Article

The Relationship between Job Insecurity and Safety Behavior: The Buffering Role of Leadership Ethics

Yunsook Hong 1, Min-Jik Kim 2,* and Young Woo Sohn 3,*

1 College of Business Administration, University of Ulsan, Ulsan 44610, Republic of Korea; yhong@ulsan.ac.kr
2 School of Industrial Management, Korea University of Technology and Education, Cheonan 31253, Republic of Korea
3 Department of Psychology, Yonsei University, Seoul 03722, Republic of Korea
* Correspondence: mkim@koreatech.ac.kr (M.-J.K.); ysohn@yonsei.ac.kr (Y.W.S.)

Abstract: While numerous studies have delved into the ramifications of job insecurity for organizational outcomes, past endeavors have not adequately unveiled the mediating and moderating factors in the connection between job insecurity and safety behavior, especially from a positive psychology standpoint. Furthermore, the interaction between organizational leadership and job insecurity has been underexplored, despite the critical role of leaders during periods of job insecurity. Addressing these research gaps, we have devised a theoretical framework suggesting that meaningfulness of work might act as an intermediary in the link between job insecurity and safety behavior. We also hypothesize that ethical leadership might mitigate the adverse effects of job insecurity on the meaningfulness of work. Data were collected three separate times from 235 employees in the Republic of Korea. Our empirical evidence substantiates that meaningfulness of work indeed serves as a bridge between job insecurity and safety behavior. Additionally, the presence of ethical leadership moderates the interrelation between job insecurity and meaningfulness of work positively, attenuating the detrimental influence of job insecurity. These insights emphasize the fundamental roles of both meaningfulness of work (as a mediator) and ethical leadership (as a moderator) in defining the nexus between job insecurity and safety behavior.

Keywords: job instability; safety behavior; meaningfulness of work; ethical leadership; structural equation modeling

1. Introduction

The global health crisis brought about by the COVID-19 pandemic led to an unprecedented economic convulsion worldwide. A plethora of companies implemented substantial restructuring and downsizing measures as a survival strategy, inciting a broad sense of job insecurity among workers [1,2]. To maintain and enhance the sustainability of companies, top management teams and leaders should consider the issue of employee job insecurity [2], which is characterized as the “anticipated threat of imminent job loss” [3] (p. 65).

In contemporary organizational landscapes, the phenomenon of job insecurity, the meaningfulness of work, and the role of leadership are pivotal topics that intertwine to influence various organizational outcomes, particularly safety behavior. As workplaces continue to evolve in response to various external and internal pressures, understanding how these elements interact becomes imperative. This study’s aim is to disentangle the intricate relationships among these constructs and provide answers to the following research questions.

RQ1: How does job insecurity influence employees’ safety behavior?
RQ2: What are the underlying processes underpinning the connection between job insecurity and safety behavior?
RQ3: How does ethical leadership influence the impact of job insecurity on perceived meaningfulness of work?
Extant research has drawn correlations between job insecurity and several organizational outcomes, positioning it as a potent stressor with harmful influences on the mental and physical health of employees, escalating job stress and burnout and reducing organizational commitment, trust, work engagement, creativity, innovative behavior, and in-role/extra-role behaviors [2,4–7]. Nonetheless, we contend there are gaps in our understanding [5,7–9].

First, the influence of job insecurity on safety behavior has not been thoroughly investigated [5,7,10]. Burke et al. described safety behavior as “activities or behaviors demonstrated by individuals in almost all occupations intended to enhance the health and safety of workers, clients, the general public, and the environment” [11] (p. 432). This concept is acknowledged as a critical antecedent to workplace accidents and injuries [12]. Specifically, in the wake of the COVID-19 pandemic, employee safety has taken center stage given its substantial influence on customer and organizational safety in such a severe health crisis [10]. Therefore, it is imperative to probe the effects of job insecurity on safety behavior.

Second, a limited number of studies have delved into the intermediating mechanisms (mediators) and contingent factors (moderators) connecting job insecurity and safety behavior [5,7,8]. Understanding these mediators and moderators could elucidate the circumstances and reasons why job insecurity influences employees’ safety behavior in the workplace [5,8]. Moreover, studies have not sufficiently explored mediators and moderators related to positive psychology (such as the meaningfulness of work, gratitude, and ethical leadership) in the context of job insecurity and organizational outcomes [5,7,9]. This indicates there has been a predominant focus on negative aspects for organizations in most research. But a more positive approach would endeavor to interpret various organizational phenomena from a positive psychological point of view. Given that any organization has both positive and negative aspects, examining mediating processes and moderating factors from a positive psychological perspective could hold significant value.

Third, research has not accorded sufficient emphasis on the role of leadership in the context of job insecurity [5,7,8]. While contemporary studies have identified a range of moderating variables capable of mitigating the adverse effects of job insecurity, the focus has primarily been on employee-level or employee-associated variables, such as self-efficacy, proactivity, psychological capital, and emotional intelligence, in addition to environmental factors like the labor market situation, the level of social security, and macroeconomic factors [13–16]. In essence, few studies have investigated the contingent role of leadership in situations of job insecurity [5,7]. Nonetheless, leaders significantly influence their subordinates’ attitudes and behaviors by assessing their performance, establishing norms in an overt or covert way within an organization [17,18]; they are perceived as pivotal figures encapsulating an organization’s viewpoints [19]. Consequently, employees are prone to regard a leader’s thoughts and actions as indicative of the organization as a whole [19,20]. Therefore, exploring the contingent effect of leadership could constitute a valuable contribution to the literature on job insecurity.

This research aims to fill the lacunae identified above by scrutinizing the intermediary functions and their associated variables in the job insecurity–safety behavior link, given the detrimental influences that job insecurity has on employee safety behavior. According to the Conservation of Resources (COR) theory [21], when an employee encounters the possibility of resource loss, the natural response is to safeguard and conserve resources. Consequently, in the face of job insecurity, employees might lose focus on their jobs [21]. This, in turn, may lead employees to overlook safety protocols, consequently engaging in hazardous and harmful activities. Based on this premise, we put forward the proposition that job insecurity could undermine employee safety behavior. In particular, we propose that the meaningfulness of work as perceived by an employee could mediate the link between job insecurity and safety behavior. Additionally, we posit that ethical leadership might play the role of a protective variable, attenuating the negative effect of job insecurity on the meaningfulness of work.
Drawing upon data collected from 235 workers over three time-lagged waves and deploying structural equation modeling (SEM) techniques for a moderated mediation model, we aspire to contribute to the literature on job insecurity in various ways. First, our investigation illuminates the effect of job insecurity on employee safety behavior, underscoring the critical necessity of cultivating a culture that prioritizes safety within the work environment. Second, our study probes the underlying processes (mediators) and contextual variables (moderators) underpinning the connection between job insecurity and safety behavior, adopting a positive psychological approach to deliver a sophisticated understanding of the dynamics at play. Third, our research emphasizes the crucial function of leadership, offering both theoretical and empirical evidence to validate the proposition that ethical leadership can function as a shield, mitigating the harmful effects of job insecurity on the perceived meaningfulness of work. This insight emphasizes the importance of fostering ethical leadership within organizations to augment employee well-being and job satisfaction in the face of volatile employment. Lastly, from a methodological perspective, our research counters the inherent drawbacks of cross-sectional research by utilizing a rigorous three-wave, time-lagged data collection approach. The robustness enhances the validity and generalizability of our findings, providing a more holistic understanding of the relationships between job insecurity, the meaningfulness of work, ethical leadership, and employee safety behavior.

2. Theory and Hypotheses

2.1. Studies on Job Insecurity (Inhibiting or Intensifying Factors)

Job insecurity, defined as the perceived threat of job loss and the concerns related to that threat, has gained considerable attention in the academic realm, especially in light of rapidly changing economic landscapes and evolving employment structures. This section reviews pertinent studies that investigate the factors influencing job insecurity, shedding light on those that amplify or mitigate its effects.

2.1.1. Factors That Intensify

Several studies have underscored factors that intensify perceptions of job insecurity. Lin and colleagues [2] highlighted organizational transformations and restructuring, such as mergers or downsizing, as significantly intensifying perceptions of job insecurity. Employees who experience frequent organizational upheavals often report heightened concerns over job stability.

Jiang and colleagues [22] demonstrated that workers on temporary, part-time, or contractual arrangements often experience more pronounced feelings of job insecurity than their permanently employed counterparts.

An analysis by Bazzoli and Probst [23] linked macroeconomic fluctuations with job insecurity, emphasizing that economic recessions intensify workers’ apprehensions about retaining their positions.

2.1.2. Factors That Inhibit

Various studies have pinpointed elements that reduce the perception of job insecurity and its effects. Recent studies elucidated how organizations offering robust employee support mechanisms, be it through counseling or skills training, tend to diminish the adverse effects of job insecurity [24,25]. Khan et al. [26] stressed the role of open communication from management. When employees are informed about company decisions, future plans, and potential threats in a transparent manner, perceptions of job insecurity are reduced significantly. According to a study by Shao and colleagues [27], higher levels of job autonomy and flexibility in roles serve as buffers against job insecurity. Workers with greater control over their tasks and schedules report less insecurity.

Cultural and societal influences play a pivotal role. Recent work illustrated that collectivist societies such as those in East Asia might experience job insecurity differently from individualistic societies [28,29]. Cultural values, societal norms, and familial expectations
can modulate perceptions and reactions to job insecurity. Saeed and colleagues [24] revealed that favorable labor market conditions, characterized by ample job opportunities and low unemployment rates, can help curb feelings of job insecurity. Employees are more optimistic about alternative job prospects and, hence, feel less insecure.

In conclusion, the landscape of job insecurity is multifaceted, influenced by myriad organizational, economic, personal, and cultural factors. Understanding these modulating elements provides valuable insights for policymakers, organizational leaders, and scholars, guiding interventions and strategies to manage job insecurity effectively in diverse settings.

2.2. Job Insecurity and Safety Behavior

We propose that job insecurity will decrease the quality of employee safety behavior. Job insecurity, characterized by an employee’s perceived threat of job loss, or uncertainty regarding job continuity [4,5], has commanded significant scholarly and practitioner attention due to potential repercussions on employee well-being and myriad organizational outcomes [2,4–7]. Here, we propose that job insecurity could lead to a decrease in employee safety behavior, meaning the measures and precautions taken by employees to safeguard their own and others’ safety within the workplace [30].

The conservation of resources theory posited by Hobfoll [21] provides a useful theoretical construct for comprehending the connection between job insecurity and employee safety behavior. The COR theory posits that individuals strive to procure, retain, and protect their valuable resources, including personal characteristics, conditions, and energies. When individuals perceive a threat to these resources or experience a resource loss, they may experience stress and engage in behaviors designed to conserve their remaining resources. In a scenario of job insecurity, employees may perceive their jobs as endangered resources, leading them to experience stress and prioritize resource conservation, possibly at the expense of safety behavior.

Empirical research has illustrated that job insecurity reduces employee safety behavior. For example, Probst and Graso revealed that job insecurity negatively impacted both safety compliance (i.e., adherence to safety rules and regulations) and safety participation (i.e., engagement in voluntary safety activities) [31]. The relationships were mediated by job-related affective well-being, suggesting that stress elicited by job insecurity could impair employees’ emotional functioning, subsequently impacting their safety behavior. Likewise, Jiang and Probst established that job insecurity related negatively to safety behavior [32], with psychological strain and safety motivation mediating this relationship. Furthermore, research unveiled several moderating variables in the job insecurity–safety behavior link. Elst and colleagues discovered that perceived control over job insecurity could attenuate the negative effect of job insecurity on employee well-being [33], which could in turn influence safety behavior. Additionally, organizational support and job resources have been pinpointed as potential moderating factors in this relationship [34]. In summary, according to COR theory, job insecurity seems to exert a negative influence on employee safety behavior.

Hypothesis 1. Job insecurity decreases safety behavior.

2.3. Job Insecurity and Meaningfulness of Work

This study proposes that the perception of job insecurity may have a detrimental effect of attenuating an employee’s conceptualization of his or her work as meaningful. This sense of work meaningfulness is fundamentally an intricate synthesis of an employee’s holistic beliefs, values, and attitudes directed towards their occupational role [35]. Alternatively, it may be defined as the extent to which an employee attributes value and significance to his or her work, enhancing their sense of purpose and fulfillment [36].

In the framework of positive organizational scholarship, this perception of meaningful work emerges from an individual’s interpretative processes and experiences within their organizational ecosystem [36,37]. As such, meaningfulness is largely influenced by personal
and situational factors that shape an individual’s workplace experiences [38]. Extensive research in the field of positive organizational scholarship has identified self-efficacy, or an individual’s belief in their capabilities to manage specific situations [39], and competence (mastery of job-related tasks) [40] as pivotal precursors to meaningfulness of work [41,42]. For instance, employees who perceive their jobs as insecure may be subjected to pronounced psychological stress, heightened anxiety, and professional exhaustion.

These adverse psychosocial experiences may damage their self-esteem and self-confidence (both facets of self-efficacy [43]), thereby subverting their sense of competence. Drawing upon COR theory [21], this ensuing resource loss can precipitate a significant diminution in their meaningfulness of work because their cognitive and emotional resources are disproportionately allocated towards managing stress and uncertainty [42].

**Hypothesis 2. Job insecurity decreases meaningfulness of work.**

### 2.4. Meaningfulness of Work and Safety Behavior

In extending the theoretical narrative, we hypothesize that a decrease in an employee’s sense of work meaningfulness could lead to reduced safety behavior. While this hypothesis aligns with the direction of our initial research, the extant literature offers a paucity of scholarly investigation into the causal linkage between meaningful work and safety behavior [10].

To be specific, we propose that the conceptual framework of social exchange theory (SET), originally formulated by Homans [44] and expanded upon by Blau [45], can be instrumental in delineating the relationship between these two constructs. SET posits that human interactions are driven by an implicit expectation of reciprocity [46]. This norm of reciprocity suggests that when an individual perceives a substantial benefit conferred by another party, an internal obligation to return the favor arises [47].

This theoretical construct has been substantiated in previous empirical studies, with findings demonstrating that an employee’s sense of meaningful work enhances job satisfaction, intrinsic motivation, and organizational commitment [36,42,48]. Furthermore, meaningful work correlates positively with improved psychological and affective states [42].

On the other hand, if employees perceive their work as lacking meaningfulness or if they experience a sense of existential void due to heightened job insecurity, they may encounter negative affective states such as anxiety, depression, and ire [49]. In alignment with the principles of SET, such employees might respond to these negative stimuli by diminishing their positive dispositions and behaviors towards the organization, including safety behavior [50,51].

In essence, by reducing their engagement in safety behaviors, which are instrumental to organizational success, employees may perceive a restoration of equilibrium in their relationship with the organization in line with the norm of reciprocity fundamental to SET. This reciprocal relationship further reinforces the criticality of fostering a sense of meaningful work within an organizational setting to augment employee safety behaviors.

**Hypothesis 3. Decreased meaningfulness of work reduces safety behavior.**

### 2.5. Mediation Role of Meaningfulness of Work on Job Insecurity–Safety Behavior

Anchored in robust theoretical constructs and entailing an intricate interplay of associations elucidated in our research paradigms, our study theorizes that employee-perceived meaningfulness of work may function as an intermediary variable in the relationship binding job insecurity to safety behavior. This hypothesis, derived from the principles of the context–attitude–behavior (CAB) model [52], is fortified by a compelling theoretical edifice.

The CAB model asserts that organizational landscapes abound with myriad environmental or contextual determinants, incorporating structures, norms, and climates that wield significant influence over employee attitudes and behaviors. In this light, job insecurity, recognized as a key contextual determinant, possesses the capability to mold
employee attitudes, particularly regarding the sense of significance attributed to their work. Consequently, these modified attitudes, instigated by the contextual ramifications of job insecurity, may assume a crucial role in shaping employees’ safety behavior.

In this vein, our study posits that job insecurity will exert an influence over safety behavior via the mediating role of meaningfulness of work. This theoretical supposition sheds light on the complex relationship interweaving job insecurity, meaningfulness of work, and safety behavior. It serves to augment our comprehension of the underlying dynamics and provides potential pathways for workplace intervention and support.

**Hypothesis 4.** *Meaningfulness of work mediates the job insecurity–safety behavior link.*

### 2.6. Moderating Role of Ethical Leadership on Job Insecurity–Meaningfulness of Work

Furthermore, and of particular significance, our study postulates that ethical leadership acts as a protective mechanism, diminishing the deleterious influences of job insecurity on meaningfulness of work. While it is reasonable to infer that job insecurity impairs an employee’s perception of meaningful work, this relationship might not universally manifest across different scenarios, contexts, or employees. Various contingent elements (e.g., personality traits, age, leadership style, organizational culture, regulations, and systems) could influence the associations in actual organizational contexts. Despite the existence of numerous potential moderating variables, the current research primarily focuses on ethical leadership, characterized as “the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making”[53].

Our investigation indicates that ethical leadership attenuates the adverse impact of job insecurity on meaningfulness of work[54]. From an employee’s standpoint, a leader may be construed as a symbolic embodiment of the organization itself[19,20]. In essence, employees perceive the actions of their leaders as representative of the organization. Under such circumstances, if a leader showcases ethical conduct, employees may harbor the conviction that the organization’s decisions are fair and ethical, even amidst looming job insecurity[54]. Consequently, employees are more inclined to comprehend and accept job insecurity[54,55].

Thus, irrespective of the intensity of job insecurity perceived by an employee, if the organization’s evaluations and decision-making processes are deemed ethical, that can alleviate the negative repercussions of job insecurity on meaningfulness of work. Conversely, if employees perceive their leaders as unethical, they may assume that the organization will make pivotal decisions based on unjust evaluations and procedures. In such a situation, an employee might grapple with comprehending and accepting job insecurity, eventually culminating in an exacerbated sense of *meaninglessness* in their work. In other words, the negative influence of job insecurity on meaningfulness of work might remain unaddressed, or even amplified.

**Hypothesis 5.** *Ethical leadership plays a buffering role that diminishes the negative effect of job insecurity on the meaningfulness of work.*

Figure 1 represents the theoretical model in this paper.
3. Method

3.1. Participants and Procedure

In the present investigation, our focus was on a heterogeneous cohort of currently employed individuals over the age of 20 from various organizations throughout the Republic of Korea. We orchestrated data collection at three distinct chronological junctures to gain a more in-depth understanding of employee experiences. To identify suitable participants, we partnered with an online survey firm possessing a research panel of approximately 4,200,000 members. Individuals register for this panel either via their mobile phone number or email address and disclose their employment status. The usage of online survey methodologies such as this has proven dependable for acquiring diverse samples.

In a bid to circumvent certain constraints on cross-sectional research, we accumulated data on three separate occasions. The online survey infrastructure tracked participant responses, thus ensuring a stable sample across the distinct chronological junctures. The questionnaires at time points 1 and 2 were released six to seven weeks apart, with a nine- to ten-week interim between the second and final surveys. Each remained available for two to three days, thus providing participants ample time to submit responses at their convenience. To ensure the veracity of the data, the company utilized geo-IP timestamps and scrutinized responses for anomalies, such as extraordinarily rapid completion times or repeated survey attempts by the same respondent.

The research firm reached out directly to prospective participants, inviting them to participate and obtaining explicit consent. It was underscored to participants that their responses would be maintained in strict confidence and utilized solely for this research. Those who agreed to participate were compensated with US $9–11.

To curtail the likelihood of sampling bias, the research firm employed a stratified random sampling strategy. This technique divides the target population into separate groups based on certain characteristics before drawing random samples from each stratum. We grouped the strata based on attributes such as gender, age, position, educational qualification, and industry type. Stratified sampling allows for a reduction in potential biases from these attributes, resulting in a more representative sample.

Pertinent to the criteria for creating each stratum, we utilized criteria or thresholds that represented a typical segmentation within each attribute. For example, age was based on specific age brackets (20–30, 31–40, 41–50, and 51–60). For education, participants were grouped based on degrees held (bachelor’s, master’s, Ph.D.). Industry and job type were also considered.
Knowing the precise number of participants from each stratum is essential to understand the representation of each group within the total sample. We attempted to gather data in a balanced way, utilizing proportionate sampling. In this method, the sample size for each stratum was set so that it was proportional to the stratum’s size in the population. If, for example, 60% of the entire population belonged to a particular age group, then 60% of the sample was drawn from that age group.

In our research, we procured data from 407 respondents during the first time point, 299 respondents during the second, and 238 respondents the third time. After eliminating surveys with incomplete data, we were left with a definitive sample size of 235 respondents who had fully completed the surveys across all three time points (response rate: 57.74%). We delineated the sample size in compliance with recommendations drawn from antecedent research. Specifically, we leveraged G*Power version 3.1.9.7 to calculate the smallest sample size required to discern a medium effect with an alpha level of $p = 0.05$. The calculation affirmed that a sample size of 235 offered adequate statistical power ($\geq 0.70$).

The choice of South Korean employees as subjects of this inquiry was derived from several crucial determinants. First, the Republic of Korea forms a unique and enlightening environment for examining the effects of job insecurity on safety behavior considering its astounding economic progress, technological advancements, and intensely competitive labor market. In combination, these components contribute to an amplified sense of job precariousness among the workforce, making the Republic of Korea an exceptionally appropriate setting for our study.

Second, a shift in employment practices has been observed in South Korean corporations, characterized by an increase in non-standard work arrangements such as provisional and part-time employment. As a result, fears concerning job stability and the impact on worker welfare and organizational outcomes have grown. By focusing on the South Korean setting, our research provides invaluable insights into the consequences of job insecurity in a rapidly evolving labor market.

Third, the emphasis on collectivist principles and Confucian beliefs within the societal structure of the Republic of Korea might influence how employees perceive and respond to job insecurity, ethical leadership, and safety behavior. This cultural framework enables a study of the relationships among these variables in a unique socio-cultural atmosphere, thereby expanding our understanding of the interplay between job insecurity, meaningfulness of work, ethical leadership, and safety behavior.

3.2. Measures

In this study, specific elements of the investigative framework were ascertained at designated intervals. In the preliminary phase, inquiries were directed towards perceptions of job insecurity and ethical leadership. During the subsequent interval, insights were gleaned from respondents regarding their own perceived value of their work. In the final stage, we evaluated respondents’ adherence to safety practices. A five-point Likert scale encompassing various facets was employed to gauge these dimensions. The internal reliability of each determinant was validated with Cronbach’s alpha. Details of the measures are provided in Appendix A.

3.2.1. Job Insecurity (Time Point 1)

To gauge the level of employee job insecurity, we employed five items from the job insecurity scale [57]. Examples include: “If my current organization faced economic problems, my job would be the first to go” and “My job is not a secure one”. Cronbach’s alpha was 0.91.

3.2.2. Ethical Leadership (Time Point 1)

To assess the degree of ethical leadership, we used 10 items [53]. Examples are: “My leader disciplines employees who breach ethical standards”; “My leader leads their personal life ethically”; “My leader discusses business ethics or values with employees”;
and “My leader exemplifies the right way to do things in terms of ethics”. Cronbach’s alpha was 0.95.

3.2.3. Meaningfulness of Work (Time Point 2)

We measured the extent of employee meaningfulness of work using five items from the meaningfulness of work scale found in earlier studies [36,58]. Examples are: “The work I do is meaningful”; “The work I do contributes to making the world a better place”; and “My work is among the most important aspects of my life”. Cronbach’s alpha was 0.88.

3.2.4. Safety Behavior (Time Point 3)

To evaluate employee safety behavior, we used a measurement tool consisting of six items initially developed by Neal and Griffin [30]. A sample item for safety compliance is: “I use all necessary safety equipment to perform my job”. A sample item for safety participation is: “I willingly undertake tasks or activities that help enhance workplace safety”. Cronbach’s alpha was 0.92.

3.2.5. Control Variables

We followed recommendations in existing research [12,59] and employed control variables (tenure, gender, position, and education) for safety behavior at time point 2.

3.3. Statistical Analysis

Initially, a frequency assessment was undertaken to discern the demographic characteristics of the participants. Thereafter, we utilized SPSS 26 to undertake a Pearson correlation assessment aimed at discerning the relationships among the designated research determinants. In line with the bifurcated methodology advanced by Anderson and Gerbing [60], preliminary confirmatory factor analysis (CFA) ensured the dependability of the measurement framework. In the ensuing steps, SEM utilizing maximum likelihood estimation via the AMOS 26 toolkit was deployed to critically analyze the moderated mediating framework of the structural paradigm.

Furthermore, indices like the comparative fit index (CFI), the Tucker–Lewis index (TLI), and root mean square error of approximation (RMSEA) were invoked to verify the model’s adequacy. Antecedent literature posits that CFI and TLI results exceeding 0.90 in conjunction with an RMSEA value less than 0.06 denote an optimal model fit [61]. Following this, bootstrapping evaluation was mobilized to validate the statistical prominence of the inferred indirect influence in harmony with the methodological guidelines delineated by Shrout and Bolger [62]. Conclusively, to fortify our mediation hypothesis, we embarked upon a bootstrapping assessment with a 95% bias-adjusted confidence interval (CI). A CI that encompasses zero verifies the statistical relevance of the indirect influence at the 0.05 threshold [62].

4. Results

4.1. Descriptive Statistics

We discovered a significant relationship between all research variables. Table 1 presents the results from the correlation analysis.

4.2. Measurement Model

Because of the self-reported data, there is a potential issue over common method bias resulting from multiple origins, including social desirability [63]. Based on suggestions from previous research [63], we conducted statistical analyses to evaluate how serious common method bias might be. First, we conducted a Harman’s one-factor test for all research variables (job insecurity, meaningfulness of work, safety behavior, and ethical leadership). Results showed that the four factors were present, and the most covariance explained by one factor was 31.80%, meaning that common method bias was not an issue [63].
Table 1. Correlations among research variables.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
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<td>2.75</td>
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<td>-0.18 ***</td>
<td></td>
<td></td>
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<tr>
<td>Tenure_T2</td>
<td>7.71</td>
<td>7.50</td>
<td>-0.33 ***</td>
<td>-0.08</td>
<td></td>
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<tr>
<td>Position_T2</td>
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<td>1.62</td>
<td>-0.44 **</td>
<td>0.23 **</td>
<td>0.28 **</td>
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<td>Job insecurity_T2</td>
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<td>EL_T1</td>
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<td>MoW_T2</td>
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<td>SB_T3</td>
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<td>0.20 **</td>
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<td>0.13</td>
<td>-0.08</td>
<td>0.23 **</td>
<td>0.38 **</td>
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Notes: * p < 0.05, ** p < 0.01. S.D. = standard deviation, EL = ethical leadership, MoW = meaningfulness of work, and SB = safety behavior.

In order to assess the distinctiveness of the main research variables, we conducted CFA to examine the measurement model’s goodness of fit. We initially proposed a model with four factors, but also looked into models with three or two factors and with one factor. To figure out which model best fit the data, we compared these models using a series of chi-square difference tests. The goal of the analysis was to ensure the variables being measured were unique and did not capture the same concept, thereby confirming discriminant validity.

First, our proposed four-factor model showed a satisfactory fit ($\chi^2$ (df = 160) = 250.339; CFI = 0.974; TLI = 0.969; RMSEA = 0.049). Next, we conducted a set of chi-square difference tests comparing the four-factor model, which included job insecurity, ethical leadership, meaningfulness of work, and safety behavior, with a three-factor model ($\chi^2$ (df = 163) = 1228.929; CFI = 0.697; TLI = 0.647; RMSEA = 0.167), a two-factor model ($\chi^2$ (df = 165) = 1520.494; CFI = 0.615; TLI = 0.556; RMSEA = 0.187), and a one-factor model ($\chi^2$ (df = 166) = 1772.583; CFI = 0.543; TLI = 0.477; RMSEA = 0.203). The results of the chi-square difference tests revealed that the four-factor model was the best among them. Therefore, the four variables have suitable discriminant validity.

4.3. The Structural Model

Within this study, we developed a composite model that integrates both moderation and mediation mechanisms, elucidating the connection between job insecurity and safety behavior. Within the mediation component, the perceived value that employees assign to their work serves as an intermediary function bridging job insecurity and safety behavior. Conversely, within the moderation component, ethical leadership emerges as a resilience mechanism, attenuating the detrimental effects of job insecurity on perceived work significance. To formulate an interaction construct, this study multiplied job insecurity by ethical leadership. Before instituting this interaction construct between the primary determinant and the moderator, all study determinants underwent mean centering, which enhances the credibility of the moderation component. Employing this centering methodology augments the accuracy of the moderation assessment by curbing multicollinearity amidst determinants and preserving associated correlations [64].

The potential perturbation of multicollinearity bias was gauged through the calculation of variance inflation factors (VIFs) and an associated tolerance metric [64]. Both determinants (job insecurity and ethical leadership) manifested identical VIF values (1.004) paired with a congruent tolerance metric (0.996). The derived results, showcasing a VIF less than 10 and tolerance surpassing 0.2, denote an absence of significant multicollinearity issues among these determinants.

4.3.1. The Results of Mediation Analysis

We carried out a comparison between full and partial mediation models to pinpoint the most fitting model by using a chi-square difference test. The only distinction between the full mediation model and the partial mediation model was the direct path from job insecurity to safety behavior. Both the full mediation model ($\chi^2 = 297.072$ (df = 193), CFI = 0.961, TLI = 0.954, and RMSEA = 0.048) and the partial mediation model ($\chi^2 = 297.001$...
(df = 192), CFI = 0.961, TLI = 0.953, and RMSEA = 0.048) showcased acceptable fit indices. Nevertheless, the chi-square difference test between the two models ($\Delta \chi^2 [1] = 0.071$, non-significant) pointed out that the full mediation model was superior. This result indicates that job insecurity indirectly impacts safety behavior through the mediating effect of meaningfulness of work, rejecting Hypothesis 1.

Control variables like tenure, gender, education, and position were incorporated into the research model to account for safety behavior. The results demonstrated that none of control variables was significant. Moreover, when including control factors, it became evident that job insecurity did not have a significant connection with employee safety behavior ($\beta = -0.02$, $p > 0.05$), thereby rejecting Hypothesis 1. As described above, in the partial mediation model, we observed that the coefficient value of the path from job insecurity to safety behavior was inferior to that of the full mediation model. These findings align with the fact that the full mediation model had better model fit indices than the partial mediation model. This implies that job insecurity indirectly affects safety behavior through the mediation of various factors like meaningfulness of work, also rejecting Hypothesis 1.

We discovered that job insecurity had a significant negative connection with employees’ sense of meaningfulness in their work ($\beta = -0.22$, $p < 0.01$), which backs up Hypothesis 2. Moreover, the meaningfulness of work shows a significant positive association with employee safety behavior ($\beta = 0.42$, $p < 0.001$), lending support to Hypothesis 3 (Table 2 and Figure 2).

Table 2. Results of the structural model.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path (Relationship)</th>
<th>Unstandardized Estimate</th>
<th>S.E.</th>
<th>Standardized Estimate</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Job Insecurity $\rightarrow$ Safety Behavior</td>
<td>-0.016</td>
<td>0.056</td>
<td>-0.019</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>Job insecurity $\rightarrow$ Meaningfulness of Work</td>
<td>-0.174</td>
<td>0.055</td>
<td>-0.216 **</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>Meaningfulness of Work $\rightarrow$ Safety Behavior</td>
<td>0.434</td>
<td>0.075</td>
<td>0.424 ***</td>
<td>Yes</td>
</tr>
<tr>
<td>5</td>
<td>Job Insecurity $\times$ Ethical Leadership</td>
<td>0.185</td>
<td>0.059</td>
<td>0.201 **</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Notes: ** $p < 0.01$, *** $p < 0.05$. Estimate = standardized coefficients. S.E. = standard error. We do not describe the estimate values in Table 3 because the result of the comparison test between the full mediation model and the partial mediation model showed that full mediation is superior. Also, the coefficient value of the path from job insecurity to safety behavior (Hypothesis 1) was in the partial mediation model, which was not selected.

Table 3. Direct, Indirect, and Total Effects of the Final Research Model.

<table>
<thead>
<tr>
<th>Model (Hypothesis 4)</th>
<th>Direct Effect</th>
<th>Indirect Effect</th>
<th>Total Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job insecurity $\rightarrow$ Meaningfulness of Work $\rightarrow$ Safety Behavior</td>
<td>0.000</td>
<td>-0.075</td>
<td>-0.075</td>
</tr>
</tbody>
</table>

Notes: All values are unstandardized.

Figure 2. The results of the final model (** $p < 0.01$, *** $p < 0.001$).
4.3.2. Bootstrapping

In this investigation, we employed bootstrapping analysis incorporating 10,000 instances [54] to scrutinize the mediating influence of meaningfulness of work in the relationship encompassing job insecurity and safety behavior. The results demonstrated that the bias-corrected confidence interval for the average indirect effect excluded zero (95% CI = [−0.140, −0.022]). This signifies that the indirect mediation effect of meaningfulness of work was statistically significant. Table 3 delineates the direct, indirect, and cumulative effects of the paths associating job insecurity with safety behavior.

4.3.3. Results from Moderation Analysis

In this study, we examined the moderating role of ethical leadership in the relationship between job insecurity and meaningfulness of work by employing a mean-centering method with an interaction term (Figure 3). Our findings revealed that the interaction term’s value (β = 0.20, p < 0.01) was significant, suggesting that ethical leadership serves as a protective variable, positively moderating the job insecurity–meaningfulness of work link. Moreover, this implies that when ethical leadership is strong, the negative influence of job insecurity on the meaningfulness of work decreases, providing support for Hypothesis 5 (see Figures 2 and 3).

Figure 3. The moderating role of ethical leadership on job insecurity–meaningfulness of work.

5. Discussion

This research suggests that the importance an individual attributes to their work acts as a central intermediary in the nexus between job insecurity and safety behavior. Additionally, the investigation underscores that ethical leadership functions as a buffering element, diminishing the detrimental outcomes of job insecurity on employee evaluations of their work. By illuminating the core processes (i.e., mediation) and the contextual conditions (i.e., moderators) shaping the influence of job insecurity on employee safety practices, this academic contribution enriches the existing corpus of knowledge surrounding job insecurity, ethical leadership, the meaningfulness of work, and safety behavior. Subsequent sections are dedicated to explicating the theoretical considerations, pragmatic ramifications, inherent limitations, and avenues for prospective scholarly inquiries.

The empirical results obtained from this research offer a nuanced understanding of the relationship between job insecurity, meaningfulness of work, ethical leadership, and safety behavior. The mediation of the meaningfulness of work and the moderating role of ethical leadership serve as pivotal constructs in elucidating the intricacies of this relationship. Our findings, emphasizing the indirect influence of job insecurity on safety behavior through the lens of meaningfulness of work, resonate with the burgeoning body of literature highlighting the role of cognitive and emotional processing in understanding the
effects of job insecurity [65]. In a similar vein, Yam and colleagues [66] posited that cognitive appraisal of one’s work environment, especially in contexts fraught with insecurity, plays a salient role in shaping behavioral outcomes. Our results further this argument, suggesting that the mediation of meaningfulness of work provides a plausible mechanism through which employees cognitively process job insecurity.

Moreover, the moderating role of ethical leadership found in this study complements recent research emphasizing the importance of leadership dynamics in mitigating the adverse outcomes associated with job insecurity. In a parallel line of inquiry, Agarwal and colleagues [67] noted that ethical leadership can serve as a beacon of hope and stability in turbulent organizational landscapes. Our results amplify this assertion, demonstrating that ethical leadership not only diminishes the negative consequences of job insecurity but also fortifies the meaningfulness that employees attribute to their work.

Yet it is not just the individual aspects of our findings that align with contemporary research but the synergetic interplay between these constructs. The study by Lin and colleagues [2] called for an integrated approach to understanding the multifaceted nature of job insecurity, urging researchers to explore the combined effects of mediators and moderators. Our research responds to this call, shedding light on the collaborative influence of meaningfulness of work and ethical leadership.

More importantly, our findings underscore the importance of several factors that can strategically inform the sustainable development of firms [68,69]. In essence, the sustainable development of firms in an era marked by job insecurity requires a confluence of strategic, ethical, and empathetic approaches. By anchoring practices in ethical leadership, cultural sensitivity, and continuous engagement, firms can forge a path towards resilience, growth, and sustainability [69,70].

In our contemporary business environment, the symbiosis between economic sustainability and broader societal goals, particularly the United Nations’ Sustainable Development Goals (SDGs), has become inescapably apparent. Our findings, notably concerning ethical leadership and its moderating effect on perceptions of job insecurity, offer pivotal insights into this intricate relationship, particularly as they pertain to SDG Goals 3 (Good Health and Well-Being) and 8 (Decent Work and Economic Growth).

To be specific, ethical leadership, as illuminated by our research and echoed by Woo and Kang [71], extends beyond mere moral posturing. It forms the bedrock of a firm’s economic sustainability. Ethical leaders foster environments of trust, transparency, and mutual respect. Such environments are not only conducive to productivity but also instrumental in retaining talent. Employee retention, buttressed by a positive work environment, mitigates recruitment and training costs, leading to tangible economic benefits and ensuring long-term financial viability.

In addition, a byproduct of ethical leadership is a holistic focus on employee well-being. By mitigating the stressors associated with job insecurity, ethical leadership can contribute to improved mental and emotional health among employees. This aligns with SDG Goal 3, advocating for the promotion of well-being at all ages. An organization that prioritizes the health and well-being of its workforce is not merely fulfilling its moral duty; it is ensuring reduced absenteeism, increased productivity, and, consequently, stable economic growth [72].

Moreover, our study’s emphasis on meaningfulness of work and its influence on safety behavior intertwines with the core tenets of SDG Goal 8. Decent work is not merely about employment but the quality and meaningfulness of that employment. Ethical leadership plays a pivotal role in emphasizing work’s significance, thereby promoting a culture where employees perceive their tasks as more than just duties—as meaningful endeavors. Such perceptions can stimulate increased commitment, reduced turnover, and heightened productivity, all crucial elements for consistent economic growth [73].

Lastly, the intricate dance between firm-level economic sustainability and the macro-level goals of the SDGs might appear daunting. Yet by grounding corporate strategies in ethical leadership and promoting meaningful work, firms can align their economic
pursuits with broader societal objectives. In essence, a firm’s economic resilience becomes inextricably linked with global endeavors. By championing decent work and promoting well-being, businesses not only bolster their bottom line but also contribute to the tapestry of global development goals.

In conclusion, our research not only provides empirical insights into the dynamic interplay of job insecurity, meaningfulness of work, and ethical leadership but also fosters a deeper understanding of these constructs in the realm of safety behavior. By juxtaposing our findings with contemporary research, we hope to stimulate further scholarly discussion and exploration of this pertinent topic.

5.1. Theoretical Implications

The theoretical implications emerging from this study bear profound relevance to the existing corpus of literature encompassing job insecurity, safety behavior, and leadership. By addressing the discerned research voids, our investigation contributes to a more holistic comprehension of the complex interplay manifest in these domains. The salient theoretical implications of our research can be summarized as follows:

First, our research accentuates the critical importance of safety protocols within the context of job insecurity. By scrutinizing the influence of job volatility on employee safety behavior, we underscore the necessity for an increased focus on a safety-oriented organizational culture, especially amidst times of ambiguity and tumult in employment scenarios. Given that prior research has not extensively probed the effect of job insecurity on employee safety behavior, we delved into the impact of job insecurity on safety behavior due to its significance in organizational contexts [5,7,8].

Existing investigations have evidenced that an employee’s safety behavior is a vital determinant of work-related accidents and injuries, customer safety, and overall organizational safety [10,12,59]. However, a limited number of studies have delved into the effect of job security on safety behavior, notwithstanding its importance. Thus, we explored the relationship between the two variables to enrich the existing theoretical constructs [5,10].

Second, the rejection of Hypothesis 1, which postulated that job insecurity would decrease the extent of employee safety behavior, may present an interesting contrast to prevailing literature on the issue. This divergence invites careful consideration of the reasons underlying the inconsistencies in, and the broader implications for, the study of job insecurity and its influence on employee safety behavior. In this paper, we suggest some potential reasons for the divergent result. Most of all, there may be contextual differences. Prior studies addressing the topic have primarily rooted their investigations in varied cultural, economic, or organizational contexts. For instance, cultural nuances can substantially affect the perceptions of job insecurity and their subsequent behavioral outcomes [2]. Given that the present study exclusively examined employees in Republic of Korea, the unique cultural and organizational dynamics of this context might explain the observed divergence.

Next, it is possible that there are various mediating and moderating variables in the job insecurity–safety behavior link. The current research intricately examined the roles of meaningfulness of work and ethical leadership (two potent constructs) in the relationship between job insecurity and safety behavior. Darvishmotevali and Ali [65] pointed out that introducing certain mediators and moderators can sometimes suppress or amplify the original relationships. Hence, while the direct relationship between job insecurity and safety behavior might not have been significant, the indirect effects, especially through meaningfulness of work, were pronounced. Lastly, we cannot exclude the possibility of contrasting theoretical frameworks. While our study leaned on the paradigm of positive psychology to understand job insecurity’s impact, other research might have employed alternative frameworks, like conservation of resources theory or social exchange theory, leading to contrasting predictions and results.

Third, we conducted an in-depth investigation of the mediating mechanism and its associated moderating factor within the relationship between job insecurity and safety behavior. We posit that identification of the mediating and moderating variables elucidates
the impact of job insecurity on safety behavior by explaining the reasons behind and the conditions under which job insecurity influences employee safety behavior. As a result, we unearthed that job insecurity attenuates safety behavior by compromising employees’ perception of the meaningfulness of their work. Additionally, ethical leadership emerges as a buffer, assuaging the deleterious impact of job insecurity on the sense of meaningfulness of work.

Moreover, we delved into the relationship between job insecurity and safety behavior, framing it within the paradigm of positive psychology, thereby emphasizing the salient roles of work’s perceived significance (serving as a mediator) and ethical stewardship (serving as a moderator). By shedding light on the integral influence of perceived work value and ethical leadership in the realm of positive psychology, we argued that job insecurity significantly undermines an employee’s positive sentiments (e.g., their own valuation of their work), subsequently leading to diminished safety practices. Simultaneously, our investigation underscores that a leader’s principled actions—a moderating factor in the connection between job insecurity and perceived work significance—have the potential to rejuvenate the waning optimism among employees. By harnessing a positive psychological framework, our study offers a nuanced understanding of the internal mechanics, accentuating the viability of positive organizational strategies to counterbalance the adverse implications of job insecurity on employee welfare and safety outcomes.

Fourth, our research highlights the paramount importance of leadership conduct in tempering the detrimental impacts of job insecurity. Recognizing that employees’ interpretations and reactions to environmental stimuli [19] are substantially molded by their leaders’ viewpoints, demeanor, and actions, it becomes evident that leadership profoundly influences employee interpretations and sentiments regarding job insecurity. Consequently, leadership has the capacity to modify the ramifications of job insecurity on employees’ interpretive frameworks. To be precise, our findings intimate that ethical practices of leaders can mitigate the deleterious consequences of job insecurity on an employee’s perception of their work’s significance. At its core, ethical leadership can act as a beneficial counterforce. Such insights underscore the imperative to foster ethical leadership within corporate entities to enhance employee morale and job contentment, even in the face of unstable employment scenarios.

Lastly, on a methodological note, our investigation counters the constraints typically associated with cross-sectional research, opting instead for a rigorous three-point temporal data gathering approach. This methodological rigor enhances the credibility and broad applicability of our conclusions, furthering our understanding of the interplay between job insecurity, the value attributed to work, ethical guidance, and safety conduct.

5.2. Practical Implications

The practical implications emanating from our research are of substantial importance for executive management, leaders, and employees alike, providing invaluable understanding and pragmatic recommendations for bolstering workplace safety and employee wellness amidst job insecurity. The primary practical implications can be summarized as follows:

First, it is of paramount importance for executive leadership to recognize the detrimental repercussions of job insecurity on employees’ attitudes and behaviors. Our research unveils that job insecurity significantly depreciates employee safety behavior. Considering that safety behavior serves as a critical determinant of work-related accidents and injuries, customer safety, and overall organizational safety, job uncertainty could likely compromise the firm’s competitive edge. Therefore, this research advises that executive leadership ought to diligently observe and address this critical matter via the instigation of effective systems, norms, and cultures. Executive management should prioritize the cultivation of a safety-oriented culture within the workplace, acknowledging that job insecurity can leave a significant imprint on employee safety behavior. By enacting efficient safety practices,
organizations can alleviate the risks associated with job insecurity, foster a secure and supportive work milieu, and ultimately enhance organizational outcomes.

Second, the outcomes of this study can act as beneficial benchmarks for executive management teams aspiring to identify and counter the negative effects of job insecurity. We have empirically demonstrated that meaningfulness of work serves as a mediating factor between job insecurity and safety behavior. Consequently, management teams can quantify the destructive influence of job insecurity by evaluating the degree of meaningfulness of work. Moreover, changes in work meaningfulness can be tracked via the mitigating role of ethical leadership. For instance, if the degree of meaningfulness of work remains steady despite the active implementation of ethical leadership by executive management teams, it suggests that the mitigating impact of ethical leadership has not been efficacious. Therefore, our research offers executive management teams a valuable criterion to scrutinize the impacts of job insecurity and ethical leadership.

Third, the current research proffers a solution for management teams to diminish the deleterious effects of job insecurity. This study has demonstrated that ethical leadership acts as a mitigating variable that softens the negative repercussions of job insecurity. In light of this finding, we propose that executive management teams actively nurture ethical leaders within the organization. Executives should invest in the development of ethical leadership competencies among their managerial personnel, recognizing that such leaders can act as a shield against the adverse impact of job insecurity on employee wellness and job satisfaction. Ethical leaders can create a supportive work atmosphere, cultivating trust and transparent communication and thus enabling employees to maintain a sense of meaningfulness in, and commitment to, their work, despite job insecurity. Through effective ethical leadership training and execution, management teams can successfully address the pernicious implications of job insecurity.

Fourth, employees should proactively pursue opportunities to augment their sense of meaningfulness of work, which can equip them to better tackle the challenges associated with job insecurity. By nurturing a sense of meaningfulness in their work, employees can sustain a high level of safety behavior, even amidst employment uncertainty.

Finally, our study underscores the necessity of integrating mediators and moderators related to positive psychology in addressing job insecurity and its impacts on safety behavior. By initiating interventions underpinned by positive psychology principles, organizations can strengthen employee well-being and resilience, enabling them to more effectively navigate the challenges stemming from uncertain employment conditions.

5.3. Limitations and Suggestions for Future Studies

While this manuscript can constructively enrich both theoretical and practical bodies of knowledge, it is not without certain constraints. First, this study gauges the degree of job insecurity purely through subjective self-reporting, neglecting an objective measure. Therefore, the findings of the research are inherently subjective. Although previous studies suggest that objective circumstances such as organizational downsizing and restructuring are likely to influence employees’ perceptions and attitudes through subjective sense-making processes [42], it is crucial to assess the impact of such objective factors and compare the differential impacts of these two measures.

Second, our analysis could not comprehensively appraise the effects of multiple external variables that significantly shape employee job insecurity. For instance, a comprehensive exploration of employee perceptions and attitudes towards job insecurity necessitates considering factors such as the rate of downsizing, the characteristics of the organization’s HRM systems, and the caliber of social security systems across various countries [54]. Consequently, we propose that subsequent studies address this gap by incorporating these elements into their analysis.

Third, we gathered data exclusively from Eastern society. Despite the possibility that the fundamental values or principles of ethical leadership may be shared across Western and Eastern societies [20,64], there could be substantial cultural disparities in the interpretation
of ethics and the perceived role of a leader. For example, due to the Republic of Korea’s rapid economic development, South Korean employees may be less sensitive to ethical matters than their Western counterparts [74].

Although our study offers crucial insights into the interrelationships among job insecurity, meaningfulness of work, ethical leadership, and safety behavior within the South Korean context, it is crucial to acknowledge the limitations in the applicability of our findings beyond this specific setting. Cultural, societal, and economic determinants can significantly differ across countries and regions, potentially affecting the occurrence and impact of job insecurity and related variables in varying ways. These differences could ultimately influence employee responses to ethical leadership. Therefore, scholars should exercise caution when interpreting and generalizing the findings of this study to diverse cultural contexts. We strongly recommend that future research replicate and extend our analysis within diverse cultural and organizational contexts, with the objective of further assessing the universality of the findings to enhance understanding of the complex interplay among job insecurity, meaningfulness of work, ethical leadership, and safety behavior in a wide array of settings.

To be specific, one of the principal limitations of this study pertains to its geographic scope. The sample for this investigation was exclusively drawn from employees based in the Republic of Korea. While this focus provided insights into the dynamics of job insecurity, meaningfulness of work, and ethical leadership within the South Korean organizational context, it inevitably circumscribes the broader generalizability of the findings. Cultural factors, socio-economic nuances, organizational traditions, and regional business etiquettes inherent to the Republic of Korea might influence the perceptions and behaviors of employees in ways that differ from other global contexts.

It is acknowledged that cultural variances, particularly in the realms of work values, leadership expectations, and organizational behaviors, play a pivotal role in shaping employee attitudes and responses. The results of this study, while robust within the South Korean milieu, may not necessarily transpose seamlessly to other cultural or regional settings. As such, caution should be exercised when extrapolating the findings to different countries or cultural backgrounds. Future research endeavors would benefit from a more diverse, cross-cultural sampling approach to further elucidate the universality or specificity of the relationships observed in this study.

Fourth, another limitation is that self-reported data can introduce the potential for social desirability bias, wherein participants may consciously or subconsciously provide responses they perceive as socially acceptable or favorable, rather than their genuine beliefs or experiences. Such biases can pose challenges to the veracity and authenticity of the data, potentially skewing the results and tempering the strength of the conclusions. It is imperative to recognize that while self-reported measures offer a window into the individual’s perceptions and experiences, they are simultaneously vulnerable to distortions influenced by participants’ desires to present themselves in a positive light. This could affect the validity of the results, potentially leading to over- or underestimations of the relationships between the studied variables.

Future studies should contemplate integrating a mixed approach or triangulating data sources to mitigate the potential ramifications of social desirability bias. By harnessing a combination of self-reports, observational methods, and perhaps third-party evaluations, researchers can ensure a more comprehensive and less biased portrayal of the phenomena under investigation.

Fifth, a further limitation of the present research pertains to its specific concentration on safety behavior as the primary outcome of job insecurity. While understanding the nexus between job insecurity and safety behavior undeniably adds value to the academic discourse, this focal emphasis might inadvertently overshadow other pivotal outcomes of job insecurity. Notably, extensive literature has demonstrated that job insecurity can exert profound effects on myriad outcomes, including job satisfaction and employee turnover. Job satisfaction, being a crucial determinant of overall employee well-being and organi-
zational performance, may be intricately tied to perceptions of job insecurity. Similarly, turnover intentions, which influence an organization’s stability, continuity, and knowledge retention, are potentially susceptible to variations in perceived job security. By predominantly examining safety behavior, the study may not capture the full spectrum of job insecurity ramifications, leaving some facets of the phenomenon insufficiently explored.

To cultivate a more holistic understanding of job insecurity’s multifaceted impacts on employees and organizational dynamics, subsequent research endeavors should consider broadening the range of outcomes examined. This expansion would not only yield a comprehensive overview of the interplay between job insecurity and various organizational behaviors but could also guide more effective intervention strategies for organizations grappling with the challenges posed by job insecurity.

Sixth, an additional consideration to note is the inherent emotional dimension associated with the topic of job insecurity. The very nature of job insecurity can stir potent emotional reactions among employees, rendering them vulnerable to potential response biases. Emotions such as fear, anxiety, or even resentment stemming from perceived job instability might inadvertently color the responses of participants, thereby introducing biases that could distort the true nature of the relationships under investigation.

While the methodology employed in this study has been rigorous, acknowledging the potential for emotionally driven response biases is crucial. It is conceivable that participants, when confronted with questions regarding their perceived job security, might either underreport or exaggerate their feelings and perceptions due to the sensitive and personal nature of the topic. This could, in turn, affect the validity and reliability of the data collected.

To address these potential biases and ensure the robustness of our findings, several measures were integrated during the data collection and analysis phases. For instance, the survey instrument was meticulously crafted to use neutral and non-leading language, aiming to minimize the potential for evoking heightened emotional reactions. Additionally, participants were reassured about the confidentiality and anonymity of their responses, fostering a more genuine and candid reporting environment. Nevertheless, the potential influence of emotionally driven biases remains an inherent limitation, and future research in this domain should continue to prioritize strategies that further minimize such biases, ensuring the capture of authentic employee perceptions and experiences.

Lastly, upon closer examination of the data set, there exists a notable skewness regarding the educational background of the respondents. Specifically, there is a disproportionately high representation of participants with advanced or higher education. While stratified random sampling tries to generate a representative sample, this apparent bias towards those with higher education necessitates further elucidation.

There are several potential explanations and implications tied to such an overrepresentation. First, this could hint at an inadvertent selection bias introduced during the sampling phase, which would raise questions about the representativeness and generalizability of the results. For instance, was the sampling frame predominantly populated by individuals from certain sectors or organizations that typically require higher educational qualifications? Or did the survey, being online, inherently cater to a demographic more acquainted with digital platforms due to their educational background? Secondly, there might be inherent characteristics of the topic or the incentives provided that inadvertently appealed more to individuals with a higher educational background, prompting a higher response rate from this group. Lastly, it could be a reflection of broader societal or employment trends, particularly in the South Korean context. Labor market dynamics, the cultural emphasis on education, or industry-specific demands could potentially result in a greater prevalence of higher education among the employed demographic.

Whatever the cause, it is paramount that this disproportionality be addressed. Recognizing and comprehending this overrepresentation is not only critical for the internal validity of the study but vital when extrapolating the findings to the broader population. Future endeavors would benefit from a more detailed justification or corrective measures
to ensure a balanced representation across educational qualifications, thus enhancing the robustness and relevance of the research findings. In light of these observations, a thorough investigation into the potential reasons behind this disproportionality, as well as its implications for the study’s findings, is both warranted and imperative.

6. Conclusions

In conclusion, the current investigation addresses several research voids within the literature of job insecurity by probing its impact on safety behavior, scrutinizing the mediating role of the meaningfulness of work, and postulating the positive moderating role of ethical leadership on the job insecurity–meaningfulness of work link. The creation of a moderated mediation model and the application of SEM with tripartite time-lagged data from a sample of 235 workers contribute to a more sophisticated comprehension of the intricate dynamics among job insecurity, meaningfulness of work, ethical leadership, and safety behavior.

Author Contributions: Conceptualization, Y.H.; methodology, M.-J.K.; software, M.-J.K.; validation, M.-J.K. and Y.W.S.; formal analysis, Y.H.; investigation, Y.W.S. and Y.H.; resources, Y.H.; data curation, writing—original draft preparation, Y.H. and M.-J.K.; writing—review and editing, Y.W.S. and M.-J.K.; visualization, Y.H.; supervision, M.-J.K. and Y.H.; project administration, M.-J.K. and Y.W.S.; funding acquisition, M.-J.K. All authors have read and agreed to the published version of the manuscript.

Funding: This paper was supported by the Education and Research promotion program of KOREATECH in 2022.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Review Board of Yonsei University (protocol code: 202208-HR-2975-01, and date of approval: 15 August 2022).

Informed Consent Statement: Written informed consent has been obtained from the participants to publish this paper.

Data Availability Statement: New data were created and analyzed in this study. Data sharing is not applicable to this article.

Conflicts of Interest: The authors declare they have no conflicts of interest relating to the publication of this paper.

Appendix A. Measures

1. Job Insecurity (Time point 1, gathered from employees)
   (a) “My job will be there as long as I want it (reverse scored)”.
   (b) “If my current organization were facing economic problems, my job would be the first to go”.
   (c) “I will be able to keep my present job as long as I wish (reverse scored)”.
   (d) “I am not confident that I will be able to work for my organization as long as I wish”.
   (e) “My job is not a secure one”.

2. Ethical Leadership (Time point 1, collected from employees)
   (a) “My leader leads their personal life ethically”.
   (b) “My leader discusses business ethics or values with employees”.
   (c) “My leader exemplifies the right way to do things in terms of ethics”.
   (d) “My leader disciplines employees who violate ethical standards”.
   (e) “My leader makes fair and balanced decisions”.
   (f) “My leader defines success not just by results but also the way that they are obtained”.
   (g) “When making decisions, my leader asks, ‘What is the right thing to do?’”.
   (h) “My leader can be trusted”.
   (i) “My leader has the best interest of employees in mind”.


(j) “My leader listens to what employees have to say”.

3. Meaningfulness of Work (Time point 2, collected from employees)
   (a) “The work that I do is meaningful”.
   (b) “The work that I do makes the world a better place”.
   (c) “My work is one of the most important things in my life”.
   (d) “I would choose my current work life again if I had the opportunity”.
   (e) “The work that I do is important”.

4. Safety Behavior (Time point 3, gathered from employees)
   (a) “I use all the necessary safety equipment to do my job”.
   (b) “I use the correct safety procedures for carrying out my job”.
   (c) “I ensure the highest levels of safety when I carry out my job”.
   (d) “I promote the safety program within the organization”.
   (e) “I put in extra effort to improve the safety of the workplace”.
   (f) “I voluntarily carry out tasks or activities that help to improve workplace safety”.

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