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Financial planning and financial well-being of B40 households with disabled children: Questionnaire validation

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Abstract: This study assesses the reliability and validity of a newly developed questionnaire measuring financial planning and financial well-being among B40 households with disabled children. The instrument was adapted from established 5-point Likert scale measures found in existing literature. A total of 50 responses were collected and analyzed using SPSS Version 29.0. The scale purification process involved testing for reliability and conducting exploratory factor analysis (EFA). Results indicate high internal consistency, with Cronbach's alpha values exceeding 0.7 across all constructs. Of the original 108 items, 97 were retained, representing 11 constructs aligned with the theoretical model. Factor loadings were strong and consistent for each construct, and the Kaiser-Meyer-Olkin (KMO) values surpassed 0.7, supporting the adequacy of the sampling. This study contributes to theory building and validation by verifying the conceptualization and operationalization of key constructs, offering a replicable framework for future research on financial planning and well-being among vulnerable households.

Keywords: *Autism, Autism, Disabled children, EFA, Financial attitude, Financial planning, Financial well-being.*

1. Introduction

The financial challenges experienced by families with children who have special needs are a major concern, as evidenced by numerous studies. Studies suggest that families with children with special needs (SNC) face elevated expenses and distress due to the demands of care [1]. Parents of SNC may incur substantial personal medical costs [2]. Insufficient insurance coverage among these SNCs has been linked to difficulties in accessing healthcare, challenges in utilizing healthcare services, and financial burdens on families [3].

Caring for individual SNCs can be expensive. Studies have demonstrated that families face several financial challenges beyond healthcare expenditures, including high out-of-pocket spending, obstacles linked to health plans, decreased involvement in the labour market, and worries about the quality of care Busch and Barry [4]. Kenneson and Bobo [5] assert that providing care for individuals with SNC, such as muscular dystrophy, can result in stress, which can have negative effects on the well-being and financial situation of caregivers. In other words, families with children with special needs face significant financial burdens due to medical and healthcare expenses, therapies, respite care, productivity loss, special education needs, and insurance coverage [6]. The wider social environment might worsen financial difficulties for families with SNC. Parents may face challenges in achieving work-life balance due to the demands of their family, which can impact their daily lives and overall satisfaction [7]. Parents with special needs children often experience severe financial, social, and emotional burdens as they prioritize their children's needs over their own [8].

In some cases, family members experience various physical and psychological impairments that affect their career development, causing unemployment and increasing financial burdens Ou et al. [9].

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McConachie et al. [10] asserted that having an SNC will cause 14 percent of income losses. This income reduction will further deplete their existing financial resources during increased financial needs. The loss of employment and other out-of-pocket expenses would have restricted the parents from accessing healthcare services that are part of the employee's benefits; this situation would further contribute to negatively impacting the parents' financial situation.

Another interesting issue is related to the future financial independence of SNC. Planning for SNC is essential to ensure they are financially independent when they reach adulthood, Sharpe and Baker [11]. Kapadia [12] studied data from the survey by MassMutual and discovered that 40 percent of families with autistic children face difficulties in accumulating wealth for long-term financial needs. Sivakumar [13] suggested a way to safeguard the child's future financial support through establishing a special needs trust. The trust can help protect assets and ensure that the child with special needs continues to receive necessary support even after the parents or caregivers are no longer able to provide it, Sivakumar [13]. It is also important to consider estate planning, including naming a guardian and creating a will, to ensure that the individual with special needs is cared for and supported in the event of the parents' or caregivers' death [14].

Focusing on children with autism spectrum disorder (ASD), previous studies have discovered that parents of children diagnosed with autism experience more severe financial issues and greater stress, which affect their overall well-being [15-18]. According to Järbrink et al. [19], the total cost of caring for children with ASD is three times higher than that of typically developing children. Further, Anderson et al. [20] asserted that many families who have children with ASD sometimes face financial difficulties, which may necessitate assistance from safety net programmes. To summarize, the literature study highlights the intricate nature of financial matters concerning children with special needs. Robust support networks are essential in mitigating the financial burden on families, taking into account healthcare expenses, wider financial obligations, and considerations for achieving a balance between work and personal life.

Therefore, this study examines the determinants of financial planning and financial well-being of B40 households with disabled children and develops a reliable framework with contextual factors that predict the financial planning and financial well-being of poor households with disabled children.

The subsequent sections of this study are as follows: Section 2 conducts a theoretical and empirical literature review, Sections 3 and 4 outline the materials and methodology and the results of the pilot study, respectively. It is then followed by a discussion and conclusions.

2. Literature Review

2.1. Theoretical Reviews

This study integrates the Theory of Planned Behaviour (TPB), Stress and Coping Theory, and the Life-Cycle Model of Consumption and Savings as theoretical foundations. According to Ajzen [21] Refers to, intentions are strong predictors of actual behavior. Associating the TPB with the context of retirement planning, therefore, individuals with strong intentions to prepare for retirement are more likely to engage in behaviors such as saving, investing, and making informed financial decisions that contribute to retirement readiness. An individual's level of knowledge or financial literacy, attitude and motivation, and financial stress can be prerequisite factors for effective behavior related to retirement readiness [22].

The stress and coping theory by Lazarus and Folkman [23] focused on psychological stress, cognitive appraisal, and coping. In this study, psychological stress is conceptualized as a "particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" [23]; While the process of cognitive appraisal is a mediator of transactions between a person, the environment, and the immediate and long-range outcomes of the transactions.

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Another theory is the life cycle theory (LCT) by Penrose [24], which introduced the life-cycle model of asset allocation and accumulation. The model differentiates between the propensity to consume and save at various stages of an individual's life.

The main reason for considering the above three major theories is based on the recent findings by Nawi and Hussin [25] on financial literacy. The study reported that an individual's level of financial literacy was found to change significantly with objective (i.e., income) and subjective factors (i.e., age, marital status) during the various stages of an individual's life. The levels of financial literacy among the participants also depend on their intentions to behave, and they will act according to their beliefs. The findings follow the proposition of stress-coping theory in relation to psychological stress.

2.2. Financial Well-Being

People define financial well-being in different ways. The well-being concepts have evolved to include both material and non-material aspects from the individual's perspective, such as their financial status, improved living standards, meeting essential needs, financial security, and income stability Taft et al. [26]. Brüggen et al. [27] have defined financial well-being as the ability of individuals or households to manage their budgets by avoiding excessive spending, which contributes to establishing financial security against economic risks such as unemployment, health issues, financial distress, and retirement planning. Parish et al. [28] have found that financial well-being for disabled families is associated with changes in income level, asset and wealth ownership, net worth, and liquid assets. The study has identified that when parents' age increases, financial well-being will gradually decrease, and financial security will be the primary concern when parents reach retirement age. The financial well-being requirement for families with disabled members would be more challenging, as non-financial well-being is relatively essential and is associated with the financial side. Thus, relevant knowledge in creating a plan is crucial in assisting these families to achieve better financial well-being [29].

2.3. Special Education Costs

The growth of the prevalence rate for children diagnosed with autism spectrum disorder from 1 out of 77 children in 2008 [30] to 1 out of 44 [31] has caused the increasing demand for various ASD-related services. The services related to ASD are expensive and demand a lifetime commitment to undergoing treatment and other healthcare services. As such, Blaxill et al. [32] have been motivated to carry out a study to estimate the costs associated with ASD indicates an increase in the overall expenditure on individuals with ASD. Special education is one of the major expenses incurred by parents in preparing their children to live independently in the future, and these expenses can significantly affect the financial well-being of families with autistic children. Children with autism require a different approach to special education or additional educational services compared to regular education; this includes specially trained educators, specialized equipment, and other relevant services and support. Consequently, the cost of special education tends to be higher than that of ordinary education programs. Although several studies focus on estimating costs related to special education for children with ASD, most current research emphasizes overall costs and expenditure on ASD, particularly in the U.K. and the U.S. [6].

2.3.1. Direct Therapies Costs for ASD

Sharpe and Baker [11] studied financial issues faced by parents with ASD children in the U.S. The study has pointed out that a family's financial distress begins at the time of early intervention for autism in children. As everyone tends to exhibit different symptoms and behaviors, the treatment applied varies based on the uniqueness of each individual, referring to the various diagnosed results. The high cost of treatments for autism has restricted many families from adopting more than one treatment to cater to their autistic children's needs. Vohra et al. [33] highlighted that, even though some families have health

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insurance coverage covering some medical costs, it is still insufficient to pay for most other medical expenses. Chen et al. [34] have also expressed concerns about losing health insurance coverage due to the high demand for insurance protection as the number of autism cases grows. The financial impacts would be more severe on low-income families, as there are other financial commitments to meet.

2.4. Costs of Informal Care and Lost Productivity for Family/Caregiver

Caring for children with diverse autism spectrum disorders poses significant challenges. Meeting the needs of an autistic child necessitates the allocation of time, as well as the management of emotional and psychological strain, along with the depletion of financial resources. The aforementioned circumstances resulted in significant financial consequences that had a profound impact on their overall financial stability, necessitating a major alteration in their way of life. According to Befkadu et al. [35], families that care for children with autism spectrum disorder (ASD) experience significant financial difficulties, resulting in substantial financial burdens and income-related setbacks. Numerous studies have revealed that the provision of informal care by parents has substantial financial implications for their engagement in the workforce. Rogge and Janssen [6] assert that parents frequently allocate both time and financial resources towards informal care for their children, resulting in productivity deficits that lead to a reduction in income.

2.4.1. Costs of Respite Care and Out-of-Pocket Expenses

Respite care for ASD refers to arrangements that provide temporary relief to permanent caregivers of children with ASD. Harper et al. [36] study collected data from 101 respondents and identified that respite care significantly reduces stress and improves marital quality and overall well-being. Respite care allows parents to have their own leisure time, which effectively helps them take a "break" in caring for their children, Dovgan and Mazurek [37]. Parish et al. [38] conducted a study to assess the financial well-being of single and working mothers while caring for their autistic children. Data was collected for the Survey of Income and Program Participation. The study measured the financial well-being of the respondents by evaluating their income and assets as variables in measuring financial well-being. The study identified that respite care adopted by the respondents played an essential role in assisting them in making maternal employment possible and in improving psychological and financial well-being.

2.5. Transportation/Mobility Issues

The mobility of children with ASD can impact the financial planning of families. According to Bhat [39], families with younger children, children with greater impairments, and low-income families reported a greater loss in services, concerns about the same, and a greater negative impact on ASD-related behaviors. This is consistent with previous research showing healthcare inequalities impacting families of children with greater autism severity, poor adaptive functioning, and low-income families the most [40, 41].

The location of healthcare facilities, special schools, and rehabilitation centers would have caused significant difficulties for parents in accessing transportation services [42]. As such, parents often discover that healthcare centers specializing in ASD treatment are far from their homes [43]. This geographical disparity has further increased transportation difficulties, complicating adherence to a consistent regimen of therapy sessions, medical appointments, and interventions. The logistical stress from prolonged commutes demands significant time and contributes to the financial burden. This often compels parents to allocate additional resources toward transportation expenses [44].

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2.6. Insurance Coverage

The rapid increase in the prevalence rate of ASD has caused financial challenges for parents in coping with the demand for special healthcare needs, as the costs associated with related healthcare and medical expenditures are expensive for low-income families [11]. As most of the current private insurance has low coverage in covering most of the costs associated with therapies and treatment for children with ASD, parents often face significant challenges in covering these expenses. Insurance will indeed help in reducing the financial burdens of families with ASD children [45] as medical and healthcare services, intervention therapies, and other support services that are essential for the growth of children through adulthood [46].

Lack of insurance coverage for the type of disorder and therapies needed is also causing a financial burden for families with ASD children. Several studies have identified various challenges families face in seeking medical and healthcare services and how these affect their financial situation. The lack of insurance coverage for children with ASD is crucial for families seeking important psychological and rehabilitation therapies, Noori et al. [47]. Zablotsky et al. [48] have identified that children with attention-deficit hyperactivity disorder and intellectual disability disorder are facing greater unmet insurance coverage compared to other disorders. A similar study has been conducted by Haller et al. [49] on the unmet healthcare services faced by children with intellectual disability and ASD in the U.S; there has also been a similar shortage of insurance coverage. The lack of insurance coverage has caused additional expenditure in meeting their healthcare and medical needs, which has resulted in financial strain for the parents.

2.7. Medical and Healthcare Costs

The relevant costs associated with this category include inpatient and outpatient costs, as well as medical and prescription expenses. Meanwhile, some other research studies have covered additional services relevant to ASD, such as emergency care, physician and general emergency services, other healthcare professionals, home healthcare services, hospitalization, and Medicaid expenditures [45, 50, 51]. In Malaysia, Kamaralzaman et al. [52] studied the cost components that cause economic burdens for families with ASD children. Generally, purchasing medical aid, diagnostic tests, surgery ward entrance fees, alternative treatment medicine costs, and medical and therapy fees are the main cost components in measuring direct medical costs. Thus, appropriate planning and budgeting are essential for families to ensure ongoing healthcare expenses are covered and receive the necessary care while also maintaining their financial well-being.

2.8. Financial Attitude

Shariff and Isah [53], in a survey of 200 Malaysians, it was found that most respondents did not view retirement as a negative phase of life. Instead, many looked forward to it, influenced by the financial behaviors of those around them. Individuals raised in frugal environments were more likely to adopt similar saving habits. This aligns with Kadir et al. [54], whose study of Klang Valley workers aged 18 to 41 and above identified personal attitude as a key factor influencing retirement planning behavior in Malaysia. Their findings also highlighted that a positive attitude contributes to greater retirement confidence. This suggests that individuals who prioritize financial planning are better equipped with the knowledge and mindset needed for a smooth transition into retirement. Similarly, Willows [55] found that retirement planning positively shapes financial attitudes, encouraging individuals to focus more on determining how much to save. The findings underscore the importance of guiding individuals to develop and commit to a retirement savings plan.

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2.9. Financial Behaviour

Perry and Morris [56] have expressed financial behaviours as the approaches individuals use to manage financial activities such as savings, expenses, and budgeting spending. Xiao and Porto [57], having a broader coverage, managing cash, savings, debt usage, long- and short-term investments, and spending are parts of financial behavior. Financial behavior influences an individual's actions regarding their finances, and the outcomes will impact their future financial well-being. One of the most critical aspects of financial well-being is understanding how one's behavior affects their ability to achieve financial stability. However, most adults globally lack the basic knowledge to manage their finances effectively [58]. Research suggests that low levels of financial literacy may lead to a host of undesirable financial behaviors, such as high debt and risky spending patterns [59].

2.10. Financial Knowledge

Financial knowledge is one of the main components in measuring financial literacy, alongside financial behaviors and attitudes [60]. Financial knowledge involves understanding financial principles, skills, and the ability to manage available financial resources to make critical financial decisions. Individuals with a better understanding of economics and finance can apply this knowledge to secure future financial security [61]. Individuals with sound financial knowledge can obtain the necessary information before adopting any financial products and services by assessing the pros and cons of each financial product and service. Financial skills such as understanding interest rates, compounding interest, debt repayment, inflation, and the time value of money enable individuals to evaluate the adoption of financial products and services. Decisions regarding investment, savings, loans, and retirement planning influence a person's future financial well-being [62].

Financial Education Network (FEN) in Malaysia recognizes the importance of financial knowledge in maintaining a healthy financial lifestyle. Their study indicated that one in three Malaysians lacks discipline in managing their finances due to limited financial knowledge.

2.11. Financial Planning

Financial planning is a critical process that involves assessing an individual's current financial situation and developing strategies to achieve future financial goals. Financial planning can serve as a guide for individuals to make informed financial decisions [63], which includes the benefits and consequences of the decisions (Malaysia Financial Planning Council-MFPLANC, 2004). Financial planning encompasses various components, including cash flow management, investment planning, retirement planning, risk management, and tax planning. Financial planning provides a mandatory system for people to save and consume, form provisions for unforeseen contingencies, as well as prepare for retirement [64]. Besides, Cheah et al. [65] asserted that wise and smart planning with finances by creating revenue streams sets in place a pathway for ultimate freedom. Research conducted by Adam et al. [66] confirmed that this feeling of security will unknowingly fulfill a person's financial well-being.

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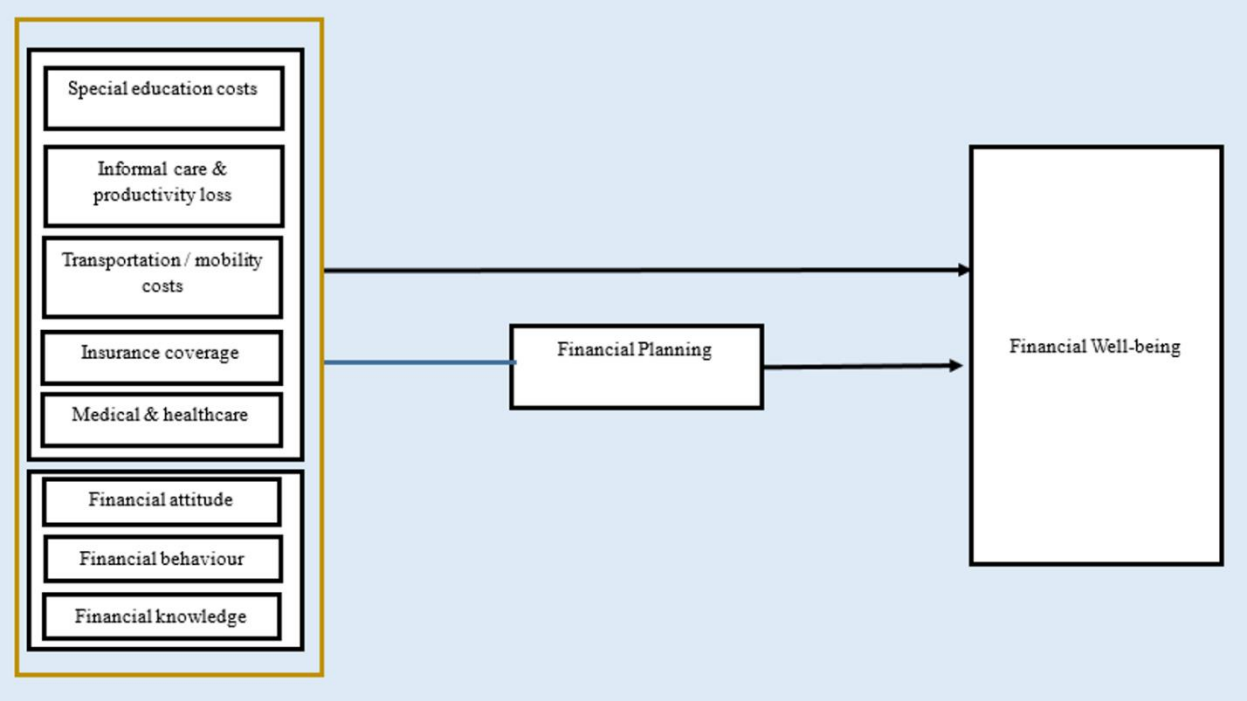

Figure 1.
Proposed research framework.

3. Materials and Methods

3.1. Research Design

The objective of this study is to evaluate the reliability and validity of a questionnaire designed to measure the influence of special education costs, informal care, medical costs, transportation/mobility costs, insurance coverage, financial attitude, financial behaviors, financial knowledge, and financial planning on financial well-being, mediated by financial planning and moderated by government support. The study employs a descriptive research design, systematically collecting, analyzing, preparing, and presenting data within a conceptual framework. A cross-sectional research design has been chosen to investigate the factors that influence the financial planning and financial well-being of B40 households with disabled children.

3.2. Participants of Pilot Study

Before conducting the formal pilot study survey, informal pilot study tests involving three parents of children with special needs were conducted. The average time required to complete the questionnaire was found to be less than 10 minutes. Subsequently, the questionnaire underwent a formal pilot phase among parents of children with special needs in Malaysia.

The participants are parents who have children with special needs, regardless of age. This study focused solely on individuals with autism spectrum disorder (ASD). Various methods were employed in the data collection process. Responses were gathered through online questionnaires distributed via Google Forms and by visiting schools and autism centers. Participants received a cover letter outlining the purpose of the study, along with a consent form and the questionnaire. They were informed about the survey's objectives and assured of the anonymity and confidentiality of their responses. Participation was entirely voluntary, and informed consent was obtained from all participants. The pilot study

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successfully collected data from 50 respondents. Ethical approval was obtained from the university's Research Ethics Committee.

3.3. Development of a Measurement for Questionnaire Design

To achieve the research objectives, questionnaires were developed containing 108 items designed into 3 sections; Section A presents questions related to Financial Well-being and Financial Planning; Section B presents questions related to other variables; and Section C is about Demographics. An introduction stating the researcher's identity and the study's goal was presented in the cover letter of the questionnaire. During the initial phases of developing a new questionnaire, scale validation is necessary. The use of questionnaires in various study settings is also facilitated by the translation and adaptation of scales into different languages [67]. For this reason, the questionnaire in this study was first translated before proceeding to confirm the validity, reliability, and various other properties of the scale for parents of children with special needs in Malaysia. Since the items obtained from the literature were defined in English, the translation was done early in the study [68].

Procedures for reliability and validity were carried out for the current investigation due to the dual versions. An academic translator converted the original literary works from their original English versions into Malay. Two final versions of the questionnaire, i.e., in Malay and English, were reconciled and made available. A second bilingual academic translator independently cross-checked both versions to confirm that the Malay and English survey instruments held and reflected the same intended meaning.

A Likert scale is used to assess attitudes, opinions, and behavioral intentions. Likert scales often employ a five-point scale to measure the degree of agreement or disagreement with a statement. Most business researchers utilize this type of scale to determine how likely customers are to exhibit certain behaviors [69]. Consequently, this study employed a five-point Likert scale for measurement. All constructs in the questionnaires utilize a 5-point Likert scale, where 1 = "Strongly Disagree," 2 = "Disagree," 3 = "Neither Agree nor Disagree," 4 = "Agree," and 5 = "Strongly Agree."

3.4. Content/Face Validation

In this study, validity and reliability are given significant attention, especially when considering the suitability of an instrument. Based on the opinions of experts, the validity of the instrument is established. The experts who need to engage must have the necessary qualifications, including education and industry experience [70]. According to Rubio et al. [71], the validity procedure should assign at least three evaluators. Therefore, four (4) validators (two academics and two experts) were chosen for the study. Face validity and content validity are the two types of validity that must be conducted. Face validity is the term for an evaluation in which the scale's items accurately reflect the construct of interest [70].

Furthermore, the degree to which the components of measurement scales are pertinent and indicative of the desired construct for a certain assessment purpose is also considered to fall within the definition of "content validity" [70]. Content validity must be assessed to ensure the construct validity of an instrument. It refers to the degree to which the items accurately represent the concept being measured and is essential in establishing the overall validity of the measurement tool [72]. The developed scale items were assessed for content adequacy, and all the constructs in the conceptual model could be measured using items on the instrument. A review by qualified expert reviewers can result in content validity [73].

Content validity was gathered by a panel of experts comprising academicians (two lecturers from two local universities in Malaysia) and two experts from industry, with expertise in special needs financial planning, reviewing the translated version of the questionnaire. The academics were chosen because they frequently served as judges of a measurement scale in earlier investigations, and the

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industry experts were chosen as they were very knowledgeable about the subject and determined whether the measures were logically legitimate [74]. To ensure the items were relevant and accurately represented the constructs, expert opinions were sought. Experts can significantly contribute by selecting a subset of items that are specifically pertinent to the constructs, thereby limiting the consideration of possibly correlated constructs and ensuring only relevant items are included.

Using feedback from the experts, the study reviewed the questions accordingly (no comments on the constructs' items; only needed to amend some grammatical errors). Following the feedback received, final adjustments were made to the questionnaire before its distribution for the pilot survey. A total of 108 items were included in the final version. The pilot survey aimed to refine the measurement items and improve the instrument's reliability and construct validity.

3.5. Scales of Measurement

The scales of measurement adopted in this study were constructed in two ways. Firstly, the reviews of literature guided the selection of nine constructs. Secondly, the identified constructs were integrated for conciseness.

3.6. Assessment of Questionnaire: Item Purification

The purification of the data from the literature includes assessing scale reliability with coefficient alpha (α), item-to-total correlation, and exploratory factor analysis (EFA). The information was gathered using 108 items to measure each of the framework's 11 constructs. According to Hair et al. [69], a minimum of three items is necessary to achieve acceptable reliability, but it is common to see at least five to seven items, and sometimes more. Thus, in this study, all the items used for each construct were within the range of 6 to 17 items, with the following construct distribution: *financial well-being – 13 items; financial planning – 8 items; special education cost – 14 items; respite care costs – 17 items; medical and healthcare costs – 6 items; transportation & mobility – 7 items; insurance coverage – 8 items; financial attitudes – 7 items; financial behaviour – 11 items; financial knowledge – 7 items.*

Subsequently, purification processes of measurement scales were carried out using scale reliability and exploratory factor analysis (EFA). SPSS 29.0 was used to measure coefficient alpha and item-to-total correlation values before applying the EFA. The survey study employed Cronbach's Alpha test to measure the reliability of the internal consistency of survey items. Specifically, the coefficient alpha and item-to-total correlation for provisional dimensions were considered to evaluate the internal consistency of all variables. The reliability analysis revealed that the statistical criteria for item retention were higher than 0.35 for item-to-total correlation [69]. This study considered an alpha of 0.7 to be the minimum threshold, with lower coefficients potentially acceptable depending on the research objectives [69, 75].

After looking into the reliability of the data, the study applied an EFA[1]. The EFA is used since the researcher has no expectations of the number or nature of the factors [76]. Principal component analysis and varimax rotation were used to perform EFA. The suitability of the data for Exploratory Factor Analysis (EFA) was assessed using the Kaiser–Meyer–Olkin (KMO) measure and Bartlett's Test of Sphericity. Bartlett's test evaluates whether the variables are significantly correlated [77]. EFA was conducted by grouping the items into nine theoretical constructs, with a minimum factor loading threshold set at 0.50. The KMO values exceeded the acceptable cutoff of 0.50, and Bartlett's Test of Sphericity produced p-values below 0.05, indicating the data were appropriate for factor analysis [69]. Communalities were also examined to assess the explanatory power of each item, with only those above

[1] Sample sizes (N) = 50 is considered as a reasonable absolute minimum for using the EFA (de Winter et al., 2009).

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0.50 retained [69]. Furthermore, factors with eigenvalues greater than 1.0 were extracted, following the criteria recommended by Pallant [78] and Hair et al. [69].

4. Results

The following table presents the results generated from reliability analysis and EFA. The results show that Cronbach's alpha values for the variables are all above 0.7, indicating good internal consistency and reliability [75]. The assessment of internal consistency reliability was positively associated with factors' coefficient alphas (α=above 0.70 for all constructs). The reliability of each construct was confirmed by Pearson intercorrelation for subsequent investigation on internal consistency.

The results showed a significant p-value of 0.001, and item-to-total correlations slightly exceeded the threshold of 0.35, indicating acceptable internal consistency. EFA results demonstrated that each item loaded clearly onto a single factor within its respective construct. The Kaiser-Meyer-Olkin (KMO) values for all constructs were above 0.6, suggesting adequate sampling adequacy for factor analysis [68]. Additionally, Bartlett's Test of Sphericity confirmed significant correlations among items, supporting the factorability of the correlation matrix.

Overall, 11 items were deleted due to low communalities and factor loadings (below the threshold value of 0.5 for both). The items are one (1) item from FINANCIAL PLANNING, three (3) items from SPECIAL EDUCATION COST, three (3) items from RESPITE CARE COST, one (1) item from FINANCIAL ATTITUDES, two (2) items from FINANCIAL BEHAVIOUR, and one (1) item from FINANCIAL KNOWLEDGE.

The following table summarizes the overall statistical findings of the study.

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Table 1.
Results of the pilot study (EFA & Reliability analysis).

Items		KMO	Bartlett's Test of Sphericity			Eigen Value	% of Variance	Cronbach Alpha	Loadings
			Approx. Chi-Square	df	Sig.				
Financial Well-being (WB)		0.872	833.58	78	0.000	10.048	77.291	0.975	
WB1	Income meets needs.								0.818
WB2	Debt level is acceptable.								0.831
WB3	Earnings sustain a lifestyle.								0.832
WB4	Save monthly.								0.851
WB5	Income covers responsibilities.								0.862
WB6	No current financial worries.								0.845
WB7	Make sound financial decisions.								0.918
WB8	Prepared for future needs.								0.925
WB9	Finances can handle shocks.								0.932
WB10	No daily financial concerns.								0.900
WB11	Do not rely on credit.								0.838
WB12	Satisfied with the economy.								0.925
WB13	Income supports financial goals.								0.937
Financial Planning (FPLAN)		0.771	252.61	28	0.000	4.446	55.572	0.877	
FPLAN1	Immediate financial goals are specific and structured.								0.728
FPLAN2	Financial success begins with clear goals.								0.797
FPLAN3	Regularly update financial goals to reflect current situations.								0.831
FPLAN4	Manage expenses to stay within budget.								0.683
FPLAN5	Spending is well-regulated and controlled.								0.786
FPLAN6	Not stressed about current debt.								0.642
FPLAN7	Consistently contribute to the emergency fund.								0.637
FPLAN8	Not relying on borrowing for daily expenses shows financial discipline								Deleted
Special Education Costs (EDU)		0.806	641.99	91	0.000	7.335	52.39	0.886	
EDU1	Education for my autistic child causes financial strain.								Deleted
EDU2	Limited public options push me to a private school, straining my budget.								Deleted
EDU3	Few suitable mainstream schools increase pressure.								0.744
EDU4	Lack of public support for inclusion raises costs.								0.730
EDU5	Cut family expenses to fund the child's education.								0.800
EDU6	Parents face high costs due to few skilled teachers.								0.804
EDU7	Providing proper education is a big burden.								0.884
EDU8	Families face more pressure from limited special services.								0.904
EDU9	No inclusive programs force extra spending on alternatives.								0.883
EDU10	Families often face money problems from a lack of options.								0.916
EDU11	Costly services force sacrifices in other budget areas.								0.745
EDU12	Public programs cannot fully meet diverse needs.								Deleted
EDU13	Homeschooling or private schooling adds strain.								0.550
EDU14	High costs affect jobs, savings, and future goals.								0.925
Informal Care & Productivity Loss (RESPITE)		0.831	752.858	136	0.000	8.775	51.619	0.928	
RESPITE1	To afford rising care costs, I work part-time for extra income.								0.766
RESPITE2	Caring for my autistic child makes work commitments difficult.								0.815
RESPITE3	One parent must stay home, causing lost income and higher obligations.								Deleted
RESPITE4	Caregiving strains my work-life balance and finances.								0.805
RESPITE5	Lack of affordable daycare reduces work hours and participation.								0.696
RESPITE6	Not returning to full-time work lowers income, savings, and long-term security.								0.837

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RESPITE7	Two incomes reduce poverty risk and support family stability.							Deleted
RESPITE8	Lack of affordable daycare cuts parents' job opportunities.							0.602
RESPITE9	Prioritizing my child limits my career growth and financial stability.							0.738
RESPITE10	Giving up work to provide care impacts family well-being.							0.586
RESPITE11	Childcare for my autistic child is a heavy financial burden.							0.757
RESPITE12	High childcare costs affect my family's well-being.							0.836
RESPITE13	Unexpected rehab and childcare costs exceed financial expectations.							0.835
RESPITE14	Arranging childcare creates economic stress.							0.757
RESPITE15	Childcare expenses are financially heavy.							0.890
RESPITE16	Covering childcare reduces the ability to meet other commitments.							0.779
RESPITE17	Hiring a domestic worker adds financial pressure.							Deleted
Medical & Healthcare Costs (MED)		0.906	408.132	15	0.000	5.27	87.837	0.972	
MED1	Therapy and treatment costs for my autistic child are hard to manage.							0.957
MED2	Traveling for medical and specialized care adds financial strain.							0.952
MED3	Covering frequent therapy sessions is difficult.							0.959
MED4	Medication, supplements, and special diets increase financial challenges.							0.940
MED5	Travel, accommodation, and specialized care create major stress.							0.865
MED6	Therapy costs plus household expenses are a heavy financial burden.							0.946
Transportation / Mobility costs (MOBIL)		0.838	220.974	21	0.000	4.382	62.596	0.894	
MOBIL1	Follow-up appointments increase costs due to transport.							0.831
MOBIL2	Limited public transport makes access harder and costlier.							0.789
MOBIL3	Without special transport, services would be very expensive.							0.897
MOBIL4	Paying for transport adds financial pressure.							0.784
MOBIL5	Families seek cheaper travel options to save money.							0.572
MOBIL6	Special transport or vehicle changes increase strain.							0.788
MOBIL7	Transport costs are a heavy burden.							0.837
Lack of Insurance Coverage (INS)		0.768	81.057	10	0.000	2.803	56.069	0.761	
INS1	Lack of ASD insurance increases financial pressure on families.							0.826
INS2	No coverage for therapies burdens families with autistic children.							0.699
INS3	Limited insurance worsens financial hardship and care access.							0.880
INS4	Ongoing care and poor coverage block financial stability.							0.920
INS5	Families bear therapy costs due to insurance gaps.							0.908
INS6	Inadequate coverage leads to high out-of-pocket expenses.							0.916
INS7	Families often cut other essentials due to poor ASD coverage.							0.936
INS8	Without full coverage, therapy costs create major financial strain.							0.903
Financial Attitude (ATT)		0.871	318.957	21	0.000	4.985	71.221	0.903	
ATT1	A positive attitude supports effective financial planning.							0.864
ATT2	Confident in managing finances for long-term goals.							Deleted
ATT3	Proactive planning is essential for well-being.							0.911
ATT4	Able to set and pursue financial goals.							0.816
ATT5	Financial discipline is key to success.							0.932
ATT6	Optimism helps overcome challenges.							0.934
ATT7	Long-term planning ensures lasting success.							0.922
Financial Behaviour (BEH)		0.758	442.311	55	0.000	6.054	55.036	0.906	
BEH1	Regularly track expenses to meet financial goals.							0.766
BEH2	Consistently save for future needs and emergencies.							Deleted
BEH3	Seeking to improve financial knowledge.							0.829
BEH4	Basing financial and investment choices on research.							0.824
BEH5	Maintain a clear financial plan with short- and long-term goals.							0.900
BEH6	Update financial plan as needs change.							0.860
BEH7	Prioritize debt repayment and credit management.							Deleted
BEH8	Diversify investments to manage risk and returns.							0.747

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BEH9	Delay gratification to achieve long-term goals.							0.760
BEH10	Seek advice from financial advisors when needed.							0.820
BEH11	Compare interest rates to maximize savings.							0.730
Financial Knowledge (KNOW)		0.778	276.301	21	0.000	4.315	61.646	0.876	
KNOW1	Financial knowledge helps low-income families engage with the financial system.							0.917
KNOW2	Good financial understanding improves decision-making.							0.870
KNOW3	Rely on financial knowledge for smart investments and savings.							0.548
KNOW4	Financial planning knowledge is key to managing expenses and needs.							0.932
KNOW5	Expert advice improves financial knowledge and decisions.							0.825
KNOW6	Without financial knowledge, effective planning is unlikely.							0.789
KNOW7	Manage daily finances efficiently.							Deleted

Source: Developed by the authors for the current study.

5. Discussion and Conclusions

This study identified and confirmed factors that influence the financial well-being of B40 households with disabled children in Malaysia, offering new insights into proper financial planning and managing the personal costs of families with special needs in Malaysia. All theoretical, operationalization of constructs, and methodological underpinnings as demonstrated in this study contributed to prospective research.

Firstly, a more nuanced understanding concerning 'special education costs', 'informal care & productivity loss', 'transportation/mobility issues', 'insurance coverage', 'medical & healthcare costs', 'financial attitude', 'financial behaviour', and 'financial knowledge'. Relevant factors that were commonly associated with normal family settings were all accounted for concerning special needs families.

Secondly, the potential interdependencies among the Financial Literacy Model, Financial Planning, and special cost factors highlight the feasibility of how these concepts were operationalized. Although most constructs used in this study have been examined in prior research, their operationalization remains limited due to insufficient evidence on the validity and reliability of existing measurement scales. This study's analysis of questionnaires administered to Malaysian families with special needs children not only identified key constructs but also provided supporting evidence for the construct validity and reliability of previously established scales.

Finally, given the prevalence of factors influencing financial well-being, the framework presented in Figure 1 can be introduced as a standard measurement for B40's special needs families.

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Institutional Review Board Statement:

This study received ethical approval from the National Defence University of Malaysia. Prior to participation, all participants provided written informed consent in accordance with institutional and international ethical standards.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study, with no vital features omitted, and any discrepancies from the planned study have been explained. This study adhered to all ethical practices during writing.

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