

Original Article

## Let's get some food! The influence of marital status on the attributes' perception of food delivery applications

Vamos pedir delivery! A influência do estado civil na percepção de atributos de aplicativos de entrega de comida

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### ABSTRACT

**Purpose:** This research aims to identify the influence of marital status on the attributes' perception of food delivery applications (FDA) by Brazilian consumers, considering convenience, price, usability, various food choices, and trustworthiness.

**Methodology:** This quantitative research study is based on a survey with a sample of 348 Brazilian FDA users, applying exploratory factor analysis (EFA).

**Findings:** This article sought to answer the influence of marital status (considering people married or in a common-law marriage vs. single, separated, and divorced individuals) on the consumer's perception of attributes of food delivery applications (FDAs). The attributes analyzed were price, convenience, usability, various food choices, and trustworthiness. The results demonstrate differences between the groups, with single, separated, and divorced individuals emphasizing perceptions of the FDA attributes usability and price.

**Theoretical contributions:** The study extends the theory on m-commerce and FDAs, as well as managerial implications for companies in the food delivery sector. Armed with such knowledge, marketing managers can develop strategies focusing on specific interest groups according to marital status, considering the attributes of greatest value for each segment.

**Relevance/Originality:** The increase in FDA consumption has attracted the attention of the most diverse market segments. This study brings light to new propositions concerning purchase habits by specific groups, reinforcing the need to improve communication between company and user, counting on resources such as customization and segmentation to optimize the use of apps.

**Keywords:** Perception of use; Marital status; Food delivery application; M-commerce; Consumer behavior

### RESUMO

**Objetivo:** Esta pesquisa tem como objetivo identificar a influência do estado civil na percepção dos atributos dos aplicativos de *delivery* de comida (ADC) pelos consumidores brasileiros, considerando conveniência, preço, usabilidade, diversas escolhas alimentares e confiabilidade.

**Metodologia:** Esta pesquisa quantitativa é baseada em uma pesquisa realizada com uma amostra de 348 usuários brasileiros de ADC, aplicando análise fatorial exploratória (AFE)

**Resultados:** Este artigo buscou responder a influência do estado civil (considerando pessoas casadas ou em união estável vs. indivíduos solteiros, separados e divorciados) na percepção do consumidor sobre atributos de aplicativos de *delivery* de comida (ADCs). Os atributos analisados foram preço, conveniência, usabilidade, diversas opções alimentares e confiabilidade. Os resultados demonstram diferenças entre os grupos, com indivíduos solteiros, separados e divorciados enfatizando as percepções dos atributos usabilidade e preço.

**Contribuições teóricas:** O estudo amplia a teoria sobre *m-commerce* e ADCs, bem como implicações gerenciais para empresas do setor de entrega de alimentos. Munidos desse conhecimento, os gestores de marketing podem desenvolver estratégias com foco em grupos de interesse específicos de acordo com o estado civil, considerando os atributos de maior valor para cada segmento.

**Relevância/Originalidade:** O aumento do consumo de ADCs tem atraído a atenção dos mais diversos segmentos de mercado. Este estudo traz à tona novas proposições sobre hábitos de compra por grupos específicos, reforçando a necessidade de melhorar a comunicação entre empresa e usuário, contando com recursos como customização e segmentação para otimizar o uso de aplicativos.

**Palavras-chave:** Percepção de uso; Estado civil; Aplicativo de *delivery* de comida; *M-commerce*; Comportamento do consumidor

## 1 INTRODUCTION

The rise in technology and internet usage, with globalization and external factors like the COVID-19 pandemic, has brought irreversible changes in the market for products and services. In this context, mobile applications have emerged and revolutionized how people purchase. Disconzi et al. (2020) explain that technology is paradoxical, with the possibility of buying at any time of the day and product variety as some of the advantages, while delivery delay and lack of security are the main disadvantages. Consequently, it is crucial to comprehend how consumers perceive such service offerings (Kaur et al., 2021).

The widespread use of smartphone applications in people's daily lives has inspired numerous studies on mobile commerce (or m-commerce), attracting the attention of scholars (Cho et al., 2019). Factors such as convenience, usability, and practicality make m-commerce a fashionable choice for consumers (Schneider & Tezza, 2021; Liébana-Cabanillas et al., 2017). Yeo et al. (2017) highlight that consumers prefer online platforms for purchasing due to the comfort of choosing products wherever they are. Studies by Cho et al. (2020) demonstrated that the perception of value can significantly contribute to

predicting purchasing behavior in the mobile segment, providing technology companies with a competitive advantage.

Applications play a crucial role in m-commerce. According to Tandon et al. (2021), the widespread popularity of food delivery applications (FDAs) in both developed and emerging countries can be credited to attributes such as convenience and practicality from the consumer's point of view, as well as saving issues, from the company's point of view. In Brazil, the delivery app market has expanded in recent years, reaching its peak during the pandemic. Fueled by hedonic motivations, convenience, attractive pricing, and even a sense of solidarity with food professionals, this mode of service has become ingrained in the habits of Brazilians (Zanetta et al., 2021).

Brazil is dynamically transforming the food delivery industry, as it boasts more than 63 million active users of FDAs, according to a report provided by Statista (2022). Katta and Patro (2020) suggest that the perception of website quality and ease of use are advantages for online shopping experiences, consequently influencing the value perceived by the customer.

Thus, it is important to understand which variables influence consumers' perception of the application's attributes, guiding companies toward more effective results. Kieling et al. (2022) highlight the need to address the demands and perceptions of specific groups in the context of m-commerce. Therefore, this research analyzes the differences between individuals who are married or in common-law marriage versus single individuals, seeking to answer the following research question: What is the influence of marital status on the consumer's perception of FDA attributes?

This study aims to assess the impact of marital status (considering individuals who are married or in common-law marriage compared to those who are single, separated, or divorced) on the consumer's perception of FDA attributes, such as convenience, price, various food choices, trustworthiness, and usability. To this end, quantitative descriptive research was conducted using a survey with 348 Brazilian users of FDAs.

This article is organized as follows: an introduction, followed by the theoretical

framework on the topics of research interest, which are m-commerce, FDAs, and marital status in the context of FDAs. Next, it presents the methodology, analysis, and discussion of the collected data. Finally, the last section offers the conclusions, limitations, and suggestions for future research.

## 2 LITERATURE REVIEW

### 2.1 M-Commerce

Mobile commerce, or m-commerce, has experienced exponential growth in Brazil and globally in recent years (Schneider & Tezza, 2016). According to Santos (2018), this kind of e-commerce emerged as a new market for offering products and services, combining the convenience inherent to e-commerce with the practicality of using smartphones.

Tassabehji (2003) advocates that e-commerce should also encompass the sale of products and services and everything that involves electronic financial transactions and service provision, such as legal or after-sales support. In their research, Wong and Sheng (2012) define m-commerce as any monetary transaction related to the purchase of goods or services conducted via internet-enabled cell phones or other devices on a wireless telecommunications network. There are numerous definitions for m-commerce, reflecting the industry's growth and the extensive development of applications and new technologies (Chong, 2013).

Mobile commerce is a relatively new segment, gaining space as consumers choose to conveniently shop through mobile devices and have incorporated this practice into their routines (Wang et al., 2015). Wang et al. (2015) found that individuals tend to spend more as they become accustomed to using these platforms, primarily seeking products and services that they were already purchasing before they started using these apps.

Several factors highlight the superiority of m-commerce over traditional e-commerce (online shopping via computers). Mahatanankoon et al. (2005) enumerate some of these advantages, such as constant online availability and portability, utilization of the user's

location, convenience, and customization. Sarkar et al. (2020) further explain that the user's interaction with the service provider fosters trust and encourages consumers to adopt the technology.

Latin America boasts one of the most vibrant markets for in-app purchases, with Brazil and Mexico leading the way, according to a research report by Data.ai (2023). The report attributes this trend to a young population accessing mobile devices for the first time, widespread smartphone use across all socioeconomic groups, and increased usage due to social distancing measures related to the COVID-19 pandemic. For this study, it is crucial to understand how the food delivery apps (FDAs) market segment fits into this context, as explored below.

## **2.2 Food Delivery Applications**

Food delivery applications (FDAs) represent a category of mobile apps used for online food ordering (Chakraborty et al., 2022). According to Kaur et al. (2021), FDAs are part of delivery platforms, which encompass both restaurant-to-consumer delivery and aggregator-to-consumer delivery. Aggregators are food ordering platforms such as iFood.

Zanquet et al. (2022) emphasized the importance of exploring how consumer perception supports their decision-making process to enhance the competitiveness of the delivery app market. The authors introduced a decision-making tool designed for companies engaged in m-commerce, aiding them in product sales by considering the criteria and perception of value.

In their research, Bao and Zhu (2022) analyzed the motivations behind the reuse of FDAs. The authors identified that information quality, ease of use, variety of choices, and convenience are relevant antecedents of satisfaction and perceived value, positively influencing the intention to reuse. Cho et al. (2019) explored five salient quality attributes associated with FDAs. The authors observed the impacts of these attributes on user-perceived value, attitudes, and the intention to continue using the service. The research demonstrated that trustworthiness is a crucial attribute of the food delivery market and

that single-person households attribute more value to price, various food choices, and trustworthiness.

According to a report from Statista (2022), eight out of ten smartphone owners in Brazil are users of food delivery applications (FDAs). This number nearly doubled between 2017 and 2022. In 2020, delivery platforms gained even more popularity during the COVID-19 pandemic. These platforms have begun to influence consumers' purchasing mindset, using marketing messages that emphasize the benefits of placing orders online. Delivery app providers offered details about hygiene and precautionary procedures to protect customers and other agents involved in the delivery service. Messages addressed protecting families and friends, supporting local businesses, saving time, and practicing social distancing (Cai & Leung, 2020).

In their study, Kieling et al. (2022) presented a research agenda for m-commerce. Among other topics, they suggested research addressing how the phenomenon manifests within specific groups. This study aligns with this direction, exploring groups according to marital status and observing the implications of this condition on the FDA market.

### **2.3 Marital Status in the Context of Food Delivery Applications**

Personal factors such as gender and marital status are expected to influence online shopping and technology use (Rybczewska & Sparks, 2022). Therefore, understanding the consumption habits of specific groups is crucial in the context of m-commerce (Kieling et al., 2022).

In their research on aging and the use of online platforms, Rybczewska and Sparks (2022) observed that marital status is a characteristic of differentiation in e-commerce activities. The authors found that widowed, single, or divorced individuals use fewer online shopping tools than married people. Studies by Shukla and Sharma (2018) on m-commerce usability showed that consumers' purchasing behaviors via mobile devices do not differ significantly, except when purchasing supermarket items. In this case, individuals with a spouse demonstrated greater acceptance of use compared to single individuals.

Wang et al. (2020) found that marital status significantly affects food consumption via e-commerce. Their findings indicate that married individuals have a higher frequency of consumption and a more positive attitude towards using online food services compared to individuals of other marital statuses. The authors attribute these results to the fact that married individuals tend to have more regular eating patterns than single individuals.

Furthermore, Wang and Somogyi (2018) demonstrated that married couples are more likely to become food consumers in B2C businesses than single individuals, in addition to maintaining higher patterns of consumption frequency. Melkis et al. (2014) found that while married and single individuals differ in their perception of the quality of food-related services, they have similar perceptions regarding product, price, and satisfaction. However, the authors emphasize that the positioning of products for single individuals requires different attributes compared to products aimed at married couples. These findings support the hypotheses proposed in this study.

### **3 RESEARCH HYPOTHESES**

Based on the theoretical background, this research works on five hypotheses:

H1: Marital status influences the perception of convenience of food delivery applications (FDAs)

H2: Marital status influences the perception of usability of FDAs

H3: Marital status influences the perception of price of FDAs

H4: Marital status influences the perception of trustworthiness of FDAs

H5: Marital status influences the perception of various food choices regarding FDAs

The next section presents the methodological assumptions.

### **4 METHODOLOGY**

This quantitative research study is based on a survey with a sample of 348 Brazilian respondents. It was conducted between March and May 2022. Online questionnaires were



created using the SurveyMonkey tool and shared on social media and via email. MS Excel spreadsheets were used to code and process the collected data.

The model by Cho et al. (2019) was used as a basis to determine the attributes of convenience, usability, various food choices, trustworthiness, and price. Due to the differences between the population of this study and that of Cho et al. (2019), adjustments were made to the original instrument, applying exploratory factor analysis (EFA) using R software.

After the EFA and definition of the items for each attribute, the scores obtained for each of them were used to test the hypotheses. The Kolmogorov-Smirnov normality test was performed.

The Mann-Whitney test was performed using SPSS software to test the hypotheses. The sample was separated into two groups to analyze the differences between marital statuses. Group 1 comprised 215 respondents who were single, separated, or divorced, and Group 2 consisted of 133 respondents who reported being married or in common-law marriage.

#### **4.1 Variables and measurement items**

This study takes into account the importance of exploring the influence of specific groups on consumer behavior. Thus, the research seeks to test the differences between two independent samples (two groups) regarding the perception of FDA attributes. For the tests, six variables were considered: "marital status," "convenience," "usability," "various food choices", "trustworthiness", and "price".

The variable "marital status" was measured on a non-metric scale, with the categories "single," "divorced," "separated," "married," and "common-law marriage". This variable was used to differentiate the two independent samples: Group 1 consisted of respondents in the categories "single," "divorced," or "separated"; Group 2 consisted of respondents in the categories "married" and "common-law marriage."



The variables related to the attributes, convenience, usability, various food choices, trustworthiness, and price were determined from items measured using a 5-point Likert scale. The items were adapted from the studies by Cho et al. (2019) and Bevan et al. (2015), in addition to information from comments from FDA users retrieved from the platform *Reclame Aqui* (2022). An Exploratory Factor Analysis (EFA) was generated with orthogonal rotation (Varimax) based on data from the 348 respondents, and 15 items presented satisfactory loadings: four items formed the variable convenience, four formed usability, two formed trustworthiness, two formed price, and three formed various food choices.

Table 1 presents the summary of items and variables measured by EFA.

Table 1 – Variables and measurement items

(Continued)

Variable-item	Factorial load	Cronbach's alpha ( $\alpha$ )
<i>Convenience</i>		0.62
The food delivery app I use is convenient to me	0.57	
The food delivery app I use allows me to place orders at any time	0.73	
The food delivery app I use allows me to place orders anywhere	0.58	
The payment methods available on the food app I use are convenient for me	0.41	
<i>Usability</i>		0.68
The structure of the food delivery app I use is logical and easy to follow	0.77	
I can easily change my options (e.g., restaurants, culinary items, and payment) within the food app I use	0.65	
The filters on the food delivery app I use work properly	0.51	
The design (organization and colors) of the food app I use conveys trustworthiness	0.40	
<i>Trustworthiness</i>		0.46
The images advertised on the food app I use convey trustworthiness	0.57	

Table 1 – Variables and measurement items

Variable-item	Factorial load	Cronbach's alpha ( $\alpha$ )
The products provided in the food app I use are priced fairly for me	0.59	
<i>Price</i>		0.46
Offering promotional combos is an attractive feature for me while using the food delivery app	0.46	
When using the food app, I prioritize shopping at restaurants that provide coupons and free delivery	0.85	
<i>Various Food Choices</i>		0.79
The food delivery app I use offers a variety of options for choosing restaurants	0.76	
The food delivery app I use offers a variety of food types to choose from	0.92	
I can place orders with a wide range of prices through the food app I use	0.59	

Source: Elaborated by the authors

## 4.2 Sample Profile

Group 1 consisted of 215 respondents who were single, divorced, or separated. The age range of this sample was between 19 and 39 years. The group was 59.1% female and 40.9% male. The most common frequency of orders in this group was 1 to 3 orders per month (43.9%) and 1 to 3 orders per week (36.4%).

Group 2 comprised 133 respondents who reported being married or in a common-law marriage. Unlike Group 1, the age range for Group 2 was between 25 and 44 years. However, the samples are similar in terms of the proportions of females (57.1%) and males (42.1%), and concerning the frequency of orders; the most frequent were 1 to 3 orders per month (38.3%) and 1 to 3 orders per week (36.8%).

Table 2 provides more details on the descriptive characteristics of the samples.

Table 2 – Sociodemographic profile of groups

<b>Sociodemographic Profile</b>	<b>Group 1</b>	<b>Group 1 (%)</b>	<b>Group 2</b>	<b>Group 2 (%)</b>	<b>Total</b>	<b>Total (%)</b>
<i>Sample size</i>						
Sum	215	1	133	1	348	1
<i>Age</i>						
18 to 19	21	0.098	1	0.008	22	0.063
20 to 24	44	0.205	4	0.030	48	0.138
25 to 29	80	0.372	29	0.218	109	0.313
30 to 34	38	0.177	31	0.233	69	0.198
35 to 39	13	0.060	27	0.203	40	0.115
40 to 44	7	0.033	23	0.173	30	0.086
45 to 49	1	0.005	6	0.045	7	0.020
More than 50	11	0.051	12	0.090	23	0.066
<i>Gender</i>						
Male	88	0.409	56	0.421	144	0.414
Female	127	0.591	76	0.571	203	0.583
Prefer not to say	0	0.000	1	0.008	1	0.003
<i>Operational system used</i>						
iOS/Apple	98	0.456	49	0.368	147	0.422
Android	117	0.544	84	0.632	201	0.578
<i>Frequency of orders</i>						
More than 3 per week	13	0.061	13	0.098	27	0.078
From 1 to 3 per week	78	0.364	49	0.368	127	0.365
From 1 to 3 per month	94	0.439	51	0.383	145	0.417
Specific dates over the year	29	0.136	20	0.150	49	0.141

Source: Elaborated by the authors

With this in mind, we sought to analyze the particularities involving the context of marital status and factors of interest to this research. These findings are presented in the following section.

## 5 RESULTS

Studies analyzing digital users' consumption behavior are increasingly urgent. In this regard, we align with Zanquet et al. (2022), advocating that companies should use knowledge of consumer perception and delivery applications to engage in research and improve products and services by incorporating new technologies, emphasizing the

attributes their target public considers a priority. This research offers a perspective in this direction, considering consumers' marital status and the Brazilian context.

The research results were tested using the Mann-Whitney U statistic, a non-parametric test applied to quantitative or qualitative variables on an ordinal scale. This test was chosen because the sample data did not show normality and aimed to investigate differences between two independent samples (Fávero & Belfiore, 2017).

To apply the Mann-Whitney U test, the values of the marital status variable were coded into two categories, namely, Group 1 and Group 2. For the variables related to the attributes (convenience, usability, various food choices, trustworthiness, and price), the values were the sum of points obtained by the set of items that correspond to each variable (items measured by the 5-point Likert scale).

With the calculations of Wilcoxon statistics (rank sums), Mann-Whitney U statistics, standardization by z-score, and P-value statistics, it was possible to verify the veracity of the hypotheses with a bilateral significance level of 5% using the asymptotic method considered for large samples (Field, 2020). The test results indicate that Group 1 (single, divorced, separated) emphasizes the perception of FDA usability and price. Table 3 shows whether or not Group 1 differs from Group 2.

Table 3 – Relationship between the hypotheses and research results

Hypotheses	Variable	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	Results
H1	CONV	13634.500	22545.500	-0.733	0.464	Rejected
H2	USAB	12422.000	21333.000	-2.079	0.038	Supported
H3	PRICE	11099.000	20010.000	-3.570	0.000	Supported
H4	TRUST	13577.000	36797.000	-0.806	0.420	Rejected
H5	VAR CH	13932.000	37152.000	-0.409	0.683	Rejected

Source: Elaborated by the authors

Based on the results in Table 3, Group 1 (single, divorced, separated) does not differ in the perception of attributes convenience (U=13634.500), trustworthiness

( $U=13577.000$ ), and various food choices ( $U=13932,000$ ). However, it differs in the perception of FDA usability ( $U=12422.000$ ,  $p<0.05$ ) and price ( $U=11099.000$ ,  $p<0.001$ ), being higher than Group 2 (married, common-law marriage). In other words, FDA users who are single, divorced, and separated emphasize the perception of FDA attributes usability and price.

These findings are counterintuitive to the literature. Melkis et al. (2014) pointed out that married and single people differ in their perception of the quality of food-related services, although they have similar perceptions regarding product, price, and satisfaction. Our findings showed that the perception of price differs between married and single people. One of the reasons for this can be attributed to financial stability issues for a single person, which tend to be undefined when people are younger, as is the case with the sample in this research.

Group 1 comprises young people, which may influence the perception of usability if we consider that young people are more predisposed to using their time with technological tools and are more skilled in this direction. The effects of user characteristics on usability are related to experience, knowledge domain, cultural background, disabilities, age, and gender (Jordan, 1998).

Pookulangara and Bharath (2022) explain that utility motivations (such as price) positively affect the trust of consumers who shop for food online. In their research on cloud kitchens, the authors identified relationships between price and user attitudes and differences between married and single people. They demonstrated that the perception of health safety risks on these apps is higher among married people than single people. The results showed the perception of utility attributes, which is in agreement with previous research.

Finally, Table 4 presents the groups' mean ranks.

Table 4 – Differences in the groups' mean ranks

	<b>Marital status</b>	<b>N</b>	<b>mean rank</b>	<b>Total rank</b>
CONV	Group 1	215	177.58	38180.50
	Group 1	133	169.52	22545.50
	Total	348		
USAB	Group 1	215	183.22	39393.00
	Group 2	133	160.40	21333.00
	Total	348		
PRICE	Group 1	215	189.38	40716.00
	Group 2	133	150.45	20010.00
	Total	348		
TRUST	Group 1	215	171.15	36797.00
	Group 2	133	179.92	23929.00
	Total	348		
VAR CH	Group 1	215	172.80	37152.00
	Group 2	133	177.25	23574.00
	Total	348		

Source: Elaborated by the authors

The results show a higher mean perception for most attributes in Group 1 compared to Group 2: convenience, usability, and price. However, it's important to note that these are mean ranks and are not statistically significant. These trends corroborate the research by Wang et al. (2020), which states that there are differences between individuals with different marital statuses. However, these results are counterintuitive since previous theory shows more substantial trends when it comes to married people, according to studies by Rybaczewska and Sparks (2022) and Wang and Somogyi (2018).

Therefore, the research contributes to the theory by extending the findings about FDAs and users' perceptions. It is an extension of the studies by Cho et al. (2019) and Pookulangara and Bharath (2022) in terms of consumer characteristics and how they influence decision-making. Furthermore, the study expands the findings on m-commerce, a sales channel that has gained importance in Brazil and worldwide with the COVID-19 pandemic.

This research also offers a managerial contribution in the sense that companies can design segmentation strategies focusing on marital status to increase the average ticket of single customers. For example, investing in promotions that attract this audience to repurchase considering price sensitivity and using the speech of influencers, promotional coupons, and other digital marketing attraction tools for apps.

Furthermore, considering that Group 2 presented, in general, a lower perception of FDA attributes, companies can invest in campaigns that explore this segment, seeking to demonstrate such attributes in their marketing campaigns offering solutions (combos and other strategies) that appeal to couples and families.

Considering the whole food service environment in the current context, composed of cloud kitchen, dark kitchen, grab and go, drive-thru, and delivery, this research increases theoretical and practical knowledge on the topic. The results reinforce the need to improve communication between the company and the user, counting on resources such as customization and segmentation to optimize the use of apps.

## **6 CONCLUSIONS**

Research on mobile commerce has been expanding yearly and gaining importance in the current market. Thus, both companies and users must understand perceptions and attributes related to the digital experience. Furthermore, demographic characteristics such as marital status have been consolidated as essential elements for market segmentation and monitoring consumption habits, bringing new perspectives in the context of new media. Research on these topics is frequent in marketing, consumer, and technology journals. This article sought to answer the influence of marital status (considering people married or in a common-law marriage vs. single, separated, and divorced individuals) on the consumer's perception of attributes of food delivery applications (FDAs). The attributes analyzed were price, convenience, usability, various food choices, and trustworthiness. The results demonstrate differences between the



groups, with single, separated, and divorced individuals emphasizing perceptions of the FDA attributes usability and price.

The findings offer theoretical contributions as they expand the literature on m-commerce and FDAs, as well as managerial implications for companies in the food delivery sector. Armed with such knowledge, marketing managers can develop strategies focusing on specific interest groups according to marital status, considering the attributes of greatest value for each segment.

As for limitations, this study explored only the restaurant category, disregarding other categories of food delivery applications, such as supermarkets. Furthermore, the results presented are limited to a sample from the Brazilian population. As a suggestion for future research, a possible path would be to replicate the research survey with users from other countries. In addition, it is possible to cross other demographic variables and factors of interest that can affect relationships, such as purchase frequency. Also, future studies can identify moderating and mediating variables of these relationships to delve deeper into the analyses.

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1. Definition of research problem	√	√	√
2. Development of hypotheses or research questions (empirical studies)	√	√	√
3. Development of theoretical propositions (theoretical work)			
4. Theoretical foundation / Literature review	√		√
5. Definition of methodological procedures	√	√	
6. Data collection	√	√	
7. Statistical analysis	√	√	
8. Analysis and interpretation of data	√	√	√
9. Critical revision of the manuscript	√	√	√
10. Manuscript writing	√		√

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