A New Measure for Family Resilience: Exploratory Factor Analysis of Malaysian Gen Y Family Resiliency Scale

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ABSTRACT

Resilience is crucial for families to adapt to evolving social, economic, and cultural changes. However, existing family resilience scales, often rooted in Western perspectives, may not fully capture the unique resilience factors of Malaysian Gen Y families. This study aims to develop and establish the initial factor structure of the Malaysian Gen Y Family Resiliency Scale (myFRSGY), a culturally relevant and reliable measure. A cross-sectional quantitative design was employed, with 243 married participants with children. Exploratory Factor Analysis (EFA) was employed using Principal Axis Factoring with varimax rotation to identify key resilience constructs based on Walsh's Family Resilience Framework (2003). Ten distinct factors emerged from qualitative thematic analysis of focus group discussions: family endurance, roles and responsibilities, psychological and physical support, communication and conflict resolution, financial stability, adaptability, parenting and child well-being, spiritual and moral values, independence, and social support networks. Factor loadings exceeded 0.60, explaining 60–73% of the variance. The myFRSGY scale demonstrated strong internal consistency with Cronbach's alpha greater than 0.90, suggesting high reliability, though some potential items overlap issues. The myFRSGY scale offers a culturally appropriate framework for evaluating the family resilience of Malaysian Gen Y, specifying important insights for research, counselling, social policy, and intervention programs. Future studies should utilise confirmatory factor analysis (CFA), cross-cultural validation, and longitudinal assessments to enrich generalizability and predictive capabilities. The myFRSGY scale presents a novel approach to understanding and strengthening family resilience in Malaysia.

Keywords: family resilience, Malaysian Gen Y families, scale development, Exploratory Factor Analysis (EFA), cultural adaptation in family resilience research

INTRODUCTION

No families in this world live without constantly facing challenges. Families, like trees, face all kinds of weather. Just as a tree withstands harsh winds, heavy rain, and even wildfires, families experience their storms, such as illness, job loss, financial struggles, and countless others. Resilience, the ability to endure and overcome significant adversity (Ensz et al., 2024), allows families to bend without breaking and even to heal, adapt, and emerge stronger from hardship. Most Generation Y families encounter challenges that significantly impact family well-being, necessitating a focused examination of family resilience. Challenges such as financial strain and economic instability necessitate resilient families to navigate these pressures effectively (Meitasari et al.,

2023). The pursuit of work-life balance, often characterized by extended work hours, job insecurity, and the demands of dual-income households, further tests families' adaptive capacities (Mortejo et al., 2024). Evolving family structures, including trends toward delayed marriage and childbearing, underscore the importance of resilience in managing these demographic shifts (Hadfield et al., 2018). Furthermore, the pervasive influence of technology and social media on individual self-esteem and interpersonal relationships within the family context highlights the critical role of family resilience in fostering family stability (Padilla-Walker, Coyne, & Collier, 2020).

Family resilience is essential in coping with challenges and maintaining the stability of Generation Y families in Malaysia, who deal with such unique socio-economic and cultural shifts nowadays. According to the Department of Statistics Malaysia (DOSM, 2022), divorce cases rose abruptly during the COVID-19 pandemic, with a 12% rise in 2020 compared to preceding years. The reasons for the high divorce of Gen Y families were because of financial difficulties, mental health struggles, and family conflicts faced intensely during the COVID-19 pandemic that happened from the year 2020 until 2021. Generation Y or Gen Y, also identified as 'millennials', are individuals born between 1981 and 1996 (Aikat, 2019), but some definitions extend the range up to 2000. This generation was raised during a period of speedy opening out of technology, globalization, and economic shifts, influencing their values, work ethics, and family dynamics.

Gen Y is typified by technology-savviness, flexibility, and a strong sense of individuality but is affectionate for work-life balance. By 2024, the Gen Y are individuals aged from 24 to 43 years old. Generation Y households encounter a complex life landscape in which adapting to and resolving challenges is imperative for sustaining a family's well-being and stability. Cultivating family resilience is paramount in enhancing familial life and empowering families to navigate and successfully overcome challenges.This issue brings to the attention of family studies researchers in Malaysia the need for effective coping mechanisms and resilience strategies to sustain family life in times of crisis. Existing family resilience scales frequently have a Western-centric that does not capture Malaysian families' cultural and contextual realities. The absence of a validated, culturally relevant scale customized to measure resilience among Malaysian Gen Y families offers a significant research gap. Thus, it is imperative to develop the Malaysian Gen Y Family Resilience Scale (myFRSGY), which specifies an empirical, context-sensitive instrument to gauge resilience factors that support family resilience in Malaysia.

LITERATURE REVIEW

This literature review investigates the concept of family resilience by examining its definition, key theoretical frameworks, and existing scales or instruments that measure family resilience or resiliency. The instruments mention factors that influence a family's ability to cope with adversities in family life.

Definitions and Key Concepts of Family Resiliency

The section presents definitions of family resilience articulated by key field authors, encompassing seminal works and contributions from the literature from the previous five years. To emphasize the family's capacity to withstand challenges and adaption, McCubbin and McCubbin (1988) defined family resilience as the characteristics, dimensions, and properties that enable families to resist disruption during change and adapt effectively to crises. Patterson (2002) states that family resilience is the family's ability to actively mobilize strengths when stressful events or crises threaten their lives. Therefore, families should proactively use resources to overcome the adversities.

Walsh (2016) describes family resilience as the capability of a family as a functional system to hold up and rebound from adversity, thereby pointing out the systemic nature of the phenomenon and the integral role of the entire family unit. Prior to that, Walsh (1996) state that family resilience is the perceived ability of a family to withstand a crisis which disrupts their normal course of life and can be a protective factor against stress and negative affect. As more research is being conducted on family resilience, the stand-alone definitions of family resilience are less common in recent literature from 2020 onwards. Instead, the concept of family resiliency is often operationalized or implied through another research area. For instance, Hamim, Addiato and Rahmat (2024), given the COVID-19 pandemic, proposed a definition of family resilience as the collective capacity of family members to withstand and positively adapt to adversity that focuses on both the joint nature of resilience

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within the family and the significance of positive adaptation as an outcome.

Ungar (2021), while focusing on individual resilience, also emphasizes the importance of family as an ecological context, asserting that family resilience involves a dynamic process of access to resources and its utilization to the benefits within families. Walsh (2020) added that family resilience is about returning to a previous state and the potential for growth and transformation. It has been conclusively established that family resilience is nurtured, facilitated, and utilised by collective efforts and resources made available to all family members, emphasising on the survival, positive adaptation, and growth after difficulties in family life.

Theoretical Perspectives of Family Resiliency

Understanding family resilience requires a strong theoretical foundation. By investigating these theoretical perspectives, crucial insights into the processes that contribute to family resilience are postulated. This part shall examine two prominent theoretical perspectives that have shaped the field of family resilience.

Family System Theory

Family resilience has advanced significantly since the 1970s (Walsh, 2016), with historical origins in physiology and psychology (Tusaie & Dyer, 2004). Walsh's (2002, 2006, 2013) research highlights the value of family systems theory as a basis for comprehending and addressing the complex dynamics of family life. This theory posits that significant crises and persistent life problems affect the entire family and that fundamental family processes mediate adaptation (or maladaptation) for individual members, their relationships, and the family unit as a whole. Because the family is the smallest unit of society with a significant impact on a country's development and strength, improved family resilience can contribute to greater national resilience.

Within the framework of Family Systems Theory, Walsh (2003, 2006, 2013) highlights that belief systems, organizational patterns, communication, and problem-solving are fundamental processes in fostering family resilience. These processes help families deal with change, handle stress, and respond to expected and unexpected crises. As a result, each family member will be more resilient, improves their relationships, and strengthens the family unit. Each of these key processes consists of three interconnected and interactive sub-processes. The first, belief systems, involve finding meaning in adversity, maintaining a positive outlook, and fostering transcendence and spirituality. The second, organizational patterns, encompasses flexibility, strong connections within the family, and access to social and economic resources. The third process is communication and problem-solving, which encompasses clear communication, open emotional expression and collaborative problem-solving.

Ecological System Theory

Another key theory underpinning family resilience research is Bronfenbrenner's (1979) Ecological Systems Theory. This theory informs the influence of multiple interacting environmental layers on individual development and well-being.

Bronfenbrenner's Ecological Systems Theory (1979) describes five interacting systems that shape individuals and their families:

1. The microsystems are the immediate environments like family, peer groups, and schools that directly influence individuals. Strong family bonds characterized by support, open communication, and practical problem-solving are essential for navigating adversity within these microsystems;

2. The mesosystem represents the interplay between microsystems, such as the connection between home and school. Positive interactions within this system, such as collaboration between parents and teachers or engagement with community organizations, bolster coping abilities during stressful periods;

3. The exosystems are external environments that indirectly impact families, such as parents' workplaces or community services;

4. The macrosystem encompasses broader cultural values, societal expectations, and economic conditions, influencing how families respond to challenges; and

5. The chronosystem considers the influence of time and historical context, including life transitions, significant historical events, and shifts across generations. Families demonstrating resilience often adapt to evolving circumstances by learning from experience and adjusting their strategies over time.

Ecological Systems Theory (Bronfenbrenner, 1979) rationalise family resilience through interconnected environmental influences. Justifying that families subsist within layered systems, from immediate relationships to broader culture. The positive relations between these systems buffer stress in families. The external factors and historical events also influence family coping. Hence, this theory provides a complete view of the development of family resilience.

Recent Research in Family Resiliency

Recent research in family resilience has broadened its scope, exploring diverse family structures, cultural contexts, and the effect of global events like the COVID-19 pandemic on families. Studies increasingly underline the dynamic interplay between individual, family, and contextual factors in promoting family resilience. To further examine the role of resilience in families, there is research that examined how families navigate resilience challenges such as parental mental health issues (Goodyear et al., 2022), chronic illness in children (Murphy et al., 2021), and the impact of forced migration on family functioning and resilience processes (Bunn et al., 2022).There is also a growing focus on the role of technology and social media in shaping family communication and support networks, particularly in geographically dispersed families or during periods of social isolation (Twenge et al., 2020). Moreover, research explores the effectiveness of interventions designed to improve family resilience, focusing on strengths-based methods and culturally sensitive practices (Walsh, 2020).

While research explicitly on family resilience in Malaysia is still emerging, several studies have given valuable insights into family resilience in Malaysia. For instance, a study compared the resilience and happiness of Malaysian children aged five and seven during the COVID-19 pandemic from 2020 to 2021 with their peers in other Asian countries. The results discovered that Malaysian children had lower resilience levels, with only 60% of five-year-olds and 67% of seven-year-olds feeling happy, compared to higher averages in other Asian countries (Mustafa, Ayob & Abdullah, 2025). The study's findings inform the need for improved support systems to enhance children's resilience and well-being in Malaysia. Recently, there has been a qualitative study that explored family resilience processes within the native group of people in Malaysia, in particular the Orang Asli Semai (Chua et al.,2021). From interviews with twenty-three community members, the researchers developed a model highlighting the community's unique family conceptualizations and functioning. The study gives insights into culturally specific resilience processes, stressing the importance of understanding indigenous people's perspectives in family resilience research.

Besides that, research on Malaysian families has explored topics such as parenting styles and their impact on child well-being (Masiran, 2022), the influence of cultural values and religious beliefs on family coping (Javaid et al., 2024) and the challenges faced by families in specific contexts like single-parent households or families with children with disabilities. One study using the mixed-methods approach and focusing on the parent-child dyads identified key family resilience factors that contribute to better mental health outcomes among adolescents in Malaysia (Serena, 2021). This study's findings highlight the importance of strengthening family resilience to support adolescent well-being.

Instruments to Measure Family Resilience

Assessing family resilience is crucial for understanding how families navigate adversity. have developed various instruments to measure this complex construct accurately. Below are some instruments and constructs identified as reliable and valid measures of family resilience across diverse populations.

Walsh Family Resilience Questionnaire (WFSQ)

Walsh Family Resilience Questionnaire (WFRQ) originates from the work of Walsh (2003). Walsh (2003) work

up a conceptual framework of family resilience and later came up with a family resilience framework that has three major domains (Walsh, 2016): (a) family belief systems, which consist of shared values, meaning-making, positive outlook; (b) organizational patterns that include the family structure, roles, flexibility, and resourcefulness; and (c) communication and problem solving with sub-domains of clear communication, conflict resolution and collaborative decision-making.

The original WFRQ has been adapted and validated in various countries to suit the diverse populations of families worldwide. Researchers translated and modified the items to ensure the WFRQ were culturally relevant, and researchers conducted psychometric analyses to establish the reliability and validity of the adapted version of the WFRQ. For instance, researchers in Poland have developed and validated a Polish version of the WFRQ (WFRQ-PL) to assess family resilience in Polish families (Nadrowska et al., 2022)

Researchers in China have examined the reliability and validity of the WFRQ in Chinese populations (Zhang et al., 2023). The WFRQ has also been adapted and used in Italy with respondents of stroke survivors and their caregivers (Ye et al., 2024). WFRQ was also adapted and validated in Portuguese families in Portugal (Morais et al., 2024).

Family Resilience Assessment Scale (FRAS)

The Family Resilience Assessment Scale (FRAS), developed by Sixbey (2005), is another broadly used instrument to measure family resilience. FRAS intends to gauge families' strengths and resources in overcoming challenges and adversity. The instrument consists of multiple subscales: family communication and problem-solving, applying social and economic resources, and maintaining a positive outlook. The Family Resilience Assessment Scale (FRAS) has been widely employed across diverse cultural contexts to examine resilience within different family structures. For instance, research on military families has underscored the importance of identifying protective factors that promote family functioning during deployments, highlighting FRAS as a valuable tool in assessing resilience among military households facing frequent separations and stressors (McCubbin et al., 2009; Chow et al., 2022).

Moreover, the FRAS has been adopted in non-Western populations. Researchers modified the scale in China to assess family resilience among families of cancer patients, providing valuable insights into how these families navigate emotional and financial stressors (Zhang et al., 2024). The Chinese adaptation demonstrated high reliability and validity, suggesting its efficacy in evaluating resilience in healthcare settings (Leung, Shek, & Tang, 2023). Similarly, a study in Taiwan examined the psychometric properties of the FRAS in families of children with developmental disabilities, finding that resilience was strongly associated with social support networks and adaptive coping strategies (Chiu et al., 2019). Further, Harper (2022) reevaluated the FRAS's factor structure among African American college students, confirming its cultural sensitivity and relevance in minority populations. This study demonstrated how family resilience mechanisms are shaped by cultural narratives and collective coping strategies, supporting the adaptability of the FRAS for diverse populations. In addition, Tetlow et al. (2024) conducted a systematic review of FRAS applications in family interventions, revealing that while the scale remains a robust measure of resilience, additional cultural modifications could enhance its applicability.

Beyond Asia and North America, the FRAS has been validated in several European and African contexts. Nadrowska and Błażek (2021) adapted the FRAS for Polish families, demonstrating its utility in understanding family adaptation to economic and health crises. Similarly, Almeida et al. (2023) validated a Portuguese version of this scale, further extending its global applicability. The ability of the FRAS to capture the complexities of family resilience across multiple demographic and socio-cultural groups makes it a valuable tool for resilience research. As global studies continue to emphasize the role of cultural context in shaping family resilience, ongoing adaptation and refinement of the FRAS remain crucial to ensuring its validity and reliability across diverse populations.

Family Resilience Inventory (FRI)

The Family Resilience Inventory (FRI) has been widely utilised across various research contexts to assess how

families adapt to adversity. In military families, the FRI has measured resilience in response to deployments, combat exposure, and reintegration challenges, showing that higher FRI scores correlate with lower rates of post-deployment marital distress and PTSD (Tetlow et al., 2024; Alderfer et al., 2008).

The FRI has been used in healthcare settings to evaluate caregiver resilience, particularly in families managing chronic illnesses, where strong resilience scores are linked to reduced psychological distress (Bethell et al., 2019).

Additionally, cross-cultural studies have adapted the FRI to assess resilience among indigenous and marginalised communities, incorporating cultural dimensions such as communal support and intergenerational coping strategies (Burnette et al., 2020; Zhou et al., 2020).

Recent studies of the FRI scale have also utilised its role in family adaptation during crises, such as the COVID-19 pandemic. The FRI scale has anticipated the possibility of families using positive coping strategies (Margola et al., 2021). These studies underscore the FRI's versatility in capturing resilience processes across diverse family systems and life challenges.

Conceptual Framework Of Myfrsgy Scale

The Malaysian Gen Y Family Resilience Scale, with the acronym myFRSGY, is a newly developed instrument designed to measure family resilience among Generation Y families in Malaysia. Based on Walsh's Family Resilience Framework (2003), this scale incorporates ten key constructs identified through focus group discussions of twenty-five families in Malaysia. The ten primary constructs that emerged from the thematic analysis were (a) family endurance; (b) roles and responsibilities within the family structure; (c) psychological and physical support, (d) communication and conflict resolution; (e) financial stability and economic resilience; (f) adaptability and flexibility in daily life; (g) parenting and children's well-being; (h) spiritual and moral values; (i) independence and self-reliance; and (j) social support networks and community influence (Figure 1). These constructs function as the foundation for the conceptual framework of myFRSGY scale development.

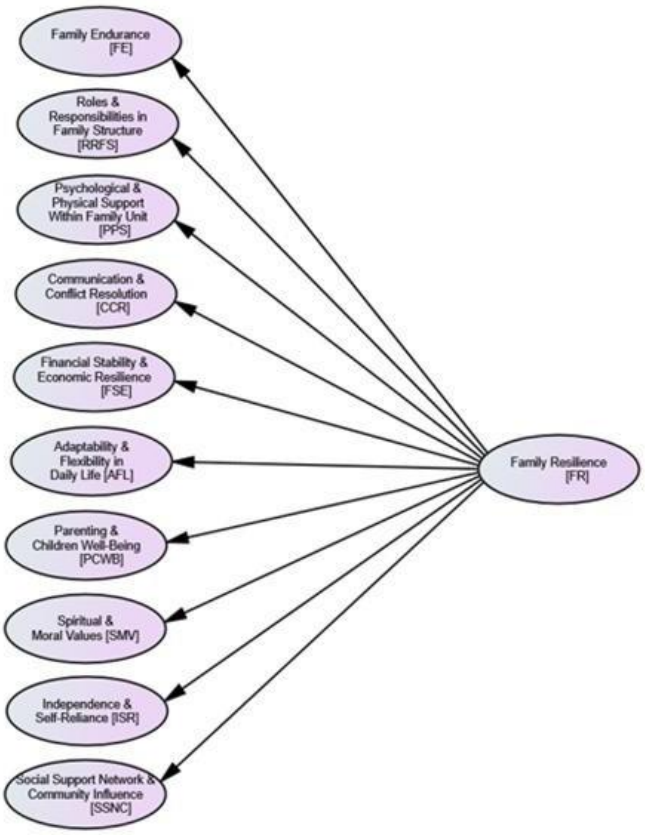

Figure 1: Conceptual Framework of myFRSGY Scale

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OBJECTIVES & RATIONALE OF THE STUDY

This study aims to initially develop a culturally relevant family resilience scale for Gen Y families in Malaysia. The rationale for this research stems from the need for a context-specific instrument that captures this population's unique challenges and strengths.

Research Objectives

The objectives of this study are two-fold:

1. To ascertain the underlying factor structure of the Malaysian Gen Y Family Resilience Scale (myFRSGY) through Exploratory Factor Analysis (EFA); and

2. To gauge the construct validity and internal consistency of the myFRSGY based on the factors extracted from Exploratory Factor Analysis (EFA).

Rationale of the Study

In essence, the rationale for developing this new scale is to address the theory and measurement concerns in the research of family resiliency. The rationales of this study are as follows:

1. Research highlights the need for culturally adapted assessments incorporating financial stability, intergenerational support, and religious influences, which are significant in Malaysian family dynamics but underrepresented in the Walsh Family Resilience Questionnaire and Family Resilience Assessment Scale (Hamzah et al., 2023; Sumari et al., 2020). Hence, there is a demand to develop a culturally specific scale to measure the family resilience of Gen Y in Malaysia correctly.

2. In addition, this new scale provides a practical tool for policy and interventions in research regarding family resilience in Gen Y families and the generations afterwards. Family counsellors and policymakers may utilize this new scale to assess family resilience and then develop intervention efforts to help strengthen and lengthen the lives of families. Together, these people may advise policies on family welfare, financial planning, and mental health support for all generations of families in Malaysia.

METHODOLOGY

The methodology of this research started with focus group discussions (FGDs) to explore the key dimensions of family resilience among Malaysian Gen Y families. Twenty-five families with fifty participants of husbands and wives from diverse ethnic and socio-economic backgrounds were selected using purposive sampling. The families chosen for the focus group discussion must also have a child or children. Guided by questions created by the researchers, the families were interviewed to explore their understanding of the concepts and factors that contribute to family resilience.

The analysis through ChatGPT-4o of qualitative data obtained from Focus Group Discussions (FGDs) extracted ten essential themes characterising family resilience in Malaysian Gen Y families. The researchers decided to utilise ChatGPT-4o since recent studies suggest that ChatGPT can streamline qualitative coding, improving efficiency while maintaining thematic accuracy (Goyanes et al., 2024; Nguyen-Trung, 2024). While NVivo and Atlas. ti software offers robust visualisation and categorisation features; research confirms that ChatGPT can effectively assist in large-scale qualitative analysis, making it a viable alternative for rapid and systematic theme extraction (Wheeler, 2025). The identified themes from the FGDs were treated as constructs that set the theoretical foundation for item generation in the scale development process of myFRSGY.

The qualitative data from the FGDs were thematically analyzed using ChatGPT 4o, identifying ten core themes or constructs that define family resilience in the Malaysian Gen Y family context. These constructs were the theoretical foundation for item generation in the scale development process.

The researchers developed an initial Malaysian Gen Y Family Resilience Scale (myFRSGY) comprising 102

items covering the identified ten constructs. The items were reviewed by four experts in family studies and one expert on scale psychometrics to ensure content validity, clarity, and relevance to the culture of Malaysian Gen Y families. A pre-test was conducted with a small sample to refine item wording and eliminate ambiguous questions to ascertain the face validity of the scale. The final version of the questionnaire was then distributed online through appointed enumerators to ensure a random sampling approach to enhance generalizability. The enumerators were trained to approach Gen Y families through online communication, either the husband or wife or both as representatives across different states in Malaysia, to warrant the diverse demographic representation of Gen Y families. A total of 243 respondents participated in the pilot survey.

Research Design

This research utilises a quantitative cross-sectional research design to develop an Exploratory Factor Analysis (EFA) to analyse the initial factor structure of the Malaysian Gen Y Family Resilience Scale (myFRSGY). The research follows a sequential instrument development approach, beginning with qualitative insights from focus group discussions (FGDs) to generate relevant items, followed by a quantitative survey to examine the factor structure and reliability of the scale.

In the first phase, FGDs were performed with Malaysian Gen Y families to identify key family resilience constructs and certify that the scale is culturally relevant to the Gen Y families in Malaysia. The findings from the FGDs informed the development of an initial item pool, which experts reviewed for content validity and scale psychometrics. The second part of the research involved the dissemination of the questionnaire via an online platform to a randomly selected sample of Gen Y families in Malaysia through appointed enumerators to confirm a broad representation of the research respondents. The collected data were analysed using EFA to determine the underlying factor structure of the myFRSGY scale. The study also included the analysis of the internal consistency reliability (Cronbach's alpha) to assess the myFRSGY scale's reliability. This rigorous multi-phase approach ensures that myFRSGY is a statistically valid and reliable scale for assessing family resilience among Malaysian Gen Y families.

Population and Sample

As this research is conducted in Malaysia, based on the Population and Family Development Act 1966 [Act 352], the act does not explicitly define the term 'family'. The act primarily focuses on establishing the Malaysia National Population and Family Development Board (LPPKN) to outline the board's functions and powers. However, the board does provide definitions and frameworks to understand the concept of family in Malaysia. According to the board, a nuclear family household in Malaysia consists of members related by blood, marriage, or adoption, comprising a husband, wife, and never-married children. Hence the sample of this research are families that consist of a husband, a wife with child or children.

As of 2024, Malaysia's total population is approximately 34.1 million. The Generation Y cohort in Malaysia is usually explained as individuals born between 1981 and 1996, but for this research, the Gen Y are individuals born between 1980 and 2000; they would be aged between 24 and 44 years in 2024. While precise figures for Malaysia's Gen Y population in 2024 are unavailable, estimates from 2010 indicated that they constituted approximately 40% of the population (Fei, 2019). Applying this proportion to the estimated 2024 population suggests a Gen Y population of roughly 13.6 million. Similarly, current data on the number of families in Malaysia for 2024 is limited. However, the 2020 census shows Malaysia had approximately 8.2 million households. Assuming a consistent growth rate, the number of families in 2024 could be around 8.5 to 8.7 million.

The sample for this pilot study was selected carefully to ensure adequate representation of Malaysian Gen Y families, aligning with the study's objective of developing and exploring the initial factor structure of the Malaysian Gen Y Family Resilience Scale (myFRSGY). Participants were recruited from across states in Malaysia using a random sampling method. Appointed enumerators facilitated the process, aiming for diversity in ethnicity, socioeconomic status, and household income. Sufficient sample size is essential for Exploratory Factor Analysis (EFA) to yield stable and reliable factor structures. Researchers argue that a minimum of 200 samples can be sufficient; others recommend a larger sample size of 300 or more for stable factor extraction

(Costello & Osborne, 2005; Mundfrom et al., 2005; Li et al., 2025). Li et al. (2025) highlight that sample adequacy varies based on study design, and high communalities (>0.6) can justify smaller samples, whereas lower communalities require a larger dataset.

Recent research suggests that the adequacy of a sample size for Exploratory Factor Analysis (EFA) depends on various factors, including the number of items, factor loadings, and communalities rather than a fixed threshold. Mundfrom et al. (2005) emphasize that sample sizes of 100-200 can be adequate when communalities exceed 0.6, but larger samples with 300 or more provide more excellent stability. Similarly, Samad et al. (2024) assert that while smaller pilot studies with over 100 participants can provide preliminary insights, a larger sample is preferable for scale validation. Given that the myFRSGY scale comprised 102 items across ten constructs, using 243 participants aligns with established recommendations for EFA sample adequacy. Data collection was completed within one week in December 2024, ensuring efficient scale validation.

Sampling Procedures

The sampling procedure for this research involved a random selection process facilitated by thirty-six appointed enumerators to safeguard a diverse and representative sample of Malaysian Gen Y families. Participants were recruited from various geographical locations, socioeconomic backgrounds, and family structures to enhance generalizability to the population of Malaysian Gen Y families. A total of 243 participants' responses are included in the pilot study analysis, conducted over one week in the third week of December 2024. The structured and systematic sampling approach ensures that the study produces initial factor structures that are valid and reliable in developing the Malaysian Gen Y Family Resilience Scale (myFRSGY).

Malaysian Gen Y Family Resiliency Scale

The Malaysian Gen Y Family Resilience Scale (myFRSGY) is a newly developed scale to measure family resilience among Generation Y families in Malaysia. The initial scale consists of ten main constructs, each representing critical family resilience factors. From the qualitative data analysis, there were also sub-constructs being identified from the constructs. However, at this point, the initial scale development of myFRSGY focuses solely on the main constructs that contribute to family resiliency. The initial version of myFRSGY consists of 102 items on ten key constructs, as informed in Table 1:

Table 1:- Constructs of Malaysian Gen Y Family Resilience Scale (myFRSGY)

	Construct	Sub-Constructs	Number of Items
Family Resilience	Family Endurance (FE)	strength through adversity, patience, adaptability and hope	8
	Roles and Responsibilities in Family Structure (RRFS)	flexible gender roles, division of labour, roles of husband and wife, intergenerational learning, mutual support in spousal roles, acceptance of strength and weakness	15
	Psychological and Physical Support (PPS)	self-regulation, coping mechanism, mutual emotional support, mental health awareness, positive mindset, physical health and well-being, empathy	16
	Communication and Conflict Resolution (CCR)	open and transparent communication, constructive conflict resolution, parent-child communication, apology and reconciliation process	9
	Financial Stability and Economic Resilience (FSE)	financial planning and budgeting, financial independence and tolerance, adaptation to economic challenges, shared financial responsibilities	10
	Adaptability and Flexibility	routine adjustment, problem-solving skills, shared family	6

	in Daily Life (AFL)	goals	
	Parenting and Children's Well-Being (PCWB)	role modelling resilience, educational and developmental support for children, emotional protection for children, children as motivation, managing technology influence	11
	Spiritual and Moral Values (SMV)	religious guidance, spiritual practices, instilling moral values	7
	Independence and Self-Reliance (ISR)	self-care for individual resilience, continuous learning, continuous adaptability, balancing personal and family needs, setting personal boundaries	11
	Social Support Networks and Community Influence (SSNC)	extended family support, community support, selective help-seeking, peer support	9
		Total Items: 102	

Each item in the scale is rated using a 5-point interval score response format from strongly disagree (1) to strongly agree (5), allowing participants to point out their level of agreement with the item statements in the questionnaire.

Data Collection for myFRSGY

Data were gathered using a structured online questionnaire distributed via Google Forms to maximise accessibility and minimise costs associated with printing and logistics. This research was funded under the Fundamental Research Grant Scheme (FRGS) by the Ministry of Higher Education Malaysia (KPT) from 2022-2025, which provided an allocation to appoint trained enumerators to assist in data collection. Thirty-six selected enumerators were responsible for sharing the online questionnaire, guiding respondents, and ensuring data completeness and accuracy received from Gen Y families, either the husband or wife.

The study is in the process of acquiring ethical permission from the university's research ethics committee. However, due to the grant's constraint that the researchers must complete the study by February 28, 2025, the pilot data collection started before gaining written formal permission from the ethics committee.

The study is acquiring ethical permission from the university's research ethics committee, with the application already submitted and awaiting approval. However, due to the grant's constraint requiring report completion by February 28, 2025, pilot data collection began before receiving the ethics approval notice. All ethical protocols were carefully observed by researchers for the need to secure informed consent from participants and to ensure the strict confidentiality of their responses. The researchers' choice to administer the questionnaire online was based on the belief that Gen Y individuals, who are usually good with digital technology, would be more likely to engage and respond to the survey. Exploiting the online survey format enabled respondents of Gen Y families to certainly access and complete the myFRSGY scale via their smartphones, which increased the accessibility and escalated the probability of the respondent's participation.

The pilot study was conducted in the third week of December 2024 until the middle of January 2025, yielding 243 responses. After data screening, one response was removed due to outliers, allowing a final pilot dataset of 242 valid responses to proceed with Exploratory Factor Analysis (EFA). The collected data were also undergone for data quality control procedures, including checks for missing values, response bias, and internal consistency before analysis. This structured data collection approach, combined with a random sampling strategy and digital accessibility, contributes significantly to developing and analysing the initial factor structure for the Malaysian Gen Y Family Resilience Scale (myFRSGY).

Data Analysis

Pilot data of the two-hundred and forty-two useable responses underwent Exploratory Factor Analysis (EFA)

using Principal Axis Factoring (PAF) with varimax rotation, as proposed for scale development and validation (Costello & Osborne, 2005). PAF was selected over Principal Component Analysis (PCA) because it takes out latent factors by analysing the shared variance between items rather than the total variance. Hence, conducting the EFA using PAF makes it more appropriate for identifying underlying constructs in psychological and social science research (Fabrigar et al., 1999). Since the factors in the Malaysian Gen Y Family Resilience Scale (myFRSGY) were expected to be not related, the varimax rotation was used instead of oblimin. The varimax rotation, which is also designed to reduce the number of items with large loadings on each factor, was utilised (Pallant, 2016). Furthermore, PAF is widely commended when data might not meet the rigorous normality assumptions required for PCA (Fabrigar et al., 1999; Costello & Osborne, 2005). For the newly developed 102-item Malaysian Gen Y Family Resiliency Scale (myFRSGY), Principal Axis Factoring (PAF) with varimax rotation was used. This method was chosen to discover the initial underlying factor structure of the scale, identify meaningful constructs related to family resilience within the Gen Y population in Malaysia, and ultimately reduce a large number of items to a more manageable and parsimonious set while maintaining the scale's validity.

The suitability assessment of the dataset for Exploratory Factor Analysis (EFA) requires testing with the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy together with Bartlett's Test of Sphericity (BTOS). A factor analytic dataset shows proper suitability when the KMO value exceeds 0.60, but achieving values above 0.80 indicates excellence in extracting meaningful factors (Kaiser, 1974; Hair et al., 2019; Tabachnick & Fidell, 2018; Pallant, 2020). Bartlett's Test of Sphericity determines whether the correlation matrix differs significantly from an identity matrix, confirming suitability for EFA if $p < 0.05$ (Bartlett, 1950; Williams et al., 2010). The KMO test also helps detect multicollinearity, while Bartlett's test ensures the dataset is appropriate for factor extraction using Principal Axis Factoring (PAF) with varimax rotation.

Recent studies in Malaysia, such as Alias, Awang and Muda (2020), have applied EFA to validate measurement models, ensuring the robustness of constructs in social science research. Furthermore, Awang (2015) emphasizes that structural equation modelling (SEM) should be preceded by rigorous exploratory factor analysis (EFA) to confirm the validity of latent constructs before proceeding with confirmatory factor analysis (CFA). These methodological approaches reinforce the importance of KMO and Bartlett's test in determining factorability before model estimation in SEM.

First, the researchers used two measures to verify data suitability for Exploratory Factor Analysis (EFA) of the Malaysian Gen Y Family Resilience Scale (myFRSGY) that were Kaiser-Meyer-Olkin (KMO) to assess sampling adequacy and Bartlett's Test of Sphericity to confirm that factor analysis was appropriate. Second, Principal Axis Factoring (PAF) with varimax rotation was selected for factor extraction, assuming the ten underlying factors were independent. This method was chosen to ensure a precise and interpretable factor structure, identifying key family resilience constructs within the Gen Y population in Malaysia and refining the scale while maintaining its validity.

Next, factors were retained based on eigenvalues greater than 1, supported by the theoretical relevance of the constructs. Items were assigned to factors based on factor loadings, with a retention threshold of ≥ 0.32 (Hair et al., 2020). A Cronbach's alpha reliability analysis was conducted to evaluate the internal consistency of each factor and confirmed that the resulting factor structure was interpretable, reliable, and valid for measuring the intended constructs.

Reliability Analysis

A construct must establish reliability, which refers to its consistency, stability, and dependability in producing accurate scores within a questionnaire (DeVellis & Thorpe, 2021). For a construct or variable to be considered reliable, it must yield stable and consistent results over time. Sekaran and Bougie (2019) emphasized that a measure is deemed reliable when it consistently evaluates the intended concept without bias.

In this study, the reliability of all ten constructs identified after EFA was assessed using internal consistency reliability. The coefficient of internal consistency functions as a reliability indicator because items evaluating the same construct should generate correlations. According to Nunnally and Bernstein (1994), the required minimum value for Cronbach's Alpha stands at 0.70 to prove acceptable measurement reliability that upholds

scale precision.

RESULTS

This section presents the findings and important statistical analysis in developing and exploring the initial factor structure of the Malaysian Gen Y Family Resiliency Scale (myFRSGY).

Normality Assessment

The pilot data of the myFRSGY was initially collected from 243 participants. Descriptive statistics were calculated for each construct to assess the normality properties, including the mean, standard deviation, skewness, and kurtosis.

Table 2: Normality Assessment (N=243)

	FE	RRFS	PPS	FSE	CCR	AFL	PCWB	SMV	ISR	SSNC
Mean	35.77	66.49	69.61	39.40	43.01	25.88	49.83	32.03	49.21	37.98
Std. Deviation	4.836	9.320	11.037	5.991	7.435	4.357	5.912	3.720	6.572	7.027
Skewness	-1.414	-1.557	-1.255	-1.336	-1.306	-1.173	-1.632	-1.621	-1.154	-.920
Kurtosis	3.231	3.254	1.950	2.726	2.231	1.777	4.574	3.541	1.288	.364

Note: Family Endurance (FE), Roles and Responsibilities within the Family Structure (RRFS), Psychological and Physical Support (PPS), Communication and Conflict Resolution (CCR), Financial Stability and Economic Resilience (FSE), Adaptability and Flexibility in Daily Life (AFL), Parenting and Children's Well-Being (PCWB), Spiritual and Moral Values (SMV), Independence and Self-Reliance (ISR), Social Support Networks and Community Influence (SSNC)

Based on the initial pilot dataset of N = 243, the data showed skewness values within the acceptable range of +2 to -2 (Garson, 2002; George & Mallery, 2010), indicating moderate symmetry. However, higher kurtosis values outside the range of +2 to -2 suggest a non-normal distribution. Hence, there is a need to assess data normality further and find out potential extreme values; a boxplot was used to identify severe outliers.

Figure 2 presents box plots of the initial pilot dataset. These plots revealed several potential outliers. Data point 128 was identified as a particularly severe outlier, indicated by an asterisk (*). Therefore, this data point was removed, and the skewness and kurtosis of the remaining data were subsequently reassessed to evaluate normality properties.

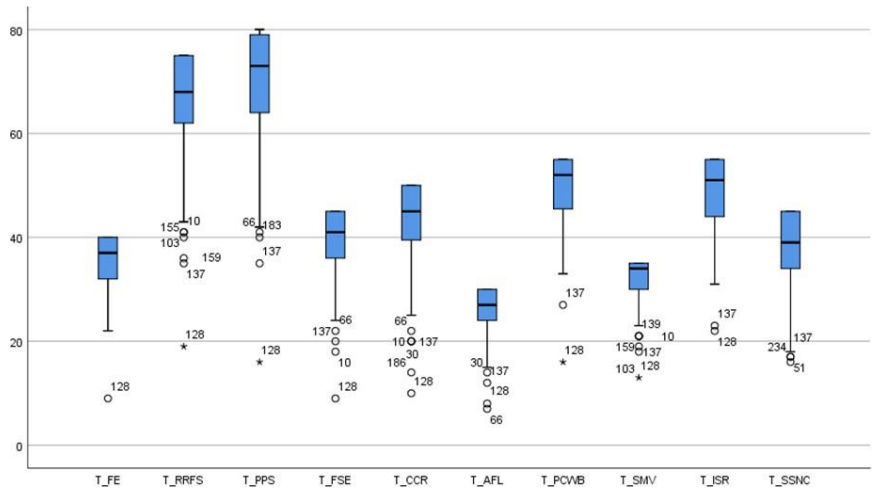

Figure 2 Box Plots for Initial Pilot Data (N=243)

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Following the removal of data point 128, Table 3 presents the normality statistics for the remaining 242 participants. The skewness and kurtosis values for all constructs fell within the acceptable range of +2 to -2, indicating a normal distribution (Garson, 2012; George & Mallery, 2010). Having established normality, the data were deemed suitable for further analysis, which proceeded with internal consistency reliability and discriminant validity assessments prior to Exploratory Factor Analysis (EFA).

Table 3 Normality Assessment (N=242)

Statistics										
	FE	RRFS	PPS	FSE	CCR	AFL	PCWB	SMV	ISR	SSNC
Mean	35.88	66.69	69.83	39.52	43.14	25.95	49.97	32.11	49.33	38.07
Std. Deviation	4.527	8.822	10.504	5.674	7.139	4.211	5.507	3.520	6.347	6.922
Skewness	-.939	-1.258	-.970	-1.003	-1.126	-1.038	-1.134	-1.328	-1.010	-.902
Kurtosis	.047	1.371	.261	.741	1.328	1.195	1.168	1.690	.589	.337

Note: Family Endurance (FE), Roles and Responsibilities within the Family Structure (RRFS), Psychological and Physical Support (PPS), Communication and Conflict Resolution (CCR), Financial Stability and Economic Resilience (FSE), Adaptability and Flexibility in Daily Life (AFL), Parenting and Children's Well-Being (PCWB), Spiritual and Moral Values (SMV), Independence and Self-Reliance (ISR), Social Support Networks and Community Influence (SSNC)

Reliability Analysis of myFRSGY

To establish the reliability of the myFRSGY scale, the internal consistency of each construct was assessed using Cronbach's alpha. Determining reliability is a crucial step in the development and validation of a new scale. The results are presented as below.

Internal Consistency of myFRSGY

The internal consistency analysis of the constructs in measuring the Malaysian Gen Y Family Resiliency reveals Cronbach's alpha coefficients ranging from 0.922 to 0.972, indicating excellent reliability across all constructs. However, with alpha values exceeding 0.95, as observed in constructs PPS (0.972), RRFS (0.956), FSE (0.960), CCR (0.945), AFL (0.940), PCWB (0.944), ISR (0.953), and SSNC (0.929), it may suggest item redundancy problem, where multiple items could be measuring the same aspect of the construct. This redundancy can inflate the alpha coefficient without necessarily enhancing the scale's validity. Later, performing Confirmatory Factor Analysis (CFA) to assess each construct's dimensionality and identify overlapping items in the Malaysian Gen Y Family Resiliency Scale is highly advisable to address and solve the potential redundancy.

Table 4 Internal Consistency of the Constructs

Construct	Reliability (α)
FE	.922
RRFS	.956
PPS	.972
CCR	.945
FSE	.960

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AFL	.940
PCWB	.944
SMV	.922
ISR	.953
SSNC	.929

Note: Family Endurance (FE), Roles and Responsibilities within the Family Structure (RRFS), Psychological and Physical Support (PPS), Communication and Conflict Resolution (CCR), Financial Stability and Economic Resilience (FSE), Adaptability and Flexibility in Daily Life (AFL), Parenting and Children's Well-Being (PCWB), Spiritual and Moral Values (SMV), Independence and Self-Reliance (ISR), Social Support Networks and Community Influence (SSNC)

Discriminant Validity Analysis of myFRSGY

At this stage, the discriminant validity of the newly developed Malaysian Gen Y Family Resiliency Scale was evaluated by examining the correlation table. The table shows the correlation of each construct to all other constructs.

Table 5 Discriminant Validity (Correlation Table)

Construct	FE	RRFS	PPS	FSE	CCR	AFL	PCWB	SMV	ISR	SSNC
FE	1									
RRFS	.766**	1								
PPS	.833**	.874**	1							
FSE	.810**	.836**	.884**	1						
CCR	.697**	.736**	.798**	.787**	1					
AFL	.753**	.763**	.817**	.816**	.829**	1				
PCWB	.699**	.722**	.735**	.799**	.697**	.761**	1			
SMV	.659**	.657**	.670**	.717**	.600**	.645**	.784**	1		
ISR	.687**	.724**	.774**	.770**	.715**	.702**	.797**	.826**	1	.669**
SSNC	.631**	.576**	.652**	.645**	.650**	.690**	.592**	.565**	.669**	1

Note: Family Endurance (FE), Roles and Responsibilities within the Family Structure (RRFS), Psychological and Physical Support (PPS), Communication and Conflict Resolution (CCR), Financial Stability and Economic Resilience (FSE), Adaptability and Flexibility in Daily Life (AFL), Parenting and Children's Well-Being (PCWB), Spiritual and Moral Values (SMV), Independence and Self-Reliance (ISR), Social Support Networks and Community Influence (SSNC)

While some inter-construct correlations are moderately high, none exceed the 0.90 threshold, suggesting that multicollinearity is not a concern (Kline, 2015). This threshold is often used as a rule of thumb to indicate potential multicollinearity issues, where correlations above 0.90 may suggest that two or more constructs measure the same concept (Tabachnick & Fidell, 2018).

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The correlations, while moderately high, remain below the more conservative threshold of 0.85, supporting the discriminant validity of the constructs (Fornell & Larcker, 1981; Hair et al., 2020). This confirms that, although the constructs are related, they remain conceptually distinct. The accuracy of measuring the intended theoretical frameworks depends on discriminant validity, which is a key component of construct validity. The normality assessment and reliability results confirm that the Malaysian Gen Y Family Resiliency Scale (myFRSGY) shall advance to Exploratory Factor Analysis (EFA).

Exploratory Factor Analysis of myFRSGY

According to Fabrigar et al. (1999), Floyd and Widaman (1995) and Hair et al. (2020), EFA explore the latent structures of constructs leading to scale initial factorial validity assessment. To examine the factor structure of the Malaysian Gen Y Family Resiliency Scale (myFRSGY), the researchers conducted EFA separately for each construct. Running separate EFAs enables more precise detection of the underlying factor structure and allows for an in-depth assessment of internal consistency and validity (Howard, 2016). Additionally, this approach mitigates factor complexity issues, which could arise due to potential cross-loadings or inter-construct correlations (Brown, 2015).

Conducting separate EFAs aligns with the Family Resilience Framework (Walsh, 2003, 2016), which postulates that family resilience consists of three interdependent but distinct domains. While these domains collectively contribute to the family resilience framework, they retain individual conceptual independence. This theoretical foundation supports the rationale for structuring the Malaysian Gen Y Family Resiliency Scale (myFRSGY) in a domain-specific manner. Below are the Exploratory Factor Analysis results for each construct comprising the Malaysian Gen Y Family Resiliency Scale (myFRSGY).

EFA for Family Endurance (FE)

KMO and Bartlett's Test of Family Endurance			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.917	
Bartlett's Test of Sphericity	Approx. Chi-Square	1251.826	
	df	28	
	Sig.	.000	

Total Variance Explained for Family Endurance						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.193	64.914	64.914	4.801	60.016	60.016
2	.716	8.955	73.869			
3	.494	6.175	80.044			
4	.442	5.520	85.563			
5	.353	4.415	89.978			
6	.342	4.277	94.255			
7	.250	3.122	97.377			
8	.210	2.623	100.000			

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Extraction Method: Principal Axis Factoring

Factor Matrix[a]	
	Factor
	1
FE4	.854
FE3	.801
FE8	.794
FE6	.785
FE5	.766
FE7	.762
FE2	.752
FE1	.671

EFA for Roles and Responsibilities in Family Structure (RRFS)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.954
Bartlett's Test of Sphericity	Approx. Chi-Square	2985.599
	df	105
	Sig.	.000

Total Variance Explained						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.401	62.672	62.672	9.009	60.058	60.058
2	1.237	8.244	70.916			
3	.598	3.984	74.901			
4	.554	3.694	78.594			
5	.465	3.099	81.694			
6	.415	2.768	84.461			
7	.349	2.326	86.787			
8	.334	2.227	89.014			
9	.309	2.063	91.077			

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10	.276	1.840	92.916			
11	.248	1.653	94.569			
12	.231	1.542	96.111			
13	.214	1.424	97.534			
14	.203	1.355	98.890			
15	.167	1.110	100.000			

Extraction Method: Principal Axis Factoring

Factor Matrix[a]	
	Factor
	1
RRFS7	.833
RRFS13	.828
RRFS8	.815
RRFS14	.809
RRFS9	.804
RRFS6	.798
RRFS15	.797
RRFS12	.792
RRFS11	.772
RRFS5	.767
RRFS10	.743
RRFS2	.738
RRFS3	.737
RRFS1	.691
RRFS4	.680

EFA for Psychological and Physical Support within Family Unit (PPS)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.962
Bartlett's Test of Sphericity	Approx. Chi-Square	4065.767
	df	120
	Sig.	.000

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Total Variance Explained						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.335	70.842	70.842	11.026	68.910	68.910
2	.657	4.108	74.950			
3	.637	3.981	78.931			
4	.552	3.453	82.384			
5	.401	2.507	84.891			
6	.373	2.331	87.222			
7	.334	2.089	89.310			
8	.280	1.748	91.058			
9	.247	1.542	92.600			
10	.232	1.448	94.048			
11	.197	1.229	95.277			
12	.185	1.159	96.436			
13	.169	1.054	97.490			
14	.151	.941	98.431			
15	.138	.862	99.293			
16	.113	.707	100.000			

Extraction Method: Principal Axis Factoring

Factor Matrix[a]	
	Factor
	1
PPS10	.869
PPS4	.864
PPS14	.850
PPS15	.846
PPS6	.839
PPS5	.836
PPS3	.833
PPS2	.831

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PPS16	.829
PPS13	.827
PPS7	.819
PPS11	.816
PPS9	.815
PPS8	.806
PPS1	.802
PPS12	.796

EFA for Communication and Conflict Resolution (CCR)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.914
Bartlett's Test of Sphericity	Approx. Chi-Square	1862.824
	df	36
	Sig.	.000

Total Variance Explained						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.277	69.740	69.740	5.939	65.987	65.987
2	.692	7.694	77.434			
3	.495	5.499	82.933			
4	.419	4.655	87.587			
5	.322	3.574	91.162			
6	.264	2.933	94.095			
7	.238	2.642	96.737			
8	.162	1.802	98.539			
9	.131	1.461	100.000			

Extraction Method: Principal Axis Factoring.

Factor Matrix[a]	
	Factor
	1
CCR6	.854

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CCR5	.851
CCR7	.822
CCR4	.814
CCR2	.802
CCR3	.802
CCR1	.798
CCR9	.791
CCR8	.773

EFA for Financial Stability and Economic Resilience (FSE)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.945
Bartlett's Test of Sphericity	Approx. Chi-Square	2403.324
	df	45
	Sig.	.000

Total Variance Explained						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.433	74.335	74.335	7.153	71.531	71.531
2	.494	4.939	79.274			
3	.443	4.427	83.701			
4	.378	3.781	87.481			
5	.310	3.102	90.584			
6	.253	2.532	93.115			
7	.219	2.187	95.302			
8	.190	1.896	97.198			
9	.148	1.475	98.673			
10	.133	1.327	100.000			

Factor Matrix[a]	
	Factor
	1
FSE2	.892

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FSE4	.885
FSE5	.868
FSE8	.859
FSE7	.849
FSE3	.845
FSE10	.833
FSE1	.830
FSE6	.830
FSE9	.759

EFA for Adaptability and Flexibility in Daily Life (AFL)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.913
Bartlett's Test of Sphericity	Approx. Chi-Square	1288.819
	df	15
	Sig.	.000

Total Variance Explained						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.669	77.810	77.810	4.409	73.478	73.478
2	.445	7.411	85.221			
3	.307	5.112	90.333			
4	.233	3.877	94.210			
5	.179	2.979	97.189			
6	.169	2.811	100.000			

Extraction Method: Principal Axis Factoring.

Factor Matrix[a]	
	Factor
	1
AFL4	.901
AFL3	.897
AFL5	.886

AFL6	.836
AFL1	.825
AFL2	.793

EFA for Parenting and Children's Well-Being (PCWB)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.936
Bartlett's Test of Sphericity	Approx. Chi-Square	2012.530
	df	55
	Sig.	.000

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.119	64.722	64.722	6.739	61.265	61.265
2	.847	7.701	72.423			
3	.543	4.940	77.363			
4	.461	4.188	81.551			
5	.434	3.947	85.498			
6	.323	2.936	88.434			
7	.312	2.839	91.273			
8	.295	2.685	93.959			
9	.277	2.514	96.473			
10	.212	1.927	98.400			
11	.176	1.600	100.000			

Extraction Method: Principal Axis Factoring.

Factor Matrix[a]	
	Factor
	1
PCWB5	.835
PCWB6	.830
PCWB8	.821
PCWB7	.821

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PCWB9	.805
PCWB4	.780
PCWB3	.769
PCWB2	.758
PCWB1	.754
PCWB10	.744
PCWB11	.677

EFA for Spiritual and Moral Values (SMV)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.911
Bartlett's Test of Sphericity	Approx. Chi-Square	1120.333
	df	21
	Sig.	.000

Total Variance Explained						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.797	68.530	68.530	4.432	63.308	63.308
2	.558	7.968	76.498			
3	.424	6.054	82.552			
4	.376	5.370	87.922			
5	.358	5.118	93.039			
6	.264	3.768	96.808			
7	.223	3.192	100.000			

Extraction Method: Principal Axis Factoring.

Factor Matrix[a]	
	Factor
	1
SMV5	.827
SMV2	.818
SMV4	.806
SMV6	.792

SMV3	.779
SMV7	.777
SMV1	.769

EFA for Independence and Self Reliance (ISR)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.958
Bartlett's Test of Sphericity	Approx. Chi-Square	2198.681
	df	55
	Sig.	.000

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.543	68.574	68.574	7.206	65.506	65.506
2	.573	5.208	73.782			
3	.507	4.606	78.387			
4	.451	4.096	82.483			
5	.386	3.513	85.997			
6	.351	3.195	89.192			
7	.295	2.681	91.873			
8	.283	2.570	94.443			
9	.243	2.208	96.650			
10	.195	1.777	98.427			
11	.173	1.573	100.000			

Extraction Method: Principal Axis Factoring.

Factor Matrix[a]

	Factor
	1
ISR6	.858
ISR4	.858
ISR5	.857
ISR9	.830

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ISR1	.829
ISR7	.827
ISR2	.794
ISR8	.792
ISR11	.780
ISR3	.763
ISR10	.700

Extraction Method: Principal Axis Factoring.[a]

EFA for Social Support Network & Community Influence (SSNC)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.897
Bartlett's Test of Sphericity	Approx. Chi-Square	1708.193
	df	36
	Sig.	.000

Total Variance Explained						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.796	64.405	64.405	5.438	60.423	60.423
2	.790	8.774	73.179			
3	.673	7.476	80.655			
4	.600	6.662	87.317			
5	.392	4.352	91.669			
6	.250	2.783	94.452			
7	.221	2.451	96.903			
8	.167	1.861	98.763			
9	.111	1.237	100.000			

Extraction Method: Principal Axis Factoring.

Factor Matrix[a]	
	Factor
	1
SSNC3	.868

SSNC4	.847
SSNC8	.846
SSNC5	.831
SSNC2	.818
SSNC1	.781
SSNC6	.768
SSNC9	.677
SSNC7	.484

The Exploratory Factor Analysis (EFA) for the newly developed Malaysian Gen Y Family Resiliency Scale examined ten constructs with 102 items. The results indicate that the scale exhibits strong construct validity and factor structure. The EFA process was conducted through the Principal Axis Factoring (PAF) method, followed by the varimax rotation technique to refine the initial factor structure. The EFA results confirm that the Malaysian Gen Y Family Resiliency Scale (myFRSGY) is a robust instrument with strong psychometric properties. The construct validity is well-established, and each factor effectively represents its theoretical domain. Next, the researchers should proceed with Confirmatory Factor Analysis (CFA) to further refine and validate the scale.

DISCUSSIONS OF FINDINGS

This study aimed to develop and validate the Malaysian Gen Y Family Resiliency Scale (myFRSGY), addressing the need for a culturally relevant instrument to measure family resilience. Family resilience is a dynamic process that enables families to adapt to adversities, emphasizing psychological, structural, and social factors (Brik & Wang, 2024; Walsh, 2021). Exploratory Factor Analysis (EFA) identified ten distinct constructs with strong psychometric properties. Kaiser-Meyer-Olkin (KMO) values above 0.90 and significant Bartlett's Test of Sphericity ($p < .001$) confirmed sampling adequacy and factorability. The factors explained 60–73% of the total variance, effectively capturing key resilience dimensions. Cronbach's alpha (above 0.90) indicated high internal consistency, though some item redundancy suggests a need for refinement in future Confirmatory Factor Analysis (CFA). These results validate the construct validity of myFRSGY, reinforcing its applicability in assessing and strengthening family resilience among Malaysian Gen Y households.

The EFA results confirmed a well-defined ten-factor structure, aligning with Walsh's Family Resilience Framework (2003), which conceptualizes resilience as adaptability, meaning-making, and family cohesion. The extracted factors—family endurance, roles and responsibilities, intra-family support, communication, financial stability, adaptability, parenting, spiritual values, independence, and community support—demonstrated high factor loadings (most exceeding 0.60), affirming their relevance. The strong loadings of intra-family support (PPS) and family structure roles (RRFS) reinforce the importance of emotional and structural support in resilience-building (Novianti et al., 2024; Walsh, 2021). However, lower loadings for community support (SSNC) suggest a collectivist cultural tendency to prioritize family over external networks, as observed in Malaysia and Indonesia (Ungar, 2021; Brik & Wang, 2024).

The findings align with existing resilience measures, such as the Walsh Family Resilience Questionnaire (WFRQ) and the Family Resilience Assessment Scale (FRAS), while myFRSGY advances these by integrating financial stability, economic resilience, and spiritual values, which are culturally significant in Malaysia (Tilaki et al., 2024). Financial stability is a key resilience factor, particularly in societies where economic pressures influence family stability (Brik & Wang, 2024). Economic hardship correlates with lower resilience, contributing to relationship strain and mental health challenges (Novianti et al., 2024). Similarly, spirituality acts as a protective factor, promoting emotional regulation, meaning-making, and coping mechanisms (Howard et al., 2024). The inclusion of contextually relevant constructs highlights the need for culturally adaptive resilience models, reinforcing the idea that resilience is shaped by universal and sociocultural influences (Walsh, 2021;

Ungar, 2021).

The myFRSGY scale provides a culturally relevant framework for understanding Gen Y family resilience in Malaysia amidst modern challenges. Its practical applications span family studies, counseling, and policymaking, offering a standardized resilience assessment and intervention tool in clinical, educational, and social work settings (Novianti et al., 2024). It strengthens the foundation for resilience research and underscores the importance of culturally specific measures (Brik & Wang, 2024; Ungar, 2021).

While demonstrating strong psychometric properties, the myFRSGY scale has limitations, including potential sampling bias and reliance on self-report data. Further validation through CFA, cross-cultural studies, and longitudinal research is necessary to refine constructs and improve generalizability (Tilaki et al., 2024). Item reduction and testing across diverse family structures will enhance its robustness. The myFRSGY scale offers a culturally sensitive tool for assessing Malaysian family resilience, validated through EFA with strong reliability and validity. However, further research is crucial to ensure its long-term applicability in family counseling, interventions, and policy development.

CONCLUSION

The development and exploration of the initial factor structure of the Malaysian Gen Y Family Resiliency Scale (myFRSGY) represent a significant contribution to family resilience research. This culturally adapted, research-based scale provides an effective tool for assessing resilience factors specific to Malaysian Gen Y families. Exploratory Factor Analysis (EFA) confirmed a robust ten-factor structure, supporting its construct validity and reliability while reinforcing the theoretical foundations of Walsh's Family Resilience Framework (2003).

The myFRSGY scale effectively measures key dimensions of family resilience, including family endurance, intra-family support, communication, financial stability, adaptability, parenting, spiritual values, independence, and social networks. The factors support the unique socio-economic and cultural dynamics of Malaysian Gen Y population, attending to the gaps in Western resilience scales that may not fully arrest the realities of Malaysian Gen Y families

Despite its strong psychometric properties, further research is needed to enhance its reliability, generalizability, and predictive validity. The Exploratory Factor Analysis of the myFRSGY revealed item redundancy issues, suggesting the need for scale refinement. Thus, future research shall focus on eliminating overlapping items and conducting a new pilot study to validate the revised version, ensuring better scale reliability and applicability. Later, a Confirmatory Factor Analysis (CFA), cross-cultural validation, and longitudinal studies will help refine the myFRSGY scale and strengthen its applicability. Another concern is the sample's limited diversity, which affects generalizability. Future research should expand the sample to include rural, low-income, and cross-cultural groups to enhance the scale's validity. The myFRSGY scale has practical applications in family support services, social programs, policymaking, and resilience research. By reinforcing family resilience strategies, this scale can contribute to mental health support, financial stability, and overall well-being for Malaysian Gen Y families.

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REFERENCES

1. Aikat, D. (2019). Millennials usher a post-digital era: Theorizing how Generation Y engages with digital media. Emerald Publishing Limited. https://doi.org/10.1108/S2050-206020190000019002
2. Alderfer, M. A., Fiese, B. H., Gold, J. I., Cutuli, J. J., Holmbeck, G. N., Goldbeck, L., & Chambers, C. T. (2008). Evidence-based assessment in pediatric psychology: Family measures. Journal of Pediatric

Psychology, 33(9), 1046–1061. https://doi.org/10.1093/jpepsy/jsm083
3. Alias, N., Awang, Z., & Muda, H. (2020). Policy implementation performance of primary school leaders in Malaysia: An exploratory factor analysis. IIUM Journal of Educational Studies, 7(2), 22–39. https://doi.org/10.31436/ijes.v7i2.222
4. Almeida, S., Rodrigues da Silva, D., & Frasquilho, D. (2023). Cross-cultural adaptation and psychometric evaluation of the Portuguese version of the family resilience questionnaire–short form (FaRE-SF-P) in women with breast cancer. Frontiers in Psychology, 13, Article 1022399. https://doi.org/10.3389/fpsyg.2022.1022399
5. Awang, Z. (2015). SEM made simple: A gentle approach to learning structural equation modeling. MPWS Publisher.
6. Bartlett, M. S. (1950). Tests of significance in factor analysis. British Journal of Statistical Psychology, 3(2), 77–85. https://doi.org/10.1111/j.2044-8317.1950.tb00285.x
7. Bethell, C. D., Gombojav, N., & Whitaker, R. C. (2019). Family resilience and connection promote flourishing among US children, even amid adversity. Health Affairs, 38(6), 1032–1039. https://doi.org/10.1377/hlthaff.2018.05425
8. Brik, A. B., & Wang, Y. (2024). A double ABC-X model of family stress and adaptation of Asian parents. ResearchGate. Retrieved from https://www.researchgate.net/profile/Anis-Ben-Brik/publication/385635275_A_Double_ABC-X_Model_of_Family_Stress_and_Adaptation_of_Asian_Parents/links/67309c2077b63d1220e9a79d/A-Double-ABC-X-Model-of-Family-Stress-and-Adaptation-of-Asian-Parents.pdf
9. Bronfenbrenner, U. (1979). The ecology of human development: Experiments by nature and design. Harvard University Press.
10. Brown, T. A. (2015). Confirmatory factor analysis for applied research (2nd ed.). Guilford Publications.
11. Bunn, M., Zolman, N., Smith, C. P., Khanna, D., Hanneke, R., Betancourt, T. S., & Weine, S. (2022). Family-based mental health interventions for refugees across the migration continuum: A systematic review. SSM - Mental Health, 2, 100153. https://doi.org/10.1016/j.ssmmh.2022.100153
12. Burnette, C., Boel-Studt, S., & Renner, L. M. (2020). The Family Resilience Inventory: A culturally grounded measure of protective processes in Native American families. Family Process, 59(2), 289–304. https://doi.org/10.1111/famp.12423
13. Che Mustafa, M., Ayob, A., & Abdullah, N. (2025). Resilience and well-being of children in Malaysia: Towards the Sustainable Development Goals (SDGs). Journal of Lifestyle and SDGs Review, 5(1), e02825. https://doi.org/10.47172/2965-730X.SDGsReview.v5.n01.pe02825
14. Chiu, S. J., Chou, Y. T., Chen, P. T., & Chien, L. Y. (2019). Psychometric properties of the Mandarin version of the Family Resilience Assessment Scale (FRAS) in families of children with developmental disabilities. Journal of Child and Family Studies, 28(3), 831–843. https://doi.org/10.1007/s10826-018-1292-0
15. Chow, T. S., Tang, C. S. K., Siu, T. S., & Kwok, H. S. H. (2022). Family resilience scale short form (FRS16): Validation in the US and Chinese samples. Frontiers in Psychiatry, 13, Article 845803. https://doi.org/10.3389/fpsyt.2022.845803
16. Chua, R. Y., Kadirvelu, A., Yasin, S., & Park, M. S. A. (2021). An exploratory model of family resilience processes and functioning: A cultural perspective of the Semai Indigenous Communities in Perak, Malaysia. Journal of Cross-Cultural Psychology, 52(6), 567–582.
17. Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. Practical Assessment, Research, and Evaluation, 10(1), 1–9. https://doi.org/10.7275/jyj1-4868
18. DeVellis, R. F., & Thorpe, C. T. (2021). Scale development: Theory and applications (5th ed.). Sage Publications.
19. Ensz, J., Ermler, M., Rabbani, H., Saunders, M., Baker, S., & Mohiyeddini, C. (2024). Resilience—The ability to bounce back! Frontiers for Young Minds, 12. https://doi.org/10.3389/frym.2024.1279405
20. Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. Psychological Methods, 4(3), 272–299. https://doi.org/10.1037/1082-989X.4.3.272
21. Floyd, F. J., & Widaman, K. F. (1995). Factor analysis in the development and refinement of clinical assessment instruments. Psychological Assessment, 7(3), 286–299. https://doi.org/10.1037/1040-

3590.7.3.286
22. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. Journal of Marketing Research, 18(1), 39–50. https://doi.org/10.2307/3151312
23. Garson, G. D. (2012). Testing statistical assumptions. Blue Book Publishing.
24. George, D., & Mallery, P. (2010). SPSS for Windows step by step: A simple guide and reference (10th ed.). Pearson.
25. Goodyear, M. J., Allchin, B., Burn, M., von Doussa, H., Reupert, A., Tchernegovski, P., Sheen, J., Cuff, R., Obradovic, A., Solantaus, T., & Maybery, D. (2022). Promoting self-determination in parents with mental illness in adult mental health settings. Journal of Family Nursing, 28(2), 129–141. https://doi.org/10.1177/10748407211067308
26. Goyanes, M., Lopezosa, C., & Jordá, B. (2024). Thematic analysis of interview data with ChatGPT: Designing and testing a reliable research protocol for qualitative research. OSF Preprints. https://osf.io/8mr2f/download
27. Hadfield, K., & Ungar, M. (2018). Family resilience: Emerging trends in theory and practice. Journal of Family Social Work, 21(2), 81–84. https://doi.org/10.1080/10522158.2018.1424426
28. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). Multivariate data analysis (8th ed.). Cengage Learning.
29. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2020). Multivariate data analysis (8th ed.). Cengage Learning.
30. Hamim, N., Addiarto, W., & Rahmat, N. (2024). Family resilience in preventing Covid-19 pandemic. JI-KES (Jurnal Ilmu Kesehatan, 8(1), 1–8. https://doi.org/10.33006/jikes.v8i1.784
31. Hamzah, H., Tan, C. S., Ramlee, F., & Zulkifli, S. S. (2023). The 4-item Family Resilience Scale: Psychometric evaluation and measurement invariance of the Malay version in adolescents and young adults. BMC Psychology, 11, Article 1435. https://doi.org/10.1186/s40359-023-01435-5
32. Harper, Q. R. (2022). Reevaluating the factor structure of the Family Resilience Assessment Scale for African American college students [Doctoral dissertation, Old Dominion University]. ProQuest Dissertations Publishing. https://digitalcommons.odu.edu/cgi/viewcontent.cgi?article=1396&context=psychology_etds
33. Howard, M. C. (2016). A review of exploratory factor analysis decisions and overview of current practices: What we are doing and how can we improve? International Journal of Human-Computer Interaction, 32(1), 51–62. https://doi.org/10.1080/10447318.2015.1087664
34. Howard, N., Roelen, K., Ton, G., & Hermoza, M. E. (2025). A new approach to children's work that prioritises resilience, well-being, and agency: Emerging findings from a 'cash plus' intervention in Bangladesh. Open University. Retrieved from https://oro.open.ac.uk/102500/
35. In, Serena. (2021). A mixed methods study on the relationship between family resilience processes and adolescent mental health in Malaysian parent-child dyads [Master's thesis, Monash University]. Monash University. https://doi.org/10.26180/14431292.v1
36. Javaid, Z. K., Naeem, S., Haroon, S. S., Mobeen, S., & Ajmal, N. (2024). Religious coping and mental well-being: A systematic review on Muslim university students. International Journal of Islamic Studies and Culture, 4(2), 363–376.
37. Kaiser, H. F. (1974). An index of factorial simplicity. Psychometrika, 39(1), 31–36. https://doi.org/10.1007/BF02291575
38. Kline, R. B. (2015). Principles and practice of structural equation modeling (4th ed.). Guilford Publications.
39. Leung, J. T. Y., Shek, D. T. L., & Tang, C. M. (2023). Development and validation of the Chinese family resilience scale in families in Hong Kong. International Journal of Environmental Research and Public Health, 20(3), Article 1929. https://doi.org/10.3390/ijerph20031929
40. Li, H., Li, K. Y., Hu, X., Hong, X., He, Y. T., Xiong, H. W., & Zhang, M. (2025). Development and validation of the Information Literacy Measurement Scale (ILMS-34) in Chinese public health practitioners. BMC Medical Education, 25, Article 06693. https://doi.org/10.1186/s12909-025-06693-y
41. Nadrowska, N., Błażek, M., Lewandowska-Walter, A., Błażek, W., & Zdun-Ryżewska, A. (2022). Walsh Family Resilience Questionnaire-Polish Adaptation (WFRQ-PL). International Journal of Environmental Research and Public Health, 19(7), 4197. https://doi.org/10.3390/ijerph19074197
42. Nadrowska, N., & Błażek, M. (2021). Polish adaptation of the family resilience assessment scale (FRAS-

PL). Community Mental Health Journal, 57(5), 891-904. https://doi.org/10.1007/s10597-020-00626-3
43. Nguyen-Trung, K. (2024). ChatGPT in thematic analysis: Can AI become a research assistant in qualitative research? ResearchGate. https://www.researchgate.net/publication/377752239_ChatGPT_in_Thematic_Analysis_Can_AI_become_a_research_assistant_in_qualitative_research
44. Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric theory (3rd ed.). McGraw-Hill.
45. Novianti, E., Asih, S. R., & Eryando, T. (2024). Model of coping mechanism of adolescents with parental loss due to COVID-19: A study using PLS-SEM analysis. The Open Nursing Journal, 18. Retrieved from https://opennursingjournal.com/VOLUME/18/ELOCATOR/e18744346304632/FULLTEXT/
46. Margola, D., Fenaroli, V., & Sorgente, A. (2021). Psychological impact of COVID-19 on family resilience: A multilevel analysis. European Journal of Psychological Assessment, 37(5), 243–256. https://doi.org/10.1027/1015-5759/a000427
47. Masiran, R. (2022). A review of parenting in a multicultural country: The Malaysian experience. IntechOpen. https://doi.org/10.5772/intechopen.101173
48. McCubbin, H. I., & McCubbin, M. A. (1988). Typologies of resilient families: Emerging roles of social class and ethnicity. Family Relations, 37(3), 247–254.
49. McCubbin, H., Thompson, A., & McCubbin, M. (2009). Family resilience in military families: An empirical assessment using FRAS. Military Medicine, 174(4), 323–329.
50. McKinley, C. E., Saltzman, L. Y., & Theall, K. P. (2024). The Weaving Healthy Families program: Promoting parenting practices, family resilience, and communal mastery. Family Process, 63(1), 78–94. https://doi.org/10.1111/famp.12854
51. Meitasari, I. G. A. S., Nugroho, F., & Anugrahini, T. (2023). Fostering low-income family resilience: Findings from Walsh family resilience framework in Tapos Depok, Indonesia. International Journal of Social Science Research and Review, 6(6), 204–217. https://doi.org/10.47814/ijssrr.v6i6.1154
52. Morais, I., Carneiro, F. A., Sinval, J., Costa, P. A., & Leal, I. (2024). The Walsh family resilience questionnaire: Validity evidence from Portugal. Family Relations: An Interdisciplinary Journal of Applied Family Studies. Advance online publication. https://doi.org/10.1111/fare.13078
53. Mortejo, J. C. (2024). Balancing work and family commitments: Adaptive strategies of dual-income couples. International Journal of Empirical Research Methods, 2(1), 72–78. https://doi.org/10.59762/ijerm205275792120240305170520
54. Mundfrom, D. J., Shaw, D. G., & Ke, T. L. (2005). Minimum sample size recommendations for conducting factor analyses. International Journal of Testing, 5(2), 159–168. https://doi.org/10.1207/s15327574ijt0502_4
55. Murphy Salem, S., & Graham, R. J. (2021). Chronic illness in pediatric critical care. Frontiers in Pediatrics, 9, Article 686206. https://doi.org/10.3389/fped.2021.686206
56. Pallant, J. (2020). SPSS survival manual: A step-by-step guide to data analysis using IBM SPSS (7th ed.). Routledge.
57. Patterson, J. M. (2002). Integrating family resilience and family stress theory. Journal of Marriage and Family, 64(2), 349–360.
58. Rolland, J. S., & Walsh, F. (2006). Facilitating family resilience with childhood illness and disability. Current Opinion in Pediatrics, 18(5), 527–538.
59. Samad, N., Noor, M. A. M., & Mansor, M. (2024). Exploratory factor analysis: Evaluating the validity and reliability of the Middle Leader Competency Model. ResearchGate. Retrieved from https://www.researchgate.net/publication/376323849
60. Sekaran, U., & Bougie, R. (2019). Research methods for business: A skill-building approach (7th ed.). Wiley.
61. Sixbey, M. T. (2005). Development of the family resilience assessment scale to identify family resilience constructs [Doctoral dissertation, University of Florida].
62. Sixbey, M. T. (2006). Family Resilience Assessment Scale (FRAS) [Database record]. APA PsycTests. https://doi.org/10.1037/t58070-000
63. Sumari, M., Baharudin, D. F., & Khalid, N. M. (2020). Family functioning in a collectivist culture of Malaysia: A qualitative study. The Family Journal, 28(3), 311–323. https://doi.org/10.1177/1066480719844334
64. Tabachnick, B. G., & Fidell, L. S. (2018). Using multivariate statistics (7th ed.). Pearson.

65. Tetlow, S., Wallace, C., Thomas, M., & Filipponi, T. (2024). A systematic review of the use of the concept family resilience in interventions with families with children and young people. Public Health Nursing, 41(1), 35–49. https://doi.org/10.1111/phn.13287
66. Tilaki, M. J. M., Rahim, A. A., & Im, L. L. (2024). COVID-19's impact on food stall workers: Night markets' resilience in Penang, Malaysia. Planning Malaysia, 22(1). Retrieved from https://planningmalaysia.org/index.php/pmj/article/view/1604
67. Tusaie, K., & Dyer, J. (2004). Resilience: A historical review of the construct. Holistic Nursing Practice, 18(1), 3–10.
68. Twenge, J. M., Coyne, S. M., Carroll, J. S., & Wilcox, W. B. (2020). Teens in quarantine: Mental health, screen time, and family connection. Institute for Family Studies: The Wheatley Institution.
69. Ungar, M. (2021). Multisystemic resilience: Adaptation and transformation in contexts of change. Oxford University Press. https://doi.org/10.1093/oso/9780190095881.001.0001
70. Walsh, F. (1996). The concept of family resilience: Crisis and challenge. Family Process, 35(3), 261–281. https://doi.org/10.1111/j.1545-5300.1996.00261.x
71. Walsh, F. (2002). A family resilience framework: Innovative practice applications. Family Relations, 51(2), 130–137. https://doi.org/10.1111/j.1741-3729.2002.00130.x
72. Walsh, F. (2003). Family resilience: A framework for clinical practice. Family Process, 42(1), 1–18. https://doi.org/10.1111/j.1545-5300.2003.00001.x
73. Walsh, F. (2013). Religion and spirituality: A family systems perspective in clinical practice. In K. I. Pargament, A. Mahoney, & E. P. Shafranske (Eds.), APA handbook of psychology, religion, and spirituality (Vol. 2): An applied psychology of religion and spirituality (pp. 189–205). American Psychological Association. https://doi.org/10.1037/14046-009
74. Walsh, F. (2016). Family resilience: A developmental systems framework. European Journal of Developmental Psychology, 13(3), 313–324. https://doi.org/10.1080/17405629.2016.115403
75. Walsh, F. (2016). Strengthening family resilience (3rd ed.). Guilford Publications.
76. Walsh, F. (2020). Loss and resilience in the time of COVID-19: Meaning making, hope, and transcendence. Family Process, 59(3), 898–911. https://doi.org/10.1111/famp.12588
77. Walsh, F. (2021). Family resilience: A framework for clinical practice. Family Process, 60(3), 695–715. https://doi.org/10.1111/famp.12620
78. Wheeler, K. (2025). How to use generative AI to assist the analysis of qualitative data. Sage Research Methods. Retrieved from https://repository.essex.ac.uk/40034/1/How%20to%20use%20AI%20for%20qualitative%20analysis_Accepted%20pre-copyedit%20version.pdf
79. Williams, B., Onsman, A., & Brown, T. (2010). Exploratory factor analysis: A five-step guide for novices. Journal of Emergency Primary Health Care, 8(3), 1–13. https://doi.org/10.33151/ajp.8.3.93
80. Ye, Q., Yang, Y., Li, J., Wang, T., & Liu, N. (2024). How does family resilience develop among stroke survivors and their caregivers? A mixed-method study using a chain mediating model. International Journal of Nursing Studies Advances, 7, 100246. https://doi.org/10.1016/j.ijnsa.2024.100246
81. Zhang, W., Gao, Y., Ye, M., & Zhou, W. (2024). Family resilience and its predictors among patients with a first-ever stroke one month after stroke: A cross-sectional study. Topics in Stroke Rehabilitation, 31(2), 159–170. https://doi.org/10.1080/10749357.2023.2165270
82. Zhang, X., Wang, A., Guan, T., Kuang, Y., Zhang, Y., & Wu, F. (2023). Reliability and validity of the Chinese version of the Walsh Family Resilience Questionnaire among community-dwelling disabled elderly individuals (WFRQ-CE). Frontiers in Psychology, 13, 1095958. https://doi.org/10.3389/fpsyg.2022.1095958
83. Zhou, J., He, B., He, Y., Huang, W., Zhu, H., & Zhang, M. (2020). Measurement properties of family resilience assessment questionnaires: A systematic review. Family Practice, 37(5), 581–594. https://doi.org/10.1093/fampra/cmaa058