Assessment of the Influence of Contracting Models on the Well-Being of Construction Workers in the Brazilian Amazon

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Abstract: The construction industry is known to present various stress-inducing conditions for its workforce, especially for workers under different employment arrangements. This research aims to investigate the influence of employment status (permanent and temporary workers) on the perception of well-being at work (WBW). The study also aims to assess whether variables such as satisfaction, commitment, and involvement are statistically significant in evaluating construction workers’ WBW. The research was conducted at various construction sites located in the Brazilian Amazon. A total of 376 responses were obtained using the Work Well-being Inventory (IBET-13) questionnaire. A multiple linear regression model was constructed to understand the relationship between self-perceived well-being (dependent variable) by employees and employment status, satisfaction, commitment, and involvement at work (independent variables). The results suggest that the employment arrangement does not significantly impact the evaluation of well-being, indicating that other factors may mediate the relationship between WBW and mental health, as well as contribute to explaining this result, such as current legislation, occupational characteristics, and unique aspects of the Brazilian reality. The research findings can contribute to the development of strategies that promote a more sustainable and healthy construction environment for workers.

Keywords: well-being at work; civil construction; temporary labor; permanent labor; construction workers

1. Introduction

Precarious employment is a well-known phenomenon in industrialized countries and represents a significant and growing portion of the workforce [1–3], especially precariousness related to the subcontracting of temporary workers, without stable direct employment relationships with the company [4,5]. This occurs because subcontracting allows for the management of a specific activity to be entrusted to another organization, reducing costs, increasing profit and productivity, and, consequently, enhancing competitiveness in this industry [6–8]. However, precarious work is typically associated with higher levels of insecurity, stress, poor mental health [5,9], and sleep disorders [10], which can lead to serious consequences for workers’ health, including loss of mobility, autonomy, and self-care [11], compromising the establishment of a healthy and safe work environment [2], making the experience of temporary workers different from that of permanent employees [12].

Currently, in Brazil, the majority of construction workers are still permanent workers, representing 69% of the hired workforce between 2011 and 2017 in São Paulo [13]. Permanent workers have job security as they are hired by the construction company with...
stable employment contracts, including the possibility of fines in cases of unjustified dismissal, that is, without the worker committing serious offenses or damaging physical and financial assets in the workplace. However, the Brazilian scenario is expected to change with the enactment of Law No. 13.429 of 31 March 2017, which allows the subcontracting of all labor activities, including in the construction sector, which was previously limited to non-core business activities and therefore restricted to specialized services, such as foundation services and project contracting. In other words, most construction services, which previously had to be performed by permanent workers hired under indefinite-term labor laws, can now, with the enactment of Law No. 13.429, be carried out by temporary workers subcontracted for up to 180 days. These temporary workers receive equivalent salaries and working hours as permanent workers but without all the guarantees afforded to permanent workers, such as overtime pay, bonuses, paid weekly rest, severance pay for dismissal without cause, and night shift differential.

Masking the clear precariousness of formal work, this law was adopted with the intention of providing flexibility in hiring practices and reducing illegal work. Illegal work accounted for 61.8% of the occupied workforce in the Brazilian construction industry alone in 2019 [14].

With the promulgation of Brazilian Law No. 13.429, dated 31 March 2017, it is reasonable to anticipate an increase in the percentage of temporary workers in Brazil with the regularization of their activities. Although there are no current data on the percentage of temporary workers in the country after the law No. 13.429, in São Paulo, the largest metropolis in Latin America, temporary workers represented an average of 14.1% of the legalized construction workforce between 2011 and 2017 [13].

In this context, the impact of this increase in the number of temporary workers on the construction site remains poorly understood. In the construction sector, workers face various stressful conditions during their work activities, such as risks at the construction site, lack of organizational recognition, prolonged exposure to high temperatures, and other adverse weather conditions [15]. These challenges not only affect the well-being of workers but are also directly related to levels of productivity, well-being, and safety [16]. These factors, along with others, explain the high turnover rate in the construction sector, including in Brazil [17,18].

Despite the more aggressive conditions for construction workers, there is a lack of research evaluating the impact of temporary work in the sector. In most cases, research is based on data from general databases that do not address the specificities of work in each sector. For example, in Australia residents were found to hold a positive association between precarious employment and mental health, with increased precariousness (including subcontracted or temporary work) increasing the likelihood of mental health problems [10]; for workers in Great Britain, a statistically significant relationship between workers with precarious employment conditions and reports of illnesses and injuries in the workplace was found [2]; in Colombia, the working conditions of 31 Venezuelan immigrants were investigated and precarious working conditions were observed, with instability, informality, high vulnerability, low income, and limited capacity for exercising labor rights, affecting mental health conditions, access to health services, and increasing work-related risks [19]; in Spain, data on the working conditions of 25,964 residents were investigated and an increase in labor precariousness was identified with the emergence of new dimensions of precariousness, such as overqualification or undesirable working hours, resulting in low productivity, absenteeism, and the deterioration of workplace relationships [20].

Understanding the impact of employment status on workers is fundamental for decision making and can contribute to the development of better hiring strategies for society and, especially, for the construction industry. Specifically in the construction sector, an important concept that has helped researchers understand the impact of various factors on workers is well-being at work (WBW) [21,22]. WBW and how to achieve it is an important step for individuals [23], being a subject of interest for governments and civil society members [24], helping to develop strategies to reduce accidents in construction
sites [21] and promote better conditions to workers and to the workplace, and encouraging healthy lifestyles and more effectively managing health risks [22,25].

However, the specific impacts of precarious work related to permanent or temporary employment models on WBW are still poorly understood. In order to investigate this issue, this study aims to evaluate the influence of employment status (permanent and temporary workers) on the perception of WBW. Additionally, the research seeks to analyze whether variables such as satisfaction, commitment, and involvement [26] allow for measuring this construct in the context of the construction industry.

2. Theoretical Framework

2.1. Workplace Well-Being

Well-being has two philosophical dimensions: hedonic and eudaimonic. The hedonic perspective underlies studies on subjective well-being and measures happiness based on individuals’ experiences, whether they are positive or negative [27]. Additionally, life satisfaction, resulting from the frequency of positive and negative emotions, and individual satisfaction are related to this dimension. Individuals who experience more positive emotions than negative ones, such as joy, interest, and pride, are more inclined towards behaviors resulting in individual satisfaction [28]. In contrast, the eudaimonic perspective is the essence of psychological well-being (PWB) development. It is characterized by the demand for internal flourishing, virtues, excellence through subjective experiences [29], and the feeling of achieving a significant goal in human life [30]. This quest to develop skills to become a better person, accepting limitations, increases emotional stability and delivers a sense of individual harmony, resulting in authentic and lasting happiness [31].

Although there are various approaches stemming from hedonic and eudaimonic traditions [32], there is a complex and controversial theme [33] worth highlighting: WBW. This approach has gained considerable prominence over the years among authors seeking to identify the aspects that have the greatest influence on this construct [34–37].

Influences vary over time as the work model is constantly changing. For example, the Fordist model and its famous assembly lines [38] are completely different from the remote work model, which increased significantly after the COVID-19 pandemic and the need for social distancing [39]. This forced organizations to update themselves with various digital applications to ensure the continuity of their activities [40]. Thus, there is a disparity between both and, consequently, the analyses focused on WBW between periods will also be divergent.

The concept of WBW does not present a definitive consensus [37]. In other words, different interpretations are linked to philosophical dimensions [41]. With the improvement of studies on this topic, authors began to consider affective and/or cognitive aspects to form the WBW construct [41]. In this context, the cognitive aspect is related to the rationalization or evaluation of the individual about their work activities [42], perceptions that are directly connected to life satisfaction [34]. That is, levels of job satisfaction are constantly influenced by factors beyond work activities, such as family and personal life aspects [43].

In the workplace, this aspect is compatible with satisfaction with salary, employer, colleagues, and the work itself. On the other hand, the affective aspect is divided into two psychological dimensions: positive emotions and negative emotions [37]. Positive emotions in the WBW context are related to calmness, joy, enthusiasm, and pleasure. Negative emotions are perceived in moments of agitation, hostility, anger, tension, and sadness. These feelings can result in negative outcomes (negative emotions), such as workaholics and burnout, or positive outcomes (positive emotions), such as engagement and satisfaction [44].

The treatments presented globally address WBW; however, each author has a research bias [41]. Job satisfaction, for example, is the defining element of WBW and affects the social and professional behavior of the worker [45]. For others [46], WBW is based on the tradition of psychological well-being, composed of satisfaction, affect, organizational commitment, and emotional exhaustion. In contrast, for some only aspects related to affect are recognized.
in their analysis, basing it on the constant experiences with positive effects and the absence of negative affects [47]. Also, affect is the most important characteristic in the conception of WBW and concludes that accumulated experiences of affections result from moods and emotions that the worker develops in the work environment [36]. Unlike the relationship of moods and emotions in the affective dimension, they are subject to momentary variations that can interfere with the obtained responses [48]. Some authors [49] consider both philosophical dimensions relevant for the conceptualization and operationalization of WBW, proposing a scale composed of three dimensions: positive affect, job satisfaction, and ideal functioning.

Currently, it is widely accepted that WBW is a positive mental state formed by the connection of three positive bonds [26]: job satisfaction, job involvement, and affective organizational commitment. For the authors, job satisfaction arises from the formation of employee cognitions about feelings resulting from interactions with their colleagues and boss; company rewards, such as salary and promotions; and tasks performed. In the same way, affective organizational commitment is linked to the employee’s positive feelings towards the employing organization, which are seen as enthusiasm, pride, contentment, trust, attachment, and dedication to the company where they work, among others [37,50].

Regarding job involvement, this literature relates it to a highly particular and subjective mental model between the employee and the execution of their activities in the workplace. In other words, it is a feeling of complete harmony between their skills, competencies, and job demands. Some authors relate involvement to self-esteem [51]. This virtue based on the organization reflects the individual’s feeling of being capable of developing their tasks with excellence and, from that, playing a significant and worthy role in the organization [52]. Through lived experiences, whether individually or as a team, the individual becomes more involved in their work, feeling important and belonging to the environment [53]. Another approach that some research presents is regarding autonomy, which is considered a work resource positively related to involvement [54] and linked to competence, personal achievement, advancement of knowledge and skills, and consequently to mastery over tasks [55], resulting in significant work–life balance and increased motivation [56].

Among all the perceptions presented regarding WBW, the aspect analyzed by [26] stands out as the basis of the present research. These authors proposed a questionnaire known as the Work Well-being Inventory (IBET-13). The IBET-13 was chosen because it has been developed and validated in the Portuguese language, which excludes issues with potential translation errors. Furthermore, this questionnaire can be applied to any individual and in any work sector, making it a multidisciplinary tool.

2.2. Temporary Labor on Civil Construction

For quite some time, companies have been exploring new forms of management and production organization in pursuit of increasing their competitiveness and productivity [57]. Among the most relevant elements, we can highlight “globalization, technological forces, fierce competitiveness, changes in behavior, consumer expectations, and governmental influences” [58]. This explains the growth of the process of low levels of vertical integration in companies, which has sparked significant attention to outsourcing and subcontracting of temporary labor [59].

Outsourcing can be defined as the act of obtaining goods or services from individuals or organizations outside the boundaries of a company [60]. That is, it is the transfer of production-related activities to individuals or legal entities, who will have full responsibility for the risks and guarantees of the service provided. The employees themselves are directly linked to the main company, which has total responsibility for such labor. Outsourcing originated from a relationship between “make or buy” decisions of companies, weighing towards a better form of yield [61]. It is worth noting that this practice indicates cost flexibility, thus generating reductions in charges generated by labor costs [62], which is attractive to large companies.
In the construction industry, outsourcing is quite common, especially for specific functions such as roofing, plumbing, or electrical work. In this sense, contractors use this trade tool instead of performing the functions themselves, in order to optimize earnings and strengthen specialized goods and services [60]. The construction industry involves one of the economic activities where the phenomenon of outsourcing has expanded the most, establishing itself as one of the pioneering sectors of this practice [63]. This can be explained by the fact that the area covers various specific stages, which if worked on by the same company would make the process burdensome in terms of management and finance [6]. Furthermore, the constant demands of the daily routine in this sector require an acceleration in the pace of project development [64]. As a consequence, there has been an increase in the need for structural changes in the management system within the construction industry.

Highlighting the trend towards outsourcing in the construction industry, a survey from 2017 revealed that approximately 65.5% of the sector in Brazil utilizes outsourced services, with an additional 24% of companies expressing interest in adopting this practice. The entity explains that these data reflect the dependence on outsourcing because without it, 59.1% of the industries state that their business would be harmed, 40.8% would suffer from loss of competitiveness, and the other 18.3% with the unfeasibility of one or more production lines [65]. Despite outsourcing being a widely used practice in the construction industry today, outsourced workers may have low remuneration, influencing their state of discomfort and/or discouragement [66,67] and, on the other hand, there are many gaps that need to be reevaluated because the management model has flaws that harm workers [62].

The current literature lacks updated empirical studies on the well-being of outsourced workers for greater support of the link between theory and practice based on results. Faced with this issue found in the exploration of this reference, the justification and support of this research and its interests in providing data to the scientific community and society are emphasized.

3. Methods

3.1. Research Object

The research locus was in construction sites located in the cities of Belém, Ananindeua, Castanhal, and Abaetetuba, situated in the state of Pará. These municipalities had estimated populations of 1,303,403, 478,778, 192,256, and 158,188, respectively [68].

3.2. Data Collect

The data collection for the research was conducted using the IBET-13 questionnaire proposed by [26]. This questionnaire consists of 13 questions and was developed and validated in Brazilian Portuguese, making it applicable to any individual in any work context, as can be seen in other papers [69,70]. The IBET-13 exhibits a precision index of 0.93, surpassing the minimum threshold of 0.70 [26]. The research sample comprised construction workers (laborers, masons, carpenters, locksmiths, painters, concrete workers, electricians, plumbers, and plasterers). Eligible participants were identified based on their job function, and anonymity was maintained for the 17 companies and the 376 participating workers. This sample size exceeds the minimum requirement of 245 participants, which was calculated for a homogeneous sample with a 95% confidence interval, a 5.05% margin of error, and a population of 60,671 construction workers in Pará [71]. The questionnaire was administered from 1 August 2019 to 30 August 2019.

To ensure the quality of the collected data, the questionnaire was administered privately to each participant, and responses were voluntary. There were no incomplete responses, as the administration was conducted by a researcher. All questions were read and explained when necessary, aiming to ensure effective understanding by the workers. The workers participated under favorable conditions outside their work environment, avoiding conditions such as excessive noise, heat, and risks during the questionnaire administration. Additionally, at the beginning of the survey, respondents were informed about the research objectives and any potential emotional risks associated with the sur-
vey. They were assured of their right to withdraw at any time while maintaining their anonymity. Only those who consented to participate were included in the study. Despite all the aforementioned measures, there was a risk of bias in the collected data when (1) workers perceived that they might face reprisal from the company for responding to the questionnaire, (2) workers, due to their exhausting work schedules, responded to the questionnaire in a disinterested manner.

The obtained data were grouped and analyzed according to the dimensions defined in the IBET-13: (1) commitment, (2) engagement, and (3) satisfaction. For the first dimension, five items of organizational and affective commitment were applied, along with four items of job satisfaction. For the second dimension, four items related to work engagement were applied. The statements utilized a 5-point Likert scale, ranging from 1 (much lower) to 5 (much higher). The choice of this questionnaire was determined for the research due to its validation (precision index = 0.93 and Cronbach’s alpha < 0.70) and suitability for any professional environment, in addition to being constructed and validated in Brazilian Portuguese. The data obtained for self-perception of well-being at work used a different scale, namely a scale from 1 (much lower) to 7 (much higher) aiming to maintain the original scale from the IBET-13 questionnaire.

To clarify the IBET-13 questionnaire, the indicators of its dimensions were adopted as described above.

3.2.1. Commitment

Organizational commitment comprises affective aspects and can be seen as the individual’s connection with the organization, representing the positive points that activate the desire to remain in the company. The questions related to commitment are (1) I am content with the company I work for; (2) I am enthusiastic about the company; (3) I am interested in the company I work for; (4) I am excited about the company I work for; (5) I am proud of the company I work for.

3.2.2. Engagement

Work engagement comprises affective aspects of BET. Engagement is assessed based on the reasons that may lead an employee to be engaged in the company. The questions related to engagement are (1) The greatest satisfactions in my life come from my work; (2) The most important things that happen in my life involve my work; (3) I eat, live, and breathe my work; (4) The hours I spend working are the best part of my day.

3.2.3. Satisfaction

Satisfaction comprises cognitive aspects and is related to the positive bond of five specific domains in the work environment: satisfaction in interpersonal relationships (with superiors and colleagues), with the salary received, with potential promotion opportunities, with the company’s management policy, and satisfaction with tasks performed and the position held [72]. The questions related to satisfaction are (1) I am satisfied with my salary compared to my efforts at work; (2) I am satisfied with the level of interest my tasks arouse in me; (3) I am satisfied with the understanding between me and my boss; (4) I am satisfied with the opportunities to be promoted in this company.

3.3. Data Analysis

A multiple linear regression model was constructed to understand the relationship between self-perceived well-being (dependent variable) by employees and (a) employment relationship, (b) satisfaction, (c) commitment, and (d) work engagement (independent variables). Pearson correlation analyses were performed to verify the individual correlations between the variables. Significant correlations were classified as weak (0.30 to 0.50), moderate (0.50 to 0.70), or strong (>0.70). The analyses were conducted using IBM SPSS v. 26 software, and significance was set at 0.05.
3.4. Application Site

This research was conducted in the state of Pará, which boasts the highest GDP and the second-largest territorial area in Brazil’s North region, situated within the Brazilian Amazon. Pará was chosen due to the scarcity of information regarding the local construction environment. Furthermore, its geographical distance from Brazil’s commercial and industrial hubs in the South and Southeast contributes to its lower level of technological development. This underscores the need for research in the region and supports the creation of strategies that can enhance the built environment in developing countries worldwide.

4. Results

4.1. Participants’ Characteristics

The study collected 376 valid samples, where 372 (98.94%) were male and 4 (1.06%) were female. The majority of participants fell within the age group of 30 to 40 years (146; 38.83%), followed by the age groups of 18 to 29 years (91; 24.20%), 41 to 51 years (88; 23.40%), and 52 to 67 years (51; 13.56%). Regarding educational level, 180 (47.87%) had attended elementary school, 192 (51.06%) had attended high school, and only 4 (1.06%) had attended college. In terms of job category, 129 (34.31%) were unskilled workers (laborers) and 247 (65.69%) were skilled workers (bricklayers, carpenters, locksmiths, painters, concrete workers, electricians, plumbers, and plasterers). Regarding the number of children, the majority had 1 to 2 children (220; 58.51%), followed by more than 3 children (95; 25.27%) and no children (61; 16.22%). Concerning the length of employment, 210 (55.85%) had less than 1 year of tenure, 86 (22.87%) had between 1 and 3 years, 16 (4.26%) had between 3 and 5 years, and 64 (17.02%) had more than 5 years. The marital status of the workers was 115 (30.59%) married, 14 (3.72%) separated, 01 (0.27%) widowed, and 138 (36.70%) in a domestic partnership. For better visualization, refer to Table 1.

Table 1. General characteristics of the research participants.

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>Category</th>
<th>Total (n = 376)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Age</td>
<td>91</td>
<td>18–29</td>
<td>24.20%</td>
</tr>
<tr>
<td></td>
<td>146</td>
<td>30–40</td>
<td>38.83%</td>
</tr>
<tr>
<td></td>
<td>88</td>
<td>41–51</td>
<td>23.40%</td>
</tr>
<tr>
<td></td>
<td>51</td>
<td>52–67</td>
<td>13.56%</td>
</tr>
<tr>
<td>2 Gender</td>
<td>372</td>
<td>Male</td>
<td>98.94%</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Female</td>
<td>1.06%</td>
</tr>
<tr>
<td></td>
<td>61</td>
<td>None</td>
<td>16.22%</td>
</tr>
<tr>
<td>3 Number of children</td>
<td>220</td>
<td>1–2</td>
<td>58.51%</td>
</tr>
<tr>
<td></td>
<td>95</td>
<td>3+</td>
<td>25.27%</td>
</tr>
<tr>
<td></td>
<td>180</td>
<td>Elementary school</td>
<td>47.87%</td>
</tr>
<tr>
<td>4 Educational level</td>
<td>192</td>
<td>High school</td>
<td>51.06%</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>College</td>
<td>1.06%</td>
</tr>
<tr>
<td>5 Job category</td>
<td>129</td>
<td>Unskilled worker</td>
<td>34.31%</td>
</tr>
<tr>
<td></td>
<td>247</td>
<td>Skilled worker</td>
<td>65.69%</td>
</tr>
<tr>
<td></td>
<td>210</td>
<td>Years of tenure &lt; 1 year</td>
<td>55.85%</td>
</tr>
<tr>
<td>6 Length of employment</td>
<td>86</td>
<td>1 year &lt; years of tenure &lt; 3 years</td>
<td>22.87%</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>3 years &lt; years of tenure &lt; 5 years</td>
<td>4.26%</td>
</tr>
<tr>
<td></td>
<td>64</td>
<td>years of tenure &gt; 5 years</td>
<td>17.02%</td>
</tr>
<tr>
<td></td>
<td>107</td>
<td>Single</td>
<td>28.46%</td>
</tr>
<tr>
<td></td>
<td>115</td>
<td>Married</td>
<td>30.59%</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Separated</td>
<td>3.72%</td>
</tr>
<tr>
<td>7 Marital status</td>
<td>1</td>
<td>Widowed</td>
<td>0.27%</td>
</tr>
<tr>
<td></td>
<td>138</td>
<td>Domestic partnership *</td>
<td>36.70%</td>
</tr>
</tbody>
</table>

* Term used to identify workers in a stable union, as it is a regionalized term, conceived based on the geographical scope of the research.
4.2. Descriptive Analysis of the Questionnaire

The questionnaire consists of 13 questions divided into three dimensions of well-being at work, namely commitment, satisfaction, and involvement. On a scale of 1–5, the items were evaluated as follows: (1) Strongly Disagree, (2) Disagree, (3) Neither Agree nor Disagree, (4) Agree, (5) Strongly Agree. For the analysis of employees’ self-perceived well-being, another scale was used where the items were rated from 1 to 7: (1) Terrible, (2) Very Poor, (3) Poor, (4) Fair, (5) Good, (6) Very Good, (7) Excellent. The mean, frequency, and standard deviation of the respondents regarding the self-perceived well-being item at work are reported in Table 2.

Table 2. Mean (MD) with standard deviation (SD) and frequency (%) of individual responses in employees’ self-perceived well-being at work.

<table>
<thead>
<tr>
<th>Item</th>
<th>Contract</th>
<th>N (%)</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do you consider your overall well-being at work?</td>
<td>P *</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td></td>
<td>T **</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

* Workers with permanent contracts with the company; ** workers with temporary contracts with the company.

The average response and standard deviation of respondents within the item of self-perceived well-being for own workers were 5.14 and 0.8 standard deviation, respectively. On the other hand, for outsourced workers, the average response was 4.81 with a standard deviation of 0.8. The majority of temporary workers (49.2%) stated that they considered their well-being at work “good”. Similarly, the majority of own professionals (59.1%) also stated that they considered their well-being at work “good”. The percentage of those who considered their well-being “excellent” was similar for both groups of workers, permanent (8.9%) and temporary (6.3%). Percentage-wise, the number of permanent workers (14.7%) who rated their well-being as “great” was higher than that of temporary workers (6.3%). A relevant characteristic in the obtained data was that a higher percentage of temporary workers (49.2%) rated their well-being as “fair” compared to permanent workers (16.0%). Another relevant characteristic reported was that only permanent employees (1.3%) reported their self-perceived well-being as “poor”.

Regarding the data reported in Table 3, some significant percentage variations can be observed. For the commitment dimension, in all items, the average percentage of respondent permanent workers was higher than temporary workers. For the item “I am content with the company I work for”, it stood out that in both categories of workers, permanent (55.3%) and temporary workers (50.8%) evaluated similarly as “Agree”. However, in the same item, the percentage of workers who evaluated this as “Agree completely” was higher for permanent workers (31.6%) compared to temporary workers (12.7%). In the items “I am interested in the company I work for” and “I am proud of the company I work for”, both classes of workers had response frequencies of less than 50% in all response possibilities.

For the dimension of involvement, the average percentage values of responses from both permanent and temporary employees were the lowest compared to items from other dimensions of the questionnaire. The lowest average was reported in the item “The most important things that happen in my life involve my work”, where the average response was evaluated at 2.79 for both permanent (SD = 1.12) and temporary employees (SD = 1.09). It is worth noting that in the item “The hours I spend working are the best hours of my day”, the majority of both permanent (32.6%) and temporary employees (36.5%) disagreed with the statement. In the item “I eat, live, and breathe my work”, temporary employees (61.9%) had the highest percentage of “Agree” compared to permanent employees (58.5%) in the same item.
Table 3. Mean and standard deviation (SD) of individual responses in the dimensions of commitment, engagement, and satisfaction.

<table>
<thead>
<tr>
<th>Item</th>
<th>Contract</th>
<th>N (%)</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Commitment Dimension:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I am content with the company I work for</td>
<td>P * 2 (0.6%)</td>
<td>9 (2.9%)</td>
<td>30 (9.6%)</td>
</tr>
<tr>
<td></td>
<td>T ** 4 (6.3%)</td>
<td>8 (12.7%)</td>
<td>11 (17.5%)</td>
</tr>
<tr>
<td>2. I am enthusiastic about the company I work for</td>
<td>P * 4 (1.3%)</td>
<td>13 (4.2%)</td>
<td>45 (14.4%)</td>
</tr>
<tr>
<td></td>
<td>T ** 5 (7.9%)</td>
<td>8 (12.7%)</td>
<td>15 (23.8%)</td>
</tr>
<tr>
<td>3. I am interested in the company I work for</td>
<td>P * 5 (1.0%)</td>
<td>2 (0.6%)</td>
<td>9 (2.9%)</td>
</tr>
<tr>
<td></td>
<td>T ** 3 (3.2%)</td>
<td>9 (14.3%)</td>
<td>14 (22.2%)</td>
</tr>
<tr>
<td>4. I am excited about the company I work for</td>
<td>P * 3 (1.0%)</td>
<td>13 (4.2%)</td>
<td>45 (14.4%)</td>
</tr>
<tr>
<td></td>
<td>T ** 2 (3.2%)</td>
<td>9 (14.3%)</td>
<td>14 (22.2%)</td>
</tr>
<tr>
<td>5. I am proud of the company I work for</td>
<td>P * 8 (2.6%)</td>
<td>22 (7.0%)</td>
<td>46 (14.7%)</td>
</tr>
<tr>
<td></td>
<td>T ** 2 (3.2%)</td>
<td>9 (14.3%)</td>
<td>22 (34.9%)</td>
</tr>
<tr>
<td><strong>Engagement Dimension:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. The greatest satisfactions of my life come from my work</td>
<td>P * 23 (7.3%)</td>
<td>54 (17.3%)</td>
<td>90 (28.8%)</td>
</tr>
<tr>
<td></td>
<td>T ** 9 (14.3%)</td>
<td>16 (25.4%)</td>
<td>10 (15.9%)</td>
</tr>
<tr>
<td>2. The most important things that happen in my life involve my work</td>
<td>P * 37 (11.8%)</td>
<td>102 (32.6%)</td>
<td>85 (27.2%)</td>
</tr>
<tr>
<td></td>
<td>T ** 6 (9.5%)</td>
<td>23 (36.5%)</td>
<td>16 (25.4%)</td>
</tr>
<tr>
<td>3. I eat, live, and breathe my work</td>
<td>P * 59 (18.8%)</td>
<td>78 (24.9%)</td>
<td>87 (27.8%)</td>
</tr>
<tr>
<td></td>
<td>T ** 13 (20.6%)</td>
<td>19 (30.2%)</td>
<td>12 (19.0%)</td>
</tr>
<tr>
<td>4. The hours I spend working are the best hours of my day</td>
<td>P * 39 (12.5%)</td>
<td>68 (21.7%)</td>
<td>85 (27.2%)</td>
</tr>
<tr>
<td></td>
<td>T ** 12 (19.0%)</td>
<td>13 (20.6%)</td>
<td>14 (22.2%)</td>
</tr>
<tr>
<td><strong>Satisfaction Dimension:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I am satisfied with my salary compared to my efforts at work</td>
<td>P * 40 (12.8%)</td>
<td>55 (17.6%)</td>
<td>48 (15.3%)</td>
</tr>
<tr>
<td></td>
<td>T ** 15 (23.8%)</td>
<td>14 (22.2%)</td>
<td>8 (12.7%)</td>
</tr>
<tr>
<td>2. I am satisfied with the level of interest my tasks arouse in me</td>
<td>P * 7 (2.2%)</td>
<td>15 (4.8%)</td>
<td>27 (8.6%)</td>
</tr>
<tr>
<td></td>
<td>T ** 3 (4.8%)</td>
<td>4 (6.3%)</td>
<td>3 (4.8%)</td>
</tr>
<tr>
<td>3. I am satisfied with the understanding between me and my boss</td>
<td>P * 6 (1.9%)</td>
<td>6 (1.9%)</td>
<td>18 (5.8%)</td>
</tr>
<tr>
<td></td>
<td>T ** 4 (6.3%)</td>
<td>4 (6.3%)</td>
<td>7 (11.1%)</td>
</tr>
<tr>
<td>4. I am satisfied with the opportunities for promotion in this company</td>
<td>P * 20 (6.4%)</td>
<td>40 (12.8%)</td>
<td>47 (15%)</td>
</tr>
<tr>
<td></td>
<td>T ** 11 (17.5%)</td>
<td>12 (19.0%)</td>
<td>9 (14.3%)</td>
</tr>
</tbody>
</table>

* Workers with permanent contracts with the company; ** workers with temporary contracts with the company; (1) Disagree completely, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Agree completely.

For the satisfaction dimension, the reported data provide an important indication of salary satisfaction. For the item “I am satisfied with my salary compared to my efforts at work”, the majority of both permanent (57.8%) and temporary employees (54%) agreed, and when combined with the “Agree completely” responses, the numbers for permanent (32.6%) and temporary employees (22.2%) sum up to more than 90% of the sample space. For the item “I am satisfied with the understanding between me and my boss”, a frequency average of responses ranging from “completely disagree” to “agree” was reported. It is worth noting that for the item “I am satisfied with the opportunities to be promoted in this company”, the majority of permanent employees (53.7%) and temporary employees (44.4%) evaluated it as “Agree”, assuming the possibility of career growth within the company.

4.3. Associations between Individual Variables

Table 4 lists the correlation data between the model's independent variables and the socio-demographic variables. These results were determined using the Pearson correlation coefficient between the variables.

The prerequisites for conducting the regression test were met considering the normal distribution test, multicollinearity, and Durbin–Watson test. The correlation in Table 5 shows an absence of multicollinearity, which is present when there is a strong correlation between independent variables (R > 0.69). Additionally, the multicollinearity test of the Variance Inflation Factor (VIF) was conducted, and the tolerance confirms that there is no multicollinearity (tolerance > 0.1 and VIF < 10). Normal distribution was met where the residuals fall within the expected range (−3 ≤ X ≥ 3), ruling out the presence of outliers. The Durbin–Watson statistic of 1.908 ensures that there is no autocorrelation, making the result valid. In Table 5, the highest correlation value is seen between (5) commitment and
(1) satisfaction ($R = 0.679$), considered to be moderate and positive ($0.40 \leq R \leq 0.69$). In the same category, the correlation between (1) self-perception of WBW and (4) satisfaction ($R = 0.414$) is considered moderate and positive. For the correlation between (1) self-perception and (5) commitment ($R = 0.502$), it is also considered moderate and positive. All other correlations can be classified as weak, ranging from negative to positive correlations.

### Table 4. Correlation between independent variables and socio-demographic variables.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment</td>
<td>1</td>
<td>0.058</td>
<td>0.018</td>
<td>0.025</td>
<td>−0.007</td>
<td>−0.003</td>
<td>0.201</td>
<td>0.112</td>
<td>−0.109</td>
<td>−0.007</td>
</tr>
<tr>
<td>Job category</td>
<td>0.058</td>
<td>1</td>
<td>−0.066</td>
<td>−0.009</td>
<td>−0.114</td>
<td>0.143</td>
<td>−0.133</td>
<td>0.143</td>
<td>0.011</td>
<td>−0.17</td>
</tr>
<tr>
<td>Marital status</td>
<td>0.018</td>
<td>−0.066</td>
<td>1</td>
<td>−0.004</td>
<td>0.006</td>
<td>0.065</td>
<td>0.081</td>
<td>−0.077</td>
<td>−0.01</td>
<td>0.091</td>
</tr>
<tr>
<td>Education level</td>
<td>0.025</td>
<td>−0.009</td>
<td>−0.004</td>
<td>1</td>
<td>−0.077</td>
<td>0.045</td>
<td>0.022</td>
<td>0.053</td>
<td>0.04</td>
<td>0.139</td>
</tr>
<tr>
<td>Length of employment</td>
<td>−0.007</td>
<td>−0.114</td>
<td>0.006</td>
<td>−0.077</td>
<td>1</td>
<td>−0.076</td>
<td>0.015</td>
<td>−0.028</td>
<td>−0.056</td>
<td>−0.178</td>
</tr>
<tr>
<td>Gender</td>
<td>−0.003</td>
<td>0.143</td>
<td>0.065</td>
<td>0.045</td>
<td>−0.076</td>
<td>1</td>
<td>−0.016</td>
<td>−0.069</td>
<td>0.076</td>
<td>0.021</td>
</tr>
<tr>
<td>Contract model</td>
<td>0.201</td>
<td>−0.133</td>
<td>0.081</td>
<td>0.022</td>
<td>0.015</td>
<td>−0.016</td>
<td>1</td>
<td>0.045</td>
<td>−0.068</td>
<td>0.158</td>
</tr>
<tr>
<td>Number of children</td>
<td>0.112</td>
<td>−0.143</td>
<td>−0.077</td>
<td>0.053</td>
<td>−0.028</td>
<td>−0.069</td>
<td>0.045</td>
<td>1</td>
<td>−0.014</td>
<td>−0.354</td>
</tr>
<tr>
<td>Engagement</td>
<td>−0.109</td>
<td>0.011</td>
<td>−0.01</td>
<td>0.04</td>
<td>−0.056</td>
<td>0.076</td>
<td>−0.068</td>
<td>−0.014</td>
<td>1</td>
<td>−0.128</td>
</tr>
<tr>
<td>Age</td>
<td>−0.007</td>
<td>−0.17</td>
<td>0.091</td>
<td>0.139</td>
<td>−0.178</td>
<td>0.021</td>
<td>0.158</td>
<td>−0.354</td>
<td>−0.128</td>
<td>1</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>−0.624</td>
<td>−0.12</td>
<td>0.027</td>
<td>0.044</td>
<td>0.015</td>
<td>0.06</td>
<td>0.03</td>
<td>−0.072</td>
<td>−0.198</td>
<td>0.042</td>
</tr>
</tbody>
</table>

### Table 5. Correlations among self-perception of well-being at work, contract model, engagement, satisfaction and commitment.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1.000</td>
<td>−0.147</td>
<td>0.197</td>
<td>0.414</td>
<td>0.502</td>
</tr>
</tbody>
</table>

4.4. Regression Analysis for Well-Being at Work Dimensions

In this study, multiple regression analysis (stepwise forward method) was conducted to examine the correlation between the variables studied, specifically the relationship between the perception of WBW as the dependent variable and the independent variables, namely: contract model, engagement, satisfaction, and commitment. The analysis resulted in a statistically significant model [$F(4, 371) = 32.975; p < 0.001; R^2 = 0.254$]. In the final model (see Table 6), it was initially observed that the variables under study did not exhibit multicollinearity (collinearity statistics: tolerance and VIF). The analysis highlights that the variable commitment to work is the most influential factor on WBW ($\beta = 0.404; t = 6.491; p < 0.05$), with a positive correlation. Similarly, job satisfaction also positively influences WBW ($\beta = 0.129; t = 2.068; p < 0.05$), though to a lesser extent, and engagement ($\beta = 0.025; t = 0.511; p > 0.05$) also shows a positive influence on WBW. However, it is also evident that the contract model (permanent or temporary) has the least explanatory power for WBW ($\beta = −0.010; t = −0.206; p > 0.05$).

### Table 6. Regression model to assess self-perception of well-being at work, employment relationship, engagement, satisfaction, and commitment.

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Standard Error</th>
<th>Beta ($\beta$)</th>
<th>t</th>
<th>Sig. ($p$)</th>
<th>Multicollinearity Test Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBW perception</td>
<td>2.718</td>
<td>0.235</td>
<td>0.101</td>
<td>11.561</td>
<td>0.000</td>
<td>0.922</td>
<td>1.084</td>
</tr>
<tr>
<td>Contract model</td>
<td>−0.022</td>
<td>0.104</td>
<td>−0.010</td>
<td>−0.206</td>
<td>0.837</td>
<td>0.860</td>
<td>1.163</td>
</tr>
<tr>
<td>Engagement</td>
<td>0.025</td>
<td>0.049</td>
<td>0.025</td>
<td>0.511</td>
<td>0.610</td>
<td>0.860</td>
<td>1.163</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.157</td>
<td>0.076</td>
<td>0.129</td>
<td>2.068</td>
<td>0.039</td>
<td>0.514</td>
<td>1.945</td>
</tr>
<tr>
<td>Commitment</td>
<td>0.441</td>
<td>0.068</td>
<td>0.404</td>
<td>6.491</td>
<td>0.000</td>
<td>0.513</td>
<td>1.950</td>
</tr>
</tbody>
</table>

* Dependent variable obtained by the indicator “How do you generally consider your WBW?”. 
5. Discussion

5.1. Influence of Contract Model on Well-Being at Work

Although other studies indicate significant differences in the mental health of permanent and temporary workers [6,73,74], the results found in this research suggest that employment status was not the determining factor for the evaluation of WBW, as the coefficient evaluation of the contract model variable ($B = -0.022$) demonstrates that permanent workers show a small variation compared to temporary workers, indicating that other factors explain the well-being of construction workers in the Brazilian Amazon. Points such as current legislation and occupational characteristics of the regional construction sector may explain this result.

5.1.1. Current Legislation of Construction Sector

Among the aspects that may explain the lack of statistical significance between the workers’ employment status and WBW is the labor legislation. The construction industry is regulated by norms and laws linked to the Consolidation of Labor Laws (CLT), supervised by the Brazilian Ministry of Labor and Social Security. With the aim of standardizing the obligations between workers and employers in various economic activities [75], regulations related to safety and occupational medicine were established in 1978. These regulations are periodically updated and have the force of law for mandatory compliance by organizations, ensuring the health and integrity of both permanent and temporary workers. The labor obligations established by regulatory standards may contribute to the perception that both groups of workers are in the same occupational hygiene, comfort, and safety conditions. Workers share the same workplace and comply with the rules imposed on the construction site, potentially experiencing the same occupational risks.

Expanding on this discussion, the results presented in Table 3 suggest that 46.03% of temporary and 30.35% of the permanent workers stated that they were dissatisfied with their remuneration in relation to their labor efforts. The greater dissatisfaction among temporary workers (difference of 15.62%) can be attributed to the loss of benefits guaranteed to permanent workers, highlighting the precarious nature of temporary employment following the enactment of Law No. 13.429. Among the lost benefits are overtime pay, bonuses, paid weekly rest, severance pay for dismissal without cause, and night shift differential. To fully understand this issue, further research is needed to investigate wage differences between permanent and temporary workers.

This finding underscores the need to review Law No. 13.429 to mitigate wage losses for temporary workers and ensure greater pay equity with permanent workers. Future research should investigate how this dissatisfaction manifests and what measures can be adopted to ensure income equity under Law No. 13.429. Nonetheless, some suggestions can be proposed.

Unions must pay close attention to the conditions of temporary workers. In addition to ensuring a minimum wage for construction workers, unions should advocate for better conditions for temporary workers and work to combat the wage losses resulting from Law No. 13.429.

Regarding construction companies, since temporary work in Brazilian construction typically occurs through subcontracting specialized companies, the main contractors must fulfill their duty to monitor the subcontractors in terms of payment to temporary workers. Ultimately, improving WBW is beneficial for the construction company [22,25].

Additionally, construction companies could develop compensatory measures for temporary workers, such as productivity bonuses similar to those offered to permanent workers. This is similar to other benefits that both categories of workers enjoy in their daily work life. In the metropolitan region of Belém, employees are entitled to breakfast and lunch during their normal working hours, among other benefits. In São Paulo, workers are also entitled to an afternoon snack in addition to the meals mentioned. The inclusion of one more daily meal can influence the perception of well-being when compared to the reality of Belém. Similarly, in the United States of America, regulations and collective agreements
impact workers. In the US, worker remuneration is based on their hours worked [76]. This work dynamic varies between regions and may explain different results in WBW assessment. These results were also found in other study [77], demonstrating the great relevance of including daily meals for construction workers, influencing their well-being.

5.1.2. Occupational Characteristics of Construction Sector

The homogeneity of perceptions between permanent and temporary workers also occurs because both operate in the same work environment and are therefore subject to the same working conditions, sharing the same risks. Hence, both will have the same perceptions of WBW. This results from the occupational characteristics of the construction sector, which is characterized by an environment full of precarious conditions and stressful factors [78,79]. It is an environment marked by noise, dust, and activities that require significant physical effort and handling of dangerous equipment [15,80]. This results in an environment conducive to workplace accidents due to the various inherent risks on the construction site [81].

The construction industry environment is so aggressive to the worker; that is, the sector is well known for its high turnover rate [82–84]. In Brazil, this rate is 7.3%, according to the General Registry of Employees and Unemployed [85]. Corroborating these findings, this research found that 77% of the workers had less than 3 years of employment (Table 1), demonstrating the high turnover rate in the region. The work of [86] relates the precarious reality of construction sites to turnover, claiming it as a reason that drives employees to seek better working conditions. Another study [83] of construction workers in China and the Philippines found that, in both countries, the high turnover intention is associated with psychological contract breach and, consequently, emotional exhaustion. Although no representative studies were found regarding turnover among permanent and outsourced workers in the construction industry, these aspects could be related. According to another author [87], temporary workers showed demotivation due to intense working hours, resulting in high turnover rates, while permanent workers, benefiting from a more beneficial employment policy, claimed a better balance between work and personal life. The difference in the results found is explained by the difference in sectors; while in the construction industry, there is no difference in the work dynamic between permanent and temporary workers, the software development sector was able to visualize this disparity.

5.2. Influence of the Engagement Dimension on Well-Being at Work

Despite employment status not being a determining factor for workers’ perception of WBW, the construction sector’s high turnover rate [18,88] may indicate the low significance found regarding engagement (B = 0.025; p = 0.05). In the construction industry, when a project is completed, permanent workers are commonly assigned to another project or are dismissed from the workforce [89]. Temporary workers are specialized in a single task, so upon completing a job at one site, they move on to another. Because they are constantly changing environments and teams, both categories of workers fail to establish a bond with the organization and the group of workers. Consequently, permanent and temporary workers may not find pleasure in working and may not see this moment as something that complements their lives. As a result, there may be a lack of motivation and productivity among employees, as an engaged team expresses proactivity, active and productive behaviors, and is satisfied with their work, seeing it as meaningful and relevant [90]. Corroborating this fact, 77% of the evaluated employees had less than 3 years of employment (Table 1). As a result of this high turnover, the local construction sector exhibits low productivity and project delays [91].

As previously discussed, self-esteem strongly influences work engagement [51]. On the other hand, job stability can meet the worker’s self-esteem demand [92]. Conversely, given the high turnover present in the construction industry [83], it is evident that employees in this sector struggle to develop a sense of belonging, leading to the perception that they are not valued, either by the companies or by society itself [93].
Therefore, to improve local worker engagement and reduce turnover in the sector, it is necessary to develop greater organizational self-esteem through significant changes within the company that empower workers to have more control over their tasks [94]. However, this is not an easy task, contributing to the construction industry presenting factors that counteract the formation of self-esteem, consequently affecting work engagement, which may explain the low capacity of the worker engagement factor to determine WBW (B = 0.025; p = 0.05).

5.3. Influence of the Commitment Dimension on Well-Being at Work

Another factor studied was commitment, which proved to be the most significant factor in determining construction workers’ WBW (B = 0.441; p = 0.05) among the evaluated factors. Like the results presented in this study, other research has confirmed the significance between affective commitment and workplace well-being [95]. This result aligns with the literature, which suggests that a higher frequency of positive emotions can increase commitment levels and, consequently, enhance WBW [96]. Specifically in the construction industry, known for its extremely stressful environment [97], there are consequences on the quality of life and well-being of the workers, like anxiety and depression [15].

Despite the findings suggesting that construction workers in the Brazilian Amazon have a positive outlook on their WBW, another study indicated that the region has the highest rates of work-related accidents due to excessive effort compared to other regions of the country [98]. This may be due to the more demanding climatic conditions of the Amazon region, characterized by high temperatures and a humid climate. Under these conditions, predominantly manual labor with a low adoption of productivity-enhancing technologies makes the work even more demanding for the sector’s workforce. In this sense, [98] other findings contrast with the positive perception of work obtained in this study. This discrepancy may be associated with the difficulty in measuring commitment in the workplace, as workers may perceive that their responses could influence their relationship with the company and how they are perceived by it.

Therefore, it remains essential for companies to value their employees because when an organization cares about the well-being of its employees, there is a greater chance of increasing their affective commitment [99]. Additionally, employee commitment within the company is extremely important for creating and maintaining a healthier and more efficient environment [100] as well as increasing the willingness to remain in the organization [101].

Finally, the commitment dimension of temporary workers showed the most significant differences compared to permanent workers. As shown in Table 3, the average responses for all items in the commitment dimension were on average 14.11% lower among temporary workers. This disparity can be partly attributed to the precariousness of work relationships following the loss of benefits due to the enactment of Law No. 13.429, such as overtime pay, bonuses, paid weekly rest, severance pay for dismissal without cause, and night shift differential. It may also result from the lack of a perceived long-term connection with the employer, as temporary workers are fully aware of the limited duration of their employment contract.

A potential consequence of this lower commitment among temporary workers is a decline in individual performance. This can occur due to job insecurity and the constant relocation of workers [102]. This is especially relevant in the construction sector, where temporary workers often perform very specific tasks and participate in a large number of projects within a short timeframe. This contrasts with permanent workers, who typically remain on a project until it is completed or until their specific work group finishes.

This finding highlights the need to improve commitment and enhance the individual performance of temporary workers by strengthening their labor rights, providing them with better job security. Without such measures, temporary workers may feel “disposable”. In this context, Law No. 13.429 does a disservice, and the country and policymakers need to act to reduce these inequalities between temporary workers and enhance performance and WBW in Brazil.
5.4. Influence of the Satisfaction Dimension on Well-Being at Work

In addition to the factors already discussed, job satisfaction was another factor that showed significant conditions in the model explaining the WBW of construction workers (B = 0.157; p = 0.05). Some demographic indicators may explain the deterministic capacity of the satisfaction variable in the proposed model. A study [103] on the relationship between age and job satisfaction among construction workers in New Zealand observed that workers aged 45 to 54 indicated being more satisfied with their work than younger workers. According to the authors, this difference in satisfaction occurs because older workers have more family commitments; therefore, they feel more satisfaction with their work knowing that it will allow them to fulfill these commitments. Similarly, in the present study, more than 50% of the workers studied have one to two children, indicating family commitments and responsibilities that may impact the satisfaction variable.

Furthermore, salary can significantly impact job satisfaction for workers. Younger workers, for example, prioritize travel, leisure, and adventures, while older workers prioritize job stability [103]. However, salary gains often do not correspond to the risks faced in work routines [104]. Since the construction industry has a set salary floor (average USD 755,796 per year), the established average salary for workers may not meet the goals of both young and older workers, possibly due to the reduced purchasing power, which is evident from the low national salary floor in the sector compared to developed countries like the United States (average USD 33,150 per year [105]) or the United Kingdom (average USD 38,126.10 per year [106]).

Corroborating this finding, a study [107] compared the effect of salary gains on work. According to the authors, knowing the salary gains of other colleagues in the profession could impact workers’ satisfaction. Knowing that a colleague is better paid could lead to job dissatisfaction and increase intentions to change jobs.

Beyond the discussion about salary, other items contribute to the dimension of job satisfaction, such as interest in the task, understanding with the boss, and opportunities for promotion. Herzberg’s two-factor theory helps us to understand the relationship between these items. Herzberg’s theory discusses job satisfaction within the context of motivation [108]. According to Herzberg, salary is a factor related to working conditions which, while they can generate satisfaction, have a greater potential to cause dissatisfaction if deficient. In this context, despite the good perception of their salaries among construction workers in the Brazilian Amazon region, this factor would have little influence on the worker’s actual motivation.

Conversely, the other items of job satisfaction studied, according to Herzberg’s two-factor theory, are more related to job satisfaction itself and thus act as motivators. In this context, interest in the task, understanding with the boss, and opportunities for promotion would have a greater capacity to generate positive outcomes for work than merely increasing salaries, for example. This is because these items have a motivational power that may lead to practical results related to productivity and meeting project deadlines.

6. Conclusions

This study aimed to assess the significance of influence of workers’ contract model on workplace well-being. Additionally, it aimed to statistically evaluate which variables are statistically significant in assessing WBW in the construction industry through a multiple linear regression model.

Conducted in August 2019, data collection involved administering the well-established and validated IBET-13 questionnaire to 376 construction workers across 17 companies in the state of Pará, located in the Brazilian Amazon. With a 95% confidence interval, the developed model determined that the factors of satisfaction (p = 0.039) and commitment (p = 0.000) significantly influence the overall WBW of construction workers, while the factors of contract model (p = 0.837) and engagement (p = 0.610) do not have a significant influence. As a result, it was observed that the contract model factor is not a determinant for the WBW of construction workers, showing little influence of the contract type on WBW, whether permanent or temporary. This finding makes an important contribution...
to the scientific literature and helps clarify an important issue in the construction sector, as the industry is experiencing a transition and expansion of labor hiring modalities, with a significant portion of the workforce moving to temporary hiring arrangements. Consequently, this result suggests that the increase in temporary labor on construction sites may have a low impact on workers’ well-being.

According to the results obtained, the impact of temporary work on WBW is accompanied by a 15.62% reduction in salary satisfaction and a 14.11% decrease in the commitment dimension, indicating the precarious working conditions for temporary workers. Although the percentage may seem small, it is not insignificant, as this precariousness can have broader implications for the construction production chain. In the Brazilian context, the impacts of precarious temporary work are particularly concerning if this employment model is adopted more widely, as anticipated with the implementation of Law No. 13.429, which began regulating temporary work in the country in March 2017.

To address these issues, it is crucial to strengthen labor rights, ensuring better conditions under Law No. 13.429 for temporary workers. Construction companies can also improve the work environment and their relationship with subcontracted employees, adopting measures such as productivity bonuses to reduce disparities between different employment models. These steps can provide temporary workers with better job security, enhance WBW, and improve individual performance.

Regarding the close relationship between WBW and mental health concepts, the non-significance of the contract model in explaining WBW contrasts with the scientific literature, which asserts that the hiring modality strongly influences mental health [4,73,74]. This may indicate that other factors act as mediators between WBW and mental health, such as work stress, work–family relationship, and task dissatisfaction. Understanding this relationship is important to developing more effective hiring strategies that include the well-being and mental health of workers. For this purpose, future research should investigate which factors may mediate this relationship and how this occurs, using modeling techniques such as structural equations or interpretative structural modeling.

In addition to demonstrating the lack of significance of contract type on WBW, this study contributes to the knowledge on the construction work environment in the Brazilian Amazon, providing a comparative scenario for other developing countries around the world. This study contributes to the literature by clarifying the relationships between the WBW of construction workers and factors such as engagement, satisfaction, and commitment. It offers a better understanding of how each of these factors influences the daily lives of construction workers on site and helps develop strategies that can foster a more sustainable and healthy construction environment. Among these strategies, fostering commitment may yield the best results related to the WBW of construction workers. Practices such as regular working hours with reduced overtime, fair wages, and promoting leisure activities during lunch breaks, for instance, can contribute to a less stressful and healthier work environment for construction workers.

Regarding the limitations of this research, it is important to note that although the IBET-13 questionnaire used for data collection is well-validated and widely accepted in studies evaluating perceptions of WBW, the indicators adopted are limited to the theoretical framework that underpin them. In this context, drawing connections with other theories, such as Herzberg’s two-factor theory, should be carried out with caution. Additionally, this research explores a relatively underexamined group—the perceptions of construction workers in the context of building construction in the Brazilian Amazon, northern region of Brazil. Therefore, potential differences compared to other regions of the country, particularly those related to climate and its impact on the WBW of construction workers, may arise. Future studies could explore the perceptions of temporary and permanent workers in other regions of the country to assess the influence of climate on the WBW dimensions explored.

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References
11. Ramírez-González, D.M.; Zamora-Macorra, M.; García, C.I.A. Association between Precarious Employment and Disability in Adults over 50 Years of Age in Mexico. Rev. Colomb. Psiquiatr. 2023, in press. [CrossRef]


95. Moreira, F.G.P.; Pereira De Oliveira, C.; Farias, C.A. Workplace Accidents and the Probabilities of Injuries Occurring in the Civil Construction Industry in Brazilian Amazon: A Descriptive and Inferential Analysis. Saf. Sci. 2024, 173, 106449. [CrossRef]


99. Goetz, N.; Wald, A. Similar but Different? The Influence of Job Satisfaction, Organizational Commitment and Person-Job Fit on Individual Performance in the Continuum between Permanent and Temporary Organizations. Int. J. Proj. Manag. 2022, 40, 251–261. [CrossRef]


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