DETERMINANTS OF SERVICE QUALITY FACTORS AND PARENT SATISFACTION IN CHILDCARE CENTRE
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ABSTRACT – This study delves into the intricate dynamics of Malaysian childcare centres, focusing specifically on the elements that contribute to service quality and, ultimately, parental satisfaction. The research seeks to understand the underlying connections and impacts of various factors on parent satisfaction, excluding the aspect of educational leadership. With potential adverse outcomes from poor service quality, such as suboptimal child development and parental stress, this study aims to identify the key factors that enhance service experiences in early childhood settings. Adopting a quantitative approach, the study utilizes a causal research design to explore the relationships between various service quality elements and parent satisfaction. A comprehensive survey method was employed, offering a cross-sectional snapshot of opinions from parents with children in Malaysian childcare services. The study's design ensures precision in testing hypotheses, with findings analysed using advanced statistical tools like SPSS and PLS-SEM. The hypothesis testing reveals interesting insights. It shows the rejection of certain assumed direct impacts of basic facilities, curriculum, and program structure on parent satisfaction. However, other factors emerged as significant in shaping parental perceptions. Notably, the study found that specific service quality factors, particularly in the domain of student interactions, play a crucial role in determining parent satisfaction. The research methodology included a pilot study in Kota Bahru, Kelantan, for preliminary validation of the survey instruments. Purposive sampling selected 318 parents from various childcare centres, ensuring a relevant and focused sample. The findings indicate that while some service quality aspects may not directly influence parent satisfaction, others are crucial. The study’s implications are significant for policy and practice in early childhood education, emphasizing the enhancement of specific service quality factors as a strategy to uplift parent satisfaction in Malaysian childcare centres. This research adds an important dimension to the understanding of service quality and parent satisfaction in the context of early childhood education.

ARTICLE HISTORY
Received: 01/10/2023
Revised: 20/11/2023
Accepted: 1/12/2023

KEYWORDS
Service Quality
Parent Satisfaction
Childcare Centre
Malaysia
Ecer

INTRODUCTION
In today's dynamic world, high-quality service in sectors like childcare is increasingly recognised as key to success. Childcare, pivotal in early development, significantly impacts parental satisfaction and children's future (Schober & Spiess, 2015; Stahl et al., 2018). Understanding and improving childcare services, especially in contexts like Malaysia, is crucial. Research indicates that aspects like educational leadership are vital for enhancing childcare quality and increasing parental satisfaction (Arpino & Luppi, 2020; Charrois et al., 2020; Gialamas et al., 2015; Schober & Spiess, 2015; Stahl et al., 2018; Weaven & Grace, 2010). Childcare, or early childhood education and care (ECEC), is essential for a child's cognitive, social, and emotional growth, catering to children before primary school age. This sector's role in long-term child success is increasingly recognised as global demand for quality childcare rises (Hong et al., 2020; Ishida et al., 2018; Zhou & Oishi, 2005). ECEC plays a critical role in developing key skills in children. For instance, it nurtures social-emotional skills like attachment and theory of mind, vital for understanding social interactions from an early age (Killen & Coplan, 2012). ECEC also aids in developing language, math, and social skills, laying the groundwork for future academic and social success (Burger, 2015). Additionally, it is instrumental in fostering self-esteem and forming the basis of future relationships (Raburu, 2015). The support ECEC offers to parents and caregivers positively impacts the home environment, crucial for holistic child development. Lastly, early childhood education and care for sustainability (ECECFS) promotes values and skills essential for sustainable development, emphasising the importance of nurturing individuals who contribute to societal progress (Koen, 2021).
PROBLEM STATEMENT

Globally, there's a growing demand for top-notch childcare services, driven by factors like increased women's participation in the workforce, recognition of early childhood education's importance, and urbanization (Schober & Spiess, 2015). Technological advancements and the need for specialized skills have also pushed parents to seek the best start for their children, amplifying the need for high-quality childcare (Hatzigianni & Kalaitzidis, 2018). In Malaysia, this demand mirrors global trends, spurred by changes in women’s work participation, family structures, and heightened awareness of early childhood education. The Malaysian government, acknowledging this surge, has integrated quality childcare into its strategic plans, including the 12th Malaysia Plan (Rahmatullah et al., 2021). High-quality childcare is crucial for children’s cognitive, social, and emotional development, influencing their readiness for school and long-term academic success (Melhuish, 2014; Sylva et al., 2011). It also provides a secure environment that nurtures children’s curiosity and growth, enhancing parental satisfaction (Rahmatullah et al., 2021).

To improve childcare quality and achieve the 12th Malaysia Plan's goals, the Malaysian government focuses on developing a comprehensive framework for early childhood care and education. A key initiative is enhancing childcare providers' quality through the PERMATA Early Childhood Care and Education Course (Economic Planning Unit, 2020). This mandatory course for childcare providers aims to elevate service standards, thereby increasing parental satisfaction and the quality of care. However, challenges persist in the Malaysian childcare sector. The COVID-19 pandemic raised health and safety standards, pressuring childcare facilities to adapt. Many struggled, leading to decreased service quality and parental satisfaction (Chin et al., 2021). Emerging trends show new-generation parents have higher expectations, including educational environment, health and safety, staff-to-child ratio, and staff qualifications. Failing to meet these expectations has resulted in growing parental discontent (Dan Dan et al., 2021; Rahmatullah et al., 2021).

In Kelantan, specific parent expectations towards childcare service quality warrant focused research. These expectations span various factors crucial in choosing childcare services, emphasizing the need to align services with parental perspectives to ensure satisfaction and quality care (Hussin et al., 2019). Family involvement also plays a significant role in influencing expectations and perceptions in Kelantan (Isa et al., 2013). The study seeks to comprehensively address factors affecting service quality in the Malaysian childcare sector, identifying strategies to enhance service quality and increase parent satisfaction. Neglecting this study could lead to a continued decline in service quality, detrimental effects on children's development, and rising parental discontentment (Fenech, 2012).

Focusing on the above issues, this study proposes the following research objective (RO).

RO: What is the service quality factors that impact parent satisfaction in the context of childcare centres?

LITERATURE REVIEW

PARENT SATISFACTION

Parent satisfaction in childcare centres is a key indicator of service success. As primary customers, parents' contentment significantly influences a centre’s reputation and growth (Vesely et al., 2013). Several factors contribute to this satisfaction. Quality of staff interaction with children, staff qualifications, and attitude play a major role in shaping parents' perception of care quality (Harms et al., 2014; Williford et al., 2013). Safety, cleanliness, and the overall physical environment are critical, with well-maintained and stimulating facilities likely to meet or exceed parental expectations (Denny, 2016). Value for money is also a considerable factor, as parents weigh the cost against the care and development offered to their children (Malik, 2018). Children’s emotional well-being is a vital aspect. Parents are satisfied when their children look forward to attending the centre and show signs of happiness (Parker et al., 2022). Thus, childcare centres must focus on high care standards, safety, value, and children's happiness.

Parent satisfaction also hinges on program quality, staff interaction, safety, and affordability. Elliot (2010) found a strong link between satisfaction and quality of care, staff interaction, and the
Parental satisfaction is subjective and may be influenced by various factors beyond those evaluated by valuable feedback for increasing satisfaction and enhancing service quality, it is important to correlate with improved child outcomes and greater parental satisfaction. While ECERS provides holistic child development and meeting the needs of families and staff relationships, and the overall value of the childcare settings, highlighting their effectiveness in various cultural contexts underlines its universality in assessing early childhood environments (Harms et al., 2014). Further justification for ECERS’s superiority includes its global adoption, reliability, consideration of cultural relevance, and its multidimensional assessment approach. It has been validated in various contexts, proving its effectiveness in capturing quality dimensions crucial for children's well-being (Brunsek et al., 2017; Garvis et al., 2018; Mathiesen et al., 2011; Rentzou, 2017). The ECERS-R scale consists of seven subscales measuring key aspects of early childhood environments: Space and Furnishings, Personal Care Routines, Language-Reasoning, Activities, Interaction, Program Structure, and Parents and Staff. These subscales collectively offer an in-depth understanding of the quality of early childhood environments (Harms et al., 1998, 2014). While SERVQUAL is a valuable tool in many industries, its dimensions may not fully capture the intricate dynamics of a childcare environment. The ECERS-E, with its emphasis on the physical environment, language, and personal care routines, offers a more specialized approach suited to childcare settings, providing a framework to measure quality and establish relationships between environment quality, child outcomes, and parent satisfaction (Khamis & Sammons, 9 2007; Taggart et al., 2015).

ECERS and ECERS-E cover a wide range of factors crucial in childcare settings, including basic facilities, staff quality, curriculum, children interaction, program structure, childcare provider relationships, and the overall value of the childcare centre. These factors are essential for promoting holistic child development and meeting the needs of families and staff (Harms et al., 2014; Mashburn et al., 2008; Taggart et al., 2015). High-quality early childhood environments, as measured by ECERS, correlate with improved child outcomes and greater parental satisfaction. While ECERS provides valuable feedback for increasing satisfaction and enhancing service quality, it is important to note that parental satisfaction is subjective and may be influenced by various factors beyond those evaluated by...
ECERS. ECERS aligns more closely with parental concerns compared to SERVQUAL, reflecting factors that affect parental satisfaction in early childcare settings (Harms et al., 1998).

**RESEARCH METHODOLOGY**

This research adopts a causal design to explore the relationships between service quality and parent satisfaction in childcare, using field experiments and questionnaires. It incorporates elements of exploratory research, including a literature review, to develop robust hypotheses and clarify concepts. A quantitative approach is used, aiming to identify factors leading to parent satisfaction with childcare services. A cross-sectional survey is conducted to describe characteristics of the Malaysian childcare service population. Data is collected through a survey, gaining insights into factors contributing to parent satisfaction and challenges faced by childcare service management.

The methodology includes quantitative methods like systematic investigation and quantifiable data collection, applying statistical techniques. This approach adds depth to understanding the experience of satisfaction, complementing existing studies. The study design is multifaceted and categorized based on the study’s reference period, investigation nature, and the number of contacts with the population. The survey method is used for data collection, subjecting responses to statistical analysis. The methodology involves selecting the topic, forming research questions and objectives, followed by an extensive literature review on parental satisfaction. This process sets the stage for developing the methodology and proceeding with the study.

The study uses a predominantly quantitative approach, employing survey research (Memon & Tahir, 2012). The survey incorporates both quantitative and qualitative strategies, like numerically rated items and open-ended questions, used either independently or in a mixed-methods approach. A cross-sectional design is applied, assessing the prevalence of the research problem at a specific point in time. This approach, while economical and straightforward, cannot measure changes over time. Probability random sampling is used to ensure unbiased representation. The Welfare Department of Malaysia provides a list of registered childcare centres for creating a sampling frame. A two-step translation process is employed for the survey, involving forward and backward translation to ensure accuracy across languages.

Questionnaire items are adapted from established scales, modified to fit the Malaysian context. The combination of sampling, translation, adaptation, and survey item selection ensures credible results applicable to Malaysian early childhood education. The research procedure includes a preliminary phase for hypothesis development, questionnaire design, pre-testing, a pilot study, main data collection, analysis, and drafting of findings and the final report. The pilot study in Kota Bahru, Kelantan, tests the validity and reliability of the questionnaire. Clear instructions, a feedback mechanism, and pilot feedback ensure that parents understand the questionnaire items. The main study is conducted across Kelantan, Malaysia, using sophisticated software like SPSS and PLS-SEM for data analysis. Hypotheses are tested to generalize and interpret findings, contributing significantly to the knowledge of parental satisfaction and service quality in childcare settings.

The study's population includes parents enrolling their children in Malaysian childcare centres. The sample size is carefully determined to avoid low response rates or data oversampling. The G*Power software aids in determining a minimum sample size for the study. A sample size of 160 respondents is identified as sufficient for achieving the study’s goals. Sampling techniques include probability and non-probability methods. This study uses purposive sampling, selecting participants based on specific criteria and objectives. The sampling involves selecting 318 parents from childcare centres across Malaysia, ensuring a focused and relevant data set. Questionnaire development involves adapting constructs from scholarly works. The questionnaire is divided into sections capturing demographic information and items related to service quality and parent satisfaction. It is designed to be straightforward, avoiding ambiguity, and is available in both English and Malay.

Data collection involves developing and pre-testing the questionnaire. Official approval from the Welfare Department of Malaysia is obtained, and a hybrid data collection approach is used to improve response rates. The questionnaire is administered to 318 respondents from 159 childcare centres.
Questionnaire pre-testing ensures reliability and validity, involving an expert evaluation. Experts from various fields evaluate the questionnaire, providing feedback that leads to modifications. This process enhances the questionnaire's validity and alignment with the study's objectives. In summary, the research methodology employed in this study is thorough and robust, combining quantitative approaches and careful sampling to ensure credible and applicable results in the context of Malaysian childcare service quality and parent satisfaction.

**HYPOTHESIS & RESULT**

| Hypothesis | Relationship                                      | Standard Deviation (STDEV) | T Statistics (|O/STDEV|) | P Values | Supported |
|------------|--------------------------------------------------|---------------------------|----------------|----------|-----------|
| H1-1       | Basic Facilities -> Parent Satisfaction           | 0.076                     | 0.742         | 0.229    | NO        |
| H1-2       | Curriculum -> Parent Satisfaction                 | 0.09                      | 0.185         | 0.427    | NO        |
| H1-3       | Program Structure -> Parent Satisfaction          | 0.148                     | 1.747         | 0.04     | YES       |
| H1-4       | CP Relationship -> Parent Satisfaction            | 0.092                     | 0.455         | 0.325    | NO        |
| H1-5       | CP -> Parent Satisfaction                         | 0.103                     | 0.605         | 0.273    | NO        |
| H1-6       | Children Interaction -> Parent Satisfaction       | 0.078                     | 1.151         | 0.125    | NO        |
| H1-7       | Value of the childcare centre -> Parent Satisfaction | 0.098                   | 1.192         | 0.117    | NO        |

The statistical analysis of the hypothesized relationships between various childcare centre factors and parent satisfaction produced a mix of results. Each hypothesis tested a different potential determinant of parent satisfaction, using T statistics to determine the strength of the relationship and P values to assess its statistical significance. The first hypothesis, H1-1, investigated whether the basic facilities of a childcare centre, such as its safety features and amenities, affect parent satisfaction. The results indicated that this was not the case, as the T statistics were below the critical value and the P value did not indicate statistical significance (P = 0.229).

Similarly, H1-2 examined the impact of the childcare centre's curriculum on parent satisfaction and found no significant effect, as evidenced by a low T statistic and a P value (P = 0.427) that exceeded the threshold for significance. The third hypothesis, H1-3, explored the relationship between the program structure of the childcare centre, including the daily schedule and variety of activities offered, and parent satisfaction. Here, the analysis revealed a different outcome. With a T statistic approaching the critical value and a P value (P = 0.04) just under the customary cut-off, this hypothesis was supported, suggesting that the program structure does indeed play a role in how satisfied parents are with the childcare service.

Next, H1-4 assessed whether the relationship between childcare providers and parents (CP Relationship) was associated with parent satisfaction. The analysis suggested that this factor did not significantly influence parent satisfaction, as both the T statistic and P value (P = 0.325) fell short of indicating significance. H1-5 focused on the influence of the childcare provider (CP) themselves on parent satisfaction. Again, the results did not support a significant relationship, as indicated by the T statistic and a P value of 0.273.

The sixth hypothesis, H1-6, evaluated the impact of children's interactions within the childcare centre on parent satisfaction. While arguably important for child development, children's interactions
did not significantly impact parent satisfaction within the scope of this study, as the T statistic was below the critical value and the P value was 0.125. Finally, H1-7 considered whether the perceived value of the childcare centre, which could include factors such as the centre's reputation and the quality of education, influenced parent satisfaction. The data did not support this hypothesis, with a P value of 0.117 indicating no significant relationship.

In summary, out of the seven hypothesized determinants of parent satisfaction in childcare centres, only the program structure of the centre (H1-3) demonstrated a significant impact. This implies that while parents may consider a range of factors when evaluating childcare services, it is the daily routine and the activities provided that are most likely to influence their satisfaction levels. The analysis underscores the complexity of parent satisfaction, suggesting that it is not solely based on tangible aspects such as facilities or even the interactions children have at the centre, but rather on the overall experience and enrichment that the program structure offers to their children.

DISCUSSION

The study tested several hypotheses to determine the factors influencing parent satisfaction in childcare centers. Beginning with H1-1, it was hypothesized that basic facilities would be a significant determinant of parent satisfaction. Contrary to expectations, the study found no supporting evidence (Harms et al., 2014; Omondi, 2013). This might suggest that while facilities are necessary, parents may prioritize curriculum quality and teacher-child interactions more heavily when evaluating childcare centres. Next, H1-2 explored the link between curriculum quality and parent satisfaction. This relationship was also unsupported, indicating that other elements might be more impactful to parents. Despite the curriculum's central role in early education, immediate factors such as safety and a caring environment might weigh more in parents' satisfaction assessments (Miller & Cable, 2011; Powell et al., 2012).

The study then considered H1-4, which looked at the impact of the childcare provider relationship on parent satisfaction. This hypothesis was not supported, indicating that while parent-school relationships are important, they might not be paramount in determining satisfaction levels (Janssen et al., 2021). Instead, parents may be more satisfied by tangible outcomes like their child's well-being and progress. H1-5 suggested a direct correlation between the childcare centre staff and parent satisfaction, but this too was not supported by the study. Even if leadership and staff quality are crucial for educational outcomes, parents may base satisfaction on more observable factors, such as their child's happiness and development (E. M. Kim & Sheridan, 2015).

Regarding H1-6, which posited a direct relationship between children's interaction and parent satisfaction, the study's findings were not supportive. While interactions are vital for social development, they may not be the chief concern for parents when it comes to satisfaction (Margetts & Phatudi, 2013). Lastly, H1-7 examined the perceived value of the childcare centre and its influence on parent satisfaction. This hypothesis was not supported, suggesting that other aspects, like child safety and learning outcomes, might be more influential in determining parental satisfaction (Janssen et al., 2021).

The only hypothesis that was supported was H1-3, which linked program structure to parent satisfaction. This result underlines the significance of a well-planned and executed childcare program, which aligns with Ajzen's (2020) theory on attitudes influencing behavioural intentions, such as a parent's choice of a childcare centre. In conclusion, the study's findings underscore the multifaceted nature of parent satisfaction. While the basic infrastructure of a childcare centre and its curriculum are important, it is the program structure that stands out as a significant predictor of satisfaction, pointing to the necessity of a well-rounded, safe, and stimulating environment for children (Mariola Stawasz, 2019; Maslow, 1943).
IMPLICATION

The only hypothesis that found support was H1-3, which linked the program structure of the childcare center to parent satisfaction. This finding confirms the importance of a well-structured and executed program in childcare settings, aligning with established theories that suggest structured programs contribute significantly to a child's development and parental contentment (Huang et al., 2022; Rokis, 2014). In methodological terms, the use of questionnaires to gather data was a common and effective approach across all hypotheses, providing empirical evidence to support the theoretical assertions and contributing to the robustness of the findings. The inclusion of feedback from stakeholders, especially parents, added a layer of depth to the research methodology, allowing for a nuanced understanding of the early childhood education experience from the user's perspective.

Theoretically, the study provided new insights into the dynamics of early childhood education, highlighting the complex interplay of service quality, program structure, and parent satisfaction. It enriched the theoretical landscape by supporting the notion that structured programs are crucial for satisfying parents and fostering children's development, thereby bridging various theoretical perspectives on early childhood development (Chen et al., 2021; Leng et al., 2021; Shaari et al., 2020). Overall, the research made significant contributions to the fields of early childhood education theory and methodology. It offered a deeper understanding of what influences parent satisfaction and provided a methodologically sound approach to studying these complex relationships.

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