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Empowering indigenous women through craft: Capabilities, livelihoods, and structural constraints among Iban artisans in Sarawak

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ABSTRACT:

Background: This study examines how handicraft production contributes to the empowerment of Iban women in Sarawak, focusing on the social, economic, and cultural roles craft work plays in their daily lives. Grounded in Sen's development-as-freedom framework, it investigates how participation in traditional craft activities supports women's livelihoods, skills, and community participation while sustaining local knowledge, interpreting empowerment as the expansion of real capabilities rather than mere resource provision.

Methods: Using a qualitative ethnographic design, data were collected through participant observation and 19 semi-structured interviews with Iban women artisans and relevant stakeholders selected via non-probability snowball sampling. The data collected were analyzed using thematic analysis to capture both lived experiences and structural conditions.

Results: The findings indicate that handicraft production strengthens women's livelihoods by providing income, enhancing skills, and supporting family welfare. However, empowerment is significantly constrained by structural barriers, including raw material scarcity, weak market access, inadequate business training, geographic isolation, poor internet connectivity, and declining interest among younger generations.

Conclusion: The study concludes that handicraft-based empowerment initiatives are most effective when aligned with artisans' practical needs, particularly regarding business training, product promotion, market access, and entrepreneurial support

1. INTRODUCTION

Promoting women's empowerment remains a central objective for development organizations and governments worldwide. Even in developed countries, women continue to face multiple forms of discrimination (Debnath et al., 2019). Such gender-based discrimination contributes to poverty, slows economic progress, weakens governance, and lowers overall living standards (Sarumathi & Mohan, 2011). These disparities create major barriers to equality and inclusive growth. At the same time, empowering women is widely recognized as an effective way to improve social and economic well-being (Sen, 1999). In developing countries in particular, women's empowerment is essential for building sustainable livelihoods and supporting long-

term development (Khan & Noreen, 2012). Women's participation in economic activity also contributes to economic growth and advances gender equality (Rahman et al., 2015). Women are therefore central to sustainable development and to improving family welfare, while also making important contributions to community socio-economic development (Rosli et al., 2021).

Historically, women's roles have shifted from predominantly domestic responsibilities to more active participation in economic life. Traditional roles were largely defined by responsibilities as wives, mothers, and household managers, whereas contemporary roles increasingly include income generation and other forms of economic participation. Changing economic conditions have also made dual-income households more common, with women taking on important breadwinning roles regardless of marital status. In some cases, women also become de facto heads of household when husbands migrate for work or other opportunities (Rosli et al., 2021). These changes highlight women's multiple roles as caregivers, income earners, and household leaders.

Research has shown that women employed as wage laborers in agriculture can increase household income by up to 30% compared with households without employed women (Krumbiegel et al., 2020). Beyond agriculture, women also participate in small-scale entrepreneurial activities, particularly in rural areas where interest in entrepreneurship is growing. (Padilla-Meléndez & Ciruela-Lorenzo, 2018) identified several factors associated with the success of female Indigenous entrepreneurs, including socio-cultural context, government support, inherited community knowledge, and individual characteristics. Women breadwinners often gravitate toward the informal sector because it offers flexibility and requires fewer formal educational and technical qualifications (Ida & Nurliani, 2016). However, while existing literature documents the general economic presence of women in the informal sector, it is noticeably thinner on the lived experiences of Indigenous craftswomen. Specifically, little is known about how structural constraints directly shape their empowerment in daily practice. This study explicitly fills this gap by evaluating the lived experiences of Iban artisans in Sarawak through Sen's Capability Approach.

The informal sector includes economic activities that operate outside formal legal and regulatory frameworks. In Malaysia, 9.4% of employed women worked in the informal sector in 2019 (Statista, 2021). According to the Population and Housing Census by the Department of Statistics Malaysia (Department of Statistics Malaysia, 2020), the total population of Sarawak reached 2,453,677, with Malaysian citizens comprising 94.9% (2,328,397). Within the Bumiputera population accounts for 71.8% (1,762,359) of the total population Sarawak Bumiputera constitutes 47.2% (1,158,429), among which the Iban form the largest sub-ethnic group, numbering 702,579 people or 28.6% of Sarawak's total population. In terms of economic participation, more than 40% of informal-sector activities were home-based, one-third were mobile, and 18.1% took place at markets or street stalls. Most workers in this sector had lower educational qualifications, such as Sijil Pelajaran Malaysia (SPM), or no certification at all. However, informal employment among degree holders increased from 2.8% in 2015 to 8.6% in 2017, representing an annual growth rate of 48.1%.

2. LITERATURE REVIEW

In the Iban community of Sarawak, women have long played a central role in handicraft production, especially in weaving and beadwork. These crafts are not only economic activities but also markers of identity, social status, and cultural continuity. The transfer of weaving knowledge from mothers to daughters helps preserve traditional skills across generations and sustains the symbolic value of Iban material culture (Kiyai & Tugang, 2021). (Colin, 2013) similarly shows that handicraft production is a form of cultural transmission, through which women sustain traditional knowledge while also reshaping its meaning in changing social contexts.

At the same time, women's participation in handicraft production is shaped by the demands of household labor and caregiving. Many artisans work part-time while carrying responsibility for family welfare, which limits the time and energy available for production and reduces the volume and quality of output. (Berma, 2001a) shows that this kind of pressure makes craft work difficult to sustain in rural settings. (Kiyai & Tugang, 2021) also note that these pressures are visible in the Iban context.

The sustainability of Iban handicrafts depends on access to raw materials, the continuity of intergenerational knowledge, and the ability of artisans to adapt to changing market demands. Scarcity of natural materials, environmental change, and declining demand for traditional products place pressure on craft production and threaten its continuity (Redzuan & Aref, 2011). (Berma, 2001a) explains that rural handicraft production becomes fragile when access to natural resources weakens. (Berma, 2001b) also notes that artisans must adapt their products if they are to remain economically viable. (Sahari, 2012) links craft sustainability to the need for adaptation in response to changing conditions. (Sahari et al., 2016) reports that reduced access to materials undermines production. (Eva et al., 2017) identify material scarcity and knowledge loss as barriers to continuity. (Jugo et al.,

2019) show that industrial substitutes can displace traditional craft practices. (Maddocks, 2017) argues that craft development must balance cultural preservation with market relevance.

A related issue is the tension between preservation and adaptation. On the one hand, handicraft work is valued because it carries cultural meaning and embodies continuity with the past. On the other hand, artisans must respond to changing consumer preferences and market conditions. (Berma, 2001b) shows that innovation in design and presentation can help crafts remain relevant. (Kiyai & Tugang, 2021) also report that some artisans experiment with new colors and patterns while still preserving traditional techniques. (Maddocks, 2017) argues that handicrafts can remain economically viable when they are linked to ethical consumption, artistic value, and niche markets. Yet adaptation also creates risk because replacing natural materials with synthetic alternatives can weaken cultural authenticity even when it improves affordability or marketability.

The market environment itself is another major constraint. Research on Iban craft entrepreneurs shows that many producers rely heavily on face-to-face sales, personal networks, tourism, and occasional bazaars or exhibitions. These channels can work for small-scale sales, but they rarely provide stable or scalable market access. (Berma, 2001a) notes that collaboration among artisans, including cooperative marketing and collective resource-sharing, can improve bargaining power and reduce production costs. (Tingi & Tugang, 2021) also emphasize that many craft producers do not have a clear marketing strategy and often depend on word of mouth, family support, or the arrival of buyers in person. This means that the economic value of the craft is shaped not only by the product itself but also by the producer's ability to reach buyers, promote the product, and sustain demand.

Digitalization has therefore become an important theme in recent literature. (Ahmad et al., 2021) link digital transformation to the use of cloud computing, artificial intelligence, machine learning, and IoT-based tools, and stress that data-driven decision-making can strengthen organizational performance. (Yadav et al., 2023) argue that digital entrepreneurship can help reconfigure craft production as a business activity and open new opportunities for income growth and social mobility. (Suhaimi et al., 2023) show that digital platforms such as Craft on the Go, My Craft Shoppe, and e-KrafBazar may support craft marketing, but only if artisans have the skills and confidence to use them effectively.

However, the literature also makes clear that digital participation is not automatic. It depends on access to devices, internet connectivity, and basic digital literacy. (Khairudin & Roddin, 2024) show that many Indigenous communities face barriers related to internet use, motivation, and access to information sources, even when devices are more widely available. Their findings suggest that the issue is not simply technology availability but the ability to use that technology for real economic benefit. (Suhaimi et al., 2023) further note that some rural entrepreneurs lack even basic platform knowledge, such as how to post products effectively, take suitable photographs, write descriptions, or prepare items for shipping. (Lian et al., 2022) point out that the e-commerce literature in some Malaysian contexts remains limited, which suggests that more grounded studies are still needed.

This digital gap matters because it shapes who can benefit from new forms of market access. (Hang & Kim, 2025) argue that digital technology can improve both organizational performance and accounting information systems, but small and medium-sized firms often lack the human resources, experience, and capital needed for adoption. (Jamaludin & Idris, 2025) reinforce this point by showing that digital transformation requires not only technology but also institutional support, new skills, and a willingness to rethink business practices. For Iban women artisans, the implication is clear: digital marketing may expand opportunity, but only if it is paired with training, infrastructure, and practical support.

Taken together, the literature shows that Iban women's handicraft production sits at the intersection of culture, livelihood, and structural constraint. It is a practice through which women preserve identity, contribute to household welfare, and participate in local economies, yet it is also constrained by scarce raw materials, weak market access, limited training, and uneven digital readiness. The literature is strongest when it explains specific barriers or documents the importance of craft to community life, but it is thinner when it shows how women themselves experience these constraints in daily practice and how they weigh the cultural and economic meanings of craft work. That is the gap this study is positioned to fill. Using Sen's development-as-freedom framework (Sen, 1999), it treats handicraft production as a matter of real capabilities, not just income, and asks how those capabilities are enabled or constrained in the lives of Iban women in Sarawak.

3. THEORETICAL FRAMEWORK

This study uses Amartya Sen's (Sen, 1999) "development as freedom" framework to analyze Iban women's empowerment through handicraft production, emphasizing expansion of valued freedoms rather than mere resource access or participation. Sen (Sen, 1999) differentiates functioning (achieved states, e.g., weaving, cultural participation) from capabilities (real freedoms to choose and control involvement). Agency, central to Sen's approach, reflects acting according to personal values, distinguishing agency freedom from agency achievement (Sen, 1999), seen in women's household, marketing, and cultural decisions. Resources affect capabilities through conversion factors (skills, social norms, environment) explaining outcome variations despite similar inputs. Constraints on freedom, such as poverty, gender norms, isolation, and limited infrastructure, restrict genuine empowerment (Sen, 1999).

4. METHODOLOGY

This study adopts a qualitative ethnographic design to examine the experiences of Iban women involved in handicraft production in Sarawak. The methodology is organized into five structured subsections below to enhance transparency, credibility, and dependability.

4.1 Design

The qualitative ethnographic design allows close attention to cultural practices, social relations, and the structural conditions shaping women's economic participation. Sen's development-as-freedom framework guided the analysis by framing empowerment as the expansion of capabilities through economic, social, and cultural participation.

4.2 Participants and Sampling

A non-probability snowball sampling technique was used to identify participants with relevant experience in handicraft production and related institutional support. Initial seeds were identified through institutional contacts at Kraftangan Malaysia, Sarawak Craft council and organizers at regional craft expos, who subsequently connected the researchers to artisan networks and urban craft markets. A total of 26 potential informants were formally approached for the study. Out of these, 19 agreed to participate (15 primary craft producers/sellers and 4 institutional stakeholders), while 7 declined due to conflicting schedules. The core group consisted of Iban women artisans, alongside organizational stakeholders who provided contextual data based on their experience in teaching, selling, or supporting Iban handicrafts. For confidentiality, all participants chose their own pseudonyms, which are used throughout the manuscript in place of real names. Demographic and professional profiles are presented in Table 1 to provide context for the analysis.

Table 1 List of informants (pseudonyms chosen by participants) in individual in-depth interview sessions (Source: Authors, 2025).

N	Name	Town	Role in study	Experience	Age
Category A: Primary Artisans & Craft Producers					
1	Doris	Kapit	artisan	5	47
2	Engga	Kapit	artisan	10	59
3	Cathrine	Kapit	artisan	10	57
4	Suzana	Serian	artisan	16	41
5	Maria	Mukah	artisan	10	53
6	Lucile	Bau	craft seller	14	41
7	Oshin	Kuching	artisan	2	36
8	Dickson	Bau	craft seller	6	56
9	Louis	Kanowit	artisan	18	39

10	Nipek	Padawan	craft seller	10	60
11	Helena	Betong	artisan	8	49
12	Jaqline	Betong	artisan	4	27
13	Angelia	Sri Aman	artisan	9	46
14	Ita	Lubok Antu	artisan	20	62
15	Lengidi	Betong	artisan	8	53
Category B: Institutional Officials and Policy Stakeholders					
16	Mr.Din	-	stakeholder	-	-
17	Mr.Tandan	Kanowit	stakeholder	22	45
18	Mr.Reynald	Sri Aman	stakeholder	22	43
19	Mdm Janet	Sri Aman	stakeholder	35	64

Note. Category A includes Iban artisan/producers and Bidayuh craft sellers who provided the core artisan data and market-linked perspectives. Category B includes institutional stakeholders who provided organizational and policy context. One participant declined to provide location, years of experience, and age information, indicated by dashes (-).

4.3 Data Collection Details and Interview Protocol

Data were collected over a 12-month period through participant observation and semi-structured in-depth interviews. Participant observation was conducted at major handicraft events, including the Festival Kraf Tekstil Borneo 2023 (60 hours across 8 days) and the Bazar Gawai Dayak Sarawak 2024 (60 hours across 10 days), yielding approximately 120 total field observation hours. Researchers observed production practices, vendor-buyer market interactions, product displays, and the logistical challenges artisans faced in selling their work. In-depth interviews were conducted with 19 participants in Malay or Iban, each lasting approximately 45 to 90 minutes and conducted with informed consent.

The standardized interview protocol included thematic prompts focusing on:

Household Livelihoods: How craft earnings contribute to household decision-making and children's schooling.

Resource Constraints: Challenges experienced when sourcing natural raw materials like rattan and their effect on production volume.

Digital Infrastructure: How internet connectivity in rural areas affects the ability to sell products via digital platforms.

4.4 Data Analysis

The interview transcripts and field notes were analyzed using qualitative thematic analysis to identify, categorize, and interpret recurring patterns across participants' accounts.

The analysis followed an inductive coding process: first, transcribing and translating the interviews while retaining authentic localized expressions; second, generating initial codes related to economic livelihoods, material sourcing, skill deficits, and infrastructure; third, clustering codes into broader thematic categories (e.g., raw material constraints, digital divide, generational gap); and finally, interpreting these themes through the theoretical lens of Sen's Capability Approach. Direct verbatim quotes from participants were preserved throughout the analysis to uphold the authenticity, contextual nuance, and lived realities of the Iban artisans.

4.5 Ethics, Confidentiality

The study followed the ethical guidelines of Universiti Malaysia Sarawak (UNIMAS). Institutional support letters were obtained, written informed consent was secured from all participants, and confidentiality was protected through self-selected pseudonyms, secure password-protected data storage, and anonymized transcriptions. To maintain research objectivity and

prevent personal bias, the primary researcher implemented several control measures during data collection and analysis. Although ten years of residence in Sarawak provided strong familiarity with the local craft sector, the researcher ensured findings were purely grounded in participant responses through systematic field notes, peer debriefing with local co-authors, and cross-checking interpretations directly with key informants.

5. DATA AND DISCUSSION:

The findings show that handicraft production among Iban women in Sarawak is both an economic activity and a cultural practice. Using Sen's (1999) development-as-freedom framework, the data indicate that handicraft work can expand women's capabilities through income generation, skill acquisition, and cultural continuity. At the same time, these capabilities are constrained by shortages of raw materials, uneven access to training, geographic isolation, weak internet connectivity, and declining participation among younger generations. To preserve the authentic voices, nuances, and lived experiences of the participants, direct quotes are presented as transcribed and translated, retaining the original syntax, localized English phrasing, and colloquial expressions used during the interviews.

5.1 Material Income and Household Expenses

For many participants, handicraft production functions as a direct source of household income. The income is used for daily living costs, children's expenses, and other family needs. As Engga explained: "This is my primary income, and I am a housewife. All our expenses, for example, pocket money, tuition fees, and all that for our children, also depend on this income." This suggests that craft production is not merely supplementary work, but a vital livelihood practice that supports family survival. Some participants described handicraft production as a stable and profitable economic activity. Suzana said: "I do it full-time and that is enough to have an income to make a living. ... I can earn 2,000 to 4,000 RM a month." For some women, then, handicraft work generates enough income to function as a primary livelihood rather than a secondary activity. In Sen's (1999) terms, this reflects a direct expansion of economic capabilities and household bargaining power. Participants also described collective efforts to improve family income through training and group participation. Lengidi stated: "We always have a course on this. We ask people to join us to increase their family's income." This indicates that handicraft production is also supported through shared learning and community-based economic development.

5.2 Challenges Related To Raw Materials

Although handicraft production generated income, participants repeatedly identified raw material scarcity as a major constraint. Engga said, "Yes, it isn't easy to get natural materials," which points to the difficulty artisans faced in sustaining production when natural inputs were limited. Institutional stakeholders described the problem as structural and environmental rather than personal. Mr. Tandan explained that there are "less and less rattan in the jungle right now" and that it is difficult to collect because it "doesn't just grow at the side of the road," while Mr. Reynald added that "finding raw materials; it's getting harder to find natural resources these days." These comments show that scarcity was tied to remoteness, environmental change, and the physical burden of collection. Because of these shortages, some artisans depended on imported supplies. Engga noted that materials were often ordered from China, Doris said the supplier came from China because "Sarawak doesn't produce this material here," and Nipek added, "I buy in China and Japan." The dependence on external supply chains increased costs and reduced local control over production. Some participants responded by substituting synthetic materials for natural ones. Mr. Tandan observed that artisans "replace the rattan with the plastic... PVC. PVC leather. PVC strip. So, no more rattan," and Cathrine noted that "new crafts use materials like PVC, which are cheaper and more popular." This adaptation helped keep production going, but it also weakened the link to traditional materials that many participants associated with authenticity. These accounts make clear that raw material scarcity shaped not only what artisans could produce, but also how they produced, where they sourced inputs, and how far they could preserve traditional craft forms.

5.3 Training And Skills

Skill development among participants came through family learning, self-learning, and formal training. Engga said, "*I never take any courses or attend any workshops fully self-learning doing this handicraft,*" while Oshin explained, "*I learned from my family. I also like it and learned from them,*" and Doris added, "*I've been making handicrafts by myself because I'm interested in them.*" These accounts show that craft knowledge was often transmitted informally through family experience and personal interest.

The participants also made clear that technical skill alone was not enough. Suzana said, *“We are interested in learning how, learning business skills. Like how to set the right price, how to promote better,”* and Mr. Tandan linked this need to educational disadvantage, saying, *“It affects them the most, especially when most of these artisans didn’t go to school. So, it’s obvious that they do not know how to sell.”* Jaqline and Helena made the same point from a marketing perspective when they said, *“I wish they could teach us more about marketing, like promoting on TikTok, Facebook, and how to start a business from a website.”*

Institutional training partly addressed these gaps. Doris explained, *“People brought me to join the Handicraft workshop... eventually registered with Kraftangan Malaysia,”* and Mr. Din said, *“In Kraftangan Malaysia, we also have training for our community, for making local handicrafts. So, we train them how to do rattan bag, just from basic, from A to Z.”* This suggests that formal training mattered most when it combined craft technique with business and market skills.

5.4 Geographic And Technical Barriers

Geographic isolation remains a major obstacle to participation in workshops, markets, and digital platforms. Engga said, *“I never attended any workshop organized by the government (one of the factors is our place is very far from the big city).”* Mr. Din confirmed that *“The main problem is it’s hard to reach into the city to sell the product.”* These statements show that distance from urban centres limits access to training and market opportunities. Weak internet access further restricts digital participation. Engga stated, *“I do not use these online platforms because I stay at longhouses, so getting an internet connection is poor.”* Doris added, *“Utilizing digital platforms is challenging in my hometown due to poor internet connections.”* Mr. Din also noted, *“Some also don’t know what WhatsApp is. They don’t have internet in the place.”* This means that digital marketing cannot function as an equal opportunity unless infrastructure is in place. Transportation also adds a heavy burden. Mr. Tandan said, *“Maybe you stay in the jungle for two nights, and then another two nights to carry the rattan to your house.”* Suzana added, *“Want to prepare things to go here and there. Had to find it. This is why the economy is getting harder. Finances that fall too much.”* These statements show that the costs of travel and transport reduce profit and make craft production more difficult to sustain.

5.5 Generation Gap

The findings also show a clear generational shift in craft participation. Mr. Tandan said that *“the interest is decreasing”* because younger people are *“looking forward to other means of income,”* while Mr. Reynald noted that *“the younger generation has lost interest in handicrafts”* and that *“most producers are older.”* Suzana confirmed this pattern in her own family when she said, *“In our family, we have no one [from the younger generation] who does it.”* These comments indicate that many younger people now see handicraft work as less attractive than other forms of employment. At the same time, some participants stressed continuity and intergenerational transmission. Doris said, *“How can this product remain? We can keep this in our family and pass it down from generation to generation,”* and Maria explained that she teaches her children so that *“her business can continue.”* The generation gap, then, is not simply a loss of interest; it is also a tension between economic opportunity and the desire to preserve craft as family knowledge and cultural inheritance.

5.6 Digital Marketing

Participants used both digital platforms and physical bazaars to sell and promote their products. Doris said that *“TikTok and Facebook”* were the most effective platforms, Cathrine explained that she used *“mostly Facebook and Instagram,”* and Lucile noted that Facebook had recently *“created more traffic compared to Instagram.”* These accounts show that artisans were actively experimenting with social media, although platform effectiveness changed over time.

Even so, face-to-face marketing remained the most reliable channel. Mr. Tandan said that the best strategy was *“more to face to face interaction,”* especially through exhibitions and sales events, while Suzana said that she got *“a good income from the bazaar.”* Jaqline added that bazaars were better because *“people come directly.”* These statements suggest that digital promotion can widen visibility, but it does not replace physical market access, where buyers can inspect products directly before purchasing.

Taken together, the findings indicate that digital marketing works best as a supplement to, not a substitute for, physical bazaars and exhibitions.

6. LIMITATIONS

This study has several limitations. First, the findings are based on a sample of 19 participants and therefore do not represent all Iban women artisans in Sarawak. Second, the use of snowball sampling may have limited participation to individuals within existing social and professional networks. Third, the study focused on specific handicraft events and locations, which may not fully capture the diversity of experiences across all regions of Sarawak. Finally, as a qualitative ethnographic study, the findings are context-specific and are intended to provide in-depth understanding rather than statistical generalization. Future research could involve larger samples and comparative studies across different Indigenous communities and craft sectors.

7. CONCLUSION

The findings indicate that handicraft production supports Iban women's empowerment by generating income, sustaining cultural identity, and strengthening social participation. In Sen's (1999) terms, the craft sector expands capabilities when women are able to convert skills and cultural knowledge into economic and social value. The interviews suggest that handicraft work is not only a source of earnings, but also a space where women maintain continuity with local traditions, contribute to household welfare, and participate more actively in community life. At the same time, the study shows that these capabilities are constrained by structural barriers. Raw material scarcity, limited access to training, weak internet connectivity, transport burdens, and declining youth interest all reduce the extent to which handicraft production can function as a stable form of empowerment. The evidence suggests that the main challenge is not the lack of interest in craft itself, but the wider conditions that make production, marketing, and skill transfer difficult to sustain over time. These findings point to the need for support that matches the actual constraints identified by participants. Strengthening local sourcing, improving access to practical training, expanding market access, and supporting cooperative or community-based initiatives would help artisans protect both the economic and cultural value of their work. Digital promotion can broaden visibility, but it does not replace the importance of physical markets, transport access, and direct buyer contact. Overall, the study shows that Iban women's handicraft production has clear empowerment potential, but that potential depends on whether structural barriers are addressed in ways that fit the realities of rural craft production.

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AUTHOR CONTRIBUTIONS

Muyyar Mukresh: Conceptualization, Methodology, Formal Analysis, Fieldwork & Investigation, Writing – Original Draft.

Noria Tugang: Supervision, Validation, Writing – Review & Editing.

Adilawati Asri: Conceptualization, Theoretical Framework Alignment, Validation, Writing – Review & Editing.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this paper.

ETHICS STATEMENT

The study followed the ethical guidelines of Universiti Malaysia Sarawak (UNIMAS). Support letters from the university were obtained for partner organizations, written informed consent was secured from all participants, and confidentiality was protected through the use of self-selected pseudonyms.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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