

Sustainability from Day One: Perceived Value and Ethical Consumption of Eco-Friendly Baby Diapers

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SUSTAINABILITY FROM DAY ONE: THE ROLE OF PERCEIVED VALUE IN THE ETHICAL CONSUMPTION OF ECO-FRIENDLY BABY DIAPERS

1. INTRODUCTION

Considering that the textile industry is one of the most polluting sectors, especially regarding the production of items used during the early stages of a child's life, when waste is substantial due to the rapid development of the human body, the consumption of reusable diapers is regarded as a sustainable practice, given that diapers are among the most frequently used and quickly discarded items during infancy.

On the other hand, according to Edbring et al. (2015), because it is a reusable item, this characteristic may be perceived as a disadvantage by a significant number of people, who associate it with second-hand goods, often viewed as lower quality, unhygienic, or contaminated (Gregson & Crewe, 2003; Edbring et al., 2015), potentially creating barriers to the consumption of this type of product.

Although it is a relevant and current social phenomenon, Peña-Vinces, Solakis, and Guillen (2020) state that the existing literature on the use of second-hand perinatal items is limited and virtually nonexistent. While the relationship between the second-hand market and children's fashion is harmonious and shows positive results in terms of sales and purchases, few researchers have shown interest in this topic, especially in addressing issues related to consumer motivation and the barriers mothers face in purchasing ecological or reused products for their children (Pires; Costa e Silva; Sandes, 2022).

When preparing a baby's layette, disposable diapers are considered essential by most families. Since their introduction to the market in 1960, disposable diapers have become the preferred choice of more than 90% of families worldwide (Płotka-Wasyłka & Vakh, 2023). Since then, this type of diaper has been the most widely used in most countries, but it generates a large amount of non-compostable and non-biodegradable waste (Uber, Imoto, Carvalho, 2025).

In light of the current shift toward more ecological baby items, ethical consumption behavior has become a relevant field of study to understand how individual moral values influence purchasing decisions (Carrington et al., 2014; Shaw & Riach, 2011), especially in contexts where environmental impact is evident from early childhood. However, the disposal of disposable diapers presents various challenges, both environmental and health-related, due to improper disposal (Shah et al., 2024). Conversely, reusable diapers have been adopted by families around the world, whether for environmental or health reasons (Uber, Imoto, Carvalho, 2025). Disposable diapers contain small amounts of dioxin, a toxic byproduct of the paper bleaching process, which is also a carcinogenic chemical and considered the most dangerous of all carcinogenic substances (Shah et al., 2024). Furthermore, this type of diaper has a significant environmental impact, being one of the most harmful forms of waste (Velasco Perez et al., 2021).

While eco-friendly diapers can be reused, disposable ones are discarded after a single use, generating a massive amount of waste: on average, a baby uses approximately 7,000 diapers during the diapering phase (Mendoza et al., 2019). Additionally, according to the New South Wales Environmental Protection Authority (2014), disposable diapers are the third-largest item in landfills, accounting for 30% of non-biodegradable waste.

In response to this environmental concern, eco-friendly diapers have emerged as an alternative to disposable options. Made from renewable resources such as cotton and bamboo, they generate less waste because they can be reused multiple times (Meseldzija et al., 2013). However, the number of families opting for this type of diaper remains significantly low. Studies suggest that the main barriers include the increased workload and decreased convenience associated with their use, making them a less attractive option for many families (Ramayah et al., 2010; Suphasomboon & Vassanadumrongdee, 2022). After removing the baby's waste, eco-friendly diapers can be washed in a regular washing machine with standard detergent. Moreover, it is not necessary to wash soiled diapers daily—they can be stored in a waterproof bag or lidded bucket for washing after a few days (Uber, Imoto, Carvalho, 2025).

Given the significant environmental impact of disposable diapers, efforts should be made to raise public awareness about the challenges related to the consumption of more sustainable diapers (Płotka-Wasyłka & Vakh, 2023). In this regard, the concept of perceived value becomes particularly relevant. Perceived value refers to consumers' evaluation of a product's utility based on the relationship between perceived benefits and costs (Suphasomboon & Vassanadumrongdee, 2022). Thus, it is suggested that functional, social, and emotional values can influence consumer behavior and the intention to ethically consume eco-friendly diapers. Kautish et al. (2023) point out that consumers' environmental knowledge determines and guides the shift from irresponsible to responsible and sustainable consumption behavior. In this sense, awareness of the positive environmental impact of eco-friendly diapers can positively influence parents' attitudes toward responsible consumption from an eco-conscious perspective. Striking a balance between economic development and environmental preservation ensures that people, through the adoption of new consumption practices, can protect the environment and maintain the conditions in which nature and humans can coexist sustainably (AbiGhannam & Atkinson, 2016).

Perceived value, understood as the evaluation consumers make of the benefits in relation to a product's costs, is a determining variable in sustainable consumption intention (Sweeney & Soutar, 2001; Sheth et al., 1991). Therefore, this study aims to investigate the role of perceived value—particularly its functional, social, and emotional dimensions, in shaping consumer intention and ethical consumption of eco-friendly diapers. By doing so, this research contributes to a deeper understanding of the psychological and practical factors that influence sustainable consumption choices and provides insights for policymakers and companies seeking to promote green alternatives. The choice to consume eco-friendly diapers can also be justified by advocating a production process that uses sustainable and durable materials, considering the product's lifespan and aligning with current sustainability concerns. This not only meets the demands of conscious parents but also contributes to a positive environmental impact. This assumption supports the pursuit of meeting the fundamental needs of children and parents, emphasizing comfort, practicality, and sustainability. The goal is to ensure a design that aligns with market demands, but especially with the expectations of environmentally conscious consumers.

2. THEORETICAL BACKGROUND

2.1 Ethical consumption behavior and intention of eco-friendly diapers

Ethical consumption can be understood as a deliberate decision to make consumption choices based on individual moral beliefs (Crane & Matten, 2004). In recent years, there has been a notable increase in consumer awareness and research focusing on ethical consumption practices (White et al., 2019).

The intention to engage in ethical consumption is defined as an individual's planned or expected ethical behavior, while ethical consumption behavior pertains to actual decision-making and purchasing actions influenced by ethical concerns (Cooper-Martin & Holbrook, 1993; Chowdhury, 2019). However, a persistent challenge in this domain is the intention-behavior gap, where consumers' ethical intentions do not consistently translate into actual purchasing behaviors (Carrington et al., 2010; Shaw et al., 2016). This gap can be attributed to various factors, such as competing priorities, habitual shopping behaviors, and situational constraints (Bray et al., 2011; Antonetti & Maklan, 2014).

In the context of eco-friendly diapers, these products are typically made from renewable materials such as cotton and bamboo, which decompose more rapidly than conventional disposable diapers, thereby reducing environmental impact (Khoo et al., 2019). Despite these benefits, adoption rates remain low due to perceived barriers, including the additional effort required for washing and drying reusable diapers, which diminishes convenience—a significant factor influencing parental decisions (Ramayah et al., 2010; Nielsen & Thøgersen, 2021).

Recent research highlights that perceived benefits, including environmental advantages, cost savings, and symbolic meaning, significantly influence pro-environmental behaviors such as the adoption of eco-friendly diapers (Amelia & Saragih, 2023). On the other hand, perceived threats, such as concerns about product efficacy, social acceptance, or hygiene, can deter consumers from choosing sustainable alternatives (Ghazali et al., 2017; Wei et al., 2022). Interestingly, factors like personal motivation and subjective norms may not have a substantial impact on the decision to use reusable diapers (Amelia & Saragih, 2023).

The Theory of Planned Behavior (TPB) postulates that intention is a primary determinant of behavior, suggesting that stronger intentions to perform a behavior increase the likelihood of its execution (Ajzen, 1991). However, in ethical consumption contexts, research consistently demonstrates that intention alone is insufficient to drive actual behavior (Chi, 2022; Nielsen & Thøgersen, 2021). This discrepancy can be attributed to external constraints, habitual behaviors, and the perceived inconvenience of ethical alternatives (Kushwah et al., 2019).

Thus, the following hypothesis is suggested:

H1: The intention to consume eco-friendly diapers ethically positively affects the ethical consumption behavior of eco-friendly diapers.

2.2 Perceived value

Perceived value theory can be understood as the assessment that consumers make regarding the utility of a product, which is established based on the perceived cost-benefit offered (Suphasomboon & Vassanadumrongdee, 2022). Additionally, Sheth et al. (1991) state that there are different values that influence consumers' purchase intention in different circumstances. These are: functional value, social value, emotional value, conditional value, and epistemic value. In the present article, the PERVAL scale will be used, which omits the conditional and epistemic values, since these are considered different types of values and are less critical for a general value measure (Sweeney & Soutar, 2001).

Functional value refers to the product benefits obtained from its functional, utilitarian, or physical purposes. Emotional value refers to emotional states, feelings, affect, and reactions related to the product. Finally, social value refers to the product image or benefits derived from association with social groups, social classes, and

reference groups (Suphasomboon & Vassanadumrongdee, 2022). Some factors that can significantly affect the intention to consume eco-friendly products are individual attitudes, subjective norms, and behavioral control (Wansink et al., 2017). It is also known that product knowledge and perceived quality positively influence the intention to consume cloth diapers (Sultan et al., 2020).

Therefore, the following hypotheses are suggested:

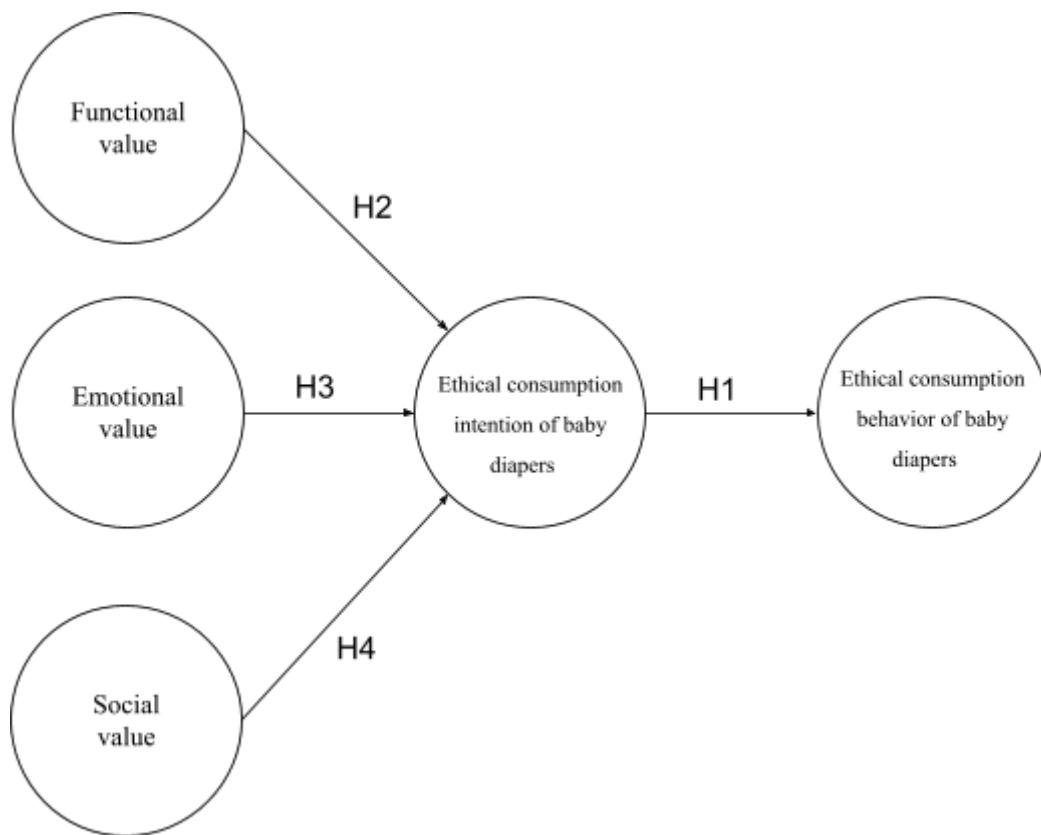
H2: Functional value positively influences the intention to consume eco-friendly diapers.

H3: Emotional value positively influences the intention to consume eco-friendly diapers.

H4: Social value positively influences the intention to consume eco-friendly diapers.

Based on the above, the following theoretical model and respective scales will be used in the investigation:

FIGURE 1 - THEORETICAL FRAMEWORK



Authors (2025)

3. METHODOLOGY

The research was developed using a quantitative and descriptive approach, as it structures a model with relationships between constructs to test hypotheses (Cooper & Schindler, 2016). Regarding the study population, individuals who had previously purchased some type of baby diaper were selected.

For data collection, the instrument was applied online and developed using the Google Forms platform, given its ease of use on portable devices (smartphones and

tablets). A presentation was included at the beginning of the questionnaire explaining the objectives of the study, and respondents were informed about the respect for anonymity, the Brazilian General Data Protection Law (LGPD), and the ethical principles of the study, ensuring that responses and information were treated securely and anonymously. The questionnaire was available from June to August 2024, for a consecutive period of 60 days.

Using the snowball sampling technique, respondents were recruited through the dissemination of the study via email and social media (Instagram and WhatsApp) (Rife et al., 2016). The survey was shared in various WhatsApp groups, such as parent and family groups that had already purchased diapers for their children. Thus, the sample was concentrated in groups close to this target audience.

The sampling method used in this research can be categorized as non-probabilistic and based on convenience, as it is not possible to consider all elements of the population, which prevents the generalization of the results (Malhotra, 2019). The snowball technique was also used to reach a larger sample (Malhotra, 2019), working in such a way that parent and/or family groups would forward the questionnaire to other families. Hair Jr. et al. (2015) suggest that, for the quantitative items in a survey, the total sample size should be five to ten times the number of variables. Accordingly, for this study, a total of 90 to 180 respondents was recommended.

A pre-test was also conducted in order to make the necessary adjustments, such as clarifying certain questions and correcting typographical errors. A pre-test is a strategy to verify and eliminate potential problems regarding the content of questions, their sequence, and the format of the data collection instrument, with the objective of refining the research questionnaire through its prior application to a small sample (Malhotra, 2019). After that, the questionnaire was disseminated to the general public. It is also important to note that all questionnaire items were configured as mandatory, and it was not possible to complete the questionnaire without answering all the statements.

The data collection followed a cross-sectional design, with a single sample collected at a specific point in time (Malhotra, 2019). To measure the dependent construct of this study, the ethical consumption behavior of eco-friendly diapers, a scale developed by Kushwah et al. (2019) and ElHaffar et al. (2020) was adapted. For the scale related to ethical consumption intention of eco-friendly diapers, a scale created by Kushwah et al. (2019) and Zhang et al. (2018) was adapted. Finally, to measure perceived value, the PERVAL scale by Sweeney and Soutar (2001) was adapted. This scale is considered reliable and widely accepted (Singh et al., 2021). The following table (Table 1) presents a summarized view of the data collection instrument.

TABLE 1- COMPOSITION OF THE DATA COLLECTION INSTRUMENT

Construct	Authors	Items
Functional value	Suphasomboon & Vassanadumrongdee (2022)	<ol style="list-style-type: none"> 1. Eco-friendly baby diapers are valued for money. 2. Eco-friendly baby diapers are safer than general products. 3. Eco-friendly baby diapers contribute to improving overall health and wellbeing more than general products.
Emotional value	Suphasomboon & Vassanadumrongdee (2022)	<ol style="list-style-type: none"> 4. The eco-friendly baby diapers aesthetics (i.e. design, appearance, smell, texture, brand image, or packaging) make me want to use it. 5. Eco-friendly baby diapers are better than conventional products.

		6. Eco-friendly baby diapers match my personality and make me feel better.
Social value	Suphasomboon & Vassanadumrongdee (2022)	7. Eco-friendly baby diapers can affect good impressions on others which improve how I am perceived. 8. I am interested in purchasing eco-friendly baby diapers when I see my friends, family, or celebrities are also using them.
Ethical consumption intention	Chi (2022)	9. I intend to consume eco-friendly baby diapers 10. I plan to consume eco-friendly baby diapers 11. I prefer eco-friendly baby diapers to disposable diapers 12. I will consider buying eco-friendly baby diapers because they are less polluting 13. I intend to choose products having less environmentally hazardous in future
Ethical consumption behavior	Chi (2022)	14. I make a special effort to buy eco-friendly baby diapers 15. I am willing to buy eco-friendly baby diapers at a higher price for their environmental benefits 16. I am willing to pay more for eco-friendly baby diapers 17. I introduce eco-friendly baby diapers to my friends and relatives 18. I have switched eco-friendly baby diapers for protecting environment

Authors (2025)

The Likert scale (1932) was used to measure the questionnaire items, from 1 to 7 points. This scale was chosen because, according to Malhotra (2019), it is easily understood by respondents and is one of the most well-known and widely used scales in quantitative research (Hair et al., 2015).

Data was treated using univariate and multivariate statistical techniques directed at factor analysis and linear regression, and was analyzed with the help of the statistical software SPSS and IBM SPSS AMOS 26®. In the analysis of the reliability of the constructs, the normality test of the coefficients was used through Cronbach's Alphas (α), considering the acceptable reliability level equal to or above 0.7 (Hair et al., 2015).

To analyze the relationships between the constructs and test the hypotheses, Structural Equation Modeling (SEM) was used, which is characterized by two elements: the measurement model and the structural model (Ribas & Vieira, 2011). The measurement model specifies the indicators for each construct and evaluates the reliability of each, as well as analyzes the causal relationships. The structural model, on the other hand, can be considered a set of one or more dependency relationships connecting the constructs shown in the model.

3.2 Sample

The collected sample consisted of 101 cases, corresponding to 101 completed structured questionnaires. Based on these questionnaires, the data analyses described below were carried out.

Among the respondents, 85.1% are women and 14.9% are men. This discrepancy may suggest that, when it comes to purchasing diapers for babies, women tend to be more engaged and proactive. Furthermore, women may have a more

consolidated opinion regarding the choice or rejection of disposable diapers, which could justify the greater engagement of the female gender in responding to surveys such as this one.

The ages of the respondents ranged from 20 to 68 years, with the majority (precisely 56.4%) being between 20 and 30 years old, followed by those aged 30 to 40 (30.7%). This may be explained by the fact that younger individuals are possibly more attentive to and informed about eco-friendly diapers and issues related to sustainability. In addition, considering that most respondents were women, these are common ages for women to become pregnant or to be planning a pregnancy, as well as a time when they may be enthusiastic about purchasing diapers for relatives or pregnant friends.

Regarding concern with sustainability, 24.6% of respondents declared themselves to be concerned, 67.3% reported being reasonably concerned, and 7.9% mentioned not considering themselves concerned with sustainability issues. These results show that it is uncommon for people to declare themselves indifferent to sustainability issues. However, what prevails is the idea of being only reasonably concerned with such matters. Even though not everyone is well-informed about sustainability-related topics or particularly committed to them, it is not socially acceptable to openly admit a lack of concern with sustainability. This may be the reason why few respondents described themselves as unconcerned with sustainable issues.

4. RESULTS

4.1 Measurement Model Analysis

Prior to evaluating the measurement model, the multivariate outlier detection procedure, utilizing Mahalanobis Squared Distance, was executed. This initial step aimed to ensure data integrity by identifying and potentially excluding outliers. Notably, the dataset exhibited no extreme values necessitating removal.

By analyzing the reliability of the scales through the calculation of Cronbach's Alpha for the constructs, the model was found to be reliable, as all Cronbach's Alpha values were greater than 0.70 (Hair et al., 2017). The constructs behavior, intention, functional value, emotional value, and social value presented Cronbach's Alpha values of 0.927, 0.919, 0.82, 0.784, and 0.821, respectively. It is worth noting that the item VF1 was removed to improve the reliability of the Alpha coefficient.

Similarly, regarding the convergent validity of the constructs, assessed through the calculation of AVEs, the results were also satisfactory, as the AVEs of all constructs were above the threshold of 0.50. The constructs behavior, intention, functional value, emotional value, and social value had AVE values of 0.749, 0.783, 0.645, 0.774, and 0.796, respectively.

In the second test for verifying discriminant validity, the model was evaluated using the Fornell-Larcker criterion. Both in the comparison among the first-order latent variables and among the latent variables of the structural model, the square roots of the AVEs for each construct were consistently greater than their correlations with other constructs. Therefore, the tests conducted confirm the discriminant validity of the model.

4.2 Analysis of the Structural Model and Discussion of Hypotheses

After analyzing the measurement model, the second stage of Structural Equation Modeling (SEM) corresponds to the analysis of the structural model, which integrates relationships between the latent variables into the measurement model. The fit indices are presented in the following table (Table 2):

TABLE 2 - STRUCTURAL MODEL FIT INDICES

Índices	Resultados
Qui-cuadrado	216,292
CMIN/DF	2,021
<i>p-value</i>	0,000
GFI	0,814
IFI	0,935
TLI	0,916
CFI	0,934
NFI	0,879
RMSEA	0,101
PCLOSE	0,002

Authors (2025)

The following table presents the hypothesis testing proposed in the present study. The hypothetical model was tested based on the regression weights (β), the estimated correlation coefficients between the constructs, and the p-value results.

TABLE 3 -TEST OF HYPOTHESIS

Simplified Relationship	Hypothesis	Unstandardized Coefficient	Standardized Coefficient	<i>p</i>	Situation
H1 ICEDE CBED	(+): -> The intention to consume eco-friendly diapers ethically positively affects the ethical consumption behavior of eco-friendly diapers.	0,52	0,68	<0,01	Hypothesis Supported
H2 (+): FV -> ICED	Functional value positively influences the intention to consume eco-friendly diapers.	0,23	0,17	0,550	Hypothesis Rejected
H3 (+): EV -> ICED	Emotional value positively influences the intention to consume	1,39	0,60	0,021	Hypothesis Supported

	eco-friendly diapers.					
H4 (+): SV -> ICED	Social value positively influences the intention to consume eco-friendly diapers.	-0,3	-0,3	0,850		Hypothesis Rejected

Authors (2025)

According to the results obtained through Structural Equation Modeling (SEM), Hypothesis 1 (H1) was supported, indicating a statistically significant and strong relationship between the ethical consumption intention and the actual behavior of consuming eco-friendly baby diapers. The path coefficient ($\beta = 0.68$, $p < 0.01$) confirms the substantial predictive power of intention in shaping behavior. This finding is consistent with the Theory of Planned Behavior (Ajzen, 1991; 2020), which posits that intention is the most proximal determinant of behavior, especially when individuals perceive the behavior as under their volitional control.

Despite the well-documented intention-behavior gap in ethical consumption literature (Carrington et al., 2010; Shaw et al., 2016), the present study found a notably strong correlation, suggesting that, in the context of eco-friendly diaper consumption, intention can indeed translate into action when certain psychological and contextual enablers are present. This may reflect increased consumer awareness about the environmental impacts of disposable diapers (Khoo et al., 2019; Shah et al., 2024) and growing perceived value associated with sustainable alternatives (Suphasomboon & Vassanadumrongdee, 2022).

Nonetheless, it is important to recognize that various barriers can still inhibit behavior despite strong intentions — such as lack of time, forgetfulness, limited access to products, or concerns regarding convenience and social acceptance (Bray et al., 2011; Ghazali et al., 2017). However, the high path coefficient observed in this study indicates that many of these potential inhibitors may be less influential in this particular sample, possibly due to heightened environmental concern among respondents — 91.9% self-reported at least a moderate concern for sustainability.

In light of these findings, public policy and marketing strategies should focus on reinforcing ethical intentions and converting them into concrete behaviors. Awareness campaigns highlighting the environmental and health risks associated with disposable diapers (Płotka-Wasyłka & Vakh, 2023; Shah et al., 2024), along with the benefits of reusable alternatives (Uber, Imoto, & Carvalho, 2025), can strengthen consumer motivation. Moreover, initiatives that improve product accessibility, usability, and emotional appeal — such as attractive design, personalized options, and endorsements by influencers or trusted public figures — can help sustain intention and facilitate behavior (Amelia & Saragih, 2023; Sweeney & Soutar, 2001).

Additionally, integrating content about sustainable parenting and ethical consumption into educational curricula from early childhood could promote long-term behavioral change and normalize the use of eco-friendly products. Such efforts may also help close the intention-behavior gap over time by making sustainable choices more habitual and socially rewarded (Nielsen & Thøgersen, 2021).

In summary, the confirmation of H1 reinforces the critical role of intention in ethical consumption contexts and underlines the importance of targeted strategies to maintain and support this intention through structural, social, and emotional means. The test of Hypothesis 2 revealed a non-significant relationship between functional value and the intention to consume eco-friendly diapers, with a standardized path coefficient of 0.17 and a p-value of 0.550. These results indicate that, contrary to expectations, functional value — which encompasses attributes such as safety, perceived utility, and contribution to health and well-being (Suphasomboon & Vassanadumrongdee, 2022) — does not significantly influence consumers' intention in this context.

One possible explanation lies in the limited familiarity and knowledge of consumers regarding eco-friendly diapers. As noted by Sultan et al. (2020), product knowledge and perceived quality are prerequisites for consumers to appreciate the functional value of sustainable products. In the absence of widespread awareness about how eco-friendly diapers compare to conventional ones in terms of performance, consumers may not perceive functional superiority, thus weakening the motivational impact of this value dimension.

This finding suggests that functional benefits alone may not be sufficient to influence purchase intentions, especially when dealing with products that require behavioral change and effort, such as washing and storing reusable diapers (Ramayah et al., 2010). Therefore, public and private initiatives should prioritize informational strategies, for example, consumer education campaigns and detailed product demonstrations, that highlight tangible benefits such as health advantages, long-term cost savings, and ease of use, which are often overlooked due to knowledge gaps (Uber, Imoto & Carvalho, 2025).

Hypothesis 3 was supported by the data, with a statistically significant standardized path coefficient of 0.60 ($p = 0.021$). This indicates a strong positive relationship between emotional value and the intention to consume eco-friendly diapers. Emotional value refers to the feelings, aesthetics, and personal gratification associated with a product (Sweeney & Soutar, 2001), including elements such as design, fragrance, brand personality, and alignment with personal identity.

This result is consistent with findings from Amelia & Saragih (2023), who noted that symbolic and affective elements are key motivators in sustainable product adoption, particularly in categories linked to parenting and care. Emotional connections to eco-friendly products can help bridge the intention-behavior gap by enhancing personal meaning and motivation, making the choice not only rational but also emotionally fulfilling.

Given the strong influence of emotional value on intention, companies should invest in aesthetics, sensory experiences, and brand storytelling. Designing diapers that are visually appealing, comfortable, fragrant, and packaged in eco-friendly materials can elevate emotional engagement. Furthermore, emotional appeal can be enhanced through storytelling that connects diaper use with values such as love, care, and environmental stewardship, especially when endorsed by trusted influencers or real-life parent testimonials.

Customization options, such as patterns, sizes, or packaging with children's names, could also help foster emotional attachment, increasing both product loyalty and ethical consumption intention (Sweeney & Soutar, 2001).

Hypothesis 4 was not supported, as the path coefficient was negative ($\beta = -0.30$) and non-significant ($p = 0.850$), indicating that social value does not significantly influence intention to consume eco-friendly diapers in the current sample. Social value, defined as the perceived utility derived from association with social groups or the

approval of others (Suphasomboon & Vassanadumrongdee, 2022), appears to have limited impact on this specific consumption decision.

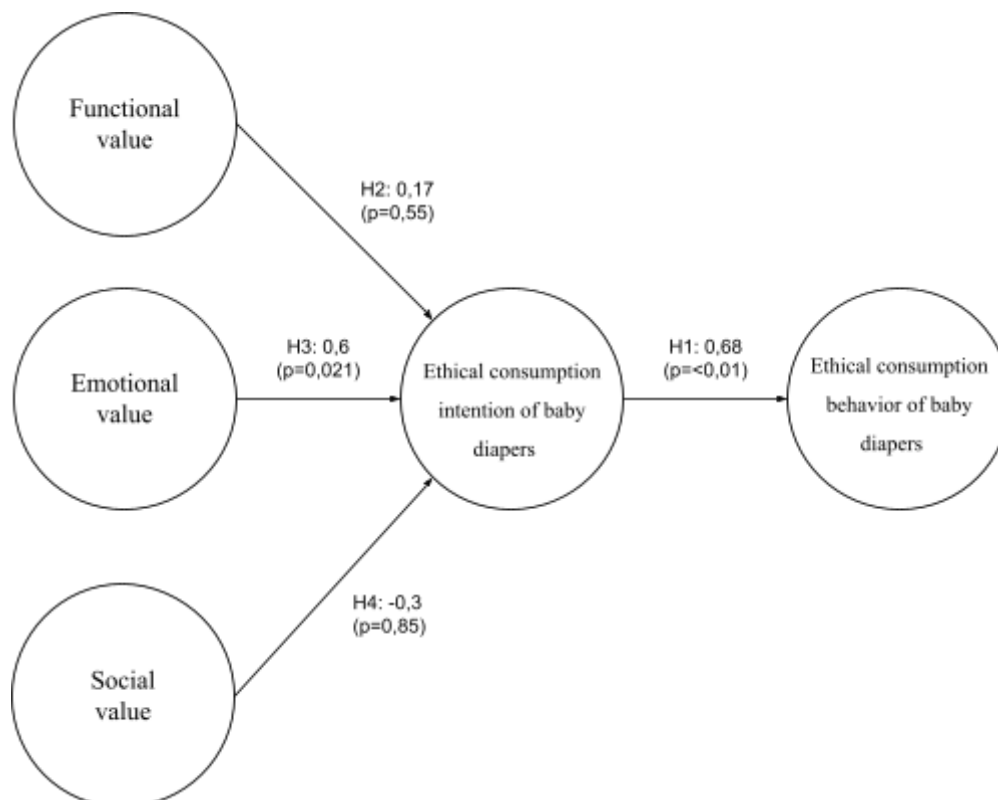
A plausible reason may be the limited visibility and normalization of eco-friendly diaper usage in the social context of the respondents. According to Bray et al. (2011), when a behavior is not socially widespread or endorsed by influential groups, its social signaling value diminishes. In this case, the use of eco-friendly diapers might not yet carry enough social prestige or visibility to exert peer pressure or enhance self-image.

Additionally, as Amelia & Saragih (2023) suggest, parental decisions regarding diapers are often made in private and may be guided more by personal values than by social influence. Consequently, unless the product becomes a more socially visible marker — through mainstream adoption, media representation, or celebrity endorsement — its social value may remain low.

To increase social influence, companies and institutions should foster normative pressure and community engagement. This could include leveraging parental networks, encouraging social media sharing, and promoting visible sustainability symbols (e.g., certifications, eco-labels). Collaborations with influencers and parenting forums can also help increase the perceived social acceptance and desirability of using eco-friendly diapers.

Based on the above, the theoretical model with coefficients and corresponding hypotheses is presented below (Figure 2).

FIGURE 2 - THEORETICAL MODEL WITH COEFFICIENTS AND CORRESPONDING HYPOTHESES



Authors (2025)

5. CONCLUSION

This study aimed to explore the ethical consumption of eco-friendly baby diapers by examining the influence of functional, social, and emotional values on consumer intention and behavior. Based on a quantitative empirical approach using a structured questionnaire, the results confirmed that ethical consumption intention has a significant positive effect on actual consumption behavior. Additionally, emotional value emerged as a strong predictor of intention, underscoring the importance of affective engagement in shaping sustainable consumer choices.

Conversely, functional and social values did not show statistically significant effects on intention. This may be attributed to the limited awareness and understanding of eco-friendly diapers among Brazilian consumers, particularly within younger and older demographic groups. Without sufficient knowledge about the product's benefits, consumers may struggle to perceive its functional superiority or social relevance.

Given these findings, it is recommended that governments, companies, educational institutions, and social influencers collaborate to promote awareness about the environmental and health advantages of eco-friendly diapers. Comprehensive campaigns can help increase familiarity and foster stronger consumer engagement. Additionally, manufacturers should invest in product quality, durability, user-friendliness, appealing design, and pleasant scent to enhance emotional value and strengthen purchase intention, ultimately contributing to reduced environmental impact.

Education and the widespread dissemination of information remain crucial for cultivating a sustainability-conscious society. Influencer marketing and celebrity endorsements can further amplify consumer interest by attaching symbolic and emotional meaning to the product.

This study presents some limitations, notably the use of a non-probabilistic sample with limited male participation. Future research should consider larger and more diverse samples, allowing for deeper analysis of gender differences and age-related engagement in sustainable consumption. Further studies may also explore additional perceived value dimensions, including epistemic or conditional value, or reconsider the role of social value, which showed limited explanatory power in this context.

Ultimately, this research contributes to the growing body of literature on ethical consumption and offers practical implications for stakeholders aiming to promote environmentally responsible behaviors from early stages of parenthood.

REFERENCES

- Abighannam, N., Atkinson, L., (2016). Good green mothers consuming their way through pregnancy: roles of environmental identities and information seeking in coping with the transition. *Consumption Markets & Culture*, v. 19, n. 5, p. 451-474.
- Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Wiley Periodicals*, p. 314-324.
- Amelia, N., & Saragih, H. S. (2023). Factors predicting pro-environmental behavior: the case of baby diapers. *Journal of Social Marketing*, 13(2), 241-257.
- Antonetti, P., & Maklan, S. (2014). Exploring post-consumption guilt and pride in the context of sustainability. *Psychology & Marketing*, 31(9), 717-735.
- Bray, J., Johns, N., & Kilburn, D. (2011). An exploratory study into the factors impeding ethical consumption. *Journal of business ethics*, 98, 597-608.

- Carrington, M. J., Neville, B. A., & Whitwell, G. J. (2010). Why ethical consumers don't walk their talk: Towards a framework for understanding the gap between the ethical purchase intentions and actual buying behavior of ethically-minded consumers. *Journal of Business Ethics*, 97(1), 139-158.
- Chi, N. T. K. (2022). Ethical consumption behavior towards eco-friendly plastic products: Implication for cleaner production. *Cleaner and Responsible Consumption*, 5, 100055.
- Chowdhury, R. M. M. I. (2019). The role of ethical considerations in consumer decision-making. *International Journal of Consumer Studies*, 43(4), 377-389.
- Cooper-Martin, E., Holbrook, M.B., 1993. Ethical consumption experiences and ethical space. *ACR North Am. Adv.*
- Crane, A., & Matten, D. (2004). Questioning the domain of the business ethics curriculum. *Journal of Business Ethics*, 54, 357-369.
- EPA, N. (2014). Waste classification guidelines part 1: classifying waste. *Environ. Prot. Auth*, 30.
- ElHaffar, G., Durif, F., Dube, L., 2020. Towards closing the attitude-intention-behavior gap in green consumption: a narrative review of the literature and an overview of future research directions. *Journal of Cleaner Production* 122556.
- Ghazali, E., Soon, P. C., Mutum, D. S., & Nguyen, B. (2017). Health and environmental concerns as antecedents of eco-friendly consumer behavior: The moderating role of perceived consumer effectiveness. *Sustainable Development*, 25(6), 505-516.
- Kautish, P., Khare, A., Khare, A., (2023). Human values, sustainability orientation, and intentions: A SDG perspective towards branded organic products in India. In: Nachhaltigkeit und Innovation in internen und externen Unternehmensbeziehungen: Festschrift für Prof. Dr. Klaus Bellmann zum 80. Geburtstag. Wiesbaden: Springer Fachmedien Wiesbaden. p. 191-217.
- Khoo, H. H., Lim, T. Z., & Tan, R. B. H. (2019). Environmental impacts of conventional disposable diapers: A review. *Environmental Management*, 44(3), 556-571.
- Kushwah, S., Dhir, A., Sagar, M., 2019. Ethical consumption intentions and choice behavior towards organic food. Moderation role of buying and environmental concerns. *Journal of Cleaner Production* 236, 117519
- Lehrburger, C. (1989). *Diapers in the Waste Stream: A review of waste management and public policy issues*. C. Lehrburger.
- Mendoza, J. M. F., Popa, S. A., D'aponte, F., Gualtieri, D., & Azapagic, A. (2019). Improving resource efficiency and environmental impacts through novel design and manufacturing of disposable baby diapers. *Journal of Cleaner Production*, 210, 916-928.
- Meseldzija, J., Poznanovic, D., & Frank, R. (2013). Assessment of the differing environmental impacts between reusable and disposable diapers. *Dufferin Research*, 1-11.

- Ng, F. S. F., Muthu, S. S., Li, Y., & Hui, P. C. L. (2013). A critical review on life cycle assessment studies of diapers. *Critical reviews in environmental science and technology*, 43(16), 1795-1822.
- Nielsen, K. S., & Thøgersen, J. (2021). The role of habit strength in sustainable consumption: A meta-analysis. *Journal of Environmental Psychology*, 78, 101694.
- Peña-Vinces, J., Solakis, K., Guillen, J., (2020). Environmental knowledge, the collaborative economy and responsible consumption in the context of second-hand perinatal and infant clothes in Spain. *Resources, Conservation and Recycling*, v. 159, p. 104840.
- Plotka-Wasyłka, J., & Vakh, C. (2023). Insights into baby disposable diapers sustainable application. *Science of The Total Environment*, 900, 165813.
- Plotka-Wasyłka, J., Makoś-Chełstowska, P., Kurowska-Susdorf, A., Treviño, M. J. S., Guzmán, S. Z., Mostafa, H., & Cordella, M. (2022). End-of-life management of single-use baby diapers: analysis of technical, health and environment aspects. *Science of The Total Environment*, 836, 155339.
- Ramayah, T., Lee, J.W.C. and Mohamad, O. (2010), “Green product purchase intention: some insights from a developing country”, *Resources, Conservation and Recycling*, Vol. 54 No. 12, pp. 1419-1427.
- Shah, DRSI, Anuar, NF, Daud, WMAW e Aghamohammadi, N. (junho de 2024). Implicações Ambientais e de Saúde do Descarte Indiscriminado de Fraldas Descartáveis: Um chamado por práticas responsáveis de gestão do descarte sustentável. Em *Anais Da Conferência Internacional De Pesquisa Em Ação (Iarc) De 2024* (p. 95).
- Shaw, D., & Clarke, I. (1999). Belief formation in ethical consumer groups: An exploratory study. *Marketing Intelligence & Planning*, 17(2), 109–120.
- Shaw, D., McMaster, R., & Newholm, T. (2016). Care and commitment in ethical consumption: An exploration of the ‘attitude–behaviour gap’. *Journal of Business Ethics*, 136(2), 251-265.
- Sheth, J.N., Newman, B.I., Gross, B.L., 1991. Why we buy what we buy: a theory of consumption values. *Journal of Business Result*. 22, 159–170.
- Suphasomboon, T., & Vassanadumrongdee, S. (2022). Toward sustainable consumption of green cosmetics and personal care products: The role of perceived value and ethical concern. *Sustainable Production and Consumption*, 33, 230-243.
- Sultan, M. A., Hurriyati, R., & Aprianti, V. (2020, February). When the Ecofeminists Decide Product to Use: A Simple Analysis on Cloth Diapers Users. In *3rd Global Conference On Business, Management, and Entrepreneurship (GCBME 2018)* (pp. 11-15). Atlantis Press
- Sweeney, J.C., Soutar, G.N., 2001. Consumer perceived value: the development of a multiple item scale. *Journal of Retail*. 77, 203–220.
- Wei, L., Zhang, W., & McDonald, H. (2022). Understanding perceived consumer effectiveness in sustainable consumption. *Journal of Consumer Marketing*, 39(4), 399-412.

Uber, M., Imoto, R. R., & Carvalho, V. O. (2025). Cloth versus disposable diapers: an exploratory study on family habits. *Jornal de Pediatria*, 101(2), 276-281.

Velasco Perez, M., Sotelo Navarro, P.X., Vazquez Morillas, A., Espinosa Valdemar, R.M. and Hermoso Lopez Araiza, J.P. (2021), "Waste management and environmental impact of absorbent hygiene products: a review", *Waste Management and Research: The Journal for a Sustainable Circular Economy*, Vol. 39 No. 6, pp. 767-783.

Zhang, L., Liu, J., Xie, Y., Zhong, S., Gao, P., 2021. Occurrence and removal of microplastics from wastewater treatment plants in a typical tourist city in China. *Journal of Cleaner Production*. 291