ORIGINAL ARTICLE OPEN ACCESS

A Study on First Time Fathers After the Birth of Their Child: Paternal Involvement

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ABSTRACT

Background: The transition to fatherhood represents a critical period for first-time fathers, influencing their parenting self-efficacy (PSE), social support, postnatal depression (PND), and overall satisfaction in parenting and marital relationships. Cultural perspectives may shape these experiences, particularly in Malaysian contexts. This study aimed to examine the levels of PSE, social support, PND, parenting satisfaction, marital satisfaction, relationship with their fathers, and paternal involvement among first-time fathers at discharge from the hospital and one month postpartum, while exploring correlations among these variables across different socio-demographic subgroups.

Methods: A cross-sectional survey was conducted with 32 first-time fathers in Kuantan, Pahang. Data were analyzed using descriptive statistics and Pearson correlation to identify relationships among variables.

Results: Results indicated high levels of PSE among fathers, which increased over time, while social support also improved. PND levels were low, and paternal involvement was moderate, with most fathers sharing caregiving tasks with their partners. Notably, significant differences were observed in parenting efficacy based on age and attendance at antenatal classes, and paternal involvement was influenced by educational level. The positive correlation between PSE and paternal involvement underscores the importance of enhancing fathers' confidence and engagement in parenting. The study highlights the role of socio-demographic factors in shaping paternal experiences and outcomes, consistent with findings in similar cultural contexts.

Conclusion: This study emphasizes the significance of enhancing PSE and support systems for first-time fathers, underscoring the need for culturally relevant interventions that foster active paternal involvement and mitigate potential postnatal challenges. Future research should explore larger, diverse samples to strengthen the generalizability of these findings.

Keywords: Fatherhood; Paternal involvement; Parenting self-efficacy; Social support; Postnatal depression; Parenting satisfaction; Marital satisfaction; Relationships; First-time fathers.

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Article History:

Submitted: 15 August 2024
Revised: 20 March 2025
Accepted: 23 March 2025
Published: 31 March 2025

DOI: 10.31436/ijcs.v8i1.391
ISSN: 2600-898X

INTRODUCTION

Paternal involvement significantly impacts the well-being of infants, mothers, and fathers. Fathers who are actively engaged during pregnancy, childbirth, and the postpartum period often foster stronger parent-child bonds and contribute positively to family dynamics (1–3). Previous studies have explored predictors of paternal involvement, particularly in Western contexts, examining factors such as self-efficacy, marital satisfaction, social support, and mental health (4–6). These studies have demonstrated that fathers' attitudes, support systems, and psychological health can influence their participation in childcare and co-parenting (7).

Cultural expectations surrounding fatherhood, however, vary considerably. The traditional view of fathers as primarily financial providers has evolved, encouraging more nurturing roles in Western societies. Asian fathers, meanwhile, may face distinct societal expectations and barriers to involvement, especially regarding masculinity and family roles (8–10). Research in the Asian context on paternal involvement remains limited, although a few studies have identified relevant predictors, such as paternal self-efficacy, social support, and marital satisfaction (11,12). More in-depth qualitative studies are necessary to understand the unique experiences and challenges faced by fathers in Asian cultures (13).

Self-efficacy, or confidence in one's parenting abilities, is especially significant for paternal involvement. Studies indicate that fathers with high self-efficacy are more active, confident, and satisfied with their parenting role (14). Fathers with higher self-efficacy also report lower levels of stress and depression, which are otherwise known to hinder father-child interactions (15). However, the impact of self-efficacy on paternal involvement may differ across cultures, particularly for Asian fathers who may experience limited access to paternal support networks (16).

The mental health of fathers is another crucial factor, as symptoms of depression can significantly reduce engagement in child-rearing activities (17,18). Fathers with high levels of depressive symptoms tend to engage less in parenting, which can affect child development and family well-being (19). Although few studies examine paternal mental health within Asian cultural settings, stigma surrounding mental health in these societies may restrict fathers from seeking support (20). Furthermore, paternal involvement is strongly influenced by spousal relationships and support. Studies have found that marital satisfaction, partner support, and a close relationship with one's own parents enhance paternal engagement (21,22). Fathers who receive emotional and instrumental support, such as guidance from family members and friends, better balance work and family life, promoting positive parenting behaviors (23).

Despite the importance of paternal involvement, limited research addresses this topic in Asia, where cultural, economic, and social factors influence parenting behavior uniquely. This study aims to address a critical gap in the literature by examining the experiences and predictors of paternal involvement in a Malaysian context. Understanding the factors that promote or hinder paternal involvement will provide insight into how cultural norms impact fatherhood. Thus, the objective of this study is to examine the experiences of first-time fathers in early parenthood, focusing on the specific factors that impact their involvement in childcare and family dynamics within the cultural setting of Malaysia.

METHODS

Study Design

This study used a cross-sectional design to investigate the experiences and perceptions of first-time fathers in early parenthood through the administration of self-reported questionnaires.

Research Instrument

In this study, the research instrument consists of seven parts to identify the experiences and perceptions of first-time fathers in early parenthood. Those are:

Part A: Sociodemographic Data: This section collects participants' sociodemographic characteristics, including age, education level, ethnicity, and income.

Part B: Parenting Self-Efficacy (PSE): The 10-item Parenting Efficacy Scale (PES) by Teti and Gelfand (1991) as modified by Leerkes and

Crockenberg (2003) measures fathers' beliefs in their self-efficacy for parenting tasks. The PES has demonstrated good reliability and validity across different populations (24 & 25).

Part C: Perceived Social Support for Parenting (PSSP): This section uses the four-item Perceived Social Support for Parenting scale developed by Leerkes and Crockenberg (2002) to measure fathers' satisfaction with the social support they receive from their partners and others. This instrument has shown high internal consistency and construct validity (25).

Part D: Postnatal Depression: The 10-item Edinburgh Postnatal Depression Scale (EPDS) by Cox, Holden, and Sagovsky (1987) assesses depressive symptoms among first-time fathers. The EPDS has well-established reliability and validity in various cultural contexts (26).

Part E: Paternal Involvement: An eight-item instrument adapted from Rustia and Abbott (1993) measures fathers' engagement and accessibility during the early postpartum period. This measure has been validated in similar populations and settings (27).

Part F: Parenting Satisfaction: The evaluation subscale of the "What Being the Parent of a New Baby is Like" (WPBL) questionnaire by Pridham and Chang (1989) evaluates fathers' satisfaction with their parenting role. This scale has shown good psychometric properties in previous studies (28)

Part G: Couples Satisfaction Index (CSI) – The 16-item Couples Satisfaction Index by Funk and Rogge (2007) measures marital satisfaction between fathers and their spouses. The CSI has demonstrated strong reliability and validity across diverse populations (29).

Part H: Family of Origin Questionnaire (FOQ) – The FOQ by Lewis and Owen (1995) assesses the relationship between first-time fathers and their own fathers. The instrument has been validated and is considered reliable for exploring familial relationships (30).

Data Collection and Sample Size

This study was conducted during the COVID-19 pandemic. Therefore, the data collection was conducted entirely online due to the Movement Control Order. Participants were recruited through social media platforms such as WhatsApp, Facebook, Instagram and local community groups. To ensure a representative sample, the selection criteria included:

Inclusion Criteria:

- First-time fathers with a child aged six months or younger.
- Fathers residing in Kuantan, Pahang.
- Ability to provide informed consent.

Exclusion Criteria:

- Fathers who had previous children.
- Non-residents of Kuantan, Pahang.

Upon receiving of the informed consent from the targeted participants, they were given the link to complete the questionnaires via online. The online format allowed for a wider reach and facilitated data collection during the pandemic, although it may have limited the depth of responses and interaction with participants.

In this study, a power analysis for multiple linear regression was conducted to determine the minimum sample size. Based on the literature, eight independent variables were anticipated for the regression model, including PSE, social support, postnatal depression, parenting and marital satisfaction, relationship with fathers' own fathers, and various sociodemographic variables. Using a medium effect size of 0.15, 80% power, and a significance level of 0.05 (two-tailed), a minimum of 107 participants was required (31). To account for an anticipated attrition rate of 15%, as observed in a prior local study with mothers, a total sample of 125 fathers was targeted (32). However, out of the 125 participants targeted, data was collected from 32 participants, resulting in a response rate of 25.6%. It was because most of the studied participants did not complete some questionnaires and had to be excluded from this study.

Statistical Analysis

IBM SPSS Statistics for Windows, Version 23.0 (IBM Corp., Armonk, NY), was used for data analysis. Descriptive statistics were computed for sociodemographic data and outcome variables. Following tests for normality, independent t-tests and analysis of variance (ANOVA) were used to compare levels of

outcome variables. Pearson's product-moment correlation coefficient was employed to examine relationships among the primary outcome variables. Statistical significance was set at a *p*-value<0.05.

Ethical Approval

Participants were informed that participation was entirely voluntary, with all responses recorded anonymously. They were assured of confidentiality and informed of their right to withdraw from the study at any point without penalty. Ethical approval was obtained prior to data collection from the IIUM ethics committee.

RESULTS

To fulfil the objective of this study, the research and the team was analyse the levels of outcomes among first-time fathers, specifically focusing on parenting self-efficacy (PSE), social support, postnatal depression (PND), parenting satisfaction, marital satisfaction, and paternal involvement at the time of discharge and post-confinement.

In this study, a total of 32 first-time fathers participated in the study, all identifying as Malay. The majority of participants were aged 21-30 years (65.6%), with 34.4% aged 31-52 years. Educationally, the fathers predominantly held foundation/diploma qualifications (40.6%) or bachelor's degrees and higher (56.3%). Regarding employment, 18.8% were self-employed, 75% were full-time employed, and 6.3% were part-time employed, with working hours averaging 8.47 hours. The reported household incomes varied, with 6.3% earning less than RM1000, 21.9% between RM1000 and RM2999, 53.1% between RM3000 and RM5999, 9.4% between RM6000 and RM9999, and 9.4% over RM10,000. Additionally, 53.1% of the fathers indicated that their wives were in paid work, while 46.9% stated that they were not. In terms of delivery mode, 84.4% of the participants reported a normal vaginal delivery, whereas 15.6% indicated an instrumental vaginal delivery. Furthermore, 28.1% of fathers reported that their wives attended antenatal classes, and only 15.6% accompanied their wives to these classes. The details of the participants' demographic characteristics are shown in **Table 1**.

Table 2 and **3** shows parenting self-efficacy of first-time father on the day of discharge and 1 month after discharge from the hospital. This study findings showed a mean score of 32.34 (SD=4.749) on the day of discharge, which increased to 36.63 (SD=2.927) after one month, indicating a positive trend. The perceived social support from partners and others also showed improvement, with fathers reporting a mean score of 31.44 (SD=5.775) at discharge, rising to 35.34 (SD=2.280) one month later. For postnatal depression, the mean score was 7.41 (SD=4.493) at discharge, which decreased to 5.50 (SD=2.841) after one month, suggesting low levels of depression among first-time fathers.

Paternal involvement was measured with mean scores of 20.41 (SD=4.989) at discharge and an increase to 22.44 (SD=2.906) after one month. Similarly, parenting satisfaction showed a slight increase from a mean of 88.97 (SD=7.191) at discharge to 92.41 (SD=4.832) after one month. The fathers also reported high levels of couple satisfaction, with mean scores of 43.19 (SD=7.917) at discharge and 46.38 (SD=4.449) after one month. Finally, the relationship with their own fathers had a mean score of 27.38 (SD=3.740) at discharge, slightly decreasing to 27.25 (SD=4.024) after one month. Overall, these results suggest positive trends in parenting self-efficacy, social support, and satisfaction levels among first-time fathers in the first month following childbirth.

Table 4 describe the findings details of the influence of socio-demographic factors on first-time fathers' experiences and outcomes, including parenting self-efficacy (PSE), social support, postnatal depression (PND), parenting satisfaction, marital satisfaction, relationships with their own fathers, and paternal involvement at two key time points: the day of discharge and one month postpartum. Using a combination of independent t-tests, Mann-Whitney tests, one-way ANOVA, and Kruskal-Wallis tests, significant differences emerged across various subgroups. For parenting efficacy on the day of discharge, age was a notable factor. Fathers aged 31-52 reported a slightly higher mean parenting efficacy score (32.5) compared to those aged 21-30 (mean score of 32.24), with the difference reaching statistical significance (p=0.021). This suggests that older fathers may experience a marginally greater sense of parenting self-efficacy initially. One month postpartum, educational level played a significant role in paternal involvement. Fathers holding a degree or higher reported a

higher level of involvement (mean score of 23.78) than those with a foundation, diploma, or secondary education (p=0.007), suggesting that higher educational attainment may positively influence active paternal involvement.

Table 1: Demographic characteristics of participants (N=32)

Variable	Mean	Number(n)	Percentage (%)
Age	29.25		
21-30		21	65.6%
31-52		11	34.4%
Race	1.00		
Malay		32	100%
Chinese		0	
Indian		0	
Others			
Education Level	3.53		
Primary School		0	0
Secondary School		1	3.1%
Foundation/Diploma		13	40.6%
Bachelors Degree or above		18	56.3%
Employment Status	1.88		
Self-employed		6	18.8%
Full-time employee		24	75%
Part-time employee		2	6.3%
Working hours per week	8.47		
6		2	6.5%
7		2	6.5%
8		13	41.9%
9		7	22.6%
10		5	16.1%
12		1	3.2%
16		1	3.2%
Average household income	2.94		
Less than RM1000		2	6.3%
RM1000 – RM2999		7	21.9%
RM3000 – RM5999		17	53.1%
RM6000 – RM9999		3	9.4%
More than RM10,000		3	9.4%
Wife in paid work	1.47		
Yes		17	53.1%
No		15	46.9%
Mode of wife/partner's delivery			
Normal vaginal delivery		27	84.4%
Instrumental vaginal delivery (Forcep-assisted or vacuum-assisted)		5	15.6%
Water birth		0	0%
Attend antenatal class			
Yes		9	28.1%
No		23	71.9%
Accompany wife to antenatal class			
Yes		5	15.6%
No		27	84.4%

Table 2: Parenting self-efficacy of first-time father on Day of Discharge (N=32)

Variables (Day of discharge)	Mean	Standard Deviation
Parenting Efficacy	32.34	4.749
Parental support	31.44	5.775
Depression	7.41	4.493
Paternal Involvement	20.41	4.989
Parenting Satisfaction	88.97	7.191
Couple Satisfaction	43.19	7.917
Relationship with their own father	27.38	3.740

Table 3: Parenting self-efficacy of first-time father on 1 month (N=32)

Variables (1 month)	Mean	Standard Deviation
Parenting Efficacy	36.63	2.927
Parental support	35.34	2.280
Depression	5.50	2.841
Paternal Involvement	22.44	2.906
Parenting Satisfaction	92.41	4.832
Couple Satisfaction	46.38	4.449
Relationship with their own father	27.25	4.024

The wife's educational level also affected fathers' perceptions of social support on the day of discharge. Fathers with partners who held a degree or above reported significantly higher parental support (median score of 34.00) compared to those with less educated partners (p=0.026). Employment status further impacted fathers' depression levels on the day of discharge. Part-time employees exhibited the highest mean depression score (16.50), followed by self-employed fathers (mean score of 8.00), while full-time employees reported lower levels of depression (mean score of 6.50), highlighting the emotional toll potentially associated with employment instability (p=0.006).

In terms of antenatal engagement, fathers who accompanied their wives to antenatal classes demonstrated significantly higher parenting efficacy on the day of discharge (mean score of 39.00) than those who did not attend (mean score of 31.11) (p<0.001). This finding underscores the positive impact of antenatal involvement on paternal confidence in parenting. Finally, the method of childbirth was found to influence parenting satisfaction one month postpartum, with fathers whose partners experienced a normal vaginal delivery reporting higher satisfaction (median score of 93.00) compared to those with instrumental vaginal delivery (p=0.022).

These findings collectively highlight the important role that socio-demographic factors and antenatal engagement play in shaping early fatherhood experiences, particularly in parenting efficacy, depression, social support, and satisfaction levels at various stages postpartum.

As shown in **Table 5** and **6**, this study also examined the correlations among key variables; fathers' parenting self-efficacy (PSE), social support, postnatal depression (PND), parenting satisfaction, marital satisfaction, and paternal involvement at on the day of discharge and one month post discharge from the hospital, Pearson's correlation analysis was conducted.

The findings indicated a small positive correlation between parenting efficacy and paternal involvement among first-time fathers, with a correlation coefficient of r=0.397. Although classified as a small correlation, the result suggests that higher levels of parenting efficacy are associated with increased paternal involvement. In terms of parenting efficacy and parenting satisfaction, there was a moderate positive correlation observed both on the day of

discharge (r=0.598 and one month postpartum (r=0.666), indicating that fathers with higher parenting efficacy tend to report greater parenting satisfaction over time.

Furthermore, a moderate positive correlation was found between marital satisfaction and the fathers' relationship with their own fathers, with a correlation value of r=0.457. This finding suggests that first-time fathers who report higher satisfaction in their relationships with their partners also tend to have a stronger relationship with their own fathers. These correlations provide insights into how dimensions of parenting efficacy, satisfaction, and intergenerational relationships may interact, emphasizing the interconnectedness of these experiences in the early stages of fatherhood.

Table 4: Relationships between socio-demographic characteristics and the outcomes for first-time fathers (N=32)

Outcome Variable	Sociodemographic data	Sociodemographic Details	Mean (SD) or Median (IQR)	t and f Statistic	p-value
Parenting Efficacy (Day of Discharge)	Age	21-30 years: 32.24 (3.872) 31-52 years: 32.5 (6.314)	Mean Difference = -0.171	(30) = 4.247	0.021
Paternal Involvement (1 Month)	Educational Level	Foundation/Diploma: 20.62 (2.074) Degree or above: 23.78	t(2) = 5.894	0.007	
Parental Support (Day of Discharge)	Wife's Educational Level	Foundation/Diploma: 31.00 (7) Degree or above: 34.00 (5)	(df) = 2	0.026	
Depression (Day of Discharge)	Employment Status	Self-employed: 8.00 Full-time employee: 6.50 (3.648) Part-time employee: 16.50 (6.364)	F(2, 31) = 6.191	0.006	
Paternal Involvement (1 Month)	Employment Status	Self-employed: 19.33 (3.615) Full-time employee: 23.13 (2.328) Part-time employee: 23.50 (0.707)	t(2, 31) = 5.437	0.010	
Parenting Efficacy (Day of Discharge)	Attendance at Antenatal Class	Yes: 39.00 (1.732) No: 31.11 (4.041)	Mean Difference = 7.889	t(30) = 4.247	0.000
Parenting Satisfaction (1 Month)	Method of Delivery	Normal vaginal delivery: 93.00 (4) Instrumental vaginal delivery: 93.00 (13)	(df) = 1	0.022	

p-value<0.05

Table 5. Pearson correlation for all outcome variables on the day of discharge

Variables	Parenting efficacy (1)	Parental support (1)	Depression scale (1)	Paternal involvement (1)	Parenting satisfaction (1)	Couple satisfaction (1)	Relationship with own father (1)
Parenting efficacy (1)		-.006 (.975)	.206 (.257)	.397 (.025)	.598 (<0.001)	-.111 (.546)	.238 (.190)
Parental support (1)	-.006 (.975)		-.043 (.815)	.286 (.113)	.103 (.575)	.222 (.222)	.171 (.348)
Depression scale (1)	.206 (.257)	-.043 (.815)		.309 (.085)	.216 (.235)	-.267 .140	-.038 .836
Paternal involvement (1)	.397 .025	.286 .113	.309 .085		.195 .286	.164 .370	.334 .062
Parenting satisfaction (1)	.598 .000	.103 .575	.216 .235	.195 .286		.177 .333	.216 .234
Couple satisfaction (1)	-.111 .546	.222 .222	-.267 .140	.164 .370	.177 .333		.487 .005
Relationship with own father (1)	.238 .190	.171 .348	-.038 .836	.334 .062	.216 .234	.487 .005	

p-value<0.05

Table 6. Pearson correlation for all outcome variables on 1 month

Variables	Parenting efficacy (1)	Parental support (1)	Depression scale (1)	Paternal involvement (1)	Parenting satisfaction (1)	Couple satisfaction (1)	Relationship with own father (1)
Parenting efficacy (1)		.034 .852	-.329 .066	.096 .602	.666 .000	-.133 .470	.082 .655
Parental support (1)	.034 .852		.033 .856	.196 .283	.010 .955	.448 .010	-.010 .958
Depression scale (1)	-.329 .066	.033 .856		.052 .779	-.357 .045	-.018 .921	-.078 .670
Paternal involvement (1)	.096 .602	.196 .283	.052 .779		.099 .588	.274 .129	.225 .216
Parenting satisfaction (1)	.666 .000	.010 .955	-.357 .045	.099 .588		-.078 .672	.258 .153
Couple satisfaction (1)	-.133 .470	.448 .010	-.018 .921	.274 .129	-.078 .672		.227 .211
Relationship with own father (1)	.082 .655	-.010 .958	-.078 .670	.225 .216	.258 .153	.227 .211	

p-value<0.05

DISCUSSION

Firstly, the observed positive correlation between parenting efficacy and paternal involvement aligns with recent literature underscoring PSE as a resilience factor for fathers. High PSE has been associated with greater warmth and involvement, mitigating the effects of stress and depression on parenting behaviors (33 & 34). This is particularly relevant in the context of Malaysian culture, where traditional gender roles often dictate paternal involvement. Fathers who feel competent in their parenting roles are likely to challenge these norms and engage more actively, fostering stronger parent-child bonds and positive child development outcomes.

The moderate correlation between PSE and parenting satisfaction further underscores this relationship. Recent research suggests that fathers who perceive themselves as competent in their parenting roles report higher levels of satisfaction (34). In the Malaysian cultural context, where community and familial expectations around parenting can be significant, this sense of satisfaction may act as a crucial motivator for increased paternal engagement. For instance, cultural pressures to conform to specific parenting roles can heighten stress levels, but higher PSE may

provide fathers with the confidence to navigate these expectations more effectively (35).

Moreover, the association between marital satisfaction and the relationship with the father's own father highlights the broader influence of intergenerational dynamics on paternal involvement. Positive paternal role models contribute to higher marital satisfaction and support, which, in turn, enhances paternal involvement (36). This intergenerational influence is particularly significant in Asian cultures, where familial relationships often dictate social roles and responsibilities. For example, Malaysian fathers may feel compelled to emulate the parenting styles of their own fathers, impacting their involvement with their children (37).

These findings emphasize the importance of considering fathers' socio-demographic and personal factors, particularly in the Asian context, when supporting them in early parenthood. Interventions that foster parenting confidence, such as antenatal classes that include fathers, may help improve PSE and, subsequently, parenting satisfaction and involvement (36 & 38). Furthermore, recognizing the unique cultural perspectives and practices of Malaysian fathers is crucial for developing effective support mechanisms. Tailored interventions that respect cultural nuances could enhance paternal engagement, particularly in a society where traditional views on masculinity and fatherhood persist.

Therefore, this study underscores the interplay between fathers' personal competencies, relational dynamics, and socio-demographic factors in influencing early paternal involvement. This aligns with the growing recognition of fathers' critical role in child development and family functioning, while also highlighting the need for further research that incorporates local contexts and cultural perspectives. There remain gaps in the literature regarding the specific challenges and supports that Malaysian father encounter, suggesting that future studies should explore these areas in greater depth to better understand the unique contributions of fathers in Asian societies.

CONCLUSION

This study provides significant insights into the multifaceted experiences of first-time fathers during the early postpartum period, focusing on parenting self-efficacy, social support, postnatal depression, parenting satisfaction, marital satisfaction, relationships with their own fathers, and paternal involvement. The findings indicate that many first-time fathers report high levels of parenting efficacy and satisfaction, which positively correlate with their involvement in childcare. Importantly, socio-demographic factors such as age, educational level, employment status, and the relationship with their own fathers significantly influence these paternal outcomes.

These results highlight the importance of supportive interventions tailored to fathers, particularly in the context of Malaysian culture, where traditional gender roles may shape paternal involvement. By fostering environments that encourage fathers to engage actively in parenting, healthcare providers and policymakers can promote healthier family dynamics and better developmental outcomes for children. Further research is needed to explore the long-term effects of paternal involvement on family relationships and child development, particularly in diverse socio-cultural settings. Addressing the gaps in literature regarding fathers' roles in Asian contexts will be crucial in developing effective support systems that cater to the unique challenges and strengths of fathers in this region.

RECOMMENDATION

Based on the findings of this study, several recommendations can be made to enhance the experiences of first-time fathers during the postpartum period. First, healthcare providers and policymakers should prioritize the inclusion of fathers in antenatal and postnatal programs. Evidence suggests that active paternal involvement during these critical periods can significantly improve parenting self-efficacy and satisfaction (33 & 38). Therefore, offering tailored educational sessions that address the specific challenges faced by fathers can help equip them with the necessary skills and confidence to engage actively in parenting from the outset.

Second, interventions should be culturally sensitive and take into account the unique dynamics of Malaysian families, as paternal roles may differ significantly within various cultural contexts (35 & 37). Community-based

programs that focus on strengthening familial relationships and support networks could enhance fathers' engagement and reduce feelings of isolation, especially for those with lower social support.

Lastly, further research should explore the long-term impacts of paternal involvement on child development outcomes and family dynamics, particularly in the context of diverse socio-demographic groups. Longitudinal studies could provide deeper insights into how early paternal experiences shape future parenting behaviors and relationships. Addressing these areas will not only benefit first-time fathers but also contribute to healthier family environments and better developmental outcomes for children.

LIMITATION

The study faced several limitations that may impact the generalizability and applicability of its findings. Firstly, the sample size of 32 first-time fathers, although providing preliminary insights, is relatively small and may not adequately represent the broader population of fathers in Malaysia. This limited sample size restricts the ability to draw robust conclusions about the diverse experiences of first-time fathers across various socio-demographic backgrounds (37).

Additionally, the data collection was conducted during the Covid-19 pandemic, which necessitated the use of an online approach for distributing questionnaires. This method may have excluded potential participants who were less technologically adept or had limited internet access, potentially introducing bias into the sample. Face-to-face interactions, which could have fostered a more comprehensive understanding of participants' experiences, were not feasible due to movement restrictions imposed by the national authorities (35).

Moreover, the study's reliance on self-reported measures may raise concerns regarding the accuracy and honesty of the responses, as social desirability bias could influence how fathers perceive and report their levels of parenting efficacy, involvement, and mental health symptoms (37). Future studies should aim to include larger, more diverse samples and consider mixed-methods approaches to capture a more nuanced understanding of first-time fathers' experiences in different cultural contexts.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

FUNDINGS

No funding provided for this study

ACKNOWLEDGEMENTS

Special thanks to all respondents who participated in this study.

AUTHORS CONTRIBUTION

MSN: Overall project supervision.
ALAN: Data collection, data analysis and manuscript drafting.
TSSJ: Study conceptualization and finalizing manuscript.
SS: Methodology development.
RYS: Literature support for discussion.

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