategi holistik ini bertujuan untuk mengurangkan tekanan, meningkatkan kesejahteraan pekerja, dan seterusnya, meningkatkan produktiviti dan prestasi organisasi.

Pandemik COVID-19 telah menekankan keperluan untuk pendekatan holistik ini,

dengan banyak pekerja menghadapi cabaran seperti peningkatan beban kerja, ketidakpastian, dan pengasingan sosial. Dengan melaksanakan pendekatan yang menyeluruh dan holistik, organisasi boleh menyediakan persekitaran kerja yang lebih menyokong dan sihat.

Kesimpulannya, pendekatan holistik dalam penjagaan pesakit dan pengurusan kesihatan mental di tempat kerja adalah penting untuk kesejahteraan keseluruhan

individu. Ia memerlukan komitmen daripada kedua-dua pihak – penyedia penjagaan kesihatan dan organisasi tempat kerja – untuk memastikan bahawa setiap dimensi kesejahteraan diambil kira dan diuruskan dengan berkesan. Melalui usaha ini, kita dapat mencapai hasil kesihatan yang lebih baik, meningkatkan kepuasan pesakit dan pekerja, serta mewujudkan persekitaran yang lebih produktif dan positif.

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FUEL SUBSIDY REFORM AND ITS IMPACTS ON NIGERIAN CITIZENS

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ABSTRACT

The paper examined the implications of fuel subsidy reforms on the Nigerian citizens. It identifies public policy as the consequence of series of steps taken by policy actors to address a specific social problem in the polity. Nigeria operates a democratic political arrangement, but the cherished tenets of consensus, consultation and compromise are observed in the breach by successive political leadership that implemented fuel subsidy reforms without recourse to wide consultation and broad representation of the stakeholders affected by the policy. The paper argues that the unpleasant development accounts for spontaneous reactions that often greet policy pronouncements on fuel subsidy removal by the government. Energy subsidy entails direct budgetary payment by government to provide support through market intervention. Relying on descriptive design method, it was established that members of the ruling class are profoundly subsidized by the peripheral capitalist system while the masses are subjected to excruciating economic pains. This is attributed to lack of sufficient orientation and advocacy that could generate public support for any policy in Nigeria. It is not surprising that citizens criticize government policies as being insensitive to humanity and development. Based on the findings of this study, it is suggested that principle of consultation in policy formulation, reinvestment of subsidy gains into social welfare scheme, rehabilitation of the existing refineries, transparency and accountability in government operations be accorded priority by political leaders.

Keywords: Fuel subsidy, democracy, political economy, public policy, reforms

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INTRODUCTION

Public policies are formulated to improve the living conditions of the masses regardless of their geographical location, ethnic identity, religious affiliation and socio-economic status in the society. The politics of oil extraction and distribution has generated fierce power struggle among political actors in Nigeria. Rather than utilize oil wealth and optimize its lucrative revenue to develop different sectors of the economy, leadership ineptitude and cronyism hindered the actualization of the prosperity expected of the oil-producing country. Due to years of neglect and inefficiency, capacity utilization deficits characterized the operations of refineries as influential business moguls frustrate domestic processing of petroleum products (Decker, 2023).

The cartel that profits from the shady deals stoutly oppose subsidy reforms each time executive organ made such an attempt with a view to alleviating living conditions in the society. This contradicts the primary purpose of government instituted to provide workable solutions to the social concerns of the citizenry. By the same token, citizens influence policy decisions that may emanate from public administrators to ensure the implementation of pro-poor policies in the economy. In this context, democracy, as an institutional arrangement, enables citizens

to shape public policies. Given present realities however, citizens were not engaged in the policy-making process before actual policy is made by the political office holders. Besides, they are denied sufficient information concerning the management of petroleum products by the Nigerian National Petroleum Corporation

Limited (NNPCL). So worrisome to know that Nigeria subsidizes petrol to the tune of USD3.9 billion (Munshi, 2018). One is tempted to ask: Do public officials derive their power from the people? Are ethical values of transparency and accountability relevant in policy implementation? Does excessive spending on fuel subsidy significantly impact the lives of an average citizen?

Official pronouncements by successive political leaders on subsidy regime fail to address actual socio-economic conditions, as these policies have hampered rapid development for decades. Thus, various individuals and groups have been subjected to economic hardship occasioned by policies that promote the interests of the powerful elite in the society. At this point, the paper explores fuel subsidy removal vis-à-vis the adverse effects it has on hapless citizens. It is divided into five sections; introduction, theoretical framework, state capacity on fuel subsidy reforms, mitigating adverse effects of subsidy reforms and the concluding part

BACKGROUND

Fuel subsidy entails support provided by a government to reduce the cost of petroleum products and make them more affordable with a view to promoting economic activities that are considered beneficial to the society. In ideal political economy, human security and developmental activities that facilitate conducive lifestyles for every individual are accorded priority in consideration of fuel subsidy budget. Policies are meant to protect and promote

the public interests and not undermine their adaptive capacities. However, previous attempts by successive political leadership to reduce the cost of fuel by providing financial support to oil companies did not yield positive result as the bourgeoisie capitalized on prevailing corrupt economy to exploit Nigerian masses (*Tribune*, June 4, 2023). Regrettably, limited institutional capacity to support social protection programmes (GSI Report, 2016) make attainment of the lofty goals a serious challenge.

Experience from oil-producing countries indicate that fuel subsidy reform is a daunting task for policy makers striving to provide welfare services in the society. Subsidy reform is a state intervention which has multiple effects on the socio-economic conditions of population. Hence, energy subsidy reform is a policy choice demanding active involvement of relevant stakeholders, government commitment and concerted efforts of citizens before, during and after implementation. In 2004, Olusegun Obasanjo (as democratically elected president of Nigeria) created the Excess Crude Account (ECA) to save revenue in excess of the budgetary benchmark price that were accrued from the sale of oil (Bassey et al., 2014). The

rationale is to “insulate the economy from external shocks” (Chiejina, 2015) occasioned by the volatility in the price of crude oil at the global markets.

The lopsidedness in wealth allocation of the subsidy regime pave the way for illegal oil bunkering and frequent attacks on oil pipelines by vandals “who sabotage the distribution of refined petroleum products” (GSI Report, 2016; p. 12) to different refineries across the country. Since the public was unable to make connection between excess profits from sale of petroleum products and its impacts on economic growth, the Nigerian Governors’ Forum (NGF) used the opportunity to insist that the savings be expended citing reasons that the boom was recorded during their tenure. The group was unyielding to the plea by former president Olusegun Obasanjo to save for the rainy day and stabilize the economy. They argued that the incoming administration should be able to generate enough revenue to finance its fiscal responsibilities. Conscious of the negative impacts of the exploitative subsidy regime that have hampered rapid development for decades, the current Bola Tinubu administration has announced the removal of fuel subsidy with immediate effect (*Punch*, May 30, 2023).

THEORETICAL FRAMEWORK

The adoption of a democratic system is necessitated by the desire to make policies that regulate activities of citizens and protection of their interests. The masses are constitutionally empowered to make meaningful contribution towards promoting the unity and progress of the country. Accordingly, this research adopts social contract theory to elaborate the imperative of consultation among relevant

stakeholders in the policy design, formulation and execution at a given period. Originated from Thomas Hobbes, social contract theory was developed by John Locke, Jacques Rosseau and Immanuel Kant to underscore the significance of mutual agreement among members of a social group to obey the established authority. People choose to coexist in a social system with the

determination “to be subject to rules and laws” (D’Agostino et al., 2021) and accord those regulations legitimacy.

Typical of representative democracy, institutional design is structured in such a way that developmental activities considered to address the interests and needs of the masses and benefit the poor should incorporate and engage the people in policies that will affect them. The design and implementation of government activities require wider consultation, and active involvement of individuals and groups with a view to ensuring attainment of core objectives of governance. Individuals and corporate sectors shape decisions made by public officials by coming up with useful information, valuable ideas, and workable strategies that, if adopted, translate into sound policy that boosts the popularity of the existing administration.

On this premise, public officials are obliged to orientate citizens on urgency of fuel subsidy removal, its impacts on crude oil production and distribution, and reinvestment of subsidy gains on social welfare in the society. Fuel subsidy reforms have been carried out successfully in Indonesia, India and Egypt without crippling their economies (Sivaram &

Harris, 2016). Following this lead, adequate information and active involvement of citizens keep them abreast of the steps involved in subsidy regime, policy-making process, and motivate them to identify with government programmes. Social contract between the state and the citizens is a basic ingredient of democratic governance. When government does the right things, and take the interests of the common people into consideration, individuals tend to give their full support. Any kind of reforms public officials intend to undertake ought to have been communicated to the followers. As Oboh (2023) remarks, it is insensitive to formulate a policy without consulting stakeholders and considering the interests of the public. Once the impact of the common man has been considered, gradual implementation of the policy then follows. Accommodation of critical stakeholders in the conception, design, formulation, implementation, evaluation of subsidy reforms would engender public approval. The nexus between subsidy and social welfare is reflected in palliatives to mitigate the adverse effects of fuel subsidy removal on the vulnerable people in the country. These include minimum wage review, free health care, mass transit schemes and free education.

State capacity and fuel subsidy reforms

Since the discovery of crude oil in January 1956 by Shell Darcy at Oloibiri in Bayelsa state, the extraction, production and distribution of the material wealth has become a national question confronting inter-governmental relations in the complicated Nigerian federalism (UNEP, 2020). Sequel to the attainment of political independence from the British, the

management of petroleum took a new dimension owing to its value at the global market, and significant contribution to national economy. Oil resources remain the yardstick for determining socio-economic, education, health, defence and foreign policies (Ering & Akpan, 2012) during military and civilian regimes. Expansion of oil production necessitated the establishment of refineries at Port Harcourt,

Warri and Kaduna to facilitate the distribution of petroleum resources to public and private sectors across the nook and cranny of the country.

In 1978, former president Olusegun Obasanjo (as a military head of state) undertook upward review of pump price of premium motor spirit (petrol) in order to generate sufficient fund required to run the administration. Subsequently, successive administration had equally made similar adjustments to price of petrol following mass protests by labour unions and civil society organisations. Abati (2023) submits that no matter how valid a public policy may be, it is important to secure multi-stakeholder adoption of the agenda to generate a sense of ownership and easy implementation. Trust deficit among political leaders culminates in public demonstration of disapproval any time policy pronouncement is made. Thus, badly-targeted subsidy programmes “have worsened the problem of inequality” (Omotosho, 2019; p. 2) in the national economy. Unilateral decision on subsidy reforms do not improve the social conditions of people as they were excluded from the actionable proposals that would subsequently transform into policy choice.

Concerning political economy, oil sector contributed 5.34% to the Gross Domestic Product (GDP) in the second quarter of 2023. Besides, the sector accounted for 95% of Nigeria’s foreign exchange earnings and 80% of its budgetary revenues (National Bureau of Statistics, 2023). As a mono-cultural economy that generates substantial revenues from oil, recurrent and capital expenditure at different levels of administration are completed from the proceeds accruable from the sale of oil at the international market. Unfortunately, the

pricing of the petroleum products is riddled with controversies as citizens cannot ascertain the claims of the Petroleum Products Pricing Regulatory Agency (PPPRA) owing to bureaucratic operations of NNPC over the years. Lack of transparency and accountability in the determination of the Expected Open Market Price (EOMP) of the petroleum products generate heated debates and public criticisms nationwide.

During Goodluck Jonathan administration (2010-2015), the state governors contended that reserves from ECA be shared to various levels of government. As a result of this messy nature of oil windfall, the problem appears very monumental when the NGF dragged the federal government to court on the matter (*The Nation*, July 6, 2015). Furthermore, irresistible urge by state chief executives to withdraw monies from ECA put Nigerian economy at risk. It seems better understanding of the subsidy reforms exposes the short-term and long-term effects of the reform plans which prepares the mind of every stakeholder to either adopt or reject the idea. This becomes imperative because subsidy programmes, once established, outlast the other pressing needs that fostered them (OECD, 2013). In Nigeria, the implementation of energy subsidy reform paved the way for certain vested interests within and outside government institutions who command political power to resist public-driven change, and lobby to retain subsidy programmes.

The Nigeria Extractive Industries Transparent Initiative (NEITI) has revealed that Nigeria lost 619.7 million barrels of crude oil valued at N16.25 trillion (\$46.16 billion) to oil theft between 2009 and 2020 (Falana, 2023). Despite this shocking

revelation, the security forces have not been able to stop the stealing and smuggling of petroleum resources from the country. Widespread corruption and lack of credible governance in the conduct of energy subsidies instigated public discontent over the years. Popular opinion indicates that savings from subsidy reforms are often misappropriated and diverted to benefit well-organized and powerful elite in the society at the expense of poor masses who are subjected to higher energy costs of cooking, heating, lighting, transport and services (IMF, 2013). The unwholesome financial dealings and unethical practices attributed to fuel subsidy left much to be desired. Apparently, the oil cabal make more money from importation and distribution of oil than its production (Shagali & Yusuf, 2022; p. 6).

Described as “paradox of plenty”, Nigeria typifies a rich nation with poor citizens (Umeji & Eleanya, 2021) as a result of administrative inefficiency to utilize the proceeds from oil to create social safety net as a strategy to mitigate the adverse impact of price adjustment of fuel on the low-income masses, and improve the efficiency of energy consumption and supply. As such, oil wealth is believed to be a curse rather than a blessing to Nigeria (Adedayo, 2024) because it is not being effectively used to achieve enduring developmental goals (Falana, 2023; Okoye et al., 2016; p. 153). The minimum wage of a country to a large extent determines the purchasing power of individual citizens. Since the existing refineries in the country could not perform optimally to process oil resources at home, refined petroleum products are imported to meet its domestic consumption making the country vulnerable to the volatility of global oil prices. Despite these challenges,

the government fails to design proactive strategy towards ensuring fiscal sustainability of subsidy programme.

Towards mitigating adverse effects of subsidy reforms

A common feature of oil-producing nations is the inclusion of energy subsidy in the annual budget with a view to providing social safety nets for the citizens. Energy subsidy is implemented by political leaders to improve macroeconomic stability of the country. A subsidy exists whenever the price of energy on the domestic market is below the price on the global market “with adjustments for the costs of bringing these energy commodities to the world market” (OECD, 2013; p. 18). Political leadership initiates the subsidy reform process by involving critical stakeholders in the deliberations that will ensure greater benefits and manageable effects of the proposed policy on the vulnerable social groups in the society. Investing time and resources to secure public assessment and eventual support of energy reform will help policy makers make informed decision that will address identifiable social problem.

This positive development leads every segment of the population (that may be most affected by the reform) to demonstrate willingness in monitoring performance and addressing the challenges of managing the transition to a liberalized market for fuel. Expectations of better living conditions make citizens abide by the conditions attached to subsidy reforms. It is evident that a number of fuel subsidy regime undertaken so far has elevated the rate of inefficiency, leakages, waste and endemic corruption in the Nigerian economy (Obasi et al., 2017; Omotosho, 2019; Ozougwu et al., 2023; Shagali & Yusuf, 2022).

Specifically, it was confirmed that successive political leadership spent, through the NNPC, about N9.5 billion (\$6.02 million) on the so-called turn-around maintenance and rehabilitation of refineries at Port-Harcourt, Warri and Kaduna at various times (*Vanguard*, January 18, 2022). The huge amount earmarked for the maintenance of the refineries was reportedly diverted by the contractors.

Despite being the proverbial goose that lays the golden egg, the oil-producing communities are grossly exploited, marginalized and neglected (Adedayo, 2024). The anticipation by indigenes of government coming up with compensation mechanisms that could alleviate environmental hazards afflicting them for decades was dashed.



Image showing illegal pipelines used to siphon crude oil in Nigeria

Source: Premium Times Newspaper, 2024

People lack access to basic amenities of life such as affordable education, health facilities, safe water and habitable environment. Inability of youth in oil-bearing areas to draw government attention to their plight gave rise to oil bunkering, pipeline destruction, kidnapping of

expatriates and holding government to ransom. Activities of pipeline vandals involve oil spillage, pipeline explosion, and illegal refining of petroleum products in the riverine communities. The magnitude of pipeline vandalism has been the worst

disaster in the Nigerian economy (Johnson et al., 2022).

Rather than take decisive action to improve welfare of the masses, political leaders are not proactive to deal a dead blow on the corruption that drains the proceeds of crude oil. Rather, they listen to the pressure from bourgeoisie that disproportionally benefit from the energy subsidy. In a study by Ozougwu et al. (2023) which examined

environmental identities of youth and propensity toward destructive behaviour, it was indicated that criminal groups take advantage of government ineffectiveness to vandalize pipelines and perpetrate crude oil theft. Notwithstanding the allocation of 445,000 barrels of crude oil to NNPC per day for domestic consumption, it was evident that the figures for fuel importation in Nigeria between 1999 and 2023 are as follows:

1999-2006	N813 billion (\$515.6 million)
2007-2009	N794 billion (\$503.6 million)
2010-2014	N3.9 trillion (\$2.47 billion)
2015-2023	N11 trillion (\$6.97 billion)

Source: Falana (2023) Catalogue of looting and brigandage in Nigeria

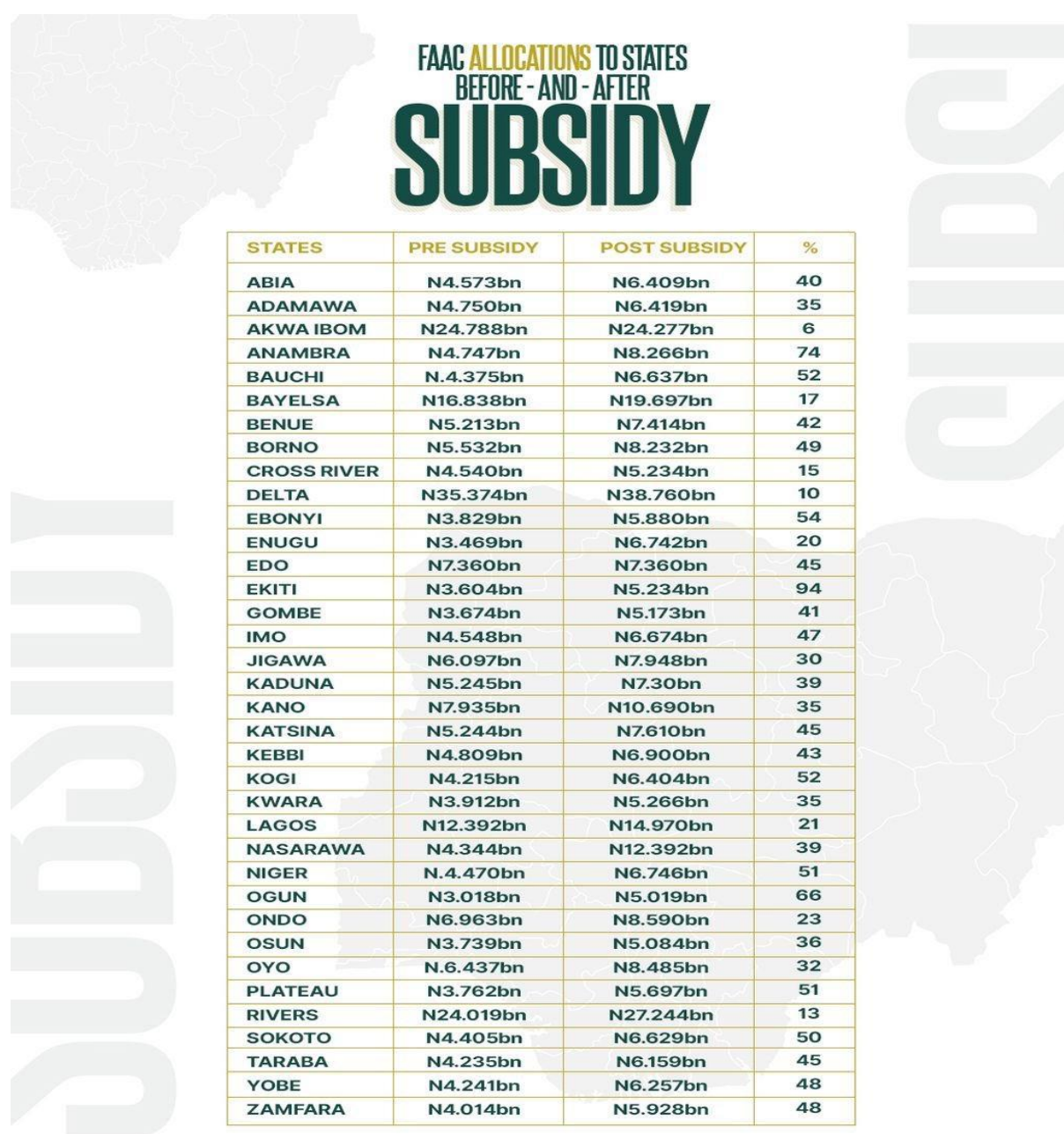
Yet, the Chief executive officer of NNPC Limited, Mele Kyari shocked the baffled nation that the federal government still owes the company N2.8 trillion (\$1.8 billion) in fuel subsidy payments! The militant youth are disappointed in the executive organ that could not actualize the purpose for which subsidy payments are being made in the first instance. Consumer goods are not within the reach of poor masses, just as services are not accessible and affordable by the people. Hence, the purported developmental tool turned out to be a socio-economic burden on the people. Despite argument that government is up to the task, the cost of fuel subsidy continues to grow exponentially (Shagali & Yusuf, 2022; p. 4) under successive regime.

In 2022, the Muhammadu Buhari administration awarded pipeline

surveillance contract to a non-state actor so as to minimize incidence of oil-related criminalities. Headed by Owezide Ekpemupolo, a former Niger Delta militant, the body was mandated to secure oil pipelines from attacks, bunkering, vandalism, smuggling and theft in the Niger Delta. In effect, the 9th Senate approved a whopping sum of N48 billion (\$30.5 million) to Ekpemupolo in order to ensure protection of pipelines and facilitate uninterrupted transportation of oil resources to refineries across the country (*Premium Times*, November 23, 2022). The action yielded desired results as over 58 illegal oil pipelines used to siphon oil for decades were discovered by the security outfit in different parts of the riverine communities.

Failure of successive political leadership to show genuine concerns for citizens' welfare in the implementation of subsidy reforms has led a number of despondent youth becoming agents of social disorder, militancy, banditry and cyber-crime. Convinced that fuel subsidy has outlived its usefulness, the Tinubu administration announced withdrawal of subsidy payment

without further delay. Phasing out a subsidy may have a direct budgetary impact through budgetary savings which can then be directed elsewhere and spent where they are most needed. This requires government to demonstrate political will and vision to take tough decision benefitting society as a whole.



Source: National Bureau of Statistics, Nigeria (2024)

Recently, the legislative organ approved a sum of N500 billion (\$316.3 million) as fuel subsidy palliative to make a positive socio-economic impact on the lives of Nigerians (Akoje, 2023). *Premium Times*, a national daily, reveals that a number of states has started the distribution of palliatives to people in their areas of control (*Premium Times*, August 27, 2023) with a view to alleviating economic hardships occasioned by fuel subsidy removal. Besides, it is imperative to note that there has been a substantial increase in the monthly allocation to the 36 states. According to the figures obtained from the approved budget, the sub-federating units are expected to receive N5.5 trillion (\$3.48 billion) in 2024 from the Federal Account Allocation Committee (*Punch*, February 14, 2024).

Fiscal expenditures are strategically designed to be allocated to health care, education and infrastructures to boost

public acceptance of government programmes and reduce domestic vulnerabilities. Moreover, committed leadership and proper implementation guarantee creation of value adding activities that transform the living conditions of the masses. In fulfilment of the campaign promise, the Bola Tinubu administration has assented to Electricity Act, Student loan Act and upward minimum wage review as part of measures to promote welfare services for the masses across the country. The giant strides are to authorize government and private sectors to generate, transmit and distribute electricity such that both rural and urban areas would have access to power supply (Izuaka, 2023); enable indigent but intelligent students access loans at free-interest rates to boost educational access and delivery at tertiary level (Anuku, 2023); and ease the working conditions of civil servants across the country.

CONCLUSION

Subsidy reform is a difficult policy choice in any nation especially when relevant stakeholders are not integrated in the discussions that culminate in its eventual implementation. Lack of technical capacity to refine crude oil at local refineries necessitated its transportation in large quantities to refineries abroad for processing. The importation of refined oil to Nigeria came at a huge cost to the detriment of the poor with difficulty to eke out a living. Subsidy regime encouraged criminal activities which has debilitating impacts on the nation's oil resources. Typical of oil-bearing countries, successive administration earmarked budgetary allocations to energy subsidy in order to

minimize the burden incurred by citizens on fuel consumption.

Subsidy reform, if well implemented, could assuage the feelings of people and improve their living conditions. It becomes a nationwide problem only when government lacks political will to enforce compliance as evidenced with oil-producing communities in Nigeria. The implications of subsidy reforms on the masses are such that the promise of compensation mechanisms to alleviate financial burden on the people is mere policy rhetoric, as the policy continues to protect the interests of oil cartel. The policy has made people worse off because they find it difficult to make ends meet on daily basis. The prevailing

situation is a pitiable sight with people facing serious economic hardship. The worrisome situation has resulted in nefarious activities such as stealing, kidnapping for ransom, prostitution, bullying, and other forms of social deviance across the country.

Effective reform strategies need to identify ways in which the adverse effects of subsidy reforms on the vulnerable groups could be mitigated without undermining their means of livelihood. The incumbent Tinubu administration has taken giant steps having highlighted mitigating strategies to alleviate economic hardships caused by fuel subsidy removal. These include anti-corruption strategies, approval of student loans, upward minimum wage review and strengthening of social safety nets (payment of cost of living and petrol allowances) to make life a better place for all. Importantly, government efforts would be meaningful in the areas of bridging communication gaps, development of institutional capacity, economic consideration, social assistance programmes, and regular consultation with stakeholders.

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PARENTING STYLES AS PREDICTORS OF EXECUTIVE FUNCTION IN CHILDREN AGED 5 TO 6 YEARS IN HULU LANGAT, SELANGOR, MALAYSIA

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ABSTRACT

Background Executive functions (EF) are a set of skills that develop from childhood and are vital in predicting future success. As these skills develop rapidly between the ages of three to five years old, parents play a crucial role in ensuring that a proper framework is set to support its development in their children. One parental factor that contributes to the development is parenting style. Hence, the aim of this study is to investigate the role of parenting styles on EF function in preschool children.

Methods One hundred and forty-one parents and children between 5 and 6 years old ($M = 5.46$, $SD = 0.5$) from the Hulu Langat district of Selangor participated in this study. This cross-sectional study used the Behaviour Rating Inventory of Executive Function—Preschool Version (BRIEF-P) to measure EF while the Parenting Style Four Factor Questionnaire (PS-FFQ) was used to determine parenting styles. The questionnaires were completed by the main caregiver of these children.

Results Findings suggest an authoritative parenting style had a significant positive relationship with EF while the uninvolved parenting style would negatively affect the development of a child's EF. On the other hand the regression analysis showed that, the authoritative and authoritarian parenting were both significant predictors of EF.

Conclusions This study showed that of the different parenting styles, the authoritative parenting style had a good relationship with EF which indicated that this parenting style would contribute to the healthy development of EF in preschool children which in turn would contribute to the development of competent adults.

Keywords: executive functions, preschool, parenting style, authoritative parenting, authoritarian parenting

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INTRODUCTION

Executive function (EF) is defined as a high-level cognitive process that allowed individuals to regulate their actions and thoughts during goal-directed behaviour (Friedman & Miyake, 2016). It was generally accepted that there were three core EF processes which are inhibition, working memory, and cognitive flexibility (Diamond, 2013). When solving new problems, these functions and processes were critical, as the definition suggested (Garon et al., 2008). EF provided a degree of coordination and way to manage cognitive abilities to use them efficiently and effectively (Akbarian, 2014). EF related cognitive abilities are especially important for younger age groups because they provide the foundation for later success (Akbarian, 2014; Selvam et al., 2016).

The first five years of a child's life were vital in the development of EFs (Garon et al., 2008) and it continued developing throughout preschool years, middle childhood and adolescence (Anderson & Reidy, 2012; Meuwissen & Carlson, 2015; Selvam et al., 2016; Nieto-Lopez et al., 2020). EF was very predictive of children's future academic performance (Thorell et al., 2013; Selvam et al., 2016). EF was also vital for school readiness with having high EF related outcomes would persist throughout life including social skills, income, mental and physical health (Mischel et al., 2011; Moffitt et al., 2011; Meuwissen & Carlson, 2015).

As a predictor of future success, it is vital for children to develop their EF capabilities efficiently (Selvam et al., 2016) and to avoid suffering from executive dysfunction.

Executive dysfunction could be associated to a variety of neurological and mental health problems as well as difficulties in later life including poor academic achievement and a lack of inhibitory control (Rabinovici et al., 2015). The inability for children to focus for a long period of time or organize thoughts and information would contribute to the disorders but it was not totally irreversible (Schrader, 2018). Given these negative outcomes were avoidable and manageable, it was vital to find the biggest contributing influence on EF and intervene as early as possible.

One factor that most affects a child's EF was parenting style. Patterns of parenting behaviour have been suggested to alter the developmental outcomes in children (Calkins et al., 2013). Furthermore, the EF of parents and children correlated with each other (Distefano et al., 2018). Parents influence what their children learn and how they respond to their environment (El Nokali et al., 2010; Distefano et al., 2018) because they create barriers and provide opportunities for their children (Yeung & Hills, 2007; Distefano et al., 2018). Therefore, parenting style plays a major role in safeguarding children's development. Unfortunately, because parental involvement is vital, uninvolved parents could have a detrimental impact on their children's overall development.

Baumrind (1971) categorized parenting styles as authoritative, authoritarian, permissive, and neglectful. These different type of parenting styles create different environments for children's EF to develop. A review by Horwitz and Neiderhiser

(2011) found family relationships had the potential to alter the trajectory of a child's biological growth. Moreover, authoritative parenting is thought to have had a positive effect on EF because it provides appropriate control and warmth (Abdorezza & Baharudin, 2010). Unlike other parenting styles that were neither too strict nor uncontrolled, the bidirectional nature of authoritative parenting allowed children to learn and explore more.

A cross-sectional study by Kashahu et al. (2014) involving 220 students identified a significant relationship between parenting styles and academic performance. The study discovered that students achieved better overall academic performance in homes with authoritative parenting but achieved only moderate to low performance when authoritarian parenting was involved. Based on this study, Kashahu et al. revealed that mothers tend to be more authoritative while fathers and younger parents were more authoritarian.

A longitudinal study by Mileva-Seitz et al. (2015) conducted in the Netherlands investigated whether sensitivity in parenting would affect the EF of children. The researchers discovered that parent's sensitivity towards their children affected the performance of EF in children and especially in boys who required more scaffolding and were more influenced by parenting sensitivity and family environment. In general, the findings aligned with Bernier et al. (2012) and Abdorezza and Baharudin (2010) because they highlighted the importance of

sensitivity in parenting and scaffolding as being key to nurturing good EF, as suggested by Fay-Stammbach and colleagues (2014).

There were, however, limited studies that specifically related the four parenting styles to EF in preschool children, and studies conducted in an Asian context were even more limited. Reviews by Abdorezza and Baharudin (2010) and Fay-Stammbach and colleagues (2014) suggested that parenting styles and behaviours influenced EF and later academic achievement. Abdorezza and Baharudin also recommended that further studies be conducted because the currently available studies were inconsistent, especially in terms of considering the relationship between Asian and Western children, which is significant because Asian parents were generally more authoritarian while Western parents were generally more authoritative (Park et al., 2010; Kashahu et al., 2014).

Therefore, the aims of this study were (a) to examine the prevalence of EF issues among preschool children, (b) to investigate the relationship between the different facets of EF and parenting styles, and (c) to identify which type of parenting style would be the best predictor of EF. Based on previous studies, the hypothesis of this study are (a) there will be a low prevalence (<15%) of EF issues among the students (b) the higher the scores for authoritative parenting styles, the better the scores on the different subscales of EF of the students, and (c) authoritative parenting would be the best predictor of EF.

MATERIALS AND METHODS

Research Design

This study was a quantitative cross-sectional study that was conducted at preschools in Hulu Langat, Selangor. Areas included in Hulu Langat are Bangi, Kajang, and Cheras. Hulu Langat was chosen as the location of study because it had been perceived as one of the busiest districts in Selangor. It had been rapidly developing and was one of the highest potential districts in Selangor since 2016.

Participants

The participants were children ($n = 141$) aged 5 and 6 ($M = 5.46$, $SD = 0.5$) and their primary caregivers. Children who attended preschool in the Hulu Langat District in Selangor were eligible to participate in this study. The sampling method for this study was multi-stage sampling. Participants were excluded if the caregiver did not understand the Malay or English language; their children had been diagnosed with mental health illness, such as anxiety and depression, by medical professionals; their children had been diagnosed with a chronic medical illness such as cancer; and their children had been diagnosed with neurodevelopmental conditions such as ADHD and autism or an intellectual or learning disability by a medical professional. The preschoolers involved in this study were provided a consent form to be completed by their primary caregivers before they answered the questionnaires.

Procedure

The preschools from the Hulu Langat area were randomly selected. Preschool administrators were approached to request permission. Then, students from each preschool were randomly selected to

maximize the number of preschools involved. Students from each school were randomly selected by getting the list of names of students and putting them through an online randomiser. The parents of the selected students were given the consent form and questionnaire to complete. The parents were provided one week to complete the questionnaire before it was collected by the researchers. Because of the COVID-19 pandemic, an online questionnaire was also provided to participants to reduce physical contact and the risk of COVID-19 transmission.

Measures

Demographic Data. A demographic questionnaire was given for the caregivers to complete which include data like age, gender, parent income, BMI, and parent education level among others.

Parenting Style. Parenting style in this study was measured by using the Parenting Style Four Factor Questionnaire (PS-FFQ) that was created and validated by Shyny (2017). This 32-item questionnaire identified the type of parenting styles based on Baumrind's (1971) four parenting style of authoritative, authoritarian, permissive, and uninvolved. Each item had a 5-likert scale answers: all of the time, most of the time, sometime, rarely, and never. This questionnaire had a good reliability and validity with a reliability coefficient of (Cronbach's alpha) 0.919.

Executive Functions. This study used the BRIEF-P as a tool to measure executive function. This questionnaire was answered by primary caregivers and consisted of 63 items assessing inhibition, shift, emotional

control, working memory, and planning. Each item had three answer choices: never, sometimes, and often. The BRIEF-P has adequate reliability (internal consistency [.80–.97], test–retest stability [.78–.90]), and convergent and divergent validity (Gioia et al., 2003).

Data Analysis

RESULTS

Table 1 shows the descriptive statistics of the demographics data of the 141 participants. The participants were evenly split between male and female. Out of 141 participants, 70 were male (49.6%), and 71 were female (50.4%). The number of 5-year-old children was slightly higher (53.9%) than 6-year-old children. The BMIs of most of the children were within the normal range (55.3%), followed by overweight/obese (31.2%) and underweight (13.5%). Most participants were Malay (82.3%), and most parents had a tertiary level education (85.8%). Most household incomes were within the middle income category (49.6%), followed by low income (34.0%).

The mean T-scores were calculated to identify the number of participants who had significant difficulties in EF. Higher T-scores would indicate difficulties related to EF, and T-scores of scales and indices at or above 65 were understood to be clinically significant (Fay-Stammbach et al., 2019). The percentages of participant's clinically significant T-scores are presented in Table 2. Because the Global Executive Composite can loosely be seen as a reflection of the overall EF of the participants, 12.1% ($n = 17$) of the participants have clinically significant executive dysfunction.

Data was analyzed by using IBM SPSS version 26.0. After the data was cleaned to remove any missing data and outliers the analysis was carried out. The correlation and multiple regression analyses were run to analyse the results according to the hypotheses.

A Bivariate correlation between parenting styles and clinical scales is presented in Table 3. An uninvolved parenting style correlated negatively with all clinical scales, which indicates that uninvolved parenting would negatively affect a child's EF ($r = -.298$, $p < .01$ [Inhibit]; $r = -.341$, $p < .01$ [Shift]; $r = -.204$, $p < 0.05$ [Emotional Control]; $r = -.247$, $p < .01$ [Working Memory]; $r = -.221$, $p < .01$ [Plan/Organize]). Authoritarian parenting was significantly negatively correlated with Inhibit ($r = -.269$, $p < .01$) and Shift ($r = -.266$, $p < .05$). However, authoritative parenting is the only type of parenting that had a significant positive correlation. Authoritative parenting is significantly correlated with Inhibit ($r = .441$, $p < .01$), Shift ($r = .174$, $p < .05$), and Plan or Organize ($r = .254$, $p < .01$). This indicates that authoritative parenting is a significant parenting style for an ideal EF.

The result of the multiple linear regression between parenting styles and clinical scales of BRIEF-P are presented in Table 4. The dependent variable of each regression model is the BRIEF-P clinical scales, while the four parenting styles were tested as possible predictors. In the model testing of Inhibit and the four parenting styles,

authoritative parenting ($B = .53$, $SE = .23$, $p < .05$) was found to have a direct effect. For Shift, there was significant interactions among all parenting styles except authoritative parenting ($B = -.40$, $SE = .18$, $p < .05$ [Authoritarian]; $B = -.30$, $SE = .30$, $p < .05$ [Permissive]; $B = -.26$, $SE = .18$, $p < .05$ [Uninvolved]). However, permissive parenting is the only style that did not have a significant relationship with Emotional

Control ($B = .47$, $SE = .20$, $p < .05$ [Authoritarian]; $B = .30$, $SE = .24$, $p < .05$ [Authoritative]; $B = -.29$, $SE = .18$, $p < .05$ [Uninvolved]). In the working memory model, only uninvolved parenting style have a significant interaction ($B = -.329$, $SE = 0.196$, $p < .05$). There was no significant relationship in the plan/organize model.

DISCUSSION

This study identified the prevalence of issues in EF among preschool children in Hulu Langat, Selangor, and examined the relationship among parenting styles and their EF. Building on previous studies that indicated parenting had a significant impact on EF, a multiple linear regression was performed to identify which parenting style can best predict EF.

Based on the cutoff for established by Gioia et al. (2003), 12.1% ($n = 17$ out of 141) of participants suffered from issues in EF in this study. This percentage is within the range identified by Selvam et al. (2016) as the norm in India, which had a 10.4% prevalence. The slight difference between the prevalence in this study and Selvam et al. (2016) is likely due to the sample size difference. Issues with a child's EF could stem from early childhood stress, their family structure, or educational opportunities. However, the most common cause of poor EF are underlying mental health illness.

The correlation analysis identified that authoritative parenting is positively correlated with most of the subscales of EF, suggesting that being authoritative influenced good EF development in

children. This finding is consistent with Mileva-Seitz et al. (2015) and Distefano et al. (2018), which found that warmth and understanding from an authoritative parent would better aid EF development. This particular parenting style would also provide scaffolding or guidance to children to help them with problems, which, as explained by Fay-Stammach et al. (2014) and Mileva-Seitz et al. (2015), were important in developing a nurturing environment for children. The guidance provided would educate and train the children about appropriate behavior. Therefore, this study concurs with the finding of Susic-Vasic et al. (2017) that the contributing factor for this strong association was parental involvement or responsibilities that guide children and directly improve their EF performance.

The results also showed there was a significant negative correlation among other types of parenting and children's EF, suggesting that less favourable parenting styles such as authoritarianism, permissiveness, and a lack of involvement would reflect negatively on the children's EF development. The aforementioned parenting styles also incorporated

inconsistent discipline toward children that would affect their EF performance (Sosis-Vasic et al., 2017). Parents who use an authoritarian style may affect their child's ability to explore and indirectly prevent the child from growing cognitively. Being neglected by parents would also negatively affect a child's self-esteem, which could lead to mental health issues such as depression that can inhibit EF. Sosis-Vasic et al. (2017) also reached a similar conclusion that permissive parenting, uninvolved parenting, and especially authoritarian parenting, would result in average or low EF performance. This relationship is consistent with Abdorezza and Baharudin (2010), which found the lack of warmth and sensitivity would impair children's EF and have a detrimental impact.

Through conducting a multiple regression analysis, authoritative parenting was identified as a predictor for inhibition and emotional control. This outcome is in line with the result of previous studies that identified authoritative parenting as significant to a child's overall intelligence (Kashahu et al., 2014; Mileva-Seitz et al., 2015). Authoritative parenting, in general, is similar to authoritarian parenting because it provides children with clear but firm directives to follow; however, these styles significantly differ in their levels of strictness (Abdorezza & Baharudin, 2010). By trading strictness with a balance of warmth, reasoning, flexibility, and discipline, authoritative parenting provides children a healthy environment to develop. Authoritative parenting can affect the psychosocial maturity of children, which can be seen in their greater self-reliance and stronger self-identity (Abdorezza & Baharudin, 2010). This study contends that

children strive to have a safe environment in which to grow and explore but need a safety net provided by their parents for help if they make mistakes. This will help them gain experience and psychosocial maturity. Therefore, from the findings of this study and the literature reviewed, the nature of authoritative parenting could significantly predict children's EF.

Interestingly, this study also found authoritarian parenting to be a significant positive predictor of emotional control and shift. Authoritarian parenting is widely perceived to be the dominant parenting style of Asian parents (Kawamura et al., 2002; Pong et al., 2005; Abdorezza & Baharudin, 2010; Kashahu et al., 2014). However, this result contradicts the findings of Kashahu et al. (2014), which found that authoritarian parenting would lead to average to low EF performance. Traditional Asian parents, however, are more likely to reinforce a concept known as "filial piety," which is commonly understood as unquestioned obedience toward parents (Park et al., 2010). However, more modern Asian parents tend to use a better blend of authoritarian and authoritative parenting styles in which they provide warmth and guidance to a certain extent but also implement rules that should be strictly followed. This might lead to more disciplined child without inhibiting their growth. Studies have suggested that authoritarian parenting in an Asian context helped children become more autonomous and self-controlled (Park et al., 2010). Therefore, this study found that from an Asian parenting point of view, authoritarian parenting can be a good predictor of EF in children.

Children's development is closely associated with their micro-environment and that of their families (Rhoades et al, 2011; Kashahu et al., 2014). Therefore, it is highly likely that parenting styles would affect children's development. According to this study's findings, an authoritative parenting is a good predictor of a child's EF because the correct blend of firmness and warmth facilitate the positive growth of EF. This study also found that authoritarian parenting would be a good predictor of EF. This is likely because of the nature of Asian parenting that includes elements of authoritarianism that are not detrimental to a child's growth. However, permissive and uninvolved parenting were significant predictors of negative EF development because of the lack of attention from parents.

The current study provides a vital foundation for other studies because there was limited research that investigated the relationship of parenting styles and EF, especially in a Malaysian context. Therefore, this study provides valuable data that can be used and analyzed for future studies. By studying preschool children who were rapidly developing cognitively, the results of this study can assist parents and teachers ample time to help them develop a healthy EF. Because this study demonstrated the importance of parenting styles on children, parents can take the correct parenting approach to reduce the percentage of executive dysfunction among preschool children.

However, there may be some limitations to this study. Because this study used a questionnaire, it is susceptible to caregivers' self-bias. This study relied on responses from caregivers as key

informants, which could lead to the risk of over- or underreporting their parenting styles or child's problems. Involving preschool teachers in future studies would provide additional data that could minimize bias from single-informant reporting (Fay-Stammbach et al., 2018). Also, a longitudinal study would be beneficial because it would allow researchers to observe children's EF development over time, which is not possible in a cross-sectional study. The samples for this study were taken from only a section of a district in Selangor, Malaysia, and the vast majority of participants were Malay, which may limit generalizability. A study that covers the whole state of Selangor or Malaysia and provides a better racial representation would lead to better generalizability of the community.

The current study found a consistent number of issues with EF compared to other studies. Hence, it provided a good picture of the general prevalence of executive dysfunction in preschool children in Malaysia. The current study also demonstrated that authoritative parenting has a significant positive impact and is a significant predictor of children's EF, highlighting the importance of balancing strictness and warmth in parenting. This study also revealed that authoritarian parenting was a significant predictor of EF, which contradicts most Western studies; however, is not uncommon in an Asian context because Asian parents tend to be stricter than their Western counterparts.

These findings, with support from previous studies, highlighted the importance of the relationship between parenting style and EF. Therefore, this study could make parents more aware of how important their

parenting approach is. Future studies should examine these potential

relationships to EF to shape the future generation.

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TABLES AND FIGURES

Table 1.

Demographic Characteristics of Respondents

Variable		n	%
Gender	Male	70	49.6
	Female	71	50.4
Age	5	76	53.9
	6	65	46.1
BMI	Underweight	19	13.5
	Normal	78	55.3
	Overweight/Obese	44	31.2
Ethnicity	Malay	116	82.3
	Chinese	19	13.5
	Indian	6	4.3
Parent Education Level	Non-schooling and primary school	2	1.4
	Secondary school	18	12.8
	Tertiary level	121	85.8
Income	Very low income	3	2.1
	Low income	48	34.0
	Middle income	70	49.6
	High income	20	14.2

Table 2.

Percentage of Clinically Significant T-Scores

BRIEF-P Clinical Index	n	%
Inhibitory Self-Control Index	15	10.7
Flexibility Index	13	7.3
Emergent Metacognition Index	19	13.5
Global Executive Composite	17	12.1

Table 3.

Correlation Between Parenting Styles and Clinical Scales

Variable	Authoritarian	Authoritative	Permissive	Uninvolved
BRIEF-P Inhibit	-.269**	.441**	.056	-.298**
BRIEF-P Shift	-.266*	.174*	-.158	-.341**
BRIEF-P Emo Ctrl	.105	.140	-.197*	-.204*
BRIEF-P W. Mem	-.159	.116	.030	-.247**
BRIEF-P Plan/Org	-.159	.254**	.007	-.221**

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

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MOTIVATION AND SATISFACTION OF VISITORS AT THE RECREATIONAL AREA IN ALOR LEMPAH, KUALA KUBU BHARU, SELANGOR, MALAYSIA

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ABSTRACT

The sustainability of the recreational area is intricately linked to visitor satisfaction and the determinants affecting their likelihood of returning to the site. Despite the growing interest in outdoor recreation, limited research has focused on specific local contexts like Alor Lempah. This study investigated visitor satisfaction at Alor Lempah and explores factors influencing this satisfaction through push and pull motivation frameworks. The multiple regression analysis was used to analyse the association between motivation and satisfaction. Utilizing the analysis, psychological and physiological factors and environmental factors were the primary motivators for visitation. Notably, 95% of visitors expressed a desire to return. The findings reveal that long-distance visitors who lived more than 10km from Alor Lempah and visitors who came by car made up the majority of recreational area visitors. Interestingly, social and economic factors significantly impacted satisfaction with amenities/facilities at Alor Lempah. Good spots for recreation or picnic areas and feeling safe were found to be major factors of user experience and environment satisfaction, while convenient changing rooms and an inadequate number of trash bins limited the satisfaction level of amenities and facilities. These findings provide valuable insights for recreation area planners in developing guidelines to improve visitor experiences and promote the sustainability of Alor Lempah.

Keywords: Outdoor recreational activities; Motivation; Psychological; Physiological Satisfaction

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INTRODUCTION

The increasing participation in outdoor recreational activities over the past two decades has been significant, encompassing a diverse demographic that includes youth, adults and seniors (Sidi & Radzi, 2017). Spending time or participating in outdoor activities in the natural environment has the potential to improve both physical and mental well-being by providing essential ecosystem services such as stress relief, socialization, and appreciation of nature through direct interaction with the environment (Zwart & Ewert, 2020; Rice et al., 2020). As people's interest in studying and exploring the field of recreation increases (Aziz et al., 2020), it is necessary to understand the motivations behind site selection.

Despite wide research on urban parks and recreational areas, there remains a notable gap in the literature concerning lesser-known local sites like Alor Lempah. Many studies have explored motivations for visiting parks, focusing on environmental and social benefits (Zhan et al., 2021; Halkos et al., 2021). However, visitor motivations can vary significantly even within similar recreational settings due to individual differences in personality, lifestyle, past experiences, demographics, and perceptions (Katsikari et al., 2020).

LITERATURE REVIEW

Visitor motivation is commonly understood through the push and pull factors framework (Katsikari et al., 2020). This model explains that internal motivation push individuals to travel, while external attractions pull them toward a destination (Sato et al., 2018). Push factors are socio-psychological motives that drive people to

This variability highlights the necessity for targeted studies that investigate unique recreational contexts.

Alor Lempah was specifically chosen for this study due to its emerging status as a recreational destination following the COVID-19 pandemic. While Alor Lempah has long been familiar to the local community as a recreational site, its popularity has surged beyond district boundaries, particularly following the COVID-19 pandemic. The Movement Control Order (MCO) restricted travel within districts, prompting local residents to explore nearby attractions. Consequently, Alor Lempah gained recognition as a desirable destination for outdoor activities among visitors from outside its immediate area. This shift raises important questions about whether this increased interest will be sustained over time and how visitor satisfaction can be maintained. This study aims to assess visitor motivations for choosing Alor Lempah as a recreational destination, evaluate visitor satisfaction levels regarding facilities and services at Alor Lempah and determine the relationship between visitor motivations and satisfaction levels.

seek travel experiences. These include psychological needs such as escape, relaxation, social interaction, self-esteem, family togetherness, and entertainment (Crompton, 1979; Musa et al., 2017; Sato et al., 2018). On the other hand, pull factors are related to the attributes of the destination that attract visitors. These

encompass novelty, educational opportunities, environmental features of the destination such as distance, tourist location, seasons, flora and fauna (Musa et al., 2017), weather, scenery, attractions, physical amenities, airfare, history and culture (Sato et al., 2018). In addition, Musa et al. (2017) stated that economic factors like the cost of travel, income, expenditure, inflation, and employability also play a significant role in influencing visitation decisions.

The success of a travel destination depends on three primary components, namely attractions, amenities or facilities, and accessibility. These interrelated factors collectively contribute to visitor satisfaction (Nafi & Ahmed, 2018). According to Oliver's definition of customer satisfaction (1993, as cited in He & Luo, 2020), customer satisfaction is evaluating the extent to which products and services meet their needs and the positive feelings or pleasure gained after experiencing or consuming them. Meanwhile, satisfied customers are highly valued for three main reasons. Firstly, they tend to become repeat visitors, which ensures stable income without additional marketing efforts. Secondly, reduce complaint handling costs. Lastly, satisfied customers act as free marketing through

positive word-of-mouth and recommendations (Hickman et al., 2023).

Recreational activities are activities with high repetitive consumption, and there are many repeat visitors; therefore, it is necessary to study their motivations and satisfaction levels. Musa et al. (2017) stated that several studies were conducted to explore the antecedent of loyalty intention. The concept of destination loyalty is relevant for understanding how satisfied visitors may recommend locations to others (Sato et al., 2018). Therefore, to enhance visitor experiences, it is essential to determine the specific needs that are met by different aspects of the park. When these needs are fulfilled, visitors will be motivated to return (Gibson, 2018). Sato et al. (2018) reported that loyal tourists may spend less than first-time visitors but still contribute positively to a destination's economic impact through recommendations and word-of-mouth promotion. Hwang et al. (2020) stated that improving visitor satisfaction requires consideration of different motivations, including both push and pull factors. Understanding these factors helps provide appropriate attractions and activities, ultimately enhancing the competitiveness of the destination.

THEORETICAL FRAMEWORK

This study aims to determine the significance of push and pull factors in influencing visit motivation while identifying the key components within these factors that drive travel motivation. This study further explored the methodology proposed by Oh et al. (1995) and Tan et al. (2021), which proposed classifying tourists into diverse market

segments according to their travel motivations. This segmentation contributes to predicting the motivation behind the destination choices of travellers. Additionally, the study seeks to identify specific components within these factors that significantly influence satisfaction. By addressing these research challenges, this study contributes valuable insights into

understanding visitor dynamics at Alor Lempah.

Figure 1 illustrates the research model that defines the relationship between push and pull factors influencing visitor motivation and satisfaction at Alor Lempah. The model is grounded in the push-pull framework, which categorizes motivations into two primary dimensions. Push factors, representing internal motivations, include social needs such as social contact, relationship enhancement and exploration of self. Then, psychological and physiological needs such as escape, desire for relaxation and adventure. Conversely, pull factors encompass external attractions related to the destination itself, such as the environment for its attractions, activities

and natural resources. Then, the economy such as budget, affordability, food and accommodation. The interplay between these push and pull factors is critical in shaping visitors' motivations to choose Alor Lempah as a recreational destination.

Furthermore, the model seeks to identify specific components within push and pull factors that significantly influence visitor satisfaction. Main among these are amenities and facilities and the user experience and environment. By highlighting these relationships, the research aims to provide an understanding that can enhance visitor experiences and inform planning strategies for recreational areas.

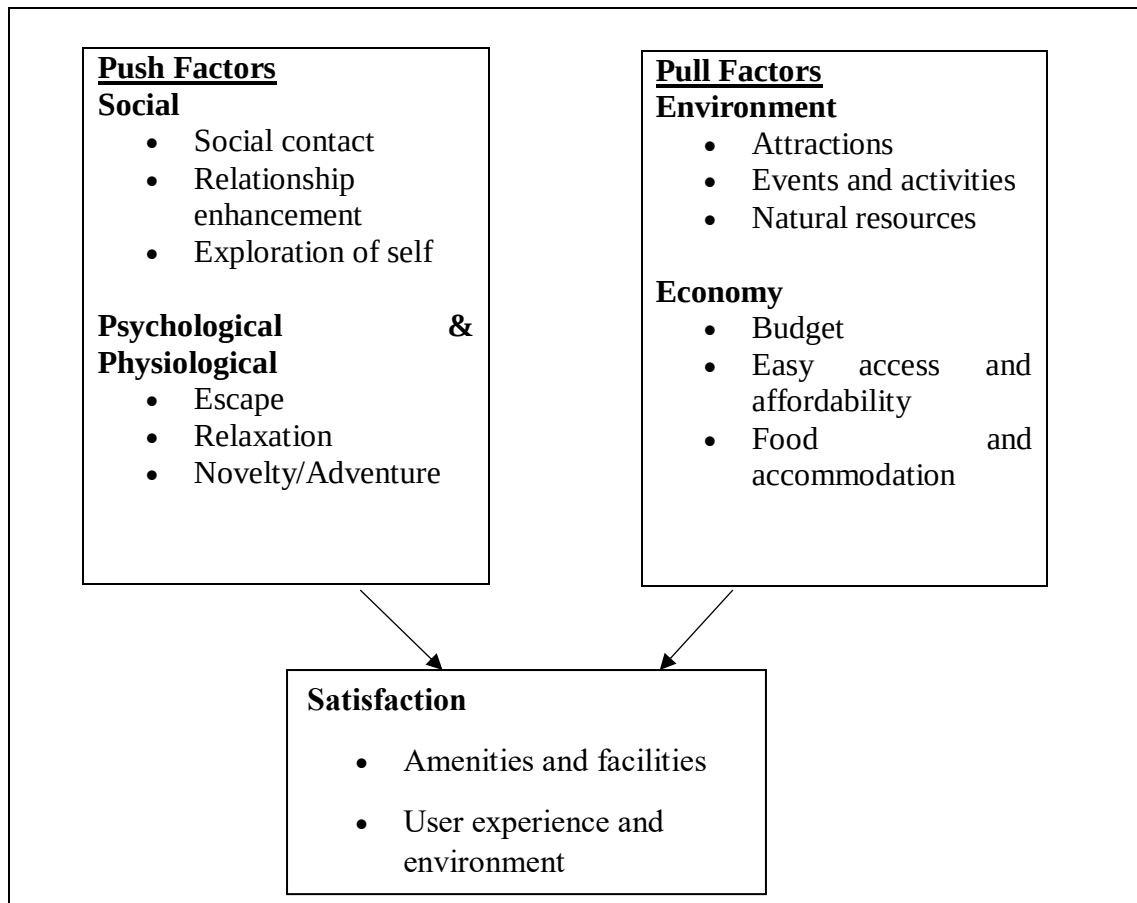


Figure 1: The Research Model of Push and Pull Factors

(adapted & modified from Tan et al., 2021)

METHODOLOGY

The study was conducted in Alor Lempah, located within the Ampang Pecah sub-district of Kuala Kubu Bharu (KKB), Selangor which has been a longstanding focus and direction of the nation's tourism industry. The selection was based on the location (accessibility), the size of the area, and the resources provided in Alor Lempah to allow people to do recreational activities. A non-probability convenience sampling method was employed to identify qualified respondents. This approach was chosen due to its practicality in reaching visitors on-site who had recently experienced Alor Lempah. Cochran's formula was used to

determine the appropriate sample size, resulting in a total of 400 participants for this study. Data collection took place from January to March 2023, during various times (mornings, afternoons, and evenings) on weekends to capture a diverse range of visitors.

A structured questionnaire was used to investigate how visitor satisfaction influences the relationship between push and pull factors affecting visits to Alor Lempah. The questionnaire consisted of the factors influencing visitation, and satisfaction towards Alor Lempah. Each question was measured using a five-point

Likert-type scale (1 = strongly disagree and 5 = strongly agree).

Statistical Analysis

The data were analysed using Microsoft Excel and Statistical Package for Social Science Version 26 (SPSS). Descriptive analysis and multiple linear regression analysis were carried out to investigate the relationship between the dependent and independent variables of the study. Meanwhile, Cronbach's alpha was used to

assess the reliability of each scale. Table 1 and 2 shows the reliability results from the pilot test. Cronbach's alpha value for factors influencing the visitation was 0.786. Each item ranged from 0.669 to 0.908. Besides, Cronbach's alpha value for visitor satisfaction was 0.915 with each item's amenities and facilities was 0.752 and user experience and environment was 0.911.

Table 1: Cronbach Alpha Coefficients for the 16 variables of factors influencing the visitation to Alor Lempah

Item	Variables	Cronbach's Alpha
Social benefits	1. Spending time with family	0.669
	2. Meeting friends	
	3. Something I prefer to experience alone	
	4. Taking children to play in the recreation area	
Environmental benefits	1. Entertainment activities (photography, videography, etc.)	0.729
	2. Enjoying outdoor activities (camping, picnics, water activities, etc.	
	3. Enjoying the scenery of the recreational area	
	4. Interacting with animals and plants	
Psychological and physiological benefits	1. To be close to nature	0.908
	2. To experience tranquility	
	3. To reduce stress and relaxation	
	4. To experience excitement and adventure	
Economic benefits	1. Free entry fee	0.715
	2. Affordable prices of food and drink	
	3. Reasonable equipment/facility rental	

	4. Free parking	
Total	16 variables	0.786

Table 2: Cronbach Alpha Coefficients for the 12-variables of visitor satisfaction towards Alor Lempah

Item	Variables	Cronbach's Alpha
Amenities and facilities	1. Sufficient number of benches and gazebo	0.911
	2. Sufficient number of trash bins	
	3. Location of the parking area	
	4. Sufficient number of food stalls	
	5. Sufficient number of equipment rental stalls	
	6. Sufficient number of campsites	
	7. Convenient changing rooms	
	8. Well-maintained natural trails	
User experience and environment	1. Signage is easy to understand	0.752
	2. Good spot for recreation/picnic area	
	3. Not too many other visitors present	
	4. Feeling safe in the recreation area/public space	
Total	12 variables	0.915

A descriptive analysis was used to compute the mean score of the factors influencing the visitation and assess the satisfaction of amenities/facilities and user experience/environment. Other than that, the descriptive analysis was also employed to describe the socio-demographic profile of the respondents of Alor Lempah.

Frequencies related to visitors' motivations, satisfaction, and socio-demographics were analyzed to characterize the study group. Multiple linear regression analysis was employed to estimate the unique contributions of each independent variable (motivation) to the dependent variable (satisfaction). If the model achieves

statistical significance, it provides insights into the magnitude and direction of the relationship between motivation and

satisfaction, along with any other included independent variables.

RESULTS

Characteristics of Respondents

There were 246 (61.5%) female and 154 (38.5%) male respondents among the total of 400 people who took part in this research. Approximately 168 (42%) of the visitors were 18 to 29 years old, while 143 (35.8%) of the visitors were 30 to 39 years old. Meanwhile, 89 (22.3%) of the visitors were 40 to 59 years old. With respect to education level, 38.1 % of the respondents had a university level, 34.0 % of the respondents had a pra-university level, 18.5% graduated from a high school, 8.8% of the respondents had a graduate secondary school education and 0.8% received informal education. As such, more than 50% of the respondents had a high level of education. In terms of occupation, 42.8% of the respondents were working in the private sector, while 21.8% were in the government. Meanwhile, 14.8% of the respondents were students, 11.8% were self-employed and 9.0% were not working. With respect to income, 52.8% of the respondents earned less than RM 4000 per month, and 22.8% earned RM 4001 – RM 5500 per month, while 24.5% of the respondents do not want to declare their monthly income.

Most of the respondents were lived more than 10km from Alor Lempah (73.3%) and most had come to the recreational area with family (51.8%). Besides, most respondents were slightly familiar with Alor Lempah (42.8%). For the past three months, most respondents never visited the Alor Lempah (61.0%), while visiting for once (11.3%) or were regular visitors of two to four times

(21.3%) and more than five time (6.5%) The majority of the respondents (89.5%) travelled using own transportation, which is their car. 41% the respondents stated that they spent around 3-4 hours at Alor Lempah. Another 34% of the respondents mentioned that they stayed for almost 1-2 hour, followed by 14.2% for 5-6 hours. Most of the respondents (72.8%) visited the recreation area in the morning. In addition, 63% of the respondents stated that they came along with children during their visit, with 10.5% of them had only one child. Meanwhile, most of the respondents (16.2%) had two children with them. Lastly, the type of activities engaged in by the respondents, majority of them participated in picnic activities (29.8%), followed by camping (24.4%), photography or videography (23.1%), tubing or inflatable boating (13.2%) and lastly, fishing (9.5%).

Factors Influencing Visitation to Alor Lempah

Table 1 summarize the factors influencing visitation. According to the strength of their motivations, the specific motivations were scored from 0 to 5. The mean scores for the visitation factors of social, enviromental, physiological and physiological, as well as economic groups across all the respondents were computed and presented in Table 1. The highest mean score was obtained for the psychological and physiological factors ($\bar{x}$ = 4.34), followed by environmental factor ($\bar{x}$ = 4.10), social factor ($\bar{x}$ = 4.09), and economical factor ($\bar{x}$ = 4.03).

The four mean scores obtained suggested that majority of the respondents strongly believe that psychological and physiological factors are crucial when visiting recreational areas, such as to reduce stress and relax ($\bar{x} = 4.42$), find peacefulness ($\bar{x} = 4.41$), experience thrills and adventures ($\bar{x} = 4.29$) and to be close to nature ($\bar{x} = 4.25$). Interestingly, visitors of Alor Lempah strongly agreed that environmental factors such as animal and plant interaction ($\bar{x} = 3.59$), entertainment ($\bar{x} = 4.06$), outdoor activities ($\bar{x} = 4.36$), and scenery appreciation ($\bar{x} = 4.39$) were their motivations to visit Alor Lempah.

In terms of social benefits, the respondents agreed and strongly agreed that visiting Alor Lempah was for enjoying solitude ($\bar{x} = 3.82$), socialising with friends ($\bar{x} = 3.85$), supervising children's play in the recreational area ($\bar{x} = 4.20$), and quality time with family ($\bar{x} = 4.48$). Lastly, the respondents who were between agree and strongly agree positions in relation to the economic factors of visiting Alor Lempah such as fair equipment/facility rental ($\bar{x} = 3.52$), affordable food and drink ($\bar{x} = 3.63$), free parking ($\bar{x} = 4.45$), and no entry fee ($\bar{x} = 4.49$).

Table1: Factors influencing visitation

Statements	Mean	SD
Social	4.09	0.626
Spending time with family	4.48	0.785
Meeting friends	3.85	0.944
Something I prefer to experience alone	3.82	0.985
Taking children to play in the recreation area	4.20	0.803
Environment	4.10	0.607
Entertainment activities (photography, videography, etc.)	4.06	0.845
Enjoying the scenery of the recreational area	4.39	0.703
Enjoying outdoor activities (camping, picnic, water activities, etc.)	4.36	0.704
Interacting with animals and plants	3.59	0.982
Physiology and Psychological	4.34	0.637
To be close to nature	4.25	0.749
To experience tranquillity	4.41	0.684
To reduce stress and relaxation	4.42	0.711
To experience excitement and adventure	4.29	0.734

Economy	4.02	0.663
Free entry fee	4.49	0.795
Affordable prices of food and drink	3.63	1.003
Reasonable equipment / facility rental	3.52	1.038
Free parking	4.45	0.737
Mean score	4.14	0.528

Visitors' Satisfaction Level Towards the Facilities in Alor Lempah

The satisfaction level of the visitors was detailed in Table 2. For this variable, the mean score for each satisfaction level towards the facilities in Alor Lempah, which were categorised into amenities and facilities, as well as user experience and environment. There were 7 variables for amenities and facilities with the mean score of 2.97, indicating that the visitors' satisfaction level was neutral. Meanwhile, under the category of user experience and environment, 5 variables obtained the mean score of 3.66, indicating that the visitors were satisfied with the experience and environment they had at Alor Lempah.

The mean scores obtained for amenities and facilities suggested that the respondents had between dissatisfied to neutral levels of satisfaction. They were dissatisfied with the "convenient changing room" facility, which

received the lowest score ($\bar{x} = 2.51$) among all the listed amenities. Similarly, visitors were also dissatisfied with the "sufficient number of trash bin" with a mean score of $\bar{x} = 2.66$. The sufficient number of food stalls ($\bar{x} = 2.75$) and equipment rental stalls ($\bar{x} = 2.77$) were also rated as dissatisfactory by the respondents.

In addition, the visitors indicated the satisfaction level towards user experience and environment between neutral and satisfied. In more specific, they were neutral with the statements, "signage is easy to understand" ($\bar{x} = 3.06$) and "well-maintained natural trail" ($\bar{x} = 3.31$). Meanwhile, the respondents were satisfied with the statements, "few people were around in the recreation area" ($\bar{x} = 3.69$), "safe to spend their time in the recreation area" ($\bar{x} = 3.91$), and "an ideal place for recreation and picnics" ($\bar{x} = 3.69$).

Table 2: Visitors' satisfaction level towards the facilities

Statement	Mean	SD
<i>Amenities and facilities</i>	2.97	0.908
Sufficient number of benches and gazebo	3.20	1.101
Sufficient number of trash bin	2.66	1.239
Location of parking area	3.38	1.031
Sufficient number of food stalls	2.75	1.179

Sufficient number of equipment rental stalls	2.77	1.090
Sufficient number of camp sites	3.18	1.120
Convenient changing rooms	2.51	1.315
<i>User experience and environment</i>	<i>3.66</i>	<i>0.747</i>
Well-maintained natural trail	3.31	1.149
Signage is easy to understand	3.06	1.121
Good spot for recreation/picnic area	3.97	0.962
Not too many other visitors present	3.69	0.921
Feeling safe in the recreation area/public space	3.91	0.926
Mean score	3.20	0.793

The Influence of Motivation Towards Satisfaction

Multiple linear regression is a statistical method that examines the relationship between a single continuous dependent variable and multiple independent variables. In the context of motivation and satisfaction, multiple linear regression can be employed to analyse how motivation affects satisfaction, taking into account potential contributing factors.

Table 4: The influence of motivation towards satisfaction regarding amenities and facilities

Regression Weights	Beta Coefficient	R ²	F	t-value	p-value
Social	-0.209	0.044	4.154	-2.117	0.035
Environment	-0.077			-0.590	0.556
Psychology and Physiology	-0.101			-0.811	0.418
Economy	0.263			3.224	0.001

Table 4 shows the dependent variable satisfaction on amenities and facilities was regressed on predicting variable motivation. The independent variables significantly predicted amenities and facilities satisfaction, $F(4,395) = 4.514$, $p < 0.001$, which indicates that the two factors under study have a significant impact on satisfaction. Moreover, the $R^2 = 0.044$

depicts that the model explains 4.4% of the variance in satisfaction.

Additionally, coefficients were further assessed to ascertain the influence of each factor on the criterion variable (satisfaction on facilities and amenities). The result revealed that social motivation has a significant and negative impact on satisfaction ($B = -0.209$, $t = -2.117$, $p <$

0.05). Hence, this suggests that higher levels of social motivation are associated with lower levels of satisfaction with facilities and amenities. Such results highlight the importance of considering social motivation as a factor that can potentially detract from overall satisfaction levels in the context under study.

Meanwhile, the results also show that economic motivation has a significantly positive impact on amenities and facilities

Table 5: The influence of motivation towards satisfaction regarding experience and environment

Regression Weights	Beta Coefficient	R ²	F	t-value	p-value
Social	-0.015	0.027	2.753	-0.188	.851
Environmental	0.056			0.523	.601
Psychological and Physiological	0.048			0.462	.644
Economical	0.128			1.899	.058

Table 5 shows the dependent variable satisfaction on experience and environment was regressed on predicting variable motivation. The overall regression model was statistically significant, $F(4,395) = 2.573$, $p < 0.05$, which indicates that the combination of the four independent variables significantly predicted the dependent variable. Moreover, the $R^2 = 0.027$ depicts that the model explains 2.7% of the variance in satisfaction.

However, the analysis did not find any significant relationship between the motivation variables (social,

satisfaction ($B = 0.263$, $t = -3.224$, $p < 0.001$). This implies that factors related to economic motivation, such as free entry fees, affordable prices of food and drink, reasonable equipment/facility rental, and free parking, may contribute positively to facilities/amenities satisfaction. However, environment ($B = -0.77$, $t = -0.590$, $p > 0.05$) and psychology and physiology ($B = -0.101$, $t = -0.811$, $p > 0.05$) did not influence facilities/amenities satisfaction.

environmental, psychological and physiological, economic) and satisfaction with users' experience and environment. This suggests that these specific aspects of motivation may not directly impact satisfaction levels in relation to users' experience and environment in this particular study. This is similar to the previous study by Su et al. (2020), which indicated a direct influence of each separate motivational factor on satisfaction, whereby the study indicated that there was no significant direct link between motivation and satisfaction towards a heritage destination.

DISCUSSION

Factors Influencing Visitation to Alor Lempah

People who visit the recreational area in Alor Lempah are mainly motivated by psychological and physiological factors such as to reduce stress and relax, find peacefulness, experience thrills and adventures and be close to nature. In a study by [Kabisch et al. \(2021\)](#), 33 older male and female participants were monitored for their health before, during, and after visiting three different locations in Leipzig: Friedenspark, Lene-Voigt-Park, and Ostplatz. They were asked to sit for 15 minutes and then walk for 30 minutes in each place. The study looked at how being in these environments affected their physical and mental health, focusing on factors like blood pressure, heart rate, mood, and feelings of restoration and naturalness.

Interestingly, visitors of Alor Lempah strongly agreed that environmental factors such as animal and plant interaction, entertainment, outdoor activities and scenery appreciation were their motivations to visit Alor Lempah. The results from [Alcock et al. \(2020\)](#) strongly support the notion that individuals who show a higher level of appreciation for the natural environment and dedicate more leisure time to it are also more likely to engage in pro-environmental actions.

In terms of social benefits, the respondents agreed and strongly agreed that visiting Alor Lempah was for enjoying solitude, socialising with friends, supervising children's play in the recreational area and quality time with family. [Zhou et al. \(2022\)](#) pointed out that engaging in recreational activities has a bigger impact on their social

well-being than merely visiting recreational sites. In fact, people are more likely to form emotional connections and improve relationships through active participation in recreational activities.

Lastly, the respondents who were between agree and strongly agree positions in relation to the economic factors of visiting Alor Lempah such as fair equipment/facility rental, affordable food and drink, free parking and no entry fee. [Tursunalievich et al. \(2021\)](#) researched on the increasing significance of recreation due to the recent structural changes in the global economic system. As people's living standards improve, the demand for recreation and tourism rises, expanding the role of this sector. The primary goal of recreation is to enhance the socio-economic development of regions by building and efficiently operating recreational facilities to facilitate organised recreational activities. Hence, as living standards rise and the use of recreation and tourism increases, providing accessible and affordable amenities at recreational facilities like Alor Lempah becomes crucial to attract visitors and contribute to the socio-economic development of the region by effectively catering to the needs and preferences of the population.

Visitors' Satisfaction Level Towards the Facilities in Alor Lempah

This study analysed the level of satisfaction of the visitors in Alor Lempah. The higher mean value of the variables indicates positive satisfaction towards their visit to Alor Lempah. Descriptive descriptive analysis has been used to analyse the

satisfaction level, which was categorised into amenities and facilities, as well as user experience and environment. From the data shown in Table 2, it shown that the features under amenities and facilities required improvement as their mean score was 2.97, indicating that the visitors' satisfaction level was neutral.

The mean scores obtained for featured under amenities and facilities suggested that the respondents had between dissatisfied to neutral levels of satisfaction. They were dissatisfied with the "convenient changing room" facility, which received the lowest score among all the listed amenities. This dissatisfaction stemmed from the significant number of visitors engaging in water activities, requiring a comfortable and proper place to change clothing. In more specific, the low rating was due to insufficiencies in terms of cleanliness, privacy, or convenience at these facilities. Similarly, visitors were also dissatisfied with the "sufficient number of trash bin", indicating that they might have observed a shortage of waste disposal facilities, which could have contributed to a less pleasant environment at the recreational area. The sufficient number of food stalls and equipment rental stalls were also rated as dissatisfactory by the respondents, suggesting that the visitors might have experienced long waiting time or inadequate availability of these amenities, which could have negatively impacted their overall experience at the recreational area.

Despite expressing dissatisfaction with several amenities and facilities, other elements received neutral score; the availability of a sufficient number of campsites, the availability of a sufficient number of benches and gazebos, and the

location of the parking area. These aspects were not perceived as negative, but they also did not receive particularly positive ratings from the respondents. Instead, they were viewed as adequate or satisfactory, without eliciting strong feelings of satisfaction or dissatisfaction.

In addition, the visitors indicated the satisfaction level towards user experience and environment between neutral and satisfied. In more specific, they were neutral with the statements, "signage is easy to understand" and "well-maintained natural trail". Meanwhile, the respondents were satisfied with the statements, "few people were around in the recreation area", "safe to spend their time in the recreation area", and "an ideal place for recreation and picnics".

Based on the data provided, the factors contributing to user satisfaction in the recreational area were the number of people around, safety, and suitability for recreation and picnics. It is also important to note that areas that may need improvement, such as signage and trail maintenance. Understanding these factors can help in enhancing user satisfaction and ensuring the sustainability of recreation area by meeting the varying needs of visitors.

The Influence of Motivation Towards Satisfaction

Multiple linear regression was utilised to examine the correlation between motivation and satisfaction concerning amenities/facilities and experience/environment. The results demonstrated that motivation significantly influenced amenities/facilities satisfaction, with the F value of 4.154 ($p < 0.001$) and

the R^2 of 0.044, which means the model accounts for 4.4% of the variance in satisfaction. Social motivation exhibited a negative effect on amenities/facilities satisfaction ($B = -0.209$, $t = -2.117$, $p < 0.05$), whereas economic motivation showed a positive impact ($B = 0.263$, $t = 3.224$, $p < 0.001$).

Meanwhile, the results on experience/environment satisfaction, were statistically significant, $F(4,395) = 2.573$, $p < 0.05$. Moreover, the $R^2 = 0.027$ depicts that the model explains 2.7% of the variance in satisfaction. However, when investigating the relationship between motivation and satisfaction pertaining to experience and environment, the analysis yielded non-significant results. Therefore, it appears that the specific aspects of motivation examined (social, environmental, psychological, physiological, and economical) do not directly affect satisfaction levels related to visitors' experiences and environment in this particular study.

In summary, the multiple linear regression provided valuable insight into the interplay between motivation and satisfaction concerning amenities and facilities. However, its application to visitors' experience and environment satisfaction did not reveal any direct relationships among the specified motivations and satisfaction levels in this case.

CONCLUSION

Recreation areas are important places for people to enjoy their time outdoors. Using a field study and questionnaire, we

examined the motivations and preferences of visitors who visit recreational area at Alor Lempah; as well as factors that influence their return to this recreational area. Our research contributes to the field of recreational area studies by identify the socio-demographic, visit characteristics, factors that influence their visit and visitor satisfaction with recreation area and how motivation affects the visitor's satisfaction in amenities/facilities and experience/environment.

Our research shows that (1) most of the current visitors in the recreation area are either first-time visitors; (2) the main factors motivating park revisitation are psychological, physiological, and environmental factors; (3) convenient changing rooms, trash bins, food stalls, and equipment rental stalls are the most dissatisfied features influence their satisfaction; (4) most visitors want to revisit; and (5) people who visit parks are family with children, those who involve in picnic activity, camping and photography/videography and those who drive by car to go to the Alor Lempah. In pursuit of the study's objectives, attempts have been undertaken to mitigate limitations. However, certain issues require further attention, including the data collection process. Firstly, the study used the questionnaire survey method to investigate the research site. The quality of the questionnaire can be improved due to the revisit intention section that used nominal data. During the research process, due to time and manpower constraints, the distribution of the questionnaire itself had a certain randomness. As there was more than one checkpoint to gather the questionnaires, each checkpoint had a different type of resources and facilities. This affected the

result of the data because the instrument used to collect the data majorly covered the whole area of Alor Lempah and not specifically for each checkpoint. For instance, some checkpoints had a changing room but the other side of the checkpoints did not provide that facility. Additionally, some checkpoints provided more gazebos than the other checkpoints.

In future research, improving the revisit intention section of the questionnaire by using Likert-scale questions would enhance its effectiveness. To ensure greater accuracy and relevance of the collected data, future studies could concentrate on specific checkpoints or areas within the research site instead of broad coverage. This focused approach has the potential to yield more detailed and insightful results. It is essential to maintain consistency in the resources and facilities across various checkpoints. Therefore, future research should strive to standardise the resources available at each checkpoint to prevent discrepancies that could influence data quality and research conclusions.

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THE MEDIATING EFFECT OF TECHNOLOGY ADOPTION ON PARTICIPATION, SOCIAL CAPITAL, AND EMPOWERMENT IN THE AGRICULTURE SECTOR OF SRI LANKA

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ABSTRACT

The question of how to assist farmers in developing more sustainable empowerment remains a significant challenge. In order to fill in the gaps in the literature, this research examined how participation and social capital affect both technology adoption and empowerment. Additionally, the mediating role of agricultural technology adoption between determinants of empowerment and empowerment was examined for the first time. SPSS version 26 and PLS-SEM version 3.3 were used to analyse all direct and indirect associations between participation, social capital, technology adoption and empowerment. 322 Sri Lankan chilli farmers were interviewed using a multi-stage random sampling procedure. The findings accounted for 74.1% of the variation in empowerment. It was determined that the mediating function of agricultural technology adoption was important for all relationships between participation, social capital, and empowerment. In addition, participation and social capital were identified as favourable predictors of technology adoption and accounted for 51.2% of the variance in adoption. As a result, the findings of the current study are critical for filling gaps in the literature by improving understanding of the impact of empowerment factors on agricultural technology adoption and empowerment in the agriculture sector.

Keywords: Agriculture, Empowerment, Participation, Social Capital, Technology Adoption

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INTRODUCTION

More than 70% of the global population lives in poverty, with a significant proportion consisting of smallholder farmers in rural communities in developing countries (Danso-Abbeam et al., 2020). Food security and nutrition are critical concerns in global development (Syafrial et al., 2022). Smallholder farmers are prevalent across developing countries, and research suggests that the development and adoption of innovative agricultural technologies can significantly boost their productivity (Ruzzante et al., 2021). Danso-Abbeam et al. (2020) further assert that farmers are central to productivity in the agricultural sector and that global food production challenges can be addressed through policies that empower highly productive smallholder farmers. Most development experts agree that responsible agricultural development is essential for achieving the Sustainable Development Goals (SDGs) (Ruzzante et al., 2021). As such, agricultural development strategies are vital to improving farmers' livelihoods and realizing the SDGs by 2030.

Agriculture is crucial for the development and sustainability of developing nations (Syafrial et al., 2022). In Sri Lanka, agriculture is a primary occupation, significantly contributing to the nation's GDP and overall prosperity (Central Bank of Sri Lanka, 2019). However, low production levels present significant challenges (Herath et al., 2021). To address these issues, farmers, governments, and stakeholders must promote and adopt modern agricultural technologies to boost productivity (Musyoki et al., 2022). Approximately 11% of Sri Lanka's population is impoverished, with rural

farmers making up 82% of this demographic (Department of Census and Statistics, 2015; Jayasinghe et al., 2016; Sachitra & Wijayasinghe, 2021). Rural farmers often face barriers such as limited access to farm equipment, markets, infrastructure, modern technologies, and institutional support, which perpetuate poverty (Bulankulama, 2020). In developing countries like Sri Lanka, poverty and empowerment are interconnected (Herath et al., 2021). Therefore, it is crucial for the agricultural sector to understand the determinants of empowerment, as well as how technology adoption influences empowerment, to formulate strategies that alleviate poverty and empower farmers.

Currently, there is a lack of empirical research on farmer empowerment within the Sri Lankan agricultural sector. Both factual and anecdotal sources indicate that farmer empowerment remains insufficient, and the effectiveness of agricultural development projects in achieving their stated empowerment objectives is frequently questioned. Empowerment is a complex concept that applies to various facets of life, with many factors being difficult to quantify and often based on perceptions. Consequently, empowerment lacks a single, universal definition, and there is no standardized measurement. This necessitates the use of multiple indicators, which complicates the assessment of empowerment and poses numerous theoretical, methodological, and practical challenges. Nevertheless, empowerment analysis and metrics are essential for countries developing strategies to combat social injustices and enhance quality of life.

To the best of the researchers' knowledge, no prior study has examined the relationship between empowerment factors—such as participation, social capital, and technology adoption—and empowerment within Sri Lanka's agricultural community. Additionally, research exploring technology adoption as a mediating factor between participation, social capital, and empowerment is scarce. The current study aims to address these research gaps at local, regional, national, and global levels. Specifically, this study evaluates the impact of an agricultural development initiative led by the Ministry of Agriculture on empowering chilli producers. This research provides insights

into the long-term community development of Sri Lankan farmers. The study aims to determine whether farmers can achieve empowerment through technology use, participation in agricultural projects, and robust social capital.

To address these aims, the following research questions are posed: (1) What are the socio-demographic characteristics of respondents in Sri Lanka? (2) How do participation, social capital, and technology adoption relate to empowerment? (3) Does technology adoption mediate the relationship between participation, social capital, and empowerment?

MATERIALS AND METHODS

The respondents of the current study were chilli farmers who were already participated in the agriculture sector modernisation project. The study focused on six districts in Sri Lanka, and a total of 322 questionnaires were gathered by survey using the sample, which was chosen using multi-stage random sampling techniques. The data was gathered from March to August 2022. The questionnaire was offered in English, Sinhala, and Tamil, allowing respondents to participate in their preferred language. The respondents were free to use whatever language they preferred.

Descriptive statistics were used to describe the socio-demographic characteristics of the respondents (gender, age, race, education level, marital status, income, expenses, saving and agricultural experience). Meanwhile, statistical analysis was performed using SPSS version 26 to

calculate the frequency, percentage, mean values, and standard deviation. The relationships of the theoretical model were tested using PLS-SEM (Sarstedt et al., 2017) because it can be applied to both normally distributed and non-normally distributed samples (Hair Jr et al., 2017). PLS-SEM also allows for the precise and simultaneous analysis of mediation effects. Smart-PLS 3.3 software was used to perform PLS-SEM using the bootstrap process (Hair et al., 2019a).

RESULTS AND DISCUSSION

Socio-Demographic Background of the Respondent

It is critical to understand respondents' backgrounds in order to fully comprehend their personality characteristics and behavioural patterns. The descriptive analyses are summarised in Table 01.

Table 01: Personal Background details of the respondents

Background details of the respondents	Frequency	Percentage (%)
Gender		
Male	261	81.1
Female	61	18.9
Ethnicity		
Sinhala	176	54.7
Tamil	146	45.3
Religion		
Buddhism	173	53.7
Christianity	33	10.2
Hinduism	116	36.0
Marital status		
Single	25	7.8
Married	291	90.4
Divorced	01	0.3
Widowed	04	1.2
Separated	01	0.3
Age		
20- 30	37	11.5
31- 40	87	27
41- 50	102	31.7
51- 60	69	21.4
61- 70	25	7.8
71 or above	02	0.6
Mean	44.24	
Highest educational level		
Primary Level	87	27.0
GCE O/L	188	58.4
GCE A/L	43	13.4

Diploma	03	0.9
Master Degree Level	01	0.3
Approximately annual income (SLR)	Mean SLR:523012.42	
Approximately annual expenses (SLR)	Mean SLR:339456.52	
Approximately annual savings (SLR)	Mean SLR:186226.71	
Experience in agricultural activities		
>1 - <5	49	15.2
>6 - <10	49	15.2
>11 - <15	57	17.7
>16 - <20	48	14.9
≥ 21	119	37.0

SLR: Sri Lankan Rupees

Source: Field survey 2022

The findings indicate that more than half of the respondents (81.1%) were male. In contrast, 18.9% of respondents were female. This leads to the conclusion that men make up the majority of the participation in programs. Male respondents are important to this study since they have significantly more time to engage in agricultural activities. The results of this study support the findings of Filippini et al. (2020) and Nazuri et al. (2021), that the majority of the participants were male. In terms of ethnicity, most chilli farmers were Sinhala (54,7%), followed by Tamil (45,3%). The top three religions among chilli farmers were found to be Buddhism (53.7%), followed by Christianity (10.2%), and Hinduism (36.0%). Meanwhile, respondents were either single (7.8%), married (90.4%), widowed (1.2%), or separated/divorced (0.3%). Furthermore, the majority of respondents (70.2%) were in the powerful

20-50 age group, which can better manage agricultural tasks than elderly people and it was the hidden successful key factor in the agricultural project.

Compared to educational qualifications; 0.9% with diplomas, and 0.3% with postgraduate degrees. 27% had primary education or less. 13.4% of respondents had GCE A/L, and 58.4% had GCE O/L. The findings of the study also revealed that the annual earnings, expenses, and savings of their farming activities were on the mean, SRL: 523012.42, SRL: 339456.52, and SRL: 186226.71, respectively. The majority of respondents (37%) had extensive agricultural experience (at least 21 years or above), and their primary source of income is agribusiness.

Normality analysis

The normal distribution is a fundamental premise of statistical analysis and structural models (Aminu & Shariff, 2014). Skewness and kurtosis were used to test for normality; if both were within the range of -2 and +2,

the data set was considered to be normally distributed (Bushra Muzaffar, 2016). The assumption of normal distribution was assumed because all of the values were inside the defined range, as shown in Table 02.

Table 02: Results of the Normality test

Latent variable	skewness	kurtosis
Participation	-.082	-.429
social capital	.120	.091
Technology adoption	.111	.004
Empowerment	.355	-.460

Source: Field survey 2022

Meanwhile, a multicollinearity test was performed to determine whether one or more variables were highly associated with one another (Zhang et al., 2020). Low correlation values do not suggest any multicollinearity among the variables included in the regression. When the variance inflation factor (VIF) exceeds five, multicollinearity occurs. The table shows

the multicollinearity results of the variables of the current study. Multicollinearity between the constructs was not observed because all VIF values were lower than five (Ndlovu et al., 2022), as shown in Table 03. This has revealed that there was minimal construct redundancy and no collinearity issues. Furthermore, the confidentiality and anonymity of respondents were guaranteed.

Table 03: Collinearity Results

Variables	VIF
Participation	2.505
social capital	2.297
Technology Adoption	2.191

Dependent variable: Empowerment

Source: Field survey 2022

The outer model validates the validity and reliability (Hair et al., 2012). When

evaluating the outer model, it was advised to consider the Composite Reliability (CR)

and Average Variance Extracted (AVE) (Henseler et al., 2009). Convergent validity values are evaluated to see whether they are valid or representative of the variables. Convergent validity was achieved because

the Cronbach alpha and composite reliability values were all above 0.6 (Henseler et al., 2009), and the AVE values were also above 0.3 (Lam, 2012), as shown in Table 04.

Table 04: Summary of analysis of CR, AVE, Cronbach' alpha

Variables	Cronbach's alpha	CR	AVE
Participation	0.88	0.89	0.30
Social Capital	0.84	0.86	0.31
Technology Adoption	0.812	0.85	0.328
Empowerment	0.955	0.959	0.33

CR: Composite Reliability, AVE: Average Variance Extracted

Source: Field survey 2022

Discriminant validity was used to determine how unique the construct items were from the other constructs in the model. The discriminant validity was assessed using the HeteroTrait-MonoTrait ratio (HTMT) technique. The outcome showed that the suggestion of discriminant validity was confirmed (Henseler et al., 2009,

2015). The thresholds of 0.9 (Nazuri et al., 2022) and 0.8 (Henseler et al., 2015) are confirmed by all items in Table 05. The findings also revealed that no values were over the cutoff, while the upper limit confidence intervals were all below one. This result supports the accomplishment of discriminant validity.

Table 05: Discriminant Validity Result- HTMT

Model Variables	1	2	3	4
1 Empowerment	0.574			
2 Participation	0.738	0.525		
3 social capital	0.715	0.722	0.540	
4 Technology Adoption	0.809	0.681	0.644	0.573

Source: Field survey 2022

Structural Model Assessment

The structural model assessment considers the dependent relationships connecting the constructs in the hypothetical model. It primarily illustrates how the constructs relate to one another and provides evidence to validate the theoretical model (Hair et al., 2019b). The relationship among participation, social capital, and empowerment was evaluated using an inner model, which establishes the relationships between the independent and dependent latent variables. Bootstrapping procedures with 5000 resample were used to calculate the coefficient of determination (R square), effect sizes (f square), beta values, and t-

values (Abdalla et al., 2022). Technology adoption ($\beta=0.476$) had the strongest and most positive influence on empowerment, followed by participation ($\beta=0.233$) and social capital ($\beta=0.219$), respectively. Meanwhile, the selected empowerment factors explained 74.1% of the variance of empowerment. Furthermore, participation ($\beta=0.451$), followed by social capital ($\beta=0.319$), had a positive effect on technology adoption. These two factors accounted for 51.2% of the variation in technology adoption. Table 06 shows the R square of the dependent variable and f square value of independent variables.

Table 06: R square and f square value of variables

Dv	R square	Variables	f square value
Empowerment	0.741	Participation	0.083
Technology Adoption	0.512	Social Capital	0.080
		Tech. adoption	0.489

Source: Field survey 2022

Table 07 and Figure 02 provide a summary of the direct hypothesis testing results. Participation ($t=4.511$, $p0.01$), social capital ($t=4.579$, $p0.01$), and technology adoption ($t=11.705$, $p0.05$) were found to be significant factors of empowerment, in line with the generally accepted hypotheses of

H₁, H₂ and H₃. Meanwhile, research findings revealed a significant association between participation ($t=7.078$, $p0.01$), social capital ($t=4.680$, $p0.01$) and technology adoption, supporting the H₄ and H₅ hypotheses.

Table 07: Path Coefficient for Empowerment

	Relationship	Std Beta	Std Erro	t value	Decision
H ₁ :	Part -> EM	0.233	0.052	4.511	Significant*
H ₂ :	SC -> EM	0.219	0.048	4.579	Significant*

H ₃ :	TA -> EM	0.476	0.041	11.705	Significant**
H ₄ :	Part -> TA	0.451	0.064	7.078	Significant*
H ₅ :	SC -> TA	0.319	0.068	4.680	Significant*

Significant at * $p < 0.01$, ** $p < 0.05$:

EM: Empowerment, Part: Participation, SC: Social Capital, TA: Technology Adoption

Source: Field survey 2022

Analysis of mediation relationship - Smart PLS

The bootstrapping mediation test was then run to determine how technology adoption affected the relationships between participation, social capital, and empowerment. The findings of the

mediation test are shown in Table 08, and all two mediated pathways {(H₆: PLAN -> TA -> EM; $t=5.916$, $p=0.01$) and (H₇: SC -> TA -> EM; $t=4.307$, $p=0.01$)} were found to be significant. Therefore, H₆ and H₇ were accepted as a result.

Table 08: Summary of mediating effect of Technology Adoption

Hypothesis	Coefficient	SE	t value	Lower	Upper	Decision
H ₆ : PLAN -> TA -> EM	0.230	0.039	5.916	0.161	0.313	Significant*
H ₇ : SC -> TA -> EM	0.162	0.038	4.307	0.089	0.235	Significant*

Significant at * $p < 0.01$, ** $p < 0.05$

EM: Empowerment, PLAN: Participation, SC: Social Capital, TA: Technology Adoption

CI: Percentile bootstrap 95% confidence interval

Source: Field survey 2022

Participation is a critical component of empowerment in agricultural projects (Nazuri et al., 2021). Bushra & Wajiha, (2015) revealed the relationship between poverty, participation, and economic opportunity and empower Pakistani women. Meanwhile, the FFS (Farmer Field School) is the best strategy for farmers to gain access to services and marketing opportunities by enrolling their active participation in order to empower

themselves (Friis-Hansen & Duveskog, 2012). Tremblay & Gutberlet, (2010) highlighted the relationships between empowerment and participatory sustainable waste management (PSWM). Furthermore, SHGs (Self-Help Groups) serve a critical role in encouraging people to participate in community development activities that lead to empowerment (Ibrahim et al., 2018).

Al Mamun, (2014) highlights the positive relationships between social capital,

income through empowerment, and productive assets. Meanwhile, social capital significantly affects the empowerment of squatter settlements in Pakistan (Babaei et al., 2012). Furthermore, Nazuri et al., (2021) highlighted that social capital variables are the key predictors of empowerment among UA (Urban Agriculture) programme participants. Janssens, (2010) argued that community-based development strategies improve social capital. Rahajuni et al. (2018) illustrate that social capital must be increased in order to enhance social and economic empowerment. The strategies of technology (rice intensification- SRI) adoption and social capital engagement have a positive relationship (Yahaya et al., 2019). Due to its importance in the management of common resources and joint marketing, social capital has become a major issue in agriculture sector. The adoption of soil management solutions is influenced differentially by different forms of social capital. More research into the differential results of these types of social capitals is recommended, according to the study (J. M. Njuki et al., 2008).

Agripreneurship based on social capital is one alternative for achieving the full potential of current decentralised agro-friendly rural village settlement patterns (Muralikrishnan & Rashmi Singh, 2018). Furthermore, the importance of social networks in disseminating information regarding entrepreneurship and market opportunities has been identified. In this way, social capital can have a direct and indirect impact on agricultural production and financial viability, as well as local social sustainability, because it influences the quantity of labour available through nuclear and extended family, as well as

social interactions (Gomez- Limon et al., 2012).

The adoption of technology is crucial in the process of agricultural community empowerment (Achandi et al., 2018). Dar et al. (2020) show clear evidence for ensuring the deployment of agricultural technologies that can increase rural economies and improve food security. The FFS is the finest venue for increasing the capacity of farmers to adopt agricultural innovations (Friis-Hansen & Duveskog, 2012). According to Njuki et al. (2022), when technology is used to address local food system challenges, women feel more empowered. Meanwhile, Kumar et al. (2018) reveal that the introduction of technology has been important to both the increase in agricultural productivity and global development. One efficient strategy to increase the capacity of smallholder farmers is to encourage their adoption of modern farm production technology (Zheng et al., 2022). Obisesan, (2014) explores the introduction of technology and its impact on reducing poverty in households engaged in cassava cultivation. As a result of the current findings, there are significant associations between participation, social capital, technological adoption, and empowerment in Sri Lankan agricultural community, as illustrated graphically in Figure 03.

CONCLUSION AND RECOMMENDATIONS

The research findings underscore a strong correlation between empowerment and the sustainability of rural agriculture, particularly in relation to project participation, robust social capital, and technology adoption. These factors form the essential foundation for successful agricultural initiatives. Empirical support

was found for all seven hypotheses tested, aligning with previous research. Thus, it can be concluded that participation, social capital, and technological adoption significantly influence the level of empowerment among Sri Lankan farmers.

Additionally, the study confirmed that technology adoption mediates the relationship between participation, social capital, and empowerment, supporting the proposed hypotheses.

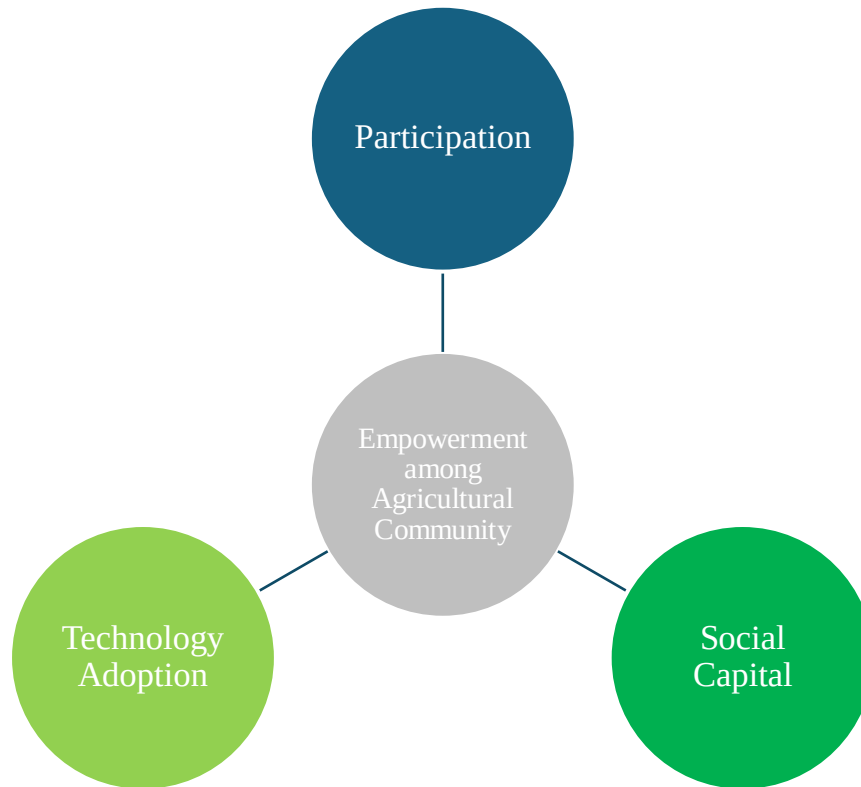


Figure 03: Association between factors of empowerment and empowerment

Source: Authors' from primary research 2022

This study offers valuable insights for government institutions, non-governmental organizations, and agricultural development partners. There is a need to enhance awareness and build capacity in modernized agricultural practices within Sri Lanka's agro-based sector to further empower farming communities. To achieve a sustainable agro-based economy, the government and community stakeholders

must take proactive steps to encourage farmer participation in agricultural development and to foster strong social capital. By supporting the formation of active farming community groups, positive attitudes and harmony within the community can be promoted, facilitating the adoption of modern agricultural technologies. Moreover, training and educational initiatives are crucial for the

development of strong social networks, increased participation in agricultural activities, and an overall positive outlook toward agro-based industries. Emphasizing these areas will enable farmers to view the agro-based sector as a viable pathway to empowerment.

This research contributes to the body of knowledge in community development and sociology by highlighting the role of technology adoption as a mediator between social capital, participation, and empowerment. Unlike previous studies that often treat these factors in isolation, this study provides an integrated perspective that underscores the interconnectedness of these elements in rural agricultural settings. By empirically validating these relationships, the study challenges existing theories in community development that do not fully account for the role of technological adoption in empowerment processes. This adds a new dimension to empowerment theory, as it illustrates how technology, coupled with social capital, can drive community resilience and sustainability.

The scope of this study was limited to Sri Lankan chili farmers, which suggests the need for further research across diverse farming communities and regions. Different socio-economic and cultural contexts may yield varied outcomes due to differences in community participation and social capital utilization. Given the cross-sectional nature of this research, longitudinal studies are recommended to explore the temporal dynamics of empowerment factors. Future research should adopt causal inference methodologies to better understand the impacts of these determinants over time. By

developing and testing integrated models, subsequent studies can provide a more comprehensive understanding of the underlying causes of empowerment within agricultural communities.

ACKNOWLEDGEMENT

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ANALYSIS OF HOTSPOTS AND TRENDS IN RESEARCH ON THE IMPACT OF CULTURAL DIVERSITY ON HUMAN DEVELOPMENT

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ABSTRACT

Cultural diversity is an important factor in human development and reflects the far-reaching influence of cultural dynamics on society. Nevertheless, a thorough interdisciplinary approach to understanding how cultural diversity affects human development is inadequate. This study revisits this territory by conducting a scientometric analysis using the Web of Science (WOS) Core Collection database, focusing on the impact of cultural diversity on human development from 1992 to 2023. Use CiteSpace software to visually analyze disciplines, institutions, authors, keywords, and articles in cultural diversity research. The study revealed that: 1. The primary subject areas of cultural diversity research are education, environment, management, psychology, anthropology, and economics, further supplemented by sociology, law, and medicine, underscoring the ongoing expansion of these areas. 2. The analysis of keywords and the merging of similar words led to the conclusion that the hot spots of cultural diversity in human development are mainly focused on biodiversity and children, followed by community and children, resilience, prejudice, and moderating roles. 3. We categorized keywords into 17 common citation clusters and six main categories using a log-likelihood ratio (LLR) algorithm, which provided a structured understanding of the research networks in the field. Exploring the hot spots and trends in this field will help guide future scholarly work and provide a deeper understanding of the dynamics of this crucial research area.

Keywords: Cultural diversity, Human Development, CiteSpace, Visualization analysis

INTRODUCTION

As the world becomes increasingly interconnected in the context of economic globalization, a multipolar world, and the influence of modern technology, the importance of cultural diversity in shaping the cultural, economic, and political landscape of global societies becomes more evident. Cultural diversity, similar to natural biodiversity, is a universal phenomenon and a driving force for human development. As set out in the United Nations Educational, Scientific and Cultural Organization's (UNESCO, 2001) Declaration on Cultural Diversity, cultural diversity is an essential component of human development and the common heritage of humanity. It forms the intricate web of human society and is essential for social cohesion, economic prosperity, and personal development (Schiefer, D., & Van

der Noll,2017). In this ever-changing environment, understanding the multifaceted impact of cultural diversity on human development has gone from a luxury to a necessity.

However, the academic discourse on cultural diversity remains complex. It requires a delicate balance between upholding individual cultural rights and collective interests, managing potential cross-cultural conflicts, and promoting the inclusiveness of diversity (OECD, 2009). Furthermore, the dynamism inherent in cultural processes (referred to as cultural fluidity) and the overlapping layers within cultures (referred to as intersectionality) complicate our understanding of cultural diversity (Homi K,2006).

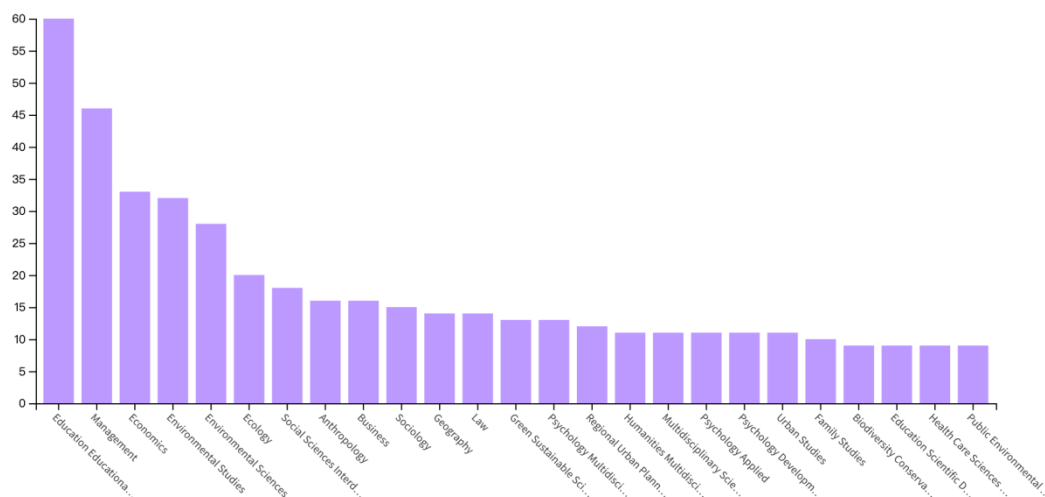


Figure 1:Web of Science Core Collection (1992-2023) subject classification and volume of publications. (2023.06.17, horizontal axis represents the discipline classification, and the vertical axis represents the number of papers published.)

Existing research on the impact of cultural diversity, retrieved through WOS Core Collection data, covers a wide range of

disciplinary areas from education, ecology, economics, psychology, religion, and political science to the social sciences and

personal development, demonstrating the wide range of impacts of cultural diversity across different disciplines. For example, cultural diversity has been found to enhance educational experiences (Doucette & Sanabria, 2021), promote economic growth (Kemeny, 2012), shape individual cognitive development (Wang, 2018), influence political dialogue (Ayupova et al., 2015), and have an impact on environmental sustainability (Aginako et al., 2017), among other important roles.

However, a comprehensive, interdisciplinary comprehension of the effect of cultural diversity on human development remains to be developed. Therefore, this study attempts to answer the following questions: What are the previous research trends in the field of cultural diversity and human development studies? What are the research hotspots in this field? How have these hotspots evolved? Based on the Web of Science (WOS) Core Collection data source, we

METHODOLOGY

Scientific knowledge mapping is an effective method for bibliometrics research. CiteSpace is a visual analysis tool for detecting trends and patterns in disciplinary literature that can objectively present research content, identify research hotspots, and sort out research lines. The process involved several steps:

Data collection

This study used the Web of Science (WOS) core collection as the central database, using relevant keywords such as cultural diversity, human development, impact and trends. The WOS core collection was searched for relevant literature published between 1992 and 2023 using relevant

aimed to conduct a scientometric review of global research trends and the structure of the relationship between cultural diversity and human development from 1992 to 2023 with the help of CiteSpace software and to conduct a visual analysis of the relevant literature to systematically explore the status, hotspots, and trends in research on the impact of cultural diversity on human development. It is intended to provide a basis and inspiration for subsequent research and practical exploration.

Unlike previous studies, this paper can better reveal the evolutionary paths and key hotspots in cultural diversity research by using CiteSpace to visualize and analyze scientific knowledge graphs, providing a more comprehensive and systematic research perspective. In addition, the findings of this paper will provide substantial insights and references for policymakers, educational practitioners, and social integration strategies.

keywords such as cultural diversity, human development, impact, and trends. The search was limited to articles and review papers published in English. This is more accurate because of the centralization of the data collected. Each bibliographic record contains the title, authors, abstract, keywords, and references cited by the article. Importantly, each connection has a DOI address to access the full text about it.

Data pre-processing

The search yielded 717 original records on June 17, 2023. After filtering out unrepresentative letters, news notes, and conference papers, the final records were reduced to 422 research articles and review literature. Finally, using CiteSpace, the data was set to download mode with full

descriptions, and the files were saved in plain text format.

Visualization tools and processes

This study CiteSpace was used as the main scientific knowledge mapping tool to reveal research hotspots and trends in the field of the impact of cultural diversity on human development. CiteSpace is able to help the researcher to better understand the relationships between the literature and the dynamic evolution of the subject areas through visualization. The process of using CiteSpace includes the following steps:

First, data import: We extract the relevant literature data from the Web of Science core database and then import it into CiteSpace software. The selected data includes important information such as the title, author, keywords, abstract, and document references to ensure robust and detailed analytical work.

Second, parameter setting: Before the CiteSpace analysis, it is significant to set the basic analysis parameters to ensure the results' creditworthiness and scientificity. The analysis parameters consist of the following: period, time slice length, node type (author, keyword, institution, etc.), and threshold setting, among others. Setting these parameters is crucial for the produced graph since it helps identify key players, research hotspots, and major collaboration networks in the research area.

Knowledge Graph Generation: Different knowledge graphs were created with the help of CiteSpace software, including keyword co-occurrence graphs, author cooperation network graphs, and institutional cooperation network graphs. The graphs are depicted as nodes and lines.

The node's importance in the network is reflected in its weighting about other nodes, while the thickness of the line relates to the strength of the connection between the nodes. These visualizations can illustrate, in a straightforward manner, the overall architecture of the research environment and the development path.

Graph analysis and interpretation: In the first part of the analysis, the graph is discussed because the creation of interrelation maps of the nodes with each other is already completed. The node size and line thickness are used to display the importance and the proximity of a certain author, institution, or keyword to the research network. The study's focus areas appear in the generated graphs, the status of dominant authors in the academic community, and the areas where the educational partnership is supported and the deficiencies are also exposed via these graphs.

Trend analysis: This study also uses CiteSpace's keyword emergent word analysis function to identify keywords whose frequencies are drawn in a specific time frame. This way, one can see the novel trends of the full research network and the projected paths of the upcoming research that is believed to exist, including the perceived changes in the academic landscape.

Finally, the topic cluster analysis: We can combine keywords based on their similarity using the LLR (Log-Likelihood Rate) algorithm for clustering. The results of the cluster analysis not only indicate the main areas of research and their links but also provide a comprehensive understanding of

the complex research scenario and the trends and statuses of the research.

RESULTS AND VISUAL ANALYSES

Author co-authorship mapping analysis

The co-authorship network diagram reveals the leading authors' collaborations in cultural diversity research. The graph allows us to identify the core scholars and the intensity of their cooperation. The size of the nodes represents the number of publications per author, the thickness of the connecting lines represents the intensity of collaboration between authors, and the

shade of the colour reflects the early or late publication. Five larger nodes are particularly visible in the network diagram: Beyerlein, Michael; Han, Soo Jeoung; Behar-Horenstein, Linda S; Acquah, Emmanuel O; and Byars-Winston, Angela. Beyerlein and Han's research focuses on the impact of cultural diversity on race issues, while Byars-Winston concentrates on the effects of multiculturalism on educational practice. Through these analyses, we can see these scholars' key roles and important contributions in advancing the study of cultural diversity.

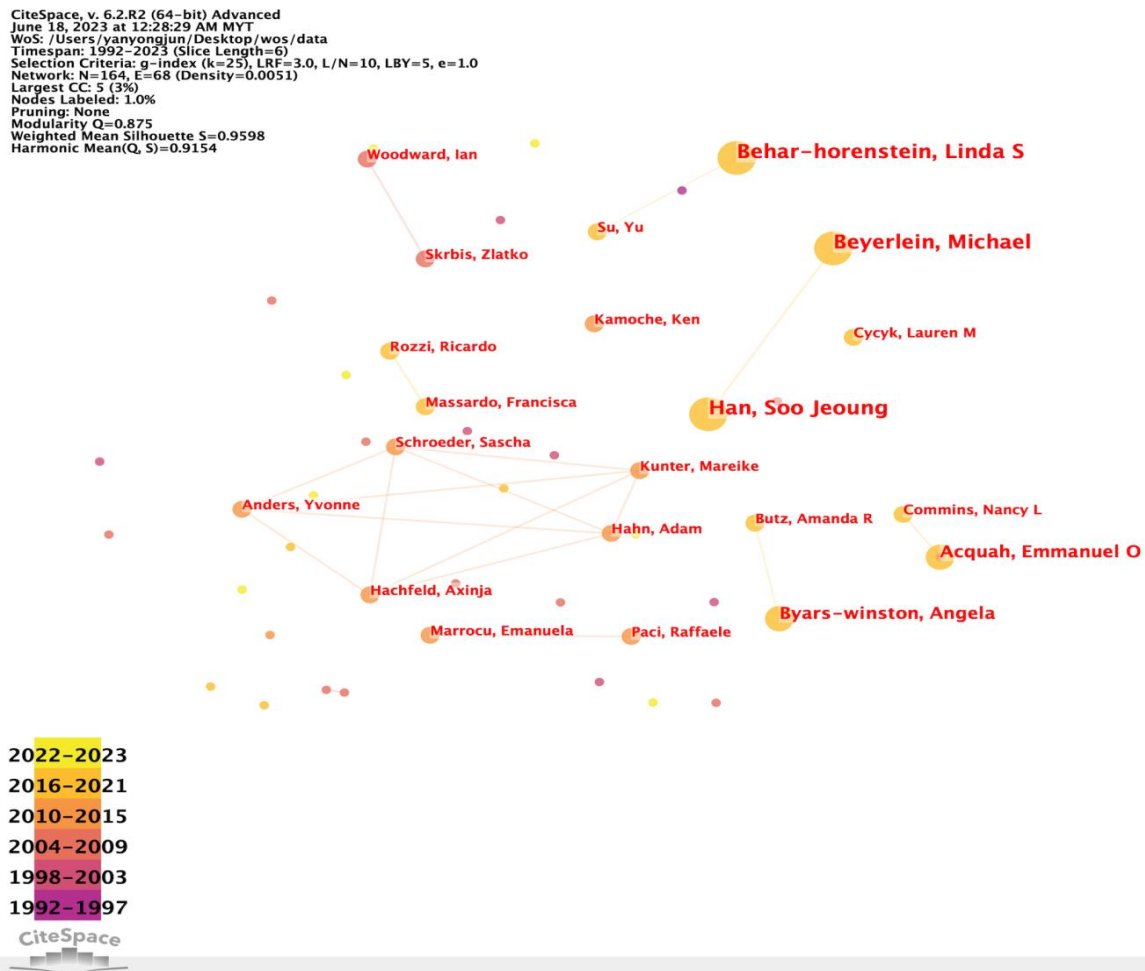


Figure 2: Author Collaboration Chart

According to Price's law, a core author is a scholar who has published three or more articles in a given field. Based on this criterion, the analyses show that only ten authors fall into the category of highly productive authors. Beyerlein and Han have established several small collaborative teams among these high-producing authors. Still, there is only a small amount of connectivity between the nodes, suggesting that the collaborative network needs to be expanded further. The current collaboration is limited to teams of four, and the overall intensity of the cooperation is weak.

Although some scholars, such as Anders, Yvonne; Schroder, Sascha; Kunter, Mareike; Hahn, Adam; and Hatfield, Axinji, have also formed some research networks, these collaborative networks are still fragmented overall and lack in-depth academic cooperation. They have not collaborated in many in-depth collaborations on the impact of cultural diversity on human development. The mapping shows many isolated nodes and fragmented network links, indicating that academic cooperation among authors within the field has yet to be improved.

Overall, the author's co-authorship network mapping shows that despite the important contributions of some highly productive scholars to the field, academic collaborations overall remain fragmented and collaborative networks are not sufficiently tight. This suggests that in future research on cultural diversity and human development, there is still a need to strengthen cooperation among scholars, especially interdisciplinary and cross-team collaboration, to promote the expansion and deepening of the research network to improve the integration and sharing of academic resources and to promote the overall development of research.

Institutional collaboration mapping analysis

To a certain extent, an institution's research content and level are presented through academic papers and participation in academic activities. The top 20 core research institutions in terms of number of publications Table 1 shows the top 20 core research institutions in terms of the number of articles published.

Serial No.	Count	Centrality	Year	Institutions
1	8	0.02	2001	California State University
2	7	0.04	1998	University of California
3	7	0.05	2013	State University System of Florida
4	6	0.00	2007	Griffith University
5	6	0.00	2005	George Mason University
6	5	0.00	2016	University of Florida
7	5	0.00	2005	Chinese Academy of Sciences
8	4	0.00	2016	Texas A&M University
9	4	0.00	2016	Texas A&M University College Station
10	4	0.00	2008	RLUK- Research Libraries UK
11	4	0.00	2005	Education University of Hong Kong (EdUHK)
12	4	0.00	2010	Cornell University
13	4	0.01	2015	Consejo Superior de Investigaciones Cientificas (CSIC)
14	4	0.00	2018	Columbia University
15	4	0.02	2016	Centre National de la Recherche Scientifique(CNRS)
16	3	0.01	2000	Wayne State University
17	3	0.00	2000	University of Washington Seattle
18	3	0.00	2000	University of Washington
19	3	0.00	2020	University of Reading
20	3	0.00	2010	University of London

Table 1: Top 20 core research institutions in terms of number of articles published

CiteSpace's node size and centrality reflect the research hotspots in the respective disciplines. The Institution module in CiteSpace was used to analyze the institution of the literature, with a threshold of 25. Figure 3 shows 380 nodes, 503 connected lines, and a density 0.0007. The number of articles an institution issues is indicated by the node size, with larger nodes indicating a more significant number of articles issued and vice versa. Centrality measures the nodes' level of importance and reflects the nodes' degree of importance. Visualizations analyzed from 423 documents reveal leading research bodies in cultural diversity research. At the same time, the nodes were formed according to their importance in issuing institutions, with California State University, University of California, State University System of Florida, Griffith University, etc. (see Table 1). The top university is California State University, with eight articles, a public, comprehensive teaching university in

California with research on the impact of education on cultural awareness and diversity in the sciences, followed by the University of California, with seven articles. The University of California is one of the world's most comprehensive higher education research institutions, with top 10 academic programs and research in over 150 disciplines. The departments of Black American Studies, Anthropology, Democracy, Economics, Ethnic Studies, Geography, History, Linguistics, Political Science, Psychology, Sociology, and Women's Studies are among the most significant contributors to this study. These two institutions account for around 15% of the top 20 and have the highest impact on the number of articles published. The geographical analysis of the research institutions shows that cultural diversity research is dominated by universities and supplemented by research institutions. Universities are the backbone of research, so this is reflected in the number of articles

published, with seven of the top ten institutions being universities, ahead of research institutes and journals publishers.

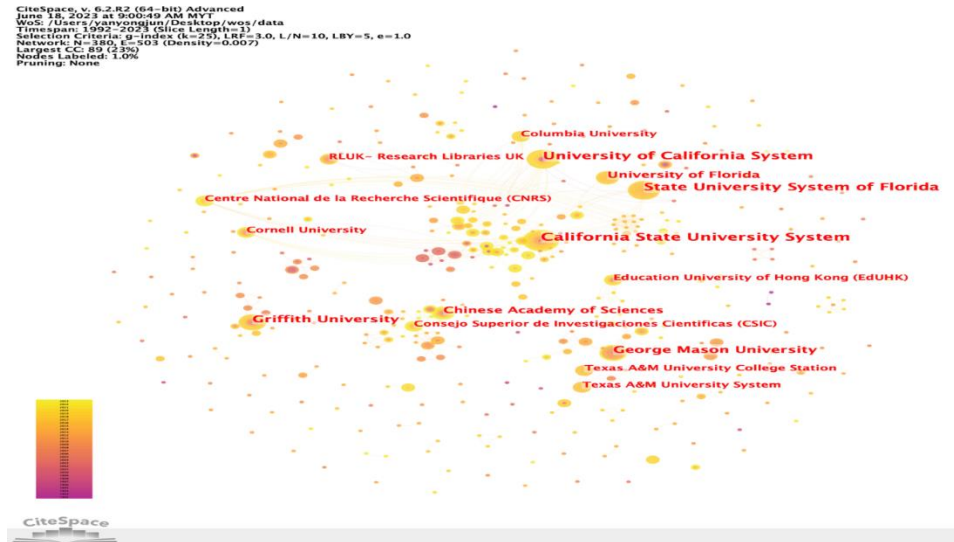


Figure 3 : Author Collaboration Chart

It is also important to note that the collaboration network between institutions needs to be more cohesive, with only a relatively concentrated network centered on California State University and little academic exchange between other institutions. This suggests that research in cultural diversity has yet to be clustered and that the leading research institutions are primarily found in individual universities. Therefore, strengthening co-operation between different institutions in the future, especially cross-institutional academic exchanges, is of great significance in advancing research in the field of cultural diversity.

Analysis of the country mapping of Cooperation

In the country co-occurrence map, Figure 4 shows 81 countries, with 18 countries

having more than ten publications (see Table 2). The United States is multicultural and has the highest number of studies on cultural diversity. The United States is a multicultural country with the highest number of studies on cultural diversity. The variety of its society, the openness of its educational system, and the strength of its research base provide a rich source of material and an excellent research environment for studying cultural diversity. The UK and Germany, as the representative countries of Europe, tend to focus on the impact of cultural diversity on social integration, education, and policy-making. The UK is rich in cultural diversity due to its colonial past and the massive immigration of recent years.

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 Network: N=81, E=419 (Density=0.1293)
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 Nodes Labeled: 1.0%
 Pruning: None

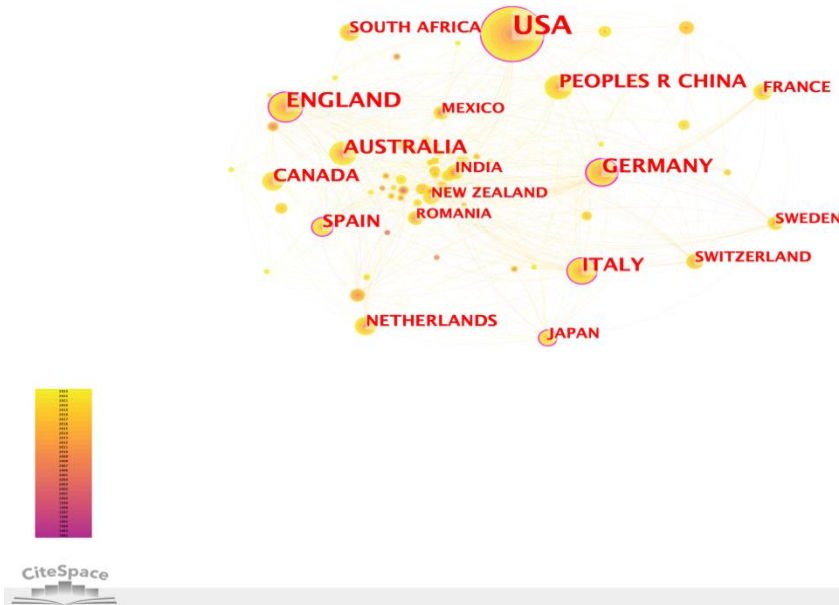


Figure 4 : Author Collaboration Chart

On the other hand (see Table 2), Germany has been the largest recipient of immigrants in Europe in recent decades and is experienced in dealing with cultural differences and integration issues. Next are Australia (31 articles) and Italy (28 pieces), respectively, and Australia and Italy, also countries of immigration, whose research on cultural diversity is likely to focus on managing multiculturalism, cultural integration, conflict, and the impact of multiculturalism on social development. PEOPLES R CHINA (28 articles) China, as a country with a long history and a

multicultural As country with a long history and diverse cultures, China has a wealth of research resources. China's unique social system, education system, and ethnic policies may influence the character and focus of its cultural diversity research. Others, such as South Africa, focus on racial issues, social justice, and achieving harmonious social development while preserving indigenous cultures. As a multi-ethnic, multi-lingual, and multi-religious country, India has focused its cultural diversity studies on religion, caste systems, and linguistic differences.

Serial No.	Count	Centrality	Year	Countries
1	142	0.14	1998	USA
2	46	0.19	1995	ENGLAND
3	34	0.24	2008	GERMANY
4	31	0.07	2006	AUSTRALIA
5	28	0.15	2009	ITALY
6	28	0.03	2005	PEOPLES R CHINA
7	22	0.07	2004	CANADA
8	21	0.17	2003	SPAIN
9	15	0.01	1996	NETHERLANDS
10	14	0.00	2007	SOUTH AFRICA
11	13	0.06	2008	FRANCE
12	12	0.04	2002	INDIA
13	12	0.14	2003	JAPAN
14	12	0.01	2011	SWITZERLAND
15	11	0.02	1999	MEXICO
16	11	0.01	2007	NEW ZEALAND
17	11	0.03	1992	SWEDEN
18	10	0.00	2011	ROMANIA

Table 2: Number of publications from partner countries

Overall, cultural diversity research exhibits a clear regional identity: countries in the Americas (e.g. the United States of America) are more concerned with the role of multiculturalism in education and social development, and countries in Europe (e.g. the United Kingdom and Germany) emphasise social cohesion and policy-making. In contrast, research in Asian and African countries is centred on their distinctive social and cultural contexts. The attributes of cultural research sharply reflect the characteristics and priorities of different countries. While we can observe a fairly close network of cooperation between countries in certain regions, the overall collaboration in the academic environment in other countries is still insufficient. In

particular, gaps in cross-regional cooperation hinder the further development of cultural diversity studies. In the future, by strengthening transnational and cross-regional academic exchanges, global academic resources can be better integrated to deepen the understanding of cultural diversity and its impact on the development of human society and to promote the overall progress of the field.

Analysis of research hot spots

- **Keyword co-occurrence analysis**

Keywords	Count	Centrality
management	25	0.21
impact	24	0.06
performance	21	0.04
diversity	20	0.10
human rights	17	0.04
education	17	0.04
work	15	0.03
model	15	0.04
knowledge	13	0.05
perceptions	13	0.06

Table 3: High frequency keywords in the field of cultural diversity

Keywords	Count	Centrality
biodiversity	12	0.35
children	6	0.23
management	25	0.21
community	5	0.21
resilience	4	0.19
prejudice	5	0.18
moderating role	5	0.18
landscape mosaics	2	0.18
policy	4	0.15
achievement	3	0.15

Table 4: Highly highly centric keywords in the field of cultural diversity

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 Network: N=245, E=406 (Density=0.0136)
 Largest CC: 217 (88%)
 Nodes Labeled: 1.0%
 Pruning: Pathfinder

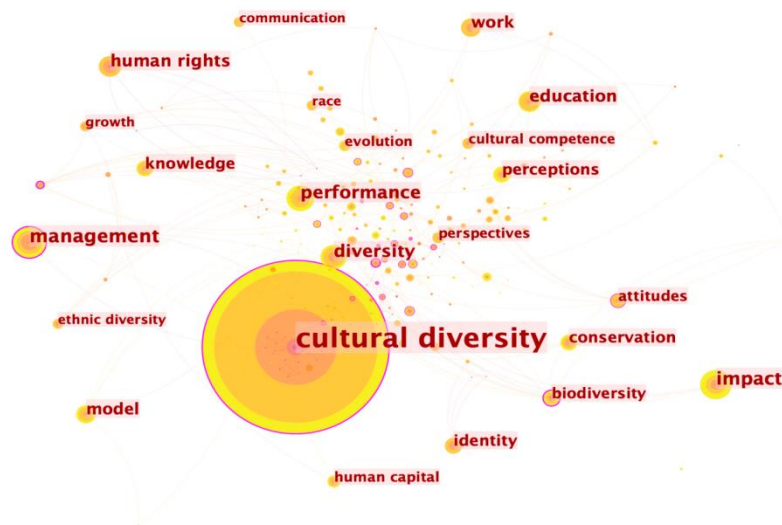


Figure 5 : Keyword Knowledge Graph

CiteSpace was used to analyze the keywords, and after merging similar words, the keyword knowledge map was obtained, as shown in Figure 5. Cultural Diversity had the highest frequency and the most significant nodes, covering the whole study time. However, this keyword will not be discussed in this paper as Cultural Diversity was used as the subject term in the search using subject terms. After excluding Cultural Diversity, the top 10 keywords were ranked according to their frequency and centrality, as shown in Tables 3 and 4, respectively. The analysis of Tables 3 and 4 shows that the high-frequency keywords are Management, Impact, Performance, Diversity, Human rights, and Education. However, not all high-frequency keywords have a high centrality, and relying on high-frequency keywords does not allow for the exact identification of research hotspots. In the CiteSpace software, keywords with

high centrality (Centrality $\geq$ 0.1) can easily be regarded as inflection points of the keyword frequency knowledge graph and, to a certain extent, represent the research hotspots in the field. Regarding centrality, Biodiversity and Children are the support points of the network. The centrality of Biodiversity is 0.35, practical support for the network. Children has a centrality of 0.23, second only to Biodiversity. Biodiversity and Children provide the basis for the stability of the network. Biodiversity and Children are, therefore, the main research hot spots followed by management, community and children, resilience, prejudice and moderating role. The centrality of these keywords suggests that they are highly integral in cultural diversity research which spurs relevant academic dialogues and extends research pathways.

Overall, the hotspots indicate an expansion of cultural diversity research from macro-management issues to specific populations (e.g., children) and themes (e.g., biodiversity and resilience). High-medium sensitivity keywords such as ‘biodiversity’ and ‘children’ not only provide stability to the research network, but also highlight how human beings are responding to the social, educational and ecological impacts of cultural diversity in complex social contexts. Future studies should focus more on these key areas especially the impact of

cultural diversity on specific populations and environments, and carry out an in-depth exploration of its theoretical and practical implications, to better understand the positive effects of cultural diversity on human societies. Besides, enhanced interdisciplinary cooperation can provide a more comprehensive theoretical framework and practical strategies for cultural diversity research to address the complex problems of cultural diversity and increase its benefits.

- **Keyword emergent analysis**

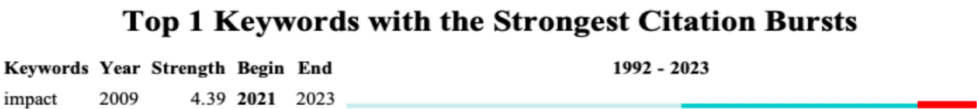


Figure6 : Cultural diversity highlighting words

The Burst function of the CiteSpace software was used to derive emergent terms (Figure 6). Burst words are identified as hot words based on the frequency growth rate of titles, abstracts, and keywords, and the size of the burst word emergence reflects the strength of the hot word. The impact of cultural diversity on human development was a significant focus of research in 1992-

2023, with a high emergence rate of 4.39, indicating that the impact of impact on cultural diversity was a significant focus of research in 2009. According to the analysis of emergent words and time points, the research hotspots are changing in line with economic globalization, with apparent policy and practical orientation.

- Thematic clustering analysis

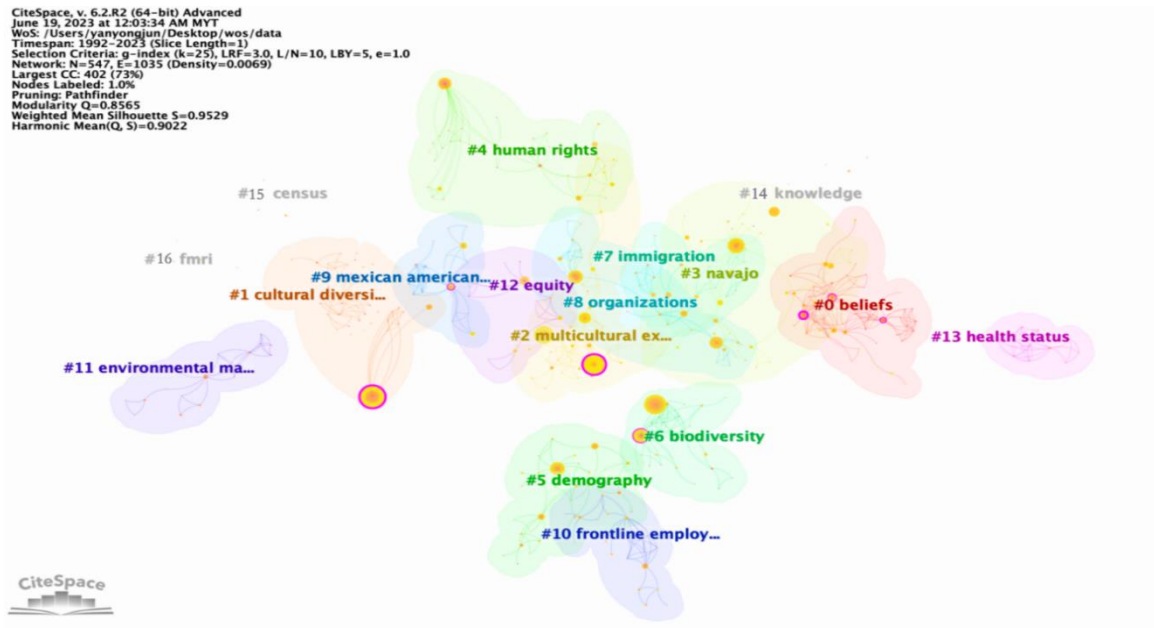


Figure7 : Theme Cluster Analysis Chart

Theme clustering results

Cluster analysis was carried out using the LLR (Log-Likelihood Rate) algorithm to categorize keywords to understand the thematic categories of research on the impact of cultural diversity on human development. Seventeen clustering results were obtained using the clustering function in CiteSpace, with Modularity=0.8565 and Mean Silhouette= 0.9529, indicating successful clustering results. The 17 results are #0 beliefs, #1 cultural diversity, #2 multicultural experience, #3 Navajo, #4 human rights, #5 Demography, #6 Biodiversity, #7 Immigration, #8 Organization, #9 Organization social content measure, #10 frontline employees, #11 Environmental management, #12 Equity, #13 Hispanic Americans, #14 Knowledge, #15 Census, #16 Culture-brain-behavior interaction model, #17 Fmri.

First, #0 beliefs include keywords such as participatory action research, readers, family involvement, and social support.

Second, #1 cultural diversity includes cultural rights, health disparities, indigenous peoples, and geographic dispersion.

Third, #2 multicultural experience includes keywords such as cultural intelligence, management styles, beta change, and measurement recalibration.

Fourth, #3 Navajo includes keywords such as activity system, immigrant children, perceptions, and moral reasoning.

Fifth, #4 Human right includes cultural relativism, immigration control, multicultural, and universal values.

Sixth, #5 Demography includes resilience, sex, fractionalization and biocultural conservation.

Seventh, #6 Biodiversity includes the keywords biotic

homogenization, biocultural, diversity cultural, and diversity corporate social responsibility.

Eighth,#7 Immigration includes keywords such as human capital, Holocene, biodiversity losses, creative class, etc.

Ninth,#8 Organization includes the keywords of social context, measure, and transportation sector.

Tenth,#9 Organization social content measure includes keywords such as Mexican Americans, risk behaviors, and transportation sector.

Eleventh,#10 frontline employees include hotel, Sabah, Malaysia, college, and other keywords.

Twelfth,#11 Environmental management includes keywords such as psychology, education, and training, international.

Thirteenth, #12 Equity includes ritual theory, cultural, and ethnic-cultural background human behavior.

Fourteenth,#13 Hispanic Americans include status, stroke, hypertension, and racial keywords.

Fifteenth, #14 Knowledge includes keywords such as face-to-face, heritage education, cancer, issue, etc.

Sixteenth, #15 Census includes keywords such as identification, black, white, marriage, etc.

Seventeenth,#16 Fmri includes keywords such as transcultural psychiatry, neural plasticity, cognitive mediation, and cab model.

Cluster Analysis

A content analysis of the valid literature was further summarised into six broad categories: Human development and Cultural values, Multicultural experiences and Management, Sociology and Demographics, Biodiversity and

Environmental management, Education and Cultural intersections, Rights and Equity.

Human development and cultural values: According to research, cultural values profoundly affect the outcome of both societies and individuals. Freeman (1996) investigates the conflict between Asian values and human rights and democracy, demonstrating the diversity and relativity of human rights concepts in various cultural contexts. Cordoba (2006) examines the competency approach of Amartya Sen. Wulf (2013) and investigates how education can contribute to global cultural diversity and sustainable development, emphasizing the significance of cultural diversity for human development and the need to integrate cultural values into development strategies.

Multicultural experiences and management: Management practices and experiences in multicultural environments must consider cultural dimensions' impact. The study by Adeshola et al. (2022) examines the influence of cultural dimensions on management styles and organizational culture, using northern Cyprus as an example, and suggests challenges and strategies for managing in multicultural environments. The study by Fenwick et al. (2011) examines Baleviciene's (2022) research on cultural diversity management practices in Lithuania and investigates strategies for promoting cultural diversity and inclusion in organizations. The study by Han and Beyerlein (2016) analyzed global cultural diversity in virtual team processes and provided recommendations for managing cross-cultural teams effectively.

Sociology and demography: Sociology and demography studies concentrate on the influence of population diversity on social and economic structures. The survey by Gerring et al. (2015) examines the impact of diversity on human development from multiple angles, indicating that variety may hurt social cohesion and social capital. Shaban and Khan (2022) analyzed the relationship between cultural diversity, human capital, and regional economic growth in India, highlighting the positive impact of cultural diversity on economic development. Alhendi et al. (2021) and Kemeny (2012) explored the relationship between tolerance, cultural diversity, and economic development from the perspectives of dynamic panel data analysis and spatial economics, thereby shedding light on the effect of cultural diversity on economic growth. They shed light on the influence of cultural diversity on economic development.

Biodiversity and environmental management: The relationship between biodiversity, environmental sustainability, and human interactions with the natural environment has been demonstrated by research. The study by Osborne (1995) investigates how biological and cultural diversity is at odds in Papua New Guinea and how they can be protected and managed. The survey by Parizeau (2013) criticizes the concept of Homo Economicus, which marginalizes cultural diversity and emphasizes the indispensable contribution of cultural diversity to sustainable development. These studies shed light on biodiversity, cultural diversity, and sustainable development interdependencies.

Education and cultural intersectionality: Education fosters cultural understanding and intersectionality. The study by Doucette et al. (2021) examines the perspectives of culturally diverse graduate students on multicultural education. It proposes strategies to promote inclusivity and multicultural sensitivity in education. Jimenez et al. (2017) examine social science textbooks for global citizenship and ESD presentations, emphasizing the significance of education in fostering global citizenship and sustainable development values.

Rights and equity: This research category investigates the effect of cultural diversity on rights and equity. Bonnes et al. (2010) explore the psychosocial affinity of individuals for variety, from biodiversity to socio-ecological sustainability. Evans (2020) investigates the complexities of teaching female genital mutilation in Africa, focusing on the interplay between culture, development, and human rights. Suci et al. (2020) investigate the impact of diversity, social inclusion, and human capital development on financial performance and risk management. Hrvatska et al. (2021) examine the prevalence and conflict between global individualism and contemporary individualistic models of civilization in the context of human rights. These studies shed light on the influence of cultural diversity on rights and fairness.

Trend analysis

In order to visualize the evolution and trends of the keywords over time, we have visualized the keywords in terms of time zones in an attempt to explore the dynamic evolution of the field of cultural diversity research by analyzing the characteristics of

the field and the mainstream of research in each phase from 1994 to 2023. Figure 8 shows the overall time zone map of cultural diversity, with the horizontal coordinates of time showing the evolution of keywords in the time dimension, allowing a clear and visual indication of trends in cultural diversity research. The high level of literature for a given period indicates that the research scholars at that time were concentrated in that area. Nodal links between periods indicate succession relationships, and the closeness of the link between two periods is presented by the number of connecting lines. As can be seen from 9 the graph, the period 1992–2001 has the fewest nodes, with only cultural diversity, human rights, African-American fathers, and the adaptation of children

having fewer connecting lines. From 2002 to 2009, cultural diversity was more intensively researched in terms of development for all, with a dense distribution of keywords and a wide range of themes, a period of great ripples. After 2010, there are fewer hotspots, but they still receive attention from researchers, and cultural diversity research begins to diversify into a period of stable and deepening research.

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Weighted Mean Silhouette S=0.9529
Harmonic Mean(Q, S)=0.9022

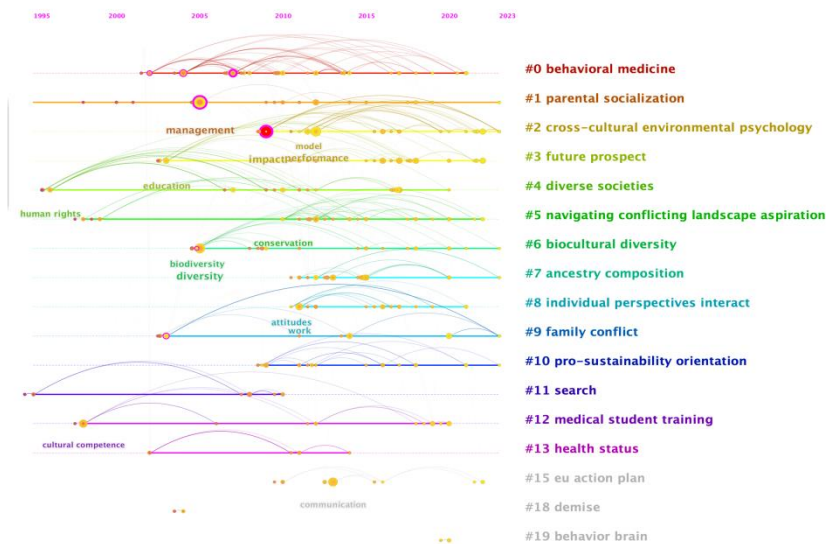


Figure8: Keyword clustering time zone map

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 Largest CC: 402 (73%)
 Nodes Labeled: 1.0%
 Pruning: Pathfinder

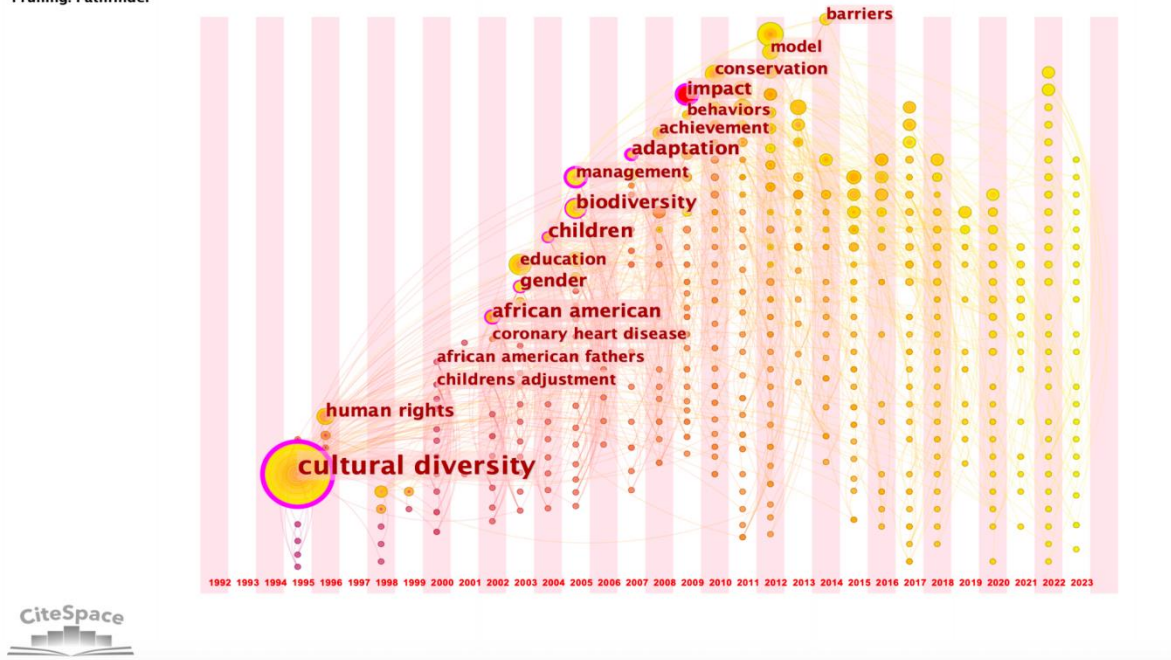


Figure 9 : Cultural diversity research keywords Time - zone diagram

The scientific knowledge map (timeline view) combined with the keyword clustering of cultural diversity research in Figure 9 makes it easy to see the period of the literature related to a particular research topic. The period of the literature on a particular research topic. The analysis shows that the study of cultural diversity began in 1995 and that the hot spot of cultural diversity has continued to this day. When cultural diversity emerged, it was accompanied by the hotspot of human rights, which, as Freeman, M argues, are general principles that must be interpreted in light of the world's different cultures. Human rights studies have since expanded into ethnography, jurisprudence, and psychology. As research has progressed, hot spots have expanded, with hotspots such as Management and Biodiversity emerging in 2005 and driving the growing body of research on cultural diversity, with an increasing number of high-frequency keyword nodes and dense linkages, with performance, community, diversity, resilience and prejudice have emerged, leading to more in-depth research and a more comprehensive range of topics. The number of articles published is on the rise compared to previous years, and at the same time is diversified. Some new hot keywords in this period are gender, education, children, adaptation, achievement, behavior, impact, conservation, model, barriers, etc. This period is dominated by an in-depth study of many new research topics that exploded earlier.

Summary and outlook

By analyzing the annual publication volume, disciplinary distribution, authorship and institutional cooperation, hotspots, frontiers, and development trends of research on cultural diversity and human development in the Web of Science core collection database from 1992 to 2023, we found that: First, the period of 1994-2001 was the initial exploration period of cultural diversity research, 2002-2009 was the explosion period, and 2010-present was the stable deepening period. Secondly, regarding the distribution of disciplines, research on cultural diversity and human development mainly focuses on education, environmental studies, management, psychology, anthropology, and economics. It is complemented by sociology, law, and medicine. Third, the distribution of cultural diversity research institutions is relatively scattered in terms of authorship and institutional cooperation. There needs to be more collaborative research among institutions. The cooperation among researchers within each institution is also loose, except for a few research teams, and most research institutions and researchers need more continuity in their research on this topic. Fourthly, the distribution of keywords, clusters, and time zones show that cultural diversity research is concentrated in Impact, which is rich in research hotspots and has a wide range of themes, showing researchers academic interest in cultural diversity and human development.

In this regard, in future research on the Impact of cultural diversity on human development, it is essential to broaden the disciplinary distribution of research in

order to test the reality of the Impact of cultural diversity on human development in different fields or to strengthen the links between disciplines in order to explore better and discover cultural diversity and human development; to strengthen the cooperation and communication between authors and institutions in order to make the research on cultural diversity and human development more detailed and sustainable, and to contribute to the development of cultural diversity and human development. The research on cultural diversity and human development will be more detailed, more sustainable, and more effective; the research on the Impact of cultural diversity on human development will be deepened and diversified by exploring other hotspots and expanding the research themes based on the existing ones. For example, applying the research paradigm of cultural diversity to the field of science and technology innovation will enable a better understanding and use of cultural diversity to promote scientific and technological innovation, thereby contributing to the scientific and technological progress and overall development of human society, which is of great theoretical and practical value in building a harmonious and pluralistic global society.

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PEMBENTUKAN MODEL JATI DIRI KESUKARELAWANAN BELIA DI PANTAI TIMUR SEMENANJUNG MALAYSIA

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ABSTRAK

Pembentukan jati diri kesukarelawanan yang kukuh boleh menyumbang kepada pembangunan dan kesejahteraan sebuah bangsa dan negara. Namun, pada era dunia yang dilingkari dengan kemodenan dan teknologi tinggi, usaha untuk mewujudkan jati diri kesukarelawanan belia pada hari ini semakin mencabar kerana pelbagai bentuk perubahan besar telah berlaku ke atas masyarakat dan negara. Oleh itu, satu kajian telah dijalankan untuk merangka sebuah model komprehensif tentang faktor-faktor pembentukan jati diri kesukarelawanan belia di Pantai Timur Semenanjung Malaysia. Kajian ini mengaplikasikan pendekatan kuantitatif melalui tinjauan menggunakan borang soal selidik yang melibatkan 384 responden sukarelawan belia. Data tersebut dianalisis dengan menggunakan perisian SMART-PLS bagi menjawab persoalan kajian. Hasil kajian ini bukan sahaja menjadi teras bagi pembentukan jati diri kesukarelawanan belia, tetapi menjadi asas yang kukuh dalam memperkasa peranan dan sumbangan belia dalam masyarakat. Model ini memaparkan faktor dalaman menjadi pemangkin utama dalam pembentukan jati diri kesukarelawanan diikuti dengan faktor luaran. Ironinya, dalam usaha untuk membentuk jati diri kesukarelawanan belia, elemen dalaman perlu dibangunkan secara menyeluruh agar golongan belia mempunyai semangat jati diri yang unggul untuk melibatkan diri dalam aktiviti kesukarelawanan. Faktor luaran juga menjadi elemen penyokong pembentukan jati diri yang lebih holistik.

Katakunci: Kesukarelawanan, Jati Diri Kesukarelawanan, Belia, & Pembinaan Bangsa.

ABSTRACT

The formation of a strong volunteering identity can contribute to the development and well-being of a nation and a country. Based on the literature review, the spirit of volunteerism,

involvement in something related to the community, the tradition of sharing and the practice of helping each other are fading and still fragile. Therefore, a study was carried out to draw

up a comprehensive model about the factors of identity formation of youth volunteering in the East Coast of Peninsular Malaysia. This study applied a quantitative approach through a survey using a questionnaire involving 384 youth volunteer respondents. The data was analysed using SMART-PLS software to answer the research questions. The results of this study are not only the core for the formation of the identity of youth volunteering, but also a solid foundation in empowering the role and contribution of youth in society. This model shows that internal factors are the main catalyst in the formation of volunteering identity followed by external factors. Ironically, to form the identity of youth volunteering, internal elements need to be developed comprehensively so that the youth have a superior sense of identity to engage in volunteering activities. External factors are also elements that support the formation of a more holistic identity.

Keywords: Volunteerism, volunteerism identity, youth, nation building & SMART-PLS.

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INTRODUCTION

Dasar Pembangunan Belia Negara 1997 telah mendefinisi belia sebagai penduduk yang berumur 15 hingga 40 tahun. Dalam sesebuah negara, belia membentuk majoriti dalam komposisi penduduk dan kedudukannya cukup penting dalam konteks pembangunan negara (Haslinda et al., 2012). Dalam aspek sosial, kerajaan Malaysia telah mengiktiraf belia sebagai pemimpin masa depan untuk kesejahteraan negara dan masyarakat. Masa depan negara bangsa akan dicorak oleh belia yang ada pada hari ini. Harapan yang tinggi diletakkan di bahu belia oleh pemimpin dan masyarakat supaya belia menjadi lebih bertanggungjawab, berkeyakinan, berwibawa, aktif dan cekap dalam pelbagai aspek. Semua ciri tersebut adalah persediaan penting yang perlu dimiliki oleh belia untuk membentuk modal insan berkualiti dan aset berharga bagi menyumbang kepada kesejahteraan komuniti, masyarakat dan negara.

Sebagai sebuah negara membangun, terdapat keperluan yang mendesak untuk generasi muda yang mempunyai semangat kesukarelawanan yang kukuh untuk membantu dalam pelbagai bidang seperti pembangunan komuniti, peningkatan pengetahuan, dan menggalakkan perpaduan dalam kalangan rakyat. Kehadiran jati diri sukarela mencerminkan patriotisme belia terhadap negara mereka. Umumnya, cinta mereka yang mendalam terhadap negara dan unsur-unsurnya, seperti masyarakat, keamanan, kepelbagaian etnik, agama, dan budaya, boleh menjadi pemangkin utama untuk memupuk identiti sukarela. Dalam konteks ini, memupuk identiti diri sukarela yang mantap menjadi penting,

menunjukkan komitmen individu untuk menyumbang secara aktif kepada negara dan kesejahteraan komuniti mereka. Walau bagaimanapun, membangunkan identiti sukarela ini dalam dunia yang semakin kompleks hari ini adalah mencabar.

Pada era dunia yang dilingkari dengan kemodenan dan teknologi tinggi, pelbagai bentuk perubahan besar telah berlaku ke atas masyarakat dan negara. Perubahan tersebut bukan sahaja mengubah nilai masyarakat ke arah lebih bersifat individualistik dan materialistik (Oesterle et al., 2004; Jardim & da Silva, 2018) tetapi telah menyebabkan masyarakat tidak lagi mengendahkan keadaan sekeliling (Wasitah, 2013) dan telah melunturkan tradisi kesukarelawanan (Saifuddin, 2001). Semangat kesukarelawanan, keterlibatan dalam sesuatu perkara, tradisi berkongsi dan amalan membantu semakin luntur apabila masyarakat bersikap individualistik (Clary & Snyder, 1999). Hal ini terbukti di mana Indeks Belia Malaysia (IBM) yang dihasilkan oleh Institut Penyelidikan Pembangunan Belia Malaysia (IPPBMM) menjadi parameter dalam mengukur sembilan domain kesejahteraan golongan belia yang mengandungi indikator sukarelawan. Ia telah menunjukkan penurunan skor pada tahun 2011 iaitu sebanyak 65.4 peratus berbanding dengan skor 2008 iaitu 67.4 peratus (Wasitah, 2013). Kajian Penilaian Outcome Indeks Belia Malaysia 2019 yang dikeluarkan oleh Institut Penyelidikan Pembangunan Belia Malaysia menunjukkan di bawah Domain Identiti, indikator sukarelawan masih di tahap sederhana dengan dapatan skor sebanyak 60.93 peratus. Selain itu, penilaian terhadap program kesukarelawanan

khususnya daripada pihak NGO adalah pada tahap 60 peratus, iaitu dalam kategori memuaskan (JBSN, 2019). Kajian Rokiah dan Lilah (2016) turut menunjukkan tahap penghayatan belia terhadap semangat kesukarelawanan adalah memuaskan dan bagi konstruk perasaan, kajian mereka menunjukkan semangat kesukarelawanan yang masih lagi rapuh.

Pihak kerajaan telah melancarkan pendekatan multi-dimensi untuk meningkatkan penglibatan masyarakat umumnya dan golongan belia khusus dalam aktiviti kesukarelawanan. Usaha untuk menyokong aktiviti kesukarelawanan serta merangka program-program pemupukan nilai murni dalam kalangan generasi muda telah dilakukan dari masa ke semasa (Wasitah, 2013). Namun, walaupun telah banyak program dan aktiviti kesukarelawanan dilaksanakan, penglibatan golongan belia masih berada pada tahap sederhana dan memuaskan. Perkara ini terbukti melalui laporan yang dikeluarkan oleh Institut Pembangunan Belia Malaysia (IYRES), Kementerian Belia dan Sukan (KBS) (2020) yang menyatakan tahap pembabitan masyarakat Malaysia terhadap semangat

kesukarelawanan adalah memuaskan. Laporan tersebut menyebutkan 62.9 peratus daripada 527 responden tidak tahu wujudnya aktiviti kesukarelawanan di sekeliling mereka, dan 58.3 peratus responden tidak tahu mengenai sambutan Hari Kesukarelawanan Malaysia (HKM). Kurang kepekaan golongan belia terhadap aktiviti kesukarelawanan turut menunjukkan kurangnya semangat kesukarelawanan dalam diri mereka.

Oleh itu, memandangkan semangat kesukarelawanan amat penting dalam membantu pembangunan dan kemajuan negara, maka kajian ini akan meninjau faktor atau elemen dalaman dan luaran yang mempengaruhi jati diri kesukarelawanan belia di Pantai Timur Semenanjung Malaysia. Bagi mencapai matlamat tersebut, satu kajian tertentu telah direka bentuk melibatkan pelbagai organisasi sukarela untuk mengenal pasti faktor dalaman dan luaran. Kemudian, kajian ini akan membentuk Model Jati Diri Sukarelawan Belia sebagai petunjuk atau garis panduan untuk menyemai jati diri yang kukuh melalui faktor dalaman dan luaran yang ketara.

LITERATURE REVIEW

Aktiviti kesukarelawanan merupakan suatu aktiviti yang murni dan amat digalakkan dalam sesebuah masyarakat dan komuniti. Aktiviti ini melibatkan kerja sukarela iaitu seseorang yang berbakti atau memberikan khidmat serta sumbangan dalam membantu orang lain, yakni dengan rela hati tanpa paksaan serta niat yang ikhlas (Azizan Bahari, 2003; Nur Raihan Che Nawi & Azizan Asmuni, 2013) tanpa menjangkakan

atau mengharapkan balasan atau apa-apa ganjaran material dan bebas sepenuhnya dari mengharapkan balasan atau apa-apa ganjaran material dan bebas sepenuhnya dari pengaruh mana-mana pihak (Musick & Wilson, 2003). Wilson (2000) telah mendefinisikan aktiviti kesukarelawanan sebagai "*any activity in which time is given freely to benefit another person, group or cause*". Secara ringkasnya, aktiviti

kesukarelawanan dapat dikaitkan dengan kerja-kerja amal dan kebajikan yang dijalankan oleh seseorang individu atau secara kumpulan terhadap golongan yang memerlukan bantuan. Eyler (1999) dan Geiser et al. (2014) berpendapat biasanya tiada unsur mementingkan diri kerana khidmat yang dihulurkan semata-mata demi kebaikan semua pihak dalam meningkatkan kualiti hidup manusia.

Aktiviti kesukarelawan sangat penting dalam pembangunan masyarakat kerana sukarelawan boleh menyumbangkan kepakaran, kemahiran, pengetahuan dan tenaga (Dorsch et.al, 2002) demi kesejahteraan bersama. Tanpa khidmat sukarelawan, banyak aktiviti dalam masyarakat dan pelbagai sektor lain tidak dapat beroperasi dengan lancar (Wu et al., 2009). Sehubungan dengan itu, penglibatan belia dalam aktiviti kesukarelawanan amat digalakkan bukan sahaja untuk membantu pembangunan dalam masyarakat, meringankan beban mangsa sesuatu bencana malah dapat menggalakkan penglibatan dalam aktiviti yang sihat dan mengelakkan penglibatan belia dalam kancan masalah sosial.

Kesukarelawan juga adalah peluang untuk pembangunan kemahiran dan pengembangan kurikulum (Jardim & da Silva, 2018). Penglibatan dalam kesukarelawanan membuka peluang kepada belia untuk mengembangkan potensi mereka, seperti kemahiran berkomunikasi, menyelesaikan masalah, bekerjasama, dan membantu mengembangkan peluang kerjaya (Saifuddin, 2001). Di samping itu, dengan terlibat dalam kesukarelawanan, belia dapat

mengelak dan mengelakkan diri mereka daripada terjebak dalam tingkah laku anti-sosial dan boleh membimbing dan memulihkan pesalah juvana (Brewis et al., 2010; Hill & Russell, 2009). Kajian mengenai kesukarelawanan dalam kalangan belia di Kuala Lumpur telah terbukti memberi impak yang positif. Dapatan kajian menunjukkan bahawa aktiviti kesukarelawanan telah memberi kesan kepada pelbagai aspek seperti gaya hidup sihat, muhasabah diri, penyayang, kemahiran diri, dan meluaskan hubungan (Alauddin & Muhamad, 2013). Penglibatan belia dalam kerja sukarela boleh menjauhkan mereka daripada aktiviti anti-sosial dan tingkah laku jenayah dan menjadikan mereka bertanggungjawab menjaga maruah keluarga, masyarakat, dan nama baik negara (Ludden, 2011).

Dengan itu, penglibatan belia dalam kesukarelawanan memberi impak terbaik kepada pembentukan personaliti, nilai, kepercayaan, motivasi, dan secara langsung melonjakkan jati diri (Ismail et al., 2021; Bang & Ross, 2009). Ia menjadikan mereka ikon, model atau contoh terbaik untuk belia lain dan agen sosial terbaik dalam membantu kerajaan mencapai kesejahteraan holistik. Tanggungjawab membangunkan belia tidak terletak di bahu kerajaan semata-mata; namun, ia adalah tanggungjawab bersama masyarakat secara keseluruhan, tidak kira di mana mereka berada. Tambahan pula, golongan belia merupakan aset masa depan negara yang memangkin pembangunan sebuah negara bangsa yang mantap khususnya dalam menghadapi pelbagai cabaran masa hadapan.

METHODOLOGY

Kajian ini menggunakan kaedah kuantitatif melalui teknik tinjauan menggunakan soal selidik yang diedarkan dalam talian melalui aplikasi *Google Form*. Pendekatan kuantitatif dalam penyelidikan menawarkan kelebihan utama dalam bentuk data yang objektif, sistematik dan boleh diukur dengan tepat. Melalui penggunaan statistik dan analisis matematik, pendekatan ini membolehkan penyelidik untuk mengumpulkan data dalam jumlah besar dan menilai hubungan antara pembolehubah dengan ketepatan yang tinggi. Ini memberikan gambaran yang jelas tentang pola, trend dan hubungan yang wujud dalam data, serta membolehkan generalisasi keputusan kepada populasi yang lebih besar.

Responden kajian telah dipilih secara rawak daripada ahli yang terlibat secara aktif dalam pelbagai organisasi kesukarelawanan di Pantai Timur Semenanjung Malaysia. Dengan memilih responden secara rawak, kajian ini mengelakkan bias pemilihan yang mungkin timbul jika responden dipilih berdasarkan kriteria tertentu. Ini dapat memastikan bahawa sampel yang diambil mewakili populasi yang lebih besar dan memberikan hasil yang lebih umum dan boleh dipercayai. Pemilihan secara rawak juga membolehkan kajian ini memperoleh pandangan daripada pelbagai individu yang terlibat dalam aktiviti kesukarelawanan, tanpa mengira latar belakang atau pengalaman tertentu. Ini meningkatkan kesahihan hasil kajian dan memastikan bahawa ia mencerminkan

pelbagai perspektif dalam populasi sukarelawan. Pemilihan responden secara rawak dari kalangan pelbagai latar belakang dan jenis aktiviti kesukarelawanan juga memberikan asas yang kukuh untuk analisis yang komprehensif mengenai penglibatan sukarelawan dan faktor-faktor yang mempengaruhi jati diri mereka.

Sasaran responden adalah sukarelawan yang berumur 15 hingga 40 tahun, melibatkan lelaki dan wanita daripada pelbagai kumpulan etnik. Kumpulan umur ini merangkumi pelbagai peringkat kehidupan yang penting dalam pembentukan jati diri dan pengalaman sukarela.

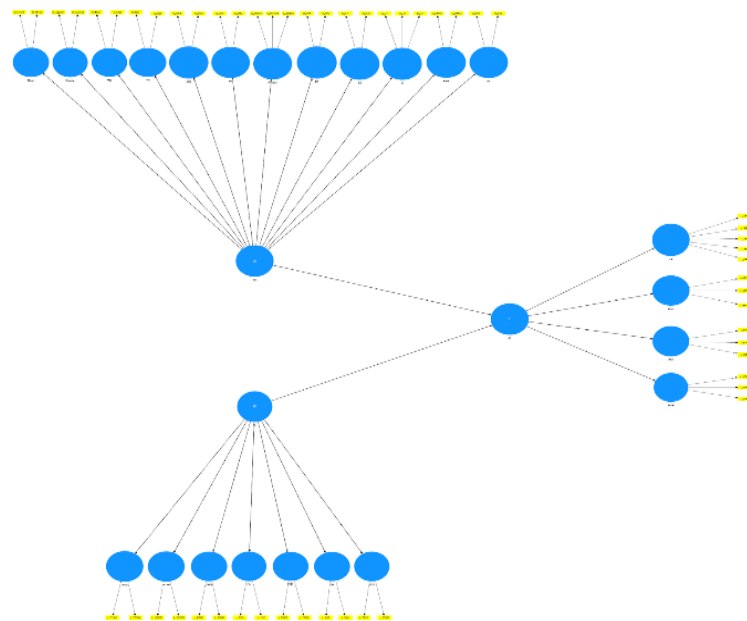
Selain itu, kajian ini juga turut mengutamakan kepelbagaian budaya dan etnik. Dengan melibatkan pelbagai kumpulan etnik membolehkan kajian ini mengkaji bagaimana latar belakang budaya mempengaruhi penglibatan dalam aktiviti kesukarelawanan.

Jumlah keseluruhan responden yang terlibat ialah 384, termasuk mereka yang aktif dengan pelbagai organisasi dan aktiviti kesukarelawanan. Responden kajian ini dipilih daripada tiga negeri di Pantai Timur Semenanjung Malaysia iaitu Kelantan, Terengganu dan Pahang.

Data yang dikumpulkan kemudian dianalisis menggunakan SMART-PLS untuk membentuk model jati diri

kesukarelawanan belia di Pantai Timur
Semenanjung Malaysia.

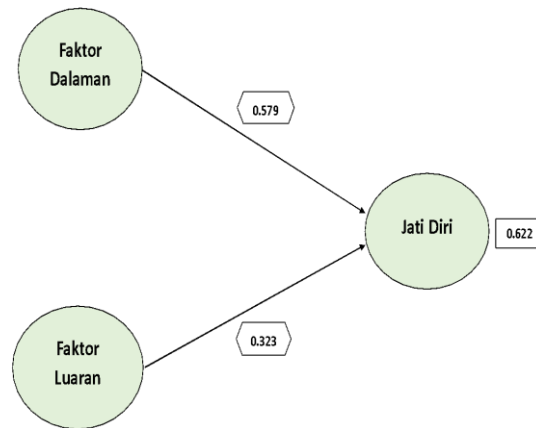
RESULT ANALYSIS AND DISCUSSION



Rajah 1: Model Jati Diri Kesukarelawanan Belia

Rajah 1 menunjukkan Model Jati Diri Kesukarelawanan Belia yang berjaya dibentuk menggunakan perisian Smart-PLS. Model ini telah mematuhi kriteria yang telah ditetapkan untuk membangunkan sesebuah model. Selepas beberapa prosedur telah dipenuhi untuk membentuk model, semua ukuran telah mencapai tahap konsistensi yang diperlukan. Model ini menunjukkan hubungan antara dua faktor utama yang membentuk jati diri kesukarelawanan belia,

iaitu faktor dalaman dan faktor luaran. Asasnya faktor dalaman merangkumi elemen personal dalam diri individu, seperti motivasi intrinsik, nilai-nilai peribadi, kepercayaan dan kepuasan sendiri. Sementara itu, faktor luaran melibatkan elemen di luar diri individu yang mempengaruhi jati diri kesukarelawanan, seperti sokongan sosial, persekitaran, peluang sukarelawan dan ganjaran luaran.



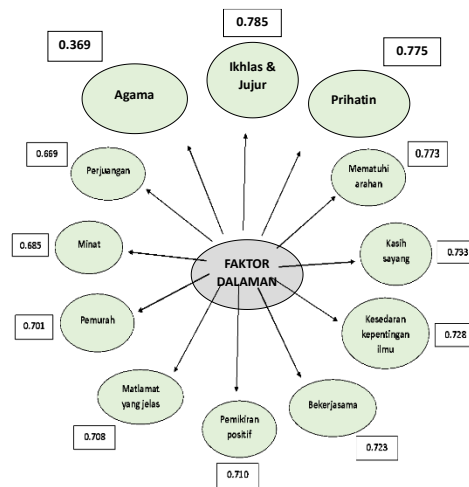
Rajah 2: Faktor dalaman dan luaran Model Jati Diri Kesukarelawanan Belia

Rajah 2 menunjukkan pengaruh unsur dalaman dan luaran terhadap jati diri melalui *path coefficient*. *Path coefficient* mewakili kekuatan dan arah hubungan antara pembolehubah dalam model. Dalam kes ini, kedua-dua unsur dalaman dan unsur luaran mempengaruhi pembentukan jati diri kesukarelawanan. Elemen dalaman dengan *path coefficient* 0.579 dan elemen luaran dengan *path coefficient* 0.323 menunjukkan arah hubungan, manakala magnitud menunjukkan kekuatan. Kedua-dua pekali positif menunjukkan hubungan positif antara dua komponen ini dengan jati diri kesukarelawanan.

Unsur dalaman merujuk kepada faktor atau ciri yang ada dalam diri seseorang individu. Ini termasuk nilai peribadi, kepercayaan, sikap, persepsi diri, dan emosi. *Path coefficient* 0.579 menunjukkan pengaruh positif unsur dalaman yang agak kuat terhadap jati diri. Maksudnya apabila elemen dalaman berubah atau meningkat, jati diri juga cenderung meningkat. Ini boleh membayangkan bahawa rasa diri yang kuat, berdasarkan kepercayaan dan nilai seseorang, menyumbang dengan ketara pada jati diri.

Unsur luaran merujuk kepada faktor atau pengaruh daripada persekitaran luaran, seperti interaksi sosial, norma masyarakat, dan faktor budaya. *Path coefficient* 0.323 menunjukkan pengaruh positif unsur luaran terhadap jati diri, walaupun sedikit lemah daripada unsur dalaman. Ini bermakna bahawa perubahan dalam faktor luaran, seperti pengaruh budaya atau sosial, juga memberi kesan positif kepada jati diri. Ini mungkin menunjukkan bahawa pengesahan luaran dan norma masyarakat menyumbang kepada jati diri seseorang individu.

Dari segi praktikal, kedua-dua unsur dalaman dan luaran berkemungkinan mempengaruhi identiti diri seseorang individu. Kepentingan relatif setiap satu bergantung kepada pelbagai faktor, termasuk nilai peribadi individu, konteks budaya, dan pengalaman hidup. Pengaruh gabungan boleh difahami sebagai wajaran kedua-dua *path coefficient*: Jati Diri = 0.622. Nilai ini mengukur pengaruh keseluruhan faktor-faktor ini ke atas jati diri.



Rajah 3: Elemen dalaman Model Jati Diri Kesukarelawanan Belia

Rajah 3 menunjukkan komponen spesifik bagi elemen dalaman yang menyumbang kepada pembentukan jati diri kesukarelawanan. Indikator yang digunakan ialah nilai *R-square*, iaitu pengukuran statistik dalam analisis regresi bagi menilai tahap ketekalan model regresi yang dibangunkan, di mana nilai tersebut menerangkan variasi dalam pemboleh ubah bersandar. Antara nilai *R-square* elemen dalaman yang tinggi dan signifikan ialah;

- i. Ikhlas dan Jujur (0.785) adalah elemen paling penting dalam proses pembentukan jati diri kesukarelawanan. Mereka melakukan tanpa paksaan, berkorban masa, tenaga dan wang ringgit untuk mengambil bahagian dalam organisasi kesukarelawanan. Sifat ikhlas dan jujur merujuk kepada kesungguhan dan ketulusan hati individu dalam memberikan khidmat mereka tanpa mengharapkan ganjaran atau

balasan. Sukarelawan yang mempunyai sifat ini akan lebih komited terhadap peranan mereka, kerana mereka merasakan khidmat untuk membantu masyarakat adalah untuk manfaat bersama. Mereka akan berusaha dengan bersungguh-sungguh untuk melaksanakan tugas mereka dengan baik dan nilai ini merupakan asas kepada jati diri yang kukuh dan berwibawa. Faktor ini adalah sangat kuat dalam membentuk jati diri sukarelawan belia kerana nilai-nilai dalaman ini lahir secara langsung dari hati mereka dan dinyatakan secara langsung melalui penglibatan mereka dalam pertubuhan kesukarelawanan.

- ii. Prihatin (0.775) paling utama dalam menyumbang pembentukan jati diri seseorang sukarelawan. Sifat prihatin mereka ini akan menimbulkan perasaan kurang senang untuk berdiam diri terhadap kesusahan dan tekanan yang dilalui

oleh segelintir golongan yang dipinggirkan. Keadaan ini menunjukkan bahawa individu yang bersifat lebih peka dan bersikap suka ambil berat permasalahan orang lain lebih cenderung untuk menjadi seorang sukarelawan yang baik. Individu yang prihatin biasanya mempunyai tahap kesedaran sosial yang tinggi. Mereka mampu mengenal pasti isu atau masalah dalam masyarakat dan merasakan tanggungjawab untuk membantu menyelesaikannya. Kesedaran sosial ini adalah kunci dalam memupuk semangat kesukarelawanan kerana ia mencetuskan dorongan dalaman untuk membuat perubahan yang positif. Sikap keprihatinan di dalam diri belia akan menjadikan mereka lebih bersemangat dan sentiasa gembira dalam melakukan kerja kesukarelawan tanpa merasakan ianya satu bebanan yang terpaksa dipikul. Hal ini dikatakan kerana mereka akan lebih gembira apabila dapat menggembirakan individu lain.

- iii. Mematuhi arahan (0.773), di mana merujuk kepada kesediaan individu untuk mengikuti garis panduan, peraturan dan arahan yang diberikan oleh pihak yang berkuasa atau ketua pasukan. Ini bermakna sikap mematuhi arahan memainkan peranan penting dalam pembentukan jati diri seorang sukarelawan. Individu yang mematuhi arahan dapat memastikan keselarasan dan kesatuan dalam pasukan, kepatuhan kepada

prosedur keselamatan, keberkesanan dalam pelaksanaan tugas, serta menunjukkan disiplin dan tanggungjawab yang tinggi. Sikap ini juga membantu dalam membina hubungan yang baik dengan pihak berkuasa dan rakan sukarelawan.

- iv. Kasih sayang (0.733) yang terpujuk pada diri individu juga menjadi pemangkin kepada pembentukan jati diri kesukarelawanan. Individu yang dipenuhi dengan kasih sayang cenderung untuk membantu orang lain dengan niat yang ikhlas. Mereka tidak mengharapkan sebarang ganjaran atau pujian, sebaliknya, mereka membantu kerana rasa kasih dan kepedulian terhadap orang lain. Nilai kasih sayang membantu individu untuk merasakan apa yang dirasai oleh orang lain. Rasa empati ini penting dalam kesukarelawanan kerana ia mendorong individu untuk memahami keperluan dan penderitaan orang lain. Keadaan ini bukan sahaja mendorong individu untuk terlibat dalam aktiviti kesukarelawanan, tetapi juga membentuk cara mereka menginterpretasi penderitaan orang lain dan melihat masyarakat sebagai sebuah keluarga besar yang perlu dijaga dan dibantu.
- v. Kesedaran kepentingan ilmu (0.728) menjadi salah satu elemen dalaman yang mempengaruhi pembentukan jati diri kesukarelawanan. Kesedaran ini

merujuk kepada pengiktirafan dan pemahaman individu terhadap nilai dan peranan ilmu pengetahuan dalam kehidupan mereka serta dalam konteks masyarakat. Dengan memiliki ilmu pengetahuan, individu dapat mengenali potensi diri dan bagaimana mereka boleh memberi sumbangan yang bermakna kepada masyarakat. Aktiviti kesukarelawan menyediakan beberapa keperluan pemahaman seperti ilmu pengetahuan tentang kehidupan, nilai-nilai murni, dan kemahiran kelangsungan hidup. Misalnya, para sukarelawan belia boleh bertukar-tukar ilmu pengetahuan dan pengalaman untuk menarik minat mereka dalam menyertai segala aktiviti. Keadaan ini membolehkan individu menjadi lebih berpengetahuan, kritis dan empatik, serta memotivasi mereka untuk terus terlibat secara aktif dalam aktiviti kesukarelawanan.

- vi. Bekerjasama (0.723) adalah elemen penting dalam proses pembentukan jati diri sukarelawan kerana ia menyentuh beberapa dimensi psikologi dan sosial yang mendasari keupayaan individu untuk berfungsi secara efektif dalam konteks sukarelawan. Kerjasama dalam aktiviti sukarelawan membantu individu untuk mengembangkan kemahiran sosial yang penting. Ini termasuk kemahiran komunikasi, dan penyelesaian konflik. Melalui pengalaman bekerjasama dengan orang lain, sukarelawan belajar bagaimana untuk bekerja dalam

pasukan, menghargai pandangan orang lain, dan mengadaptasi dengan pelbagai situasi sosial. Kemahiran ini bukan sahaja membantu dalam konteks sukarelawan tetapi juga dalam kehidupan peribadi dan profesional mereka.

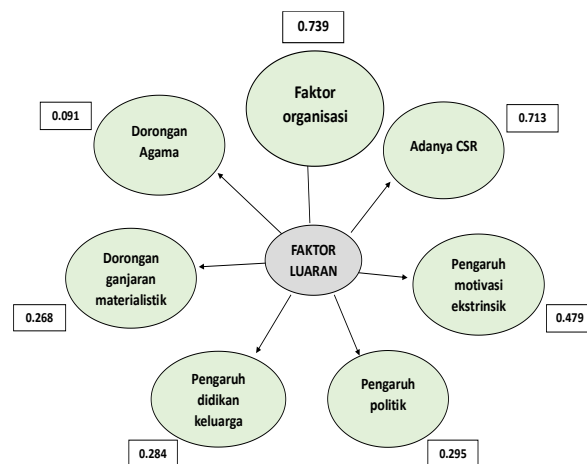
- vii. Pemikiran positif (0.710) mempengaruhi pembentukan jati diri kesukarelawanan. Pemikiran positif merujuk kepada sikap mental yang optimistik dan kepercayaan bahawa hasil yang baik boleh dicapai melalui usaha dan keazaman. Individu dengan pemikiran positif cenderung untuk melihat cabaran sebagai peluang dan bukan halangan. Sikap optimistik ini membantu mereka untuk kekal bersemangat dan berfokus walaupun menghadapi kesukaran. Mereka percaya bahawa usaha mereka akan membawa kepada perubahan positif, yang memotivasi mereka untuk terus berkhidmat dengan penuh dedikasi.

Dari perspektif elemen dalaman, usaha menerapkan nilai-nilai murni dalam diri individu akan melahirkan jati diri yang unggul serta dapat mengukuhkan karakter personaliti seseorang individu. Apabila sukarelawan belia merasakan bahawa nilai diri mereka sebagai refleksi kepada aktiviti kesukarelawanan, ia juga akan membantu mengukuhkan lagi jati diri mereka. Dengan terpupuknya jati diri kesukarelawanan, ia akan mendorong individu untuk membuat perubahan dalam masyarakat dan boleh membawa kepada komitmen yang lebih

besar untuk menjadi sukarelawan. Perkembangan elemen dalaman boleh memberi kesan yang ketara kepada persepsi belia sebagai sukarelawan dan dalam kehidupan mereka secara total. Ironinya, memilih untuk menjadi seorang sukarelawan kerana ia mewakili nilai teras, kepercayaan atau sikap seseorang boleh dikatakan insentif paling bermakna dalam kehidupan seseorang individu (Stukas et al., 2014). Dengan demikian, individu yang terlibat dalam aktiviti kesukarelawanan akan mengalami perubahan dalam diri mereka, seperti dapat meningkatkan kemahiran insaniah, memupuk semangat kerjasama dan membudayakan sifat tolong-menolong dalam masyarakat (Intan Suria et al., 2022).

Indikator menerusi nilai *R-square* menunjukkan bahagian varians dalam diri individu yang boleh menjelaskan setiap elemen dalaman yang membentuk jati diri

kesukarelawanan. Nilai *R-square* yang lebih tinggi menunjukkan pengaruh lebih besar terhadap pembentukan jati diri. Dalam hal ini, nilai ikhlas dan jujur, prihatin, mematuhi arahan, kasih sayang, kesedaran kepentingan ilmu, bekerjasama, dan pemikiran positif merupakan faktor dalaman yang paling menonjol dalam membentuk jati diri kesukarelawanan belia. Dalam pada itu, elemen-elemen dalaman yang lain juga mempunyai nilai *R-square* signifikan tersendiri dalam pembentukan jati diri kesukarelawanan belia, yang tidak boleh diabaikan. Jadi, dengan memahami komponen teras ini, ia boleh menjadi indikator asas bagi sesebuah organisasi kesukarelawanan untuk merekrut, menggalakkan, melatih, melibatkan diri dan mengekalkan semangat sukarelawan dalam diri individu khususnya dalam usaha untuk membentuk dan memupuk jati diri kesukarelawanan belia di Malaysia.



Rajah 4 menunjukkan komponen elemen luaran yang menyumbang kepada pembentukan jati diri kesukarelawan belia dengan indikator nilai *R-square*. Elemen luaran secara langsung mempunyai pengaruh yang relatif signifikan dalam

pembentukan pemupukan jati diri kesukarelawan khususnya interpretasi individu dalam memberikan khidmat bakti kepada masyarakat. Elemen-elemen ini merujuk kepada faktor-faktor persekitaran dan konteks sosial individu yang

mempengaruhi dan membentuk sikap serta tingkah laku kesukarelawanan. Dengan sokongan dan pengaruh positif daripada elemen luaran ini, individu lebih berkemampuan untuk mengembangkan sikap dan nilai-nilai kesukarelawanan yang kuat, seterusnya memberi sumbangan yang bermakna kepada masyarakat. Antara komponen utama elemen luaran ini ialah;

- i. Faktor organisasi (0.739) adalah elemen luaran yang penting. Ini menunjukkan bahawa organisasi yang dikaitkan dengan sukarelawan memainkan peranan penting dalam membentuk jati diri mereka. Sesebuah organisasi kesukarelawanan berperanan memupuk semangat bermasyarakat, memberi sokongan dan penghargaan kepada sukarelawan boleh menyumbang kepada pembangunan identiti diri yang lebih kukuh. Persekitaran yang positif, tersusun dan menyokong dalam organisasi boleh membawa kepada rasa jati diri yang lebih kukuh dalam kalangan sukarelawan. Sementara itu, mempunyai mentor dan teladan yang menyokong (Kok et al., 2020) dalam kalangan organisasi kesukarelawanan boleh mempengaruhi cara sukarelawan melihat diri mereka sendiri. Hubungan yang positif dengan sukarelawan yang lebih berpengalaman boleh memberi bimbingan, galakan dan rasa kekitaan bersama. Sukarelawan yang lebih berpengalaman dapat

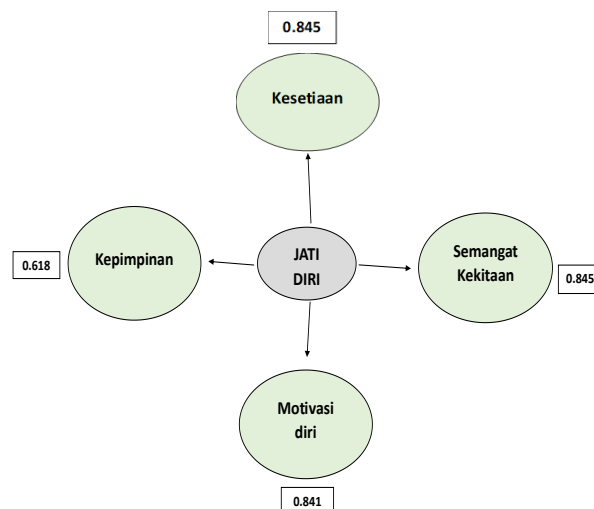
memberikan arahan yang lebih tepat dan membantu individu yang baru terlibat untuk memahami konsep kesukarelawanan dan cara-cara untuk melaksanakannya (Intan Suria et al., 2022).

- ii. ACSR (0.713) Aktiviti CSR melibatkan pembelajaran secara langsung, iaitu sukarelawan dikehendaki menangani keperluan manusia dan masyarakat. CSR adalah pembelajaran berdasarkan kepada pengalaman dan proses pemindahan pengetahuan. Matlamat utama CSR adalah untuk mempromosikan tanggungjawab sivik dan keadilan sosial melalui pengalaman yang betul serta aktiviti yang kritikal. Program CSR berpotensi membantu sukarelawan mengembangkan pemahaman tentang keadaan sosial yang dihadapi oleh orang lain.
- iii. Pengaruh motivasi ekstrinsik (0.479) merujuk kepada faktor yang datang dari luar individu, seperti ganjaran, pengiktirafan, atau tekanan sosial. Sukarelawan yang didorong oleh ganjaran atau pengiktirafan luaran mungkin mempunyai jati diri yang berkait rapat dengan insentif ini. Matlamat, objektif, motivasi atau tindakan agenda peribadi mungkin antara pengaruh langsung terhadap tingkah laku sukarelawan, seperti yang dinyatakan oleh Snyder dan Cantor (1998). Dalam konteks kesukarelawanan pula, Sharifafar (2011) menjelaskan bahawa

sukarelawan akan mendapat kepuasan diri yang maksimum setelah selesai membantu individu yang memerlukan bantuan. Oleh yang demikian, pengiktirafan yang diterima oleh sukarelawan dapat menjamin kesetiaan mereka terhadap sesuatu persatuan/ organisasi agar terus berbakti kepada anggota masyarakat untuk suatu jangka masa yang panjang. Dalam pada itu, motivasi intrinsik, yang lahir dari minat peribadi dan keinginan untuk membantu orang lain, adalah pemacu jati diri yang kuat. Apabila sukarelawan belia mempunyai motivasi intrinsik, jati diri mereka sebagai seorang sukarelawan akan lebih kuat dan berkekalan. Dari itu, individu yang kerap kali melibatkan diri dengan aktiviti kesukarelawanan dilihat

mempunyai tahap keperibadian diri yang lebih baik berbanding dengan individu yang tidak pernah terlibat dengan mana-mana aktiviti kesukarelawanan (Siti Nathrah & Fuziah, 2020).

Nilai R-square menunjukkan sejauh mana setiap elemen luaran menerangkan varians dalam identiti diri sukarelawan. Dalam kes ini, faktor organisasi, adanya CSR, dan motivasi ekstrinsik mempunyai pengaruh yang lebih ketara. Memahami elemen luaran ini adalah penting bagi organisasi sukarelawan kerana ia boleh membantu mereka bentuk strategi dan program yang memaksimumkan kesan positif faktor ini terhadap jati diri sukarelawan. Seterusnya, boleh membawa kepada kadar pengekatan yang lebih tinggi dan pangkalan sukarelawan yang lebih bermotivasi.



Rajah 5: Elemen Jati Diri Kesukarelawanan Belia

Rajah 5 menunjukkan komponen jati diri kesukarelawananan belia. Hasil penyelidikan menunjukkan terdapat empat elemen utama yang menyumbang kepada jati diri sukarelawan. Apa yang nyata, jati diri dikaitkan secara langsung dengan nilai, sifat, personaliti dan ciri-ciri individu. Jati diri kesukarelawananan ini terbentuk melalui elemen dalaman dan luaran yang dilalui oleh seseorang individu. Komponen jati diri kesukarelawananan yang terhasil melalui model yang dibentuk terdiri daripada elemen berikut;

- i. Kesetiaan (0.845) sering dilihat sebagai ukuran komitmen dan dedikasi terhadap sebab tertentu, kumpulan atau individu. Kesetiaan seseorang boleh menjadi aspek penting dalam jati diri mereka, mencerminkan nilai mereka dan kepentingan hubungan dan perhubungan mereka.
- ii. Semangat kekitaan (0.845) dalam aktiviti kesukarelawananan merujuk kepada perasaan kebersamaan dan tanggungjawab bersama yang terjalin antara individu yang terlibat dalam usaha sukarelawan. Ia menggambarkan bagaimana sukarelawan merasakan bahawa mereka adalah sebahagian daripada komuniti atau pasukan yang lebih besar dan bahawa mereka mempunyai tanggungjawab kolektif terhadap mencapai matlamat bersama. Semangat ini

memperkukuh hubungan sosial, meningkatkan motivasi, dan memupuk rasa solidariti di kalangan ahli kumpulan.

- iii. Motivasi diri (0.841) ialah kebolehan untuk menetapkan dan mengejar matlamat dan aspirasi peribadi. Apabila seseorang mempunyai motivasi diri yang tinggi, ia boleh menjadi komponen penting dalam jati diri mereka, kerana ia mencerminkan pemacu dan keazaman mereka untuk mencapai apa yang penting bagi mereka.
- iv. Kepimpinan (0.618) iaitu membimbing dan memberi inspirasi kepada orang lain. Bagi mereka yang melihat diri mereka sebagai pemimpin, ia boleh menjadi aspek penting dalam jati diri mereka, kerana ia mewakili peranan mereka dalam mempengaruhi dan membimbing orang lain. Kepimpinan merupakan salah satu kemahiran yang penting dalam pembangunan sahsiah diri kerana ianya dapat memupuk nilai-nilai positif seperti kemahiran berkomunikasi, dan kerjasama berpasukan dalam diri seseorang belia.

Ringkasnya, jati diri sukarelawan belia terbentuk dan terpujuk melalui proses sosialisasi dan pengalaman yang dilalui oleh seseorang individu, menjadi binaan

yang kompleks terbentuk daripada pelbagai sifat, sikap, nilai peribadi, personaliti, watak, karakter, kepercayaan, persepsi diri, emosi dan motivasi intrinsik serta elemen-elemen luaran yang lain. Jati diri sukarelawan belia adalah hasil daripada interaksi yang kompleks antara faktor dalaman dan luaran yang membentuk individu secara holistik. Proses

Dalam memperkasa jati diri kesukarelawan, dua aspek utama perlu diberikan penekanan iaitu faktor dalaman dan faktor luaran yang mana kedua-dua aspek ini secara langsung mempengaruhi pembentukan jati diri kesukarelawan. Kemudian, setelah menjalankan tinjauan literatur, tiada kajian-kajian lepas dilakukan yang membincangkan tentang faktor dalaman dan luaran yang memupuk jati diri kesukarelawan golongan belia di Pantai Timur Semenanjung Malaysia. Jadi, melalui penyelidikan ini, penyelidik telah menjumpai elemen-elemen baru yang signifikan yang menjadi keutamaan terhadap pembentukan jati diri kesukarelawan belia di Pantai Timur Semenanjung Malaysia.

Setiap faktor dalaman mempunyai 12 elemen. Faktor dalaman yang paling kuat mempengaruhi jati diri adalah ikhlas dan jujur, prihatin, dan mematuhi arahan, Elemen-elemen inilah yang perlu diberi perhatian utama. Kemudian, setiap faktor luaran mempunyai 7 elemen. Faktor luaran yang kuat mempengaruhi jati diri adalah faktor organisasi, adanya CSR dan pengaruh motivasi ekstrinsik, Faktor dalaman dan luaran inilah yang mempengaruhi jati diri kesukarelawan. Jati diri kesukarelawan belia yang telah disahkan pada model ini ialah 4, iaitu; kesetiaan, semangat kekitaan, motivasi diri, dan kepimpinan.

pembentukan ini merupakan sosialisasi yang berterusan, diperkaya dengan pengalaman, refleksi dan hasil pembelajaran, serta menyumbang kepada pertumbuhan peribadi dan sumbangan positif kepada masyarakat.

RUMUSAN

Kajian ini telah berjaya membina satu model jati diri kesukarelawan belia di Pantai Timur Semenanjung Malaysia. Model ini telah mengesahkan bahawa ada pemberat-pemberat tertentu. Melalui pembinaan model ini, penyelidik berjaya mengenalpasti 57.9% faktor dalaman dan 32.3% faktor luaran yang mempengaruhi pembentukan dan pemupukan jati diri kesukarelawan belia Malaysia.

Model ini boleh diaplikasikan kepada semua pertubuhan bersifat kesukarelawan yang mana boleh dijadikan sebagai garis panduan untuk menggerakkan lagi pertubuhan kesukarelawan masing-masing. Selain itu, output kajian ini boleh dijadikan strategi untuk meningkatkan kesedaran dalam penglibatan aktiviti kesukarelawan golongan belia. Menerusi kajian ini, pertubuhan kesukarelawan belia boleh membina modul asas latihan kepada sukarelawan belia untuk menarik lebih ramai lagi ahli terlibat dalam aktiviti kesukarelawan ini.

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PENDEKATAN PELAKSANAAN SARINGAN KANSER KOLOREKTAL DALAM KOMUNITI BANDAR DI PROGRAM PERUMAHAN RAKYAT (PPR) KUALA LUMPUR, MALAYSIA

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ABSTRACT

Colorectal cancer (CRC) is the second leading cause of cancer-related deaths worldwide, as reported in 2020. The significant rate of late diagnoses leads to high treatment costs and a substantial financial burden, especially for low-income groups. This study reviews the approach to implementing CRC screening in low-income urban communities within the People's Housing Program (PPR) in Kuala Lumpur by analyzing policy documents, reports, and previous studies. The study found that the CRC screening programs conducted were top-down, resulting in low participation rates. Therefore, the Ministry of Health Malaysia's (MOH) recommendation to implement community empowerment-oriented programs such as the Patient Navigation Program (PNP) and Healthy Communities Empowering the Nation (KOSPEN) is critical. These programs are seen as capable of increasing awareness, participation, and the effectiveness of CRC screening among PPR communities, thereby aiding in early detection and more effective treatment. This study emphasizes the importance of a more inclusive and community-centered approach to achieving better public health outcomes.

Keywords: *Colorectal Cancer Screening Approach, Low-Income Communities, PPR Kuala Lumpur*

ABSTRAK

Kanser kolorektal (CRC) adalah punca kedua utama kematian berkaitan kanser di seluruh dunia yang dilaporkan pada 2020. Kadar diagnosis lewat yang signifikan menyebabkan kos rawatan yang tinggi dan beban kewangan yang besar, terutama bagi golongan berpendapatan rendah. Kajian ini meninjau pendekatan pelaksanaan saringan CRC dalam komuniti bandar berpendapatan rendah di Program Perumahan Rakyat (PPR) Kuala Lumpur melalui analisis dokumen dasar, laporan, dan kajian terdahulu. Kajian mendapati bahawa program saringan CRC yang dijalankan bersifat atas ke bawah, mengakibatkan kadar penyertaan yang rendah. Justeru, cadangan Kementerian Kesihatan Malaysia (KKM) untuk melaksanakan program

berorientasikan pemerksaan komuniti seperti Program Navigasi Pesakit (PNP) dan Komuniti Sihat Perkasa Negara (KOSPEN) adalah kritikal. Program-program ini dilihat mampu meningkatkan kesedaran, penyertaan, dan keberkesanan saringan CRC dalam kalangan komuniti PPR, seterusnya membantu dalam pengesanan awal dan rawatan yang lebih efektif. Kajian ini menekankan kepentingan pendekatan yang lebih inklusif dan berpusatkan komuniti untuk mencapai matlamat kesihatan awam yang lebih baik.

Kata kunci: Pendekatan Saringan Kanser Kolorektal, Komuniti Berpendapatan Rendah, PPR Kuala Lumpur

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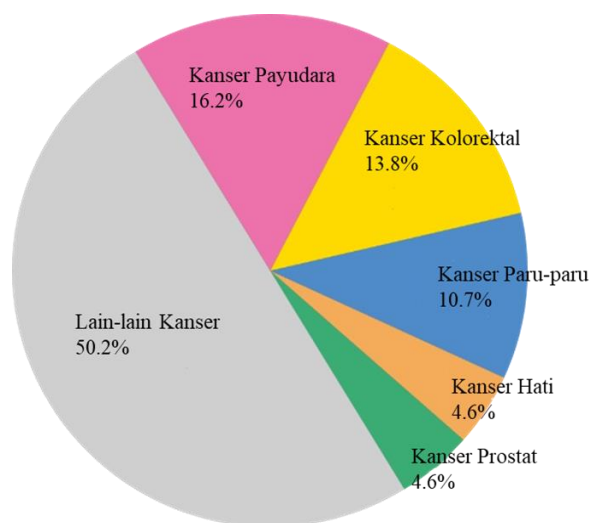
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INTRODUCTION

Kanser kolorektal (*Colorectal Cancer* [CRC]) adalah penyebab kedua kematian berkaitan kanser di seluruh dunia. Di Malaysia, CRC adalah kanser yang paling tinggi dalam kalangan lelaki (16.9%) dan kedua bagi wanita (10.7%). Menurut *The Global Cancer Observatory 2022* yang diterbitkan oleh Pertubuhan Kesihatan Sedunia, CRC merupakan kanser kedua tertinggi di Malaysia dengan prevalens sebanyak 13.8%. seperti yang ditunjukkan dalam Rajah 1 di bawah. Kadar kejadian kanser ini meningkat dengan pertambahan usia dan lebih tinggi pada lelaki berbanding

wanita. CRC boleh didiagnosa awal sekiranya tanda dan gejala dapat dikenal pasti. Lebih 70% pesakit dikesan pada tahap 3 dan 4 (Muhamad et al., 2023). Tahap diagnosis ini merupakan penentu yang paling penting dalam kejayaan rawatan dan kadar kelangsungan hidup. Berdasarkan laporan Kajian Malaysia - Survival Kanser (Muhamad et al., 2023), kadar kelangsungan hidup relatif dalam tempoh 5 tahun untuk kanser kolorektal adalah sebanyak 51.1% dan ia semakin berkurang pada tahap diagnosis yang lewat.



Rajah 1: Prevalens kanser di Malaysia, mengikut diagnosis kanser
(*The Global Cancer Observatory 2022*, Pertubuhan Kesihatan Sedunia)

Kos rawatan CRC secara purata bagi setiap pesakit adalah antara RM 5,477 hingga RM 164,984 untuk kos pembedahan dan RM 8,977 hingga RM 85,915 untuk kemoterapi (Ngan et al., 2023). Kos yang tinggi ini merupakan liabiliti kewangan serta limitasi rawatan khususnya kepada kelompok berpendapatan rendah selain mengurangkan tahap produktiviti dan kebolehan bekerja serta menguruskan diri sendiri. Impak meruncing ini membawa pada inisiatif pelaksanaan program kesedaran dan saringan awal oleh pihak berkepentingan seperti Kementerian Kesihatan (KKM), badan bukan kerajaan (NGO) berkaitan pada komuniti berpendapatan rendah (KKM, 2023).

Kajian analisa perbelanjaan penjagaan kesihatan dari perspektif pesakit kanser bagi menentukan tahap Perbelanjaan Kesihatan Bencana (CHE) dan faktor-faktor yang berkaitan, menunjukkan CHE adalah lebih tinggi dalam kelompok isi rumah dengan berpendapatan rendah (Wan Puteh et al., 2023). CHE ditakrifkan sebagai menanggung perbelanjaan kesihatan bulanan melebihi 10% daripada jumlah perbelanjaan isi rumah bulanan. Kemiskinan telah dibuktikan oleh beberapa kajian, adalah faktor bagi amalan kesihatan tidak memuaskan (Abu Bakar et al., 2023). Kajian lepas juga menyatakan usaha agresif diperlukan dalam meningkatkan kesedaran dan gaya hidup sihat amalan dalam

kelompok B40 boleh mengurangkan penyakit tidak berjangkit dan kanser melalui pencegahan, pengubahsuaian gaya hidup, dan kawalan berhemah terhadap beberapa faktor risiko biasa yang boleh membawa kepada penyakit kronik (Kadir, 2023).

Dilaporkan 30,000 ketua isi rumah di ibu negara tergolong dalam kategori bawah paras kemiskinan bandar (Kementerian Wilayah Persekutuan, 2021). Penumpuan populasi miskin bandar serta adanya sistem perumahan awam bagi kelompok ini adalah faktor utama pemilihan PPR di Kuala Lumpur bagi tinjauan ini. Secara keseluruhan, terdapat 34,862 unit PPR di Kuala Lumpur dimana ia merupakan inisiatif kerajaan melalui Kementerian Perumahan dan Kerajaan Tempatan (KPKT) dan pihak berkuasa tempatan iaitu Dewan Bandaraya Kuala Lumpur (DBKL). Jumlah ini adalah 31% dari jumlah keseluruhan unit PPR di Malaysia (KPKT, 2022).

Artikel ini bertujuan meninjau aktiviti saringan CRC kebangsaan semasa di Malaysia melalui analisa dokumen dasar, laporan dan kajian lepas berkaitan dengan pendekatan pelaksanaan saringan CRC pada komuniti bandar berpendapatan rendah di Program Perumahan Rakyat (PPR) di Kuala Lumpur.

METHODOLOGY

Kajian semakan dokumen telah dijalankan untuk meneliti aktiviti saringan CRC nasional yang lepas dan semasa di Malaysia, khususnya dalam memperincikan pendekatan pelaksanaannya di komuniti bandar berpendapatan rendah di Kuala Lumpur. Dasar dan dokumen program berkaitan

saringan CRC di Malaysia dikenal pasti dari tahun 2020, iaitu selepas saringan populasi secara oportunistik diperkenalkan. Dasar-dasar serta maklumat ini dikenal pasti melalui pencarian dokumen di laman rasmi KKM dan entiti berkaitan, serta laporan, artikel akhbar dan jurnal kajian yang telah diterbitkan.

Jadual 1: Dokumen rujukan dari agensi kerajaan terlibat dalam saringan CRC

Sumber	Informasi yang diperoleh
Kementerian Kesihatan Malaysia (KKM)	
1 Pelan Strategik Nasional bagi Kanser Kolorektal (NSPCRC) 2021-2025, 2021	Strategi utama, garis panduan pelaksanaan dan carta alir aktiviti saringan CRC kepada populasi kebangsaan yang sedang dilaksanakan
2 Panduan untuk Program Saringan Kanser Kolorektal (Barah Usus Besar) (Versi 3), 2021	Garis panduan pelaksanaan dan carta alir aktiviti saringan CRC di Klinik Kesihatan KKM
3 Buku Panduan Saringan dan Pengesanan Awal Kanser Kolorektal Edisi 3, 2020	Garis panduan pelaksanaan dan carta alir aktiviti saringan CRC di Klinik Kesihatan KKM
4 Buku Panduan: Saringan dan Pengesanan Awal Kanser Kolorektal (Usus Besar) bagi Sukarelawan KOSPEN, 2021	Garis panduan pelaksanaan dan carta alir aktiviti saringan CRC dalam kerjasama KKM-JPNIN melalui program KOSPEN
5 Portal Rasmi Jabatan Kesihatan WP Kuala Lumpur & Putrajaya, KKM https://jknkl.moh.gov.my/pejabat-kesihatan	Lokasi Pejabat Kesihatan (PKD), Klinik Kesihatan (KK) dan Lokaliti KOSPEN. Aktiviti berkaitan CRC yang dijalankan di peringkat PKD dan KK

Kementerian Perpaduan Negara

- | | | |
|---|--|--|
| 1 | Laman Rasmi Jabatan Perpaduan Integrasi Nasional (JPNIN) https://www.perpaduan.gov.my/index.php/bm/ | Lokaliti Rukun Tetangga dan KOSPEN di Kuala Lumpur |
| 2 | Agenda Kerja Komuniti Rukun Tetangga, 2021, JPNIN | Skop program, aktiviti serta carta alir tugas KOSPEN dalam Agenda Rukun Tetangga |

Limitasi kaedah ini adalah iainya terhadap kepada dokumen dan data yang telah diterbitkan dan tidak dapat memberikan maklumat terkini yang mungkin telah berubah atau tidak didokumenkan secara terperinci. Ini menghadkan perspektif terhadap program atau isu yang sedang dikaji.

Proses analisis data dokumen yang dirujuk adalah melalui kaedah analisis kandungan iaitu menilai dan menyusun maklumat yang terkandung dalam pelbagai dokumen dasar, laporan dan kajian terdahulu. Kajian ini memfokuskan kepada pengumpulan maklumat mengenai pelaksanaan saringan CRC melalui dokumen rasmi utama seperti

Pelan Strategik Nasional bagi Kanser Kolorektal (NSPCRC), panduan saringan CRC, serta laporan berkaitan oleh Kementerian Kesihatan Malaysia (KKM) dan pihak berkuasa lain.

Data dianalisis untuk memahami aspek spesifik pendekatan pelaksanaan saringan seperti strategi, carta alir aktiviti, dan kadar penyertaan berdasarkan maklumat yang ada dalam dokumen rasmi. Kajian ini menilai apakah maklumat yang ada dan bagaimana ia relevan dengan isu kadar penyertaan rendah dalam komuniti PPR, serta apakah cabaran dan penambahbaikan yang boleh dicadangkan.

DISCUSSION

Pelaksanaan saringan CRC dalam komuniti

Pemeriksaan dengan kaedah ujian darah dalam sampel najis imunokimia (*Immunochemical Faecal Occult Blood Test* [iFOBT]) adalah ujian yang paling lazim dijalankan bagi saringan dan pengesanan awal CRC. Ianya mudah dan boleh dilakukan sendiri di rumah. Dalam tempoh sedekad ini, negara berpendapatan tinggi mensasarkan pelaksanaan iFOBT ke seluruh negara untuk meningkatkan jumlah saringan CRC (Schliemann et al., 2023). Negara berpendapatan rendah dan

sedehana tidak mempunyai sumber untuk pelaksanaan seperti ini dan secara alternatifnya menawarkan saringan oportunistik kepada individu berusia lebih 40 tahun. Di Malaysia, KKM melalui *National Strategic Plan for Colorectal Cancer* (NSPCRC) 2021 – 2025 telah melaksanakan saringan oportunistik di klinik-klinik kesihatan KKM menggunakan iFOBT untuk individu berumur 50-75 tahun tanpa simptom CRC.

Unit Penyakit Tidak Berjangkit (NCD), Bahagian Kawalan Penyakit, KKM

merupakan agensi pengkoordinasian kebangsaan bagi program NSPCRC. Di klinik-klinik kesihatan KKM tersebut, individu yang memenuhi kriteria pemilihan akan ditawarkan ujian saringan CRC menggunakan kit IFOBT. Maklumat demografi mereka didokumenkan secara manual dalam buku pendaftaran saringan di fasiliti berkenaan. Individu terlibat dinasihati tentang kepentingan saringan CRC dan penerangan bahawa ujian iFOBT bukan ujian pengesanan diagnosis CRC dan keperluan untuk menjalani prosidur kolonoskopi jika mereka mendapat hasil positif ujian ini. Bagi mengelakkan risiko kesilapan dalam pengendalian kit iFOBT ini, individu terlibat diminta untuk menghantar sampel najis mereka ke klinik kesihatan, di mana kakitangan kesihatan akan membantu mereka melakukan ujian ini. Jika hasilnya positif, mereka akan dimaklumkan serta dirujuk ke hospital terdekat untuk prosidur kolonoskopi bagi diagnosis CRC (Chandran et al., n.d.).

Untuk memudahkan proses rujukan, pihak klinik kesihatan akan mendapat temujanji kolonoskopi di hospital KKM. Pegawai perhubungan di hospital rujukan dilantik untuk memudahkan temujanji kolonoskopi, serta mendapatkan hasil kolonoskopi dan laporan histopatologi untuk pengurusan lanjut. Bagi Individu- dengan hasil iFOBT negatif pula, pihak klinik kesihatan akan memberikan temujanji dalam dua tahun untuk ujian semula dan dinasihati untuk mengamalkan gaya hidup sihat (Chandran et al., n.d.).

Sehingga tahun 2020 sebanyak 598 klinik kesihatan di bawah KKM telah menyediakan perkhidmatan ini. Walau bagaimanapun, penyertaan adalah kurang daripada 3% dalam kalangan populasi

sasaran (KKM, 2022). Setiap tahun, bilangan populasi yang disaring oleh klinik kesihatan adalah kurang daripada 1% daripada jumlah penduduk yang layak di negara ini. Dari jumlah tersebut, hanya 60% sahaja dari individu dengan hasil saringan positif iFOBT yang menjalani prosedur seterusnya iaitu kolonoskopi.

Pelaksanaan saringan CRC dalam komuniti PPR Kuala Lumpur

Terdapat empat Pejabat Kesihatan Daerah (PKD) KKM di Kuala Lumpur, iaitu PKD Cheras, PKD Kepong, PKD Lembah Pantai, dan PKD Titiwangsa. Setiap PKD ini mempunyai secara purata lima Klinik Kesihatan dan enam Klinik Komuniti. Secara keseluruhan, terdapat 18 Klinik Kesihatan dan 22 Klinik Komuniti di Kuala Lumpur. Program kesedaran dan saringan awal CRC telah dilaksanakan secara berterusan dalam komuniti termasuk PPR di Kuala Lumpur oleh Klinik Kesihatan KKM dan entiti berkaitan dengan kerjasama persatuan penduduk sebagai pengantara kepada komuniti. Dalam konteks ini, Persatuan penduduk memainkan peranan penting dalam mengkoordinasi program-program yang dijalankan oleh pihak pemegang taruh. Peranan Persatuan Penduduk telah diperkasa melalui Dasar Komuniti Negara yang telah digubal oleh KPKT untuk membantu menangani isu sosial perumahan di peringkat komuniti setempat, terutamanya di kawasan perumahan berstrata kos rendah di seluruh negara (Dasar KPKT, 2021).

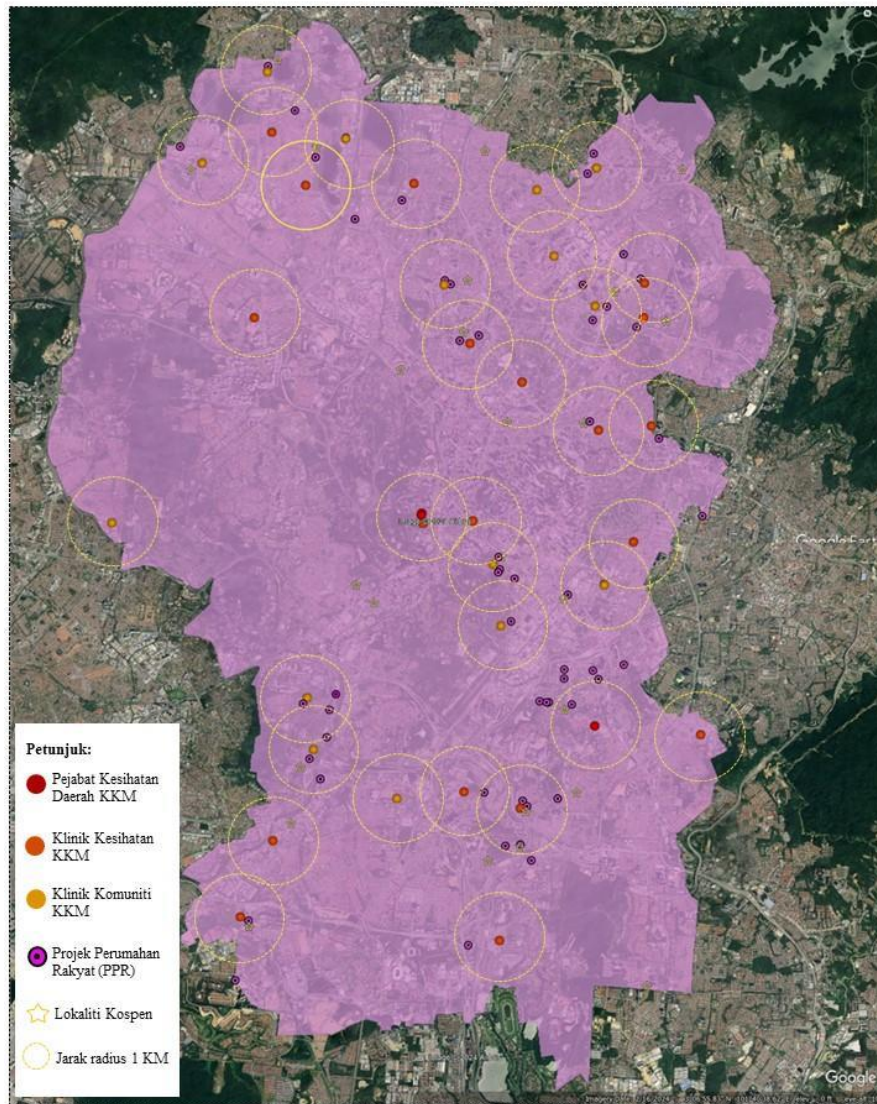
Program saringan kanser kolorektal juga telah digiatkan melalui inisiatif Komuniti Sihat, Perkasa Negara (KOSPEN), yang merupakan satu kerjasama antara KKM dan Jabatan Perpaduan dan Integrasi Nasional

(JPNIN), sejak tahun 2013. Inisiatif ini bertujuan memperkasakan komuniti dalam penjagaan sendiri bagi mengurangkan beban penyakit tidak berjangkit, termasuk kanser. Terdapat 29 lokaliti KOSPEN dari 303 Kawasan Rukun Tetangga (KRT) di Kuala Lumpur dan majoriti lokaliti ini merangkumi kawasan PPR (JPNIN, 2024). Inisiatif ini dilaksanakan oleh pasukan NCD dari Pejabat Kesihatan Daerah (PKD) di Kuala Lumpur, iaitu Lembah Pantai, Titiwangsa, Cheras, dan Kepong. Pasukan NCD bersama sukarelawan dari komuniti KRT di setiap lokaliti akan menjalankan program-program kesihatan komuniti secara berkala dan penyeliaan serta pelaporan aktiviti dilaksanakan oleh PKD yang berkenaan (Laporan Agenda Kerja

Komuniti Rukun Tetangga, Kementerian Perpaduan, 2021).

Bagi menyokong usaha ini, Persatuan Advokasi Kanser Malaysia, EMPOWERED, telah melaksanakan saringan CRC dengan garis panduan yang sama oleh KKM secara tahunan sejak tahun 2010 (Christina Ng Van Tze et al., 2016). Pelaksanaan projek berskala besar ini menyasarkan komuniti PPR di Kuala Lumpur. Sehingga tahun 2015, projek ini telah melibatkan 1,436 subjek dari 6 PPR di Kuala Lumpur. Usaha yang sama telah dijalankan oleh Institut Biologi Molekul Perubatan, Universiti Kebangsaan Malaysia pada tahun 2022-2024 melibatkan 8 PPR dengan penyertaan 583 peserta kerjasama DBKL dan Persatuan Penduduk Komuniti PPR yang terlibat.

Gambarajah 1: Pemetaan lokasi fasiliti kesihatan KKM, PPR dan Lokaliti KOSPEN menggunakan aplikasi *Google Earth*



Gambarajah 1 menunjukkan taburan 44 fasiliti kesihatan KKM yang merangkumi 4 Pejabat Kesihatan Daerah (PKD), 18 Klinik Kesihatan (KK), 22 Klinik Komuniti serta 64 Projek Perumahan Rakyat (PPR) dan 29 lokaliti KOSPEN. Semua PPR berada kurang dari 2 kilometer dan majoritinya berada dalam lingkungan kurang 1 kilometer dari fasiliti kesihatan KKM yang melaksanakan saringan CRC. Inisiatif ini dilihat dapat mengurangkan masalah akses kepada fasiliti kesihatan, terutamanya bagi komuniti PPR. Taburan lokaliti KOSPEN juga, majoritinya berdekatan dengan PPR, membolehkan inisiatif yang berteraskan kerjasama komuniti ini lebih praktikal dalam meningkatkan penglibatan komuniti PPR. Hanya 29 Rukun Tetangga (RT) daripada 303 RT di seluruh Kuala Lumpur yang terpilih untuk melaksanakan program KOSPEN.

Penyertaan komuniti dalam pelaksanaan saringan CRC

Julat tahap penyertaan yang berbeza atau 'Tipologi Penyertaan' merangkumi julat peringkat penyertaan yang boleh ditafsirkan sebagai hasil atau produk akhir penyertaan komuniti (Nazuri, Rosnon, et al., 2022). Penyertaan boleh berlaku pada pelbagai peringkat, dari 'tidak menyertai' hingga sepenuhnya penyertaan dan aktif (pemberdayaan). Penyertaan adalah konsep utama dan prinsip asas dalam pembangunan komuniti (Nikkhah & Ma'rof, 2009) serta strategi berkesan untuk meningkatkan tahap sosial komuniti. Kajian lepas menunjukkan bahawa Penyertaan Komuniti mampu melibatkan individu dalam memobilisasi dan mengorganisasi program untuk mencapai objektif komuniti dan meningkatkan kualiti hidup (Samah & Aref, 2009), mengurangkan pengasingan

sosial, meningkatkan kecekapan diri, dan membawa kepada kelestarian program. Penyertaan juga meningkatkan 'rasa kepemilikan' dalam kalangan ahli komuniti, membawa kepada hasil yang positif, memberi manfaat kepada pembangunan program komuniti, membantu individu menghadapi dan mengatasi keterbatasan sambil menyelesaikan masalah secara individu atau kolektif, dan menjadi medium untuk pemeraksanaan berlaku (Nazuri et al., 2022).

Dalam konteks penyertaan komuniti kepada program saringan kanser kolorektal, matlamatnya penyertaan komuniti adalah untuk memastikan terdapat kesedaran dan implikasi terhadap perubahan tindakan individu dalam pengesanan awal kanser. Hasil kajian lepas menunjukkan bahawa penyertaan komuniti PPR di Kuala Lumpur digambarkan sebagai 'tidak menyertai' dan memerlukan strategi lebih efektif dalam pendekatan pelaksanaan program saringan CRC di komuniti PPR Kuala Lumpur. Program yang dijalankan bersifat atas ke bawah, di mana tidak memberi peluang kepada pemimpin dan ahli komuniti dalam membuat keputusan (Schliemann et al., 2020).

Cabaran dan cadangan penambahbaikan dari inisiatif yang telah dilaksanakan

Beberapa kajian telah dijalankan untuk menilai halangan dan sikap dalam kalangan rakyat Malaysia terhadap saringan kanser kolorektal dan berikut adalah sebab yang dikenal pasti iaitu takut akan hasil ujian, percaya bahawa saringan tidak diperlukan (tiada simptom dan tiada sejarah keluarga), sibuk dan tidak mahu diganggu, kurang pengetahuan tentang saringan iFOBT,

gejala CRC dan ketersediaan daripada ujian, malu untuk pelaksanaan prosedur kolonoskopi dan takut prosedur kolonoskopi menyakitkan (KKM, 2020).

Dari inisiatif pelaksanaan saringan CRC pada usia 50 tahun atau lebih awal yang telah dijalankan oleh pemegang taruh, terutama untuk golongan yang berisiko tinggi di Malaysia, kesedaran awam mengenai kanser kolorektal masih rendah jika dibandingkan dengan negara maju. Kajian lepas juga telah mengidentifikasi beberapa halangan dalam pelaksanaan program saringan CRC di Malaysia, termasuk pengambilan yang rendah, kesedaran awam yang kurang mengenai saringan CRC, dan kadar penyertaan yang rendah terutama dalam komuniti, terutama di penempatan kos rendah atau Projek Perumahan Rakyat (PPR). Dilaporkan bahawa majoriti penduduk tidak bersedia untuk menjalani saringan CRC dan prosedur kolonoskopi (Schliemann et al., 2020).

Pada masa ini, tiada Program Navigasi Pesakit (*Patient Navigation Program*) PNP untuk kanser kolorektal di Malaysia berbanding PNP yang telah dijalankan untuk kanser payudara. PNP penting dalam sokongan penyampaian penjagaan kesihatan dengan matlamat menghapuskan halangan kepada penyampaian penjagaan kesihatan yang tepat pada masanya pada komuniti menjangkau luar dari premis/agensi penjagaan kesihatan (outreach). Melalui *National Strategic Plan for Colorectal Cancer* (NSPCRC) 2021-2025, KKM menyasarkan untuk memulakan PNP bagi kanser kolorektal dalam komuniti dengan objektif mengurangkan halangan untuk penjagaan tepat pada masanya merentasi semua segmen penjagaan

kesihatan saringan akses berterusan, bertindak sebagai jambatan antara komuniti dan perkhidmatan yang disediakan di klinik dan hospital KKM, mengurangkan kadar penolakan saringan dan kaedah rawatan (iFOBT dan kolonoskopi) dan meningkatkan kadar penyelesaian rawatan.

PNP yang dicadangkan ini juga mensasarkan kerjasama bersama dua kumpulan masyarakat iaitu Komuniti Sihat Pembina Negara (KOSPEN) dan NGO berkaitan dalam Kanser Kolorektal. Sukarelawan daripada KOSPEN dan NGO berkaitan akan dilatih dan diperakui sebagai Pemudahcara Pesakit (*Patient Navigators*) oleh KKM. Bagaimanapun, tiada pembiayaan khusus akan disediakan untuk mereka. Peranan pemudahcara hanyalah untuk membimbing pesakit melaluinya sistem penjagaan kesihatan daripada pemeriksaan, diagnosis, rawatan dan tindakan susulan daripada kanser. Mereka juga mempunyai peranan dalam membina hubungan, menyediakan a pendidikan berpusatkan pesakit berkenaan kepentingan penjagaan susulan, membantu dalam menetapkan janji temu, membantu dalam sokongan sosial atau kewangan dan mengenal pasti cabaran terhadap penjagaan kesihatan (KKM). Justeru, mekanisme dalam melestarikan hubungan agensi KKM dan komuniti perlu diberi perhatian.

Persatuan penduduk memainkan peranan penting dalam mengkoordinasi program-program yang dijalankan oleh pihak pemegang taruh ini khususnya dalam memberi hebahan serta menyokong pelaksanaan program ini. Hasil pelaksanaan program ini mendapati masih terdapat penambahbaikan yang perlu dikaji bagi meningkatkan penyertaan dalam kalangan komuniti yang disasarkan. Schliemann

(2020), melalui kajian tahap kesedaran dan cabaran pelaksanaan program CRC lokaliti terpilih di Selangor mencadangkan kajian lanjut diperlukan untuk mengenal pasti saluran komunikasi dan bentuk jalinan

kerjasama yang diperlukan mengkhusus kepada masyarakat pelbagai kaum, tanpa pendidikan formal dan warga emas yang dilihat sebagai sub kelompok dalam B40 yang perlu diberi perhatian.

CONCLUSIONS AND RECOMMENDATIONS

Kanser kolorektal (CRC) adalah punca kedua utama kematian berkaitan kanser di seluruh dunia dengan kadar diagnosis lewat yang tinggi menyebabkan kos rawatan yang signifikan dan beban kewangan, khususnya bagi golongan berpendapatan rendah. Artikel ini meninjau pendekatan pelaksanaan saringan CRC di komuniti bandar berpendapatan rendah di Program Perumahan Rakyat (PPR) Kuala Lumpur, mendapati bahawa program saringan yang dijalankan bersifat atas ke bawah tidak memberi peluang kepada pemimpin dan ahli komuniti dalam membuat keputusan, mengakibatkan kadar penyertaan yang rendah.

Cadangan Kementerian Kesihatan Malaysia (KKM) untuk melaksanakan program berorientasikan pemerksaan komuniti seperti Program Navigasi Pesakit (PNP) dan Komuniti Sihat Perkasa Negara (KOSPEN) dilihat amat perlu dilaksanakan. Program-program ini berpotensi meningkatkan kesedaran, penyertaan, dan keberkesanan saringan CRC dalam kalangan komuniti PPR, seterusnya membantu dalam pengesanan awal dan rawatan yang lebih efektif. Kajian ini menekankan kepentingan pendekatan yang lebih inklusif dan berpusatkan komuniti untuk mencapai matlamat kesihatan awam yang lebih baik.

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FACTORS INFLUENCING ORGANISATIONAL PERFORMANCE: A DYNAMIC CAPABILITIES (DCS) PRACTICED BY MELAKA HOTEL INDUSTRY IN THE POST PANDEMIC ERA

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ABSTRACT

In Malaysia, tourism arrival statistics indicated a high reduction trend from 26.10 million in the year 2019 to 4.33 million in the year 2020. This trend continues decreasing to only 0.13 million in the year 2021 and caused a big drop in receipt to 0.24 billion. This situation indicates that it has been critical for our tourism and hotel industry in ensuring the survival of the operations, especially due to the COVID-19 pandemic. Therefore, this research has closed the gap by providing new dynamic capabilities (DCs) dimensions to be applied by the other hotels to face the uncertainty of market shifts such as pandemics or economic downturns, renew competencies, and adapt faster to any changes in the internal or external environment. Quantitative approach used in this study involved 86 respondents from 65 hotels which are a hotels member of Malaysian Association of Hotels (MAH) in Melaka. Data collected through an online survey. Method to analyze data are descriptive and multiple linear regression using IBM SPSS Statistics Version 25. Instruments adopted from previous scholars through validated questionnaires have been executed. The findings of the research revealed that Market Orientation and Knowledge management dimensions were revealed to be the strong factors that influenced the organizational performance of the hotels in Melaka. Taking everything into account, this research has contributed to the body of knowledge specifically by exploring and exploiting the new dynamic capabilities that would help to unlock the potential of the internal or external resources of the hotel's organization. This study proved that the DCs were effective, and previous researchers have been highlighting the significance of DCs as a factor in influencing the organizational performance of the hotels industry. Nevertheless, choosing the best and most suitable DCs for the industry will influence the direction of success, especially when dealing with internal challenges, customers, competitors, and market fluctuations.

Keywords: dynamic capabilities, market orientation, service innovation, knowledge management, Malaysian hotel

INTRODUCTION

The volatile, uncertain, complex, and ambiguous (VUCA) nature of the tourism and hospitality industry makes the right implementation of market-oriented strategies complicated. The necessity for ongoing changes and uncertainties presupposes dynamic and flexible market orientation. However, under certain circumstances, an organization could not control the fierce competition, economic downturn, and unexpected market shifts. Liu and Yang (2021) claimed that this situation has been exacerbated by the occurrence of the worldwide pandemic outbreak as the hotel and tourism businesses have been placed on hold.

In Malaysia, tourism arrival statistics indicated a high reduction trend from 26.10 million in the year 2019 to 4.33 million in the year 2020 (Tourism Malaysia, 2020). This trend continues decreasing to only 0.13 million in the year 2021 and caused a big drop in receipt to 0.24 billion. This situation indicates that it has been critical for our tourism and hotel industry in ensuring the survival of the operations especially due to the COVID-19 pandemic (Sangaran and Selvanayagam, 2021). Consequently, the Malaysian Statistics Department (DOSM) announced in March 2021, that nationwide unemployment increased from 4.8% to 4.9% between December 2020 and January 2021. Meanwhile, according to the Malaysian Association of Hotels (MAH) (August 2021), at least 120 hotels in Malaysia have closed temporarily or permanently because of Covid-19. Melaka ranked 9th, with a

total of 4,074 hotel room cancellations, resulting in estimated losses of RM 690,499. Kuala Lumpur secured the 1st rank, with a total of 55,050 hotel room cancellations, leading to estimated losses of RM 23,021. Sabah followed closely in 2nd place, with a total of 32,393 hotel room cancellations and estimated losses of RM 301,550,605. Lastly, Pulau Pinang claimed the 3rd position, with a total of 17,753 hotel room cancellations and estimated losses of RM 8,908,000.

A part of Melaka has been recognized as a World Heritage Site by UNESCO (UNESCO World Heritage Centre, n.d.) on 7 July 2008. The UNESCO World Heritage Site designation specifically applies to the historic city of Melaka, which encompasses the core area of the city with its historical buildings, streets, and cultural landmarks. It showcases a series of historical and cultural influences resulting from its former role as commercial ports connecting the East and the West.

In connection with this, the Melaka state government has set a key performance indicator (KPI) targeting for the year 2023, 7.45 million visitor arrivals and the extension of their overnight stay to three nights in the state of Melaka. The State Government of Melaka is also focusing on increasing the number of planned tourist events in the state via various strategies in upgrading licensed homestays, tourist destinations for Meeting, Incentives,

Conferences, and Exhibitions (MICE) and developing integrated and strategic joint ventures with key players in the tourism and hospitality industry (Unit Perancang Ekonomi Negeri, 2021).

The COVID-19 pandemic severely impacted Melaka's hotel industry, decreasing tourism arrivals and causing economic losses. The study seeks to explore how dynamic capabilities (DCs) like market orientation, service innovation, and knowledge management can aid in recovery and adaptivity. This highlights the need for the hotel industry to develop DCs to thrive amid external crises.

Historically, one of the major factors that affected the industry's success was its workforce and its ability to adjust to changes. Unfortunately, the industry had some difficulties in implementing strategies that would help it to retain the best employees and offer sustainable growth. Also, government measures aimed at assisting companies and preventing the spread of the virus in times of a pandemic affect the hospitality industry's organizational performance (Aharon et al., 2021). Organizational performance attributes in the hospitality industry entail the aspects that have a derivation, it is critical on the sustainability of work leading to organizational effectiveness. The attributes of a crisis-resilient organization, in terms of its qualities and mitigating factors, should also be looked at as the other changes affecting organizational performance that happen in the tough times (Aydogan et al., 2023). In the need for

understanding how the critical traits that cause high performance are transferred to the new talents to guarantee good performance over these variant roles.

DCs are considered vital for any organization in terms of adjusting and advancing with contemporary developments. Defined as "the capacity of an organization to purposefully create, extend, and modify its resource base" (Jacobs and Pretorius, 2020), these capabilities are particularly critical in sectors like hospitality, where the ability to sense and seize opportunities can determine a firm's success.

Essentially, the significance of the development of market orientation in the hospitality field should be considered. Initially, the studies focused on the phenomenon of the market orientation of the manufacturing industry and the industry of consumer goods, while the hospitality field remained understudied (Sampaio et al., 2019). Nonetheless, over the past decade, the market performance of the services and hospitality sector has gained relevance.

Service innovation in small and medium-based enterprises in the hospitality sector is considered as an analysis trend on the performance in SMEs. These factors, including service innovation, process innovation, marketing innovation, organizational innovation, and human capital competencies (Biswakarma et al.,

2020). Moreover, it is established that entrepreneurial leadership is a driver of service innovation in the hospitality industry. In addition, requiring studies to focus on causal mechanisms of service innovation in the hospitality industry (Hoang et al., 2023).

With the development of a more professionalized approach to hospitality, certain key organizations, such as the Institutional Management Association established in 1938 and the Hotel and Catering Institute created in 1949, defined their roles in formalizing education and training, which ultimately led to the development of the knowledge management concept in the hospitality industry (Baum, 2019). Since then, talent management has seen intense consideration among researchers and industry

professionals, resulting in a better understanding of the approach to talent attraction and retention.

As mentioned by Nor et al., (2019), since the tourism and hospitality markets have become saturated at a certain level, new dynamic capabilities such as market orientation, knowledge management, and innovation in service are essential to ensuring the continuous development, growth, competitive advantage, and the organizational performance. Therefore, this research has closed the gap by providing new DCs dimensions to be applied by the other hotels to face the uncertainty of market shifts such as pandemics or particularly during economic downturns, renew competencies, and adapt faster to any changes in the internal or external environment.

LITERATURE REVIEW

DCs are essential for firms to be able to adjust and innovate specifically in a dynamically changing and competitive business context. That is, the capability serves as a foundation to help firms make sense of the exterior changes, grab the opportunities “based on the right resources and processes,” and master the process of reconfiguration. DCs are linked to an increased innovation capacity, creativity, and the capacity to enhance overall organizational performance (Li et al., 2020). They may also be critical for the development of organizational resilience, which is a particularly relevant issue in the

context of the COVID-19 pandemic (Juan and Li, 2023).

Service innovation implies updating existing services to produce more excellent customer value (Hameed, Nisar, and Wu, 2021). They also agreed that service innovation significantly improves market orientation, which has a beneficial impact on the commercial performance of the hotel industry. Kleebbuabarn et al., (2022) described that, innovation that exists inside a new framework of services has a big impact. Thus, effective market progress in

all its construct dimensions is feasible through service innovation. Thus, hospitality organizations may adapt to the shifting dynamics of their customers (Rahman, Hassan, and Fattah, 2021). However, argued by many researchers which already discovered that restaurants, hotels, and other service-based hospitality sectors prefer to focus on quality improvement rather than pushing themselves to innovate. Ziyae et al., (2021) seeing the service components in delivering the valuable experience to the customer, which is service innovation in the hotel sector has yet to be fully realized.

Knowledge management involves a suite of strategies, tools, and methods for effectively managing business processes (Anjaria, 2020). According to Abusweilem and Abualoush (2019), recognizing the

importance of knowledge management is essential for managers aiming to enhance organizational performance. Hence, hotels should employ appropriate strategies, such as knowledge management and to combat market competition and to improve productivity performance, increase occupancy rates, and generate profit (Veiga, Ambrósio, and Ferreira 2019). Sangaran and Selvanayagam (2021) emphasize that developing new capabilities is essential for the hotel industry, especially as highlighted by the challenges observed during the pandemic. The new capabilities which can promote learning, innovation, knowledge management, and technology acceptance in future 4.0 transformation. In fact, the study investigated by Muhamad Nor, Syed Mohamad, and Fikry (2021), found out that knowledge management variable was highly coordinated with hotel performance.

METHOD

In this study, an integrated quantitative approach was chosen in a coherent and logical way to answer the three research objectives. It was explanatory research which allows the researcher to explain the relationship between independent variables for DCs dimensions; Market Orientation, Service Innovation and Knowledge Management, also the dependent variable; Organizational Performance.

Melaka City situated next to the Straits of Melaka which are located in the southern region of the Peninsular. The research area primarily focused on hotels situated in the central area of Melaka, including Pulau Besar, Melaka. This selection was based on

the inclusion of Putera Island Resort, located on Pulau Besar in the sampling frame provided by Melaka Chapter. Melaka was selected due to its status as a UNESCO World Heritage Site and its significant reliance on tourism. The impact of COVID-19 on this tourism-dependent area offers unique insights into how DCs can sustain and improve organizational performance under crisis conditions.

Based on the research area covered, there were a total of 65 hotels organization organized. G*Power statistical software was used to determine the minimum sample required for the sample size. The use of the G*Power is to support the minimum sample

needed for the statistical analysis for the research. As a result, the software calculates the total sample size was 77 as this value is the minimum sample size required for this statistical test.

Research instruments have been designed to fulfil the needs in data collection in this research. The online survey questionnaire using Google Form platform developed lowering the cost of administering questionnaires, the capacity to reach out to a broad audience, geographical and temporal advantages, and other advantages which have grown increasingly popular (Vasantha and Harinarayana, 2016). The online questionnaire can be divided into five main sections.

Section A acquiring organizational profile background which were adopted from (Hilman and Kaliappen, 2014). It consisted of six items whereby the questions given were to collect general organization profile such as the position of the hotel's representative, location and classification of the hotel, number of rooms offered, years of operation and size of the hotel's establishment.

Section B described market orientation which can be divided into competitor's

orientation and customer's orientation. The instrument has ten items that were derived from Grawe et al. (2009). Both orientation measured by driving customer and competitor orientations approach with five items for each measurement.

Section C is comprised of service innovation measurement on eight items adapted from recent studies by Chu, Feng, and Lai (2018). This construct captured on continuous efforts in innovation of service enhancement practiced by the organization to continue endeavor customer's demands.

Section D captured the last DCs dimension that is knowledge management. This section required information on progress methods, tools and techniques that were exercised in the working environment of hotels operation. All eight items were exactly adapted from Chen (2017).

Finally, Section E, which represented information on organizational performance solely comprises of total nine items from financial and non-financial performance. This section acquired both common determinants used by the hotels to evaluate an organization's success and performance. This section is adapted from Hilman and Kaliappen (2014).

SAMPLING METHOD

Census sampling techniques were applied in this research. In census sampling technique, every member of the population in the sampling frame was included in the sample. This is because the sampling frame was considered small as there were merely 65 hotels organization who registered under

Melaka Chapter. The census method is deemed appropriate for this research due to its effectiveness and feasibility, particularly when dealing with small population sizes in the research area.

Since census sampling methods were applied for this research, the target population consists of the hotel managers based on the sampling frame determination. It is important in order to capture insights on decision-making and operational strategies within hotel management, as these roles are directly involved in

implementing DCs to influence organizational performance. On top of that, the sampling frame will be used as a sample to classify as the representative of the entire population. It is also the set of all viable units from which to select a sample (Bell, Harley, & Bryman, 2022, p.182).

DATA ANALYSIS

In this study, a clear indication on the distinction of dependent and independent variables was attached. All variables must pass the normality test to proceed with any statistical analysis. Multiple Linear Regression is one of the most popular statistical methods for predicting the result of a response variable since it makes use of

several explanatory variables. Using more than one explanatory variable, multiple linear regression is an expansion of the simple linear regression model (Trunfio et al., 2022). Below is the model generated from the multiple linear regression statistical analysis exercised in this research:

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \dots + \beta_{12} x_{12} + \varepsilon$$

Whereas:

Y = Organizational Performance

β_0 = Intercept value

x_1 = Independent variables

β_1 = Estimated regression coefficients

ε = Model Error

RESULT

The result conveyed that 34 respondents were from a manager's position, representing 39.5%. On the other hand, for the middle manager position, an extensive percentage of 60.5% with 52 respondents. This finding highlight that most of the

hotels in Melaka were managed by middle managers compared to top managers, depending on the size of the establishment or the administration decisions of the organization.

Table 1: Relationship between Dynamic Capabilities (DCs) towards Organizational Performance

Dynamic Capabilities (DC's)	Influence on Organizational Performance	Correlation Coefficient (r)	Significance Level (p)
Market Orientation	Moderate positive and highly statistically significant	.458	< 0.001
Service Innovation	Moderate positive and statistically significant	.638	< 0.001
Knowledge Management	Low positive and statistically significant	.346	< 0.001

Table 1 presents the relationships between three DCs which are market orientation, service innovation, and knowledge management and their influence on organizational performance in the Melaka hotel industry. The results indicate that service innovation has the strongest positive impact on organizational performance ($r = 0.638$, $p < 0.001$), suggesting that innovation in services is a critical factor in enhancing hotel performance. Market orientation also shows a moderate, positive relationship ($r = 0.458$, $p < 0.001$), highlighting the role of customer focus and responsiveness in achieving better outcomes. Lastly, knowledge management has a low but

positive effect on performance ($r = 0.346$, $p < 0.001$), which, while significant, indicates that knowledge processes may play a smaller role in driving organizational success compared to the other two DCs. Overall, the findings underscore the importance of these capabilities in post-pandemic recovery and competitive positioning for hotel. In summary, all three DCs positively influence organizational performance, but service innovation has the strongest relationship, followed by market orientation and knowledge management. This highlights the importance of DCs in enhancing performance post-pandemic of hotel industries in Melaka.

Table 2: Coefficient of factors influencing Organizational Performance

Independent Variables	Unstandardized			
	Coefficients		t-value p-value	
	B	Std. Error		
1. (Constant)	-.665	.721	-.922	.359

2. Market Orientation	.381	.123	3.100	.003
3. Service Innovation	-.203	.110	-1.855	.067
4. Knowledge Management	.837	.150	5.577	.000

a. Dependent Variable: Organizational Performance

Note: Significant at t-value > 1.96 and p-value < 0.05 (5% alpha level);

F = 19.096, p-value = 0.0001, and Adjusted R² = .390

In Table 2, the three DCs have been tested as the factors to be influencing organizational performance of the hotels in Melaka, which are Market Orientation, Service Innovation and Knowledge Management. Table 1 shows that the dependent variable, which is organizational performance was regressed by independent variables that is market orientation because it is corresponding with the significant value. Market orientation significantly predicted organizational performance, $F(3,82) = 19.096$, $P < 0.05$, which indicates that market orientation can play a significant role in shaping organizational performance ($b = .381$, $p < 0.003$). These results clearly direct the positive effect of the organizational performance. Moreover, the $R^2 = .411$ depicts that the model explains 41.1% of the variance in organizational performance of the hotel.

As for the knowledge management variable, the dependent variable organizational performance was regressed on this independent variable. Knowledge management significantly predicted organizational performance, $F(3,82) = 19.096$, $P < 0.001$, which, also indicates that knowledge management played significantly on organizational performance ($b = .837$, $p < 0.000$). These results clearly highlight the positive effect

of the organizational performance. Moreover, the $R^2 = .411$ depicts that the model explains 41.1% of the variance in organizational performance of the hotel.

The final variable tested is service innovation. The dependent variable, organizational performance was not regressed on this independent variable. Service innovation was insignificantly predicted organizational performance, $F(3,82) = 19.096$, $P < 0.001$, which indicates that service innovation is not contributing uniquely significant to the model and towards organizational performance of the hotel ($b = -.203$, $p < 0.001$). As seen in the table provided above, the p-value for Service Innovation variable was 0.067, which exceeds the significant level of 0.05. Thus, this variable was considered insignificant. Therefore, results clearly showed a negative effect on the organizational performance. In addition, the $R^2 = .411$ depicts that the model explains 41.1% of the variance in organizational performance of the hotel.

All three DCs has been tested as the factors to be influencing the organizational performance of the hotels. From here, the final regression model will be developed based on significant DCs. The rest of the DCs that were insignificant will not be

included in the model. Hence, the final regression model for Organizational Performance were summarized as below:

$$\text{Organizational Performance} = -.665 + .381 (\text{Market Orientation}) + .837 (\text{Knowledge Management})$$

The magnitude coefficient for knowledge management ($b = 0.837$) is larger than that for market orientation with coefficient ($b =$

0.381). This result suggested that, within the context of this model, knowledge management has a stronger relationship with organizational performance determinants compared to market orientation. Therefore, knowledge management was the most significant factor that influenced the organizational performance determinants of hotels in Melaka.

DISCUSSION

In the context of influencing factors, three DC dimensions have been statistically tested for market orientation, service innovation, and knowledge management to find the level of these capabilities practiced in hotels organization in Melaka. These factors were proven through analysis of collected data in this study. The dimensions are also being examined to reveal what DCs have the most contributor factor in influencing organizational performance of the hotel. Based on the result generated, only knowledge management and market orientation were significantly positive, meanwhile, service innovation was insignificant as a factor to influence organizational performance. Due to lack of studies being conducted in the aspect of organizational performance and the factor related to new DCs, this research findings have given a great perspectives and new insight for the hotel's industry.

DCs involve not only recognizing and capitalizing on market opportunities but also transforming organizational resources to meet new demands (Hoang et al., 2023; Prayag et al., 2023). Moreover, it is possible to speak of the growth of the importance of

the adoption of digital technologies and the constant upgrading of employees. On the one hand, these aspects promote the increase in DCs by making it easier for representatives of the hospitality sector to respond to market changes (Chaudhuri et al., 2023). The onset of the COVID-19 pandemic has further emphasized the need for dynamic capabilities in building organizational resilience. Automating the provision and similar re-configuration of resources has been a key to managing any crisis (Prayag et al. 2023). According to Casal-Ribeiro et al. (2023), those companies are better suited for managing disruptions, a sustainable competitive advantage and the innovation of their service offers.

In the case of small and medium enterprises within the hospitality sector, market orientation helps in understanding the market and meeting the customer preferences, and increasing the value for customers (Hu et al., 2020). In short, market orientation helps in understanding the market and meeting the customer preferences and increasing the value for customers. The market orientation also has

a direct and positive effect on the industry performance (Anjaningrum and Rudamaga, 2019).

In a similar vein, research has touched on the relationship between green entrepreneurial orientation and green service innovation in hospitality organizations. It was discovered that employee green creativity and customer involvement helped to boost perceptions of green service innovation (Luu, 2022). In addition, the literature has explored the aspects and effects of service innovation in the hospitality sector, indicating the multidimensional nature of the concept and its connection to firm performance in star rating hotels (Bhat and Sharma, 2021; Gregory et al., 2023). At the same time, it has been noted that cocreation is an essential aspect and indicator of service innovation in the sector, which serves to corroborate the collaboration's role in improving business strategies (Sharma and Bhat, 2022). The assertion that innovation is linked to creativity as injected into the workforce of the hospitality sector by Johnson et al. (2019) is directly apt to the strategies and programs of human capital development and diversity management. However, implications for the overall

provision of high-quality services and response to the needs of customers have taken an even greater role in the subsequent ideas of both scholars.

Playing an important role in achieving the Sustainable Development Goals (SDGs), the hospitality and tourism industry has played a significant role in action. By encouraging students into careers in hospitality, increasing a sustainable employment market can lead to SDG 4 (Quality Education) and SDG 8 (Decent Work and Economic Growth). In addition, open innovation models supported by knowledge management frameworks promote collaboration and knowledge exchange outside of the organizational context (Hameed et al., 2022). To illustrate, knowledge management frameworks have a capability to assess the existing approaches and provide suggestions for overcoming organizational, institutional, and technological obstacles to adopt blockchain for higher security and efficiency (Filimonau and Naumova, 2020). Fed with external knowledge and experience, services are improved even further, and innovation becomes an integral part of organizational culture.

CONCLUSION

Doubtless, DCs have historically been measured relatively to organizational performance. It also indicates the value and profitability of the hotel industry. This study proved that the DCs were effective, and previous researchers have been highlighting the significance of DCs as a factor in influencing the organizational performance of the hotels industry.

Nevertheless, choosing the best and most suitable DCs for the industry will influence the direction of success, especially when dealing with internal challenges, customers, competitors, and market fluctuations.

As for the hotel and tourism industry in Malaysia, the DCs approach has been thoroughly underutilized in the daily operation, however, to retain survival and be the most leading key player in the industry is a big challenge. In addition, the COVID - 19 pandemic inflicted damage on hoteliers all around the world. This event impacted the lodging industry, which is particularly vulnerable to decreased travel and tourism as well as a downturn in economic activity. Hence, this research focuses on three DCs as an alternative for the hotel's operator to perform at the highest level leading to organizational performance both financial and non-financial. The results for the relationship between variables, key factors of DCs that influence the organizational performance of hotels, might be replicated as predictor factors that have been analyzed in detail. To clarify, DCs in this study were confirmed market orientation and knowledge management influenced organizational performance in Malaysian hospitality sector post pandemic era.

The findings are also expected to benefit hotels operators in considering and exploiting the DCs factor revealed, which are market orientation and knowledge

management, as the key factor not just influencing but enriching the hotel's performance in how they offer products and services while delivering excellent service quality. Besides, the DC factors collectively may boost employee engagement, competitive advantage, resource optimization, and customer satisfaction. These elements work together to improve long-term success, profitability, and business performance in the competitive hospitality sector. Thus, this study is hoped to give hotel operators an early exposure to and understanding of the necessity of further research for business survival.

Consequently, there are many other DC dimensions that have not been covered yet. As a suggestion, a new research area might be studied on the factors that influence the motivation of the hotel's operator or personnel on organizational performance, the government's initiatives or policies, or satisfaction towards current organizational performance development after the pandemic. Therefore, many uncover factors or DCs that can be further investigated. For this reason, further research recommended to explore organizational performance measurement in hospitality industries.

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