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Longitudinal Impacts of Job Insecurity on Life Satisfaction: Mediating Roles of Trust in Government and Hope in the European Union

Albana Berisha Qehaja[1] and Edona Berisha Kida[2*]

[1]Faculty of Economics, University of Prishtina, Republic of Kosova
[2]Faculty of Education, University of Prishtina, Republic of Kosova
[*]Correspondence: edona.berisha@uni-pr.edu

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ABSTRACT

This longitudinal study examines the relationships among job insecurity, life satisfaction, trust in government, and hope during the COVID-19 pandemic across 27 European Union countries. Using data from 8,750 participants collected via the PsyCorona Study, the analysis applies the PROCESS macro (model 6) with 5,000 bootstrapped samples to estimate indirect effects with 95% bias-corrected confidence intervals. Findings reveal that job insecurity significantly reduces life satisfaction, explaining 13.62% of the variance over time. Trust in government mediates this relationship in earlier waves, though its influence diminishes later. Conversely, hope consistently emerges as a strong mediator across all waves, accounting for 24.64% of the variance. Sequential mediation via trust and hope is significant early on but weakens by wave 22. These findings underscore the essential role of government trust and hope in buffering the negative effects of job insecurity and enhancing societal resilience during times of crisis.

Keywords: Job insecurity; life satisfaction; trust in government; hope; COVID-19 pandemic; mediation analysis

1. Introduction

Over the last fifty years, global labor market dynamics have shifted, reducing employment guarantees. A work crisis is characterized by insecure contracts, stagnant wages, and reduced benefits [1]. Neoliberalism and globalization have driven changes in labor markets, increasing economic instability and psychological distress, which negatively impact life satisfaction [2], [3], [4], [5], [6]. These shifts have significant economic and social consequences, affecting individual well-being worldwide.

The COVID-19 pandemic further exacerbated job insecurity, particularly in vulnerable sectors such as hospitality, retail, and travel, where widespread disruptions led to heightened uncertainty and stress among workers [2], [3], [7], [8]. Quarantines, self-isolation, and travel restrictions deepened labor market instability, emphasizing the pervasive nature of job insecurity [3], [9], [8], [10].

Job insecurity negatively impacts life satisfaction [11], [12], and research consistently links it to lower well-being and increased stress [13], [14], [6], [15], [10]. Financial instability and lack of social support intensify these effects, highlighting the need for structural interventions to mitigate their psychological toll [3], [16]. Although extensive research exists on job insecurity's effects, few studies have examined its impact

on life satisfaction during the COVID-19 pandemic. Most prior research focused on direct effects but overlooked key mediating mechanisms [2], [3], [14]. This study addresses this gap by investigating the roles of hope and trust in government as mediators in the relationship between job insecurity and life satisfaction across 27 EU countries.

Trust in government plays an essential role in public confidence and stability, shaping responses to economic uncertainty [17]. Similarly, hope serves as an emotional buffer, strengthening resilience amid crises [18], [10]. While previous studies have explored these concepts separately, our study integrates them within a serial mediation framework to provide a more nuanced understanding of their combined effects on job insecurity and well-being.

This study adopts a serial mediation approach to examine the interplay of job insecurity, trust in government, hope, and life satisfaction. Inspired by Himmler et al. [9], we explore the dimensions of hope [18] and the multifaceted role of trust in government [19] as essential factors influencing well-being during crises. Given the ongoing challenges of global economic instability, trust in government remains central to maintaining societal confidence [17], while hope strengthens psychological resilience [20], [10].

Our findings guide policymakers and employers, supporting interventions that address psychological risks associated with job insecurity. Recognizing the significance of hope and trust in government can help create environments that support resilience and well-being amid uncertainty [3], [21], [10].

There are multiple novel contributions to this study. It first explores the mediating effects of hope and trust in government on the relationship between job insecurity and life satisfaction during the pandemic. Second, it uses data from the PsyCorona Study - a large-scale international survey to compare 27 EU countries. Third, using a serial mediation model, this study sequentially investigates these mediators to yield nuanced perspectives on the relationships between job insecurity, life satisfaction, and socio-economic indicators.

We hypothesize that job insecurity negatively predicts life satisfaction. Trust in the government is expected to mediate this relationship, with the hope of serving as an additional mediator. We assess whether this pattern persists over time, providing evidence-based recommendations for policymakers and employers navigating the evolving employment landscape during the COVID-19 pandemic.

The introduction outlines the research background and significance. The literature review discusses past studies on job insecurity and life satisfaction, highlighting gaps that this study addresses. The methodology section details data collection, variables, and analytical techniques. The results section presents findings, followed by the discussion, which explores their implications. Finally, the conclusion summarizes key insights and offers recommendations for policymakers and employers.

2. Theoretical Background

Job insecurity is prevalent as a result of neoliberalism and globalization, associated with precarity, low or stagnant incomes, and poor or non-existent benefits [4], [22], [1], [23], [24]. These economic shifts prioritize flexibility and cost-cutting over job security. Perceived employment insecurity negatively impacts life satisfaction, particularly in countries with less generous labor market policies [12]. The COVID-19 pandemic exacerbated job losses, highlighting the need for robust employment protections [11], [5], [6], [25], [8], [26].

Job insecurity, defined as the unpredictability and lack of control over job continuity, can be either objective (*actual probability of dismissal*) or subjective (*individual's perception*) [27], [28]. Regional differences highlight higher cognitive and affective job insecurity in Finland compared to Sweden and Norway, significantly impacting mental well-being [29]. Researchers are concerned about the negative impact of job uncertainty on employees' well-being [14], [30], [31], [32], [33], [10]. A study of 27 European countries found job insecurity linked to poorer mental well-being [34]. Similarly, job insecurity negatively impacts subjective well-being [29].

Job insecurity poses health risks similar to unemployment, acting as a personal stressor and significantly affecting work-related health [35], [36], [37]. Its immediate and cumulative impact affects well-being over time [9], [16], [38]. Attempts to use job insecurity as a motivator often reduce morale and productivity [39]. Fair organizational practices, such as perceived organizational justice, can mitigate adverse effects [40]. Considering both cognitive and affective dimensions of job insecurity, the negative psychological impacts often outweigh potential motivating effects, particularly in high-stress environments [41].

During the COVID-19 pandemic, job insecurity among hospitality workers negatively affected self-esteem and increased economic deprivation [2]. Social support played an important role in moderating these effects on mental health, self-esteem, economic self-efficacy, and life satisfaction. Alcover et al. [3] found that job insecurity as well as financial threat were associated with poorer mental health during the early pandemic and suggested that support networks are an important factor. Ariza-Montes et al. [7] highlighted that personal

protective equipment, mistrust in the national health system, job insecurity, health, and life satisfaction were key determinants of healthcare professionals' mental well-being during the pandemic.

The COVID-19 pandemic significantly lowered life satisfaction throughout Europe, falling to the lowest since 1980 due to economic and non-economic stressors like job insecurity, health concerns, and social isolation [42]. Elevated job insecurity and work-family conflict correlated with heightened anxiety, depression, and insomnia during the lockdown period [43]. Bosmans et al. [4] found that national political and economic contexts influenced the prevalence of non-standard employment (NSE) and job insecurity. Diaz Hernandez et al. [44] suggested long-term effects on mental well-being, recommending mental health support strategies, especially for young people and those under government-imposed work restrictions. Moreover, Wilson et al. [10] called for employers to minimize job insecurity and financial anxiety to address the resulting mental health problems during the pandemic. Anand et al. [45] found a relationship between job insecurity and higher rates of burnout, especially when the economy was struggling: Wang et al. [15] indicated that understanding the contexts under which employees buffer against their negative reactions to job insecurity is key, proposing that employers take proactive strategies that sustain workforce stability and health.

Life satisfaction, an individual's cognitive assessment of their overall quality of life, is a central component of subjective well-being [46]. It is a self-evaluation process where individuals consider how their lives measure against standards or ideals they set themselves. Life satisfaction at a high level indicates that experiences and personal goals are aligned. As Kim-Prieto et al. [47] define well-being as the "global assessment of life and its facets", integrating personal judgments of satisfaction and broader life conditions. Diener's [46] subjective well-being (SWB) theory is seminal in understanding life satisfaction, comprising life satisfaction, positive affect, and negative affect. Life satisfaction is the cognitive aspect of comparing one's current conditions to personal standards. High life satisfaction indicates a positive appraisal aligned with one's ideals. Social relationships and economic stability are crucial for life satisfaction. High life satisfaction requires emotional support and a sense of belonging, which are characteristics of strong social connections [48]. A stable economy lowers tension and generates resources, improving quality of life [49]. Conversely, job insecurity diminishes psychological well-being and job satisfaction [13]. A review of 30 years of studies highlights the need for further investigation into the mechanisms linking job insecurity with health and well-being [14]. The COVID-19 pandemic exacerbated these issues, increasing job insecurity and reducing life satisfaction [25], [8], [26]. Allas et al. [42] reported that life satisfaction fell to its lowest levels in Europe since 1980 due to the stressors brought on by the pandemic (2020). Richter and Näswall [32] highlighted that mediating variables are necessary to better understand the relationship between job insecurity and well-being. That trust is a mediator of job insecurity and well-being. Kim and von dem Knesebeck [36] found that work uncertainty and unemployment are connected with poor health, with unemployment having stronger associations. During the COVID-19 pandemic, Himmler et al. [9] investigated changes in well-being across seven European countries, discovering declines in the winter of 2020–2021 and increases in the summer of 2021.

Trust plays a key role across various academic disciplines, including public administration, economics, sociology, psychology, and political science [20]. Rousseau et al. [19] define trust as "the intention to accept vulnerability based upon positive expectations of the intention or behavior of the other". This definition highlights the relational dimension of trust, with a willingness to be vulnerable to another party based on an expectation of positive behavior. Lee [50] examined the relationship between institutional trust and subjective well-being during COVID-19 and concluded that those with higher institutional trust exhibited higher mental health and life satisfaction. With a sense of stability and security to rely on, trust in institutions buffered people psychologically from the worst excesses of the pandemic. Similarly, Han et al. [51] stated that higher trust in the government was linked to compliance with preventive health measures and prosocial behavior during the pandemic. Trust in government was key to encouraging the public to comply with health guidelines and work together to overcome the crisis.

The loss of trust can indicate the deterioration of the employee-employer relationship. Employees who experience job insecurity often believe their psychological contract with the organization is shattered. Employee trust in their workplace depends on the employer's trustworthiness, based on the organization's previous actions, generosity, and integrity [32]. Silla et al. [33] found that job insecurity is associated with poor well-being, and employability modifies the link between job insecurity and life satisfaction. Recent studies have further investigated the dynamics of trust in government. The Pew Research Center [52] borrowed from its stock-and-trend database to chart public attitudes regarding trust in government and its fluctuations in line with political and economic events over the past two and a half decades. According to the OECD [53], trust in government is essential for effective democratic governance, which relies on transparency, accountability, and responsiveness to public participation. The University of Waterloo's TRuST

Scholarly Network has run continuous surveys to measure trust in government regarding government responsiveness, reliability, and integrity [54].

Hope, a fundamental construct within positive psychology, is defined by Snyder [18] as comprising two key components: agency (*motivation to achieve goals*) and pathways (*perceived ability to create routes to those goals*). Hope is about having the will and the way to achieve desired outcomes. High hope in job insecurity is positive since individuals can manage uncertainties and stress, stay motivated to pursue, develop plans for achieving career goals, and thus remain resilient, adaptable, healthy, and satisfied with their lives [55], [18]. Studies show significantly that the level of hope is a significant determinant of life satisfaction and a key predictor of general well-being, with hope levels correlated positively with improved life satisfaction, appropriate mental health, and an optimistic attitude toward life [33], [18]. Hope and optimism were key drivers of workers' well-being during the COVID-19 outbreak, highlighting the need to keep a hopeful view in the face of challenging times [56]. Shoss et al. [39] demonstrated that perceptions of national employment insecurity during the pandemic correlated positively with solidarity and compliance with health precautions, suggesting that hope and collective efficacy may drive positive social behaviors. Additionally, Wu [57] focused on the effects of precarious employment on well-being in Europe, reporting that emotional precariousness, job insecurity, and employment instability all had negative effects on mental (e.g., depression, toxicity) and subjective well-being (e.g., life satisfaction), with hope and supportive environments acting as potential buffers in reducing these negative effects.

Cultivating hope allows individuals and organizations to build resilience, improve mental health outcomes, and enhance overall life satisfaction, even in challenging times. This study enriches Positive Psychology by demonstrating how hope acts as a psychological buffer during economic instability, showing that individuals with higher levels of hope experience less negative psychological impact and maintain life satisfaction. Further, it incorporates trust in government as an important positive psychological resource shaping the empowered citizen's behavior, broadening the perspective of the Positive Psychology approach at the level of collective or societal factors. These findings indicate how trust in government increases individual well-being and helps the general public follow health rules and participate in collectivist actions in situations like the COVID-19 pandemic. This paper provides a fuller picture of human flourishing by integrating hope and trust in government in a comprehensive well-being model.

Conservation of Resources (COR) Theory: Hobfoll's [58] conservation of resources (COR) theory suggests that people seek to gain, maintain, or protect valuable resources, including personal characteristics, conditions, objects, and energies. In the context of job insecurity, employees perceive a threat to their job and income security, which are essential resources, leading to stress, anxiety, and diminished well-being. COR theory provides a comprehensive framework for understanding the psychological impact of job insecurity and highlights the importance of resource management in mitigating its negative effects [58], [59].

Research has applied COR theory in various contexts, including job insecurity [60], [61], [22], [62], [63], [64], [65], [24], [66]. In integrating the concepts of hope and trust, COR theory aligns closely with ***Positive Psychology***. As a resource, hope enables more efficient coping with the unavoidable stress and anxiety that comes with job insecurity, strengthening resilience and encouraging proactive problem-solving. According to the trust theory, trust in institutions serves as a countermeasure against the adverse impacts of job insecurity; it provides stability and mitigates uncertainty. This study contributes to COR theory by exploring the dynamics of resource loss and stress within job insecurity. Focusing on job insecurity highlights how perceived threats to job and income security and personal resources increase stress, anxiety, and diminished well-being. Furthermore, this study extends the COR theory by identifying hope and trust in government as essential resources. It demonstrates a more nuanced understanding of considerations like resource management and how different resources can help or hinder one another in relieving stress.

Drawing on empirical data collected from 27 European Union countries, the research provides an important cross-cultural validation of COR theory, showing its applicability across diverse socio-economic contexts and establishing a solid framework for future studies investigating the dynamics of resources in the workplace.

3. Data and Methodology

Participants and procedure: Online data were collected cross-sectionally and longitudinally through extensive surveys in PsyCorona between March 2020 and July 2021. For a broad, representative sample, the participants were recruited through social media, email, and online communities. Initial data included 64,426 individuals from 115 countries, with 19,521 participants from EU countries analyzed; the final sample included 8,750 participants with complete data for key variables. Data collection used convenience, representative, and snowball sampling. Responses from waves 5, 11, and 22 (731, 580, and 346 participants,

respectively) were analyzed, with baseline data from March 2020 and follow-up waves in May 2020, June 2020, and July 2021. Hope was also excluded from these waves but measured in waves 4, 10, and 16 for longitudinal consistency. This study employs a longitudinal approach, following participants across multiple waves to assess changes in job insecurity, life satisfaction, trust in government, and hope over time. The repeated measurement of key variables allows for an evaluation of trends rather than relying solely on cross-sectional snapshots. To account for temporal ordering, variables were measured at distinct time points, allowing an assessment of whether earlier experiences of job insecurity influenced later life satisfaction, trust, and hope. While cross-sectional relationships remain a part of the analysis, the inclusion of multiple waves enhances the ability to track evolving economic and psychological effects across different stages of the pandemic. This approach made it possible to secure validity and provide an overview of job insecurity and other variables' effects on life satisfaction [67].

Variable	Baseline (March 19th, 2020)	Wave 4-5 (April 25th, May 2nd, 2020)	Wave 10-11 (June 6th and 13th, 2020)	Wave 16-22 (13th November, 2020, 14th July, 2021)
Job Insecurity	X	w5	w11	w22
Life Satisfaction	X	w5	w11	w22
Trust in Government	X	w5	w11	w22
Hope (*Economic*)	X	w4	w10	w16
Age	X	/	/	/
Gender	X	/	/	/
Education	X	/	/	/

Table 1. Data collection from study variables

Ethical Considerations: The PsyCorona Survey received approval from the Ethical Committee of the University of Groningen (study code: PSY-1920-S-0390) and New York University Abu Dhabi (study code: HRPP-2020-42). Before starting the survey, participants gave informed consent by completing an online consent form. The consent form contained specific information about the purpose of the study, procedures, potential risks, and benefits.

Sample Description: Participants were obtained from 27 European countries. The total sample was 8,750 participants, with detailed demographic information, including age, gender, and education, collected for analysis.

- *Gender Distribution*: 60.4% identified as female, 39.0% identified as male, and 0.4% identified as other. A small number of participants (0.2%) did not report their gender.
- *Age Distribution*: Participants ranged from 18 to 85+ years. Specifically, 17.6% of participants were aged 18-24 years, 23.2% were aged 25-34 years, 22.4% were aged 35-44 years, 19.4% were aged 45-54 years, 13.2% were aged 55-64 years, 3.8% were aged 65-75 years, 0.3% were aged 75-85 years, and 0.1% were aged 85+ years. A small number of participants (0.1%) did not report their age.
- *Education Levels*: The distribution was as follows: 1.2% of participants had primary education, 12.1% had general secondary education, 12.1% had vocational education, 21.5% had higher education, 23.4% held a bachelor's degree, 22.6% held a master's degree, and 6.9% held a PhD degree. A small number of participants (0.2%) did not report their level of education.

Participants were all citizens of their countries. This range of demographic diversity increases the chance that the study's findings can be widely applied and represent a cross-section of populations. The demographic diversity in the sample adds to the external validity of any of the findings across the European Union context.

Measures: The scales were developed and validated by a team of experienced scientists from diverse international institutions (the PsyCorona team), which helped maintain their reliability and validity in measuring pandemic-related variables.

Job insecurity scale: Participants' perceptions of job insecurity were assessed using a scale adapted from Vander Elst et al. [66], administered at baseline and during waves 5, 11, and 22. They rated their agreement with statements such as: "Chances are, I will soon lose my job," "I am sure I can keep my job" (reverse scored), "I feel insecure about the future of my job," and "I already lost my job," on a Likert scale from -2 (*strongly disagree*) to 2 (*strongly agree*). Responses were averaged to compute a job insecurity score, with higher values indicating greater insecurity. The scale demonstrated strong internal consistency: $\alpha = 0.832$ (*baseline*), $\alpha = 0.819$ (*wave 5*), $\alpha = 0.817$ (*wave 11*), and $\alpha = 0.786$ (*wave 22*).

Life satisfaction scale: It was assessed using three items: happiness, life satisfaction, and purpose. Participants rated their agreement with the statements: "In general, how happy would you say you are?" (1 = *extremely unhappy* to 10 = *extremely happy*), "In general, how satisfied are you with your life?" (1 = *very dissatisfied* to 6 = *very satisfied*), and "My life has a clear sense of purpose" (-3 = *strongly disagree* to 3 = *strongly agree*). An average score was computed, with higher values indicating greater life satisfaction. The scale showed acceptable internal consistency: $\alpha = 0.747$ (*baseline*), $\alpha = 0.759$ (*wave 5*), $\alpha = 0.783$ (*wave 11*), and $\alpha = 0.767$ (*wave 22*).

Trust in government: It was assessed using the item: "In general, how much do you trust each of the following to take the right measures to deal with the coronavirus pandemic? - The government of your country." Responses were rated on a 1 to 5 scale (1 = *Not at all*, 5 = *A great deal*), adapted from Stroebe et al. [68]. This item was selected for its relevance in evaluating trust in governmental actions during the pandemic, which is essential for understanding public response and compliance with health measures.

Hope (*Economic*): Participants rated their hope with the item: "Agree or disagree: I have high hopes that the situation regarding coronavirus's economic and financial consequences will improve". This item was rated on a scale from -3 to 3 (-3 = *Strongly disagree* to 3 = *Strongly agree*). This item was developed by Ben Gützkow, Max Agostini, Elissa El Khawli, Jannis Kreienkamp, and Anne-Margit Reitsema. This measure was added to capture participants' optimism about the economy's recovery, which is important for understanding the psychological and social effects of the pandemic.

Covariates: Covariates, such as age, gender, and education, were controlled for in the analysis to account for their potential influence on the outcomes.

Age affects job insecurity perceptions, with younger individuals facing greater instability and older workers struggling with re-entry [13], [16]. Gender plays a role in employment disparities, as women are more vulnerable to precarious conditions [3], [21]. Education enhances employability, shaping job stability, life satisfaction, and institutional trust [6], [10]. These covariates help control for individual differences, ensuring a precise estimation of effects.

Age was recorded as a continuous variable, gender was categorized as female, male, or other, and education was measured by the highest level completed (ranging from primary education to PhD). Including these covariates improved the reliability and validity of findings by adjusting for confounders.

Handling missing data: Missing data were addressed using listwise deletion to ensure consistency and integrity, assuming randomness [69]. Non-imputed data minimizes data alterations and preserves dataset authenticity throughout all waves. Although multiple imputation is a standard approach for missing data [70], it can introduce assumptions inconsistent with the original dataset. Using non-imputed data preserved natural variability and relationships, avoiding potential bias [69]. This method also maintained demographic representation, ensuring greater fidelity to participants' experiences. While this reduces sample size and statistical power, power analyses confirmed that the final sample size remains sufficient to detect small-to-moderate effects, mitigating concerns about reduced statistical power. Limitations due to missing data are further discussed in the discussion section of this paper.

Statistical analysis: To assess serial mediation effects, we used PROCESS macro (Model 6) [71], which integrates path-based moderation and mediation into a conditional process model. This approach was chosen based on theoretical reasoning that job insecurity affects life satisfaction through trust in government [51], [53] and hope [33], [38], reflecting a progressive response rather than a direct effect. This model enabled the analysis of direct and indirect effects, providing insights into sequential relationships among key variables. Bootstrapping with 5,000 resamples ensured bias-corrected confidence intervals at a 95% confidence level, enhancing estimation precision and the reliability of mediation effects. As a non-parametric method, bootstrapping is recommended over traditional parametric tests when feasible [72], making it particularly suitable for this study. Analyses were conducted in SPSS version 22 to ensure robust and reliable statistical procedures.

To examine the relationship between job insecurity and life satisfaction, we treat job insecurity as the independent variable and life satisfaction as the dependent variable. Mediating variables include trust in government and hope, while covariates include age, gender, and education to account for potential confounding factors.

Hypotheses:

H_1: Job insecurity will be negatively related to life satisfaction.

H_2: Trust in government will mediate the relationship between job insecurity and life satisfaction.

H_3: Hope will mediate the relationship between job insecurity and life satisfaction.

H_4: Trust in government and hope will sequentially mediate the relationship between job insecurity and life satisfaction.

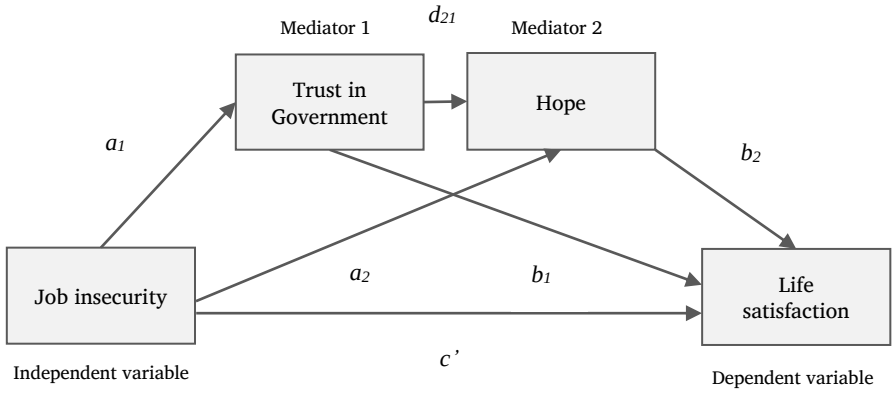

Figure 1. Research model

Model-basic equations used for regression calculations for the model described in the study are presented below:

Trust in Government: $TrustGov = i_1 + a * JobIns + e_{1,}$ (1)

Hope: $Hope = i_2 + b * JobIns + c' * TrustGov + e_{2,}$ (2)

Life Satisfaction: $LifeSat = i_3 + c * JobIns + d * TrustGov + e * Hope + e_{3.}$ (3)

As covariates, we included age, gender, and education in our serial mediation model to control for potential confounding effects. The updated model equations are as follows:

$TrustGov = i_1 + a * JobIns + b_1 * Age + b_2 * Gen + b_3 * Edu + e_{1,}$ (1)

$Hope = i_2 + c * JobIns + c' * TrustGov + b_1 * Age + b_2 * Gen + b_3 * Edu + e_{2,}$ (2)

$LifeSat = i_3 + d * JobIns + e * TrustGov + f * Hope + b_1 * Age + b_2 * Gen + b_3 * Edu + e_3$ (3)

Where

TrustGov represents trust in government; *JobIns* represents job insecurity; *Hope* represents the level of hope; *LifeSat* represents life satisfaction; i_1, i_2, i_3 are intercept coefficients; *a, b, c, c′, d, e, f* are regression coefficients for the main predictors; $\boldsymbol{b_1, b_2, b_3}$ regression coefficients for the covariates (age, gender, education) *and* e_1, e_2, e_3 are error terms.

These equations provide the basis for the sequential mediation analysis, examining job insecurity's direct and indirect effects on well-being through the mediating variables of trust in government and hope. This study is among the few research models examining the relationship between job insecurity and life satisfaction, with a unique focus on trust in government and hope as mediators.

4. Results

Descriptive statistics: Table 2 summarizes the means and standard deviations for job insecurity, life satisfaction, trust in government, and hope across baseline, wave 5, wave 11, and wave 22. Notably, job insecurity gradually increased over time, while life satisfaction and trust in government demonstrated fluctuations, particularly with a decline in trust in government at wave 22.

Measure	Baseline (*M*, SD)	Wave 5 (*M*, SD)	Wave 11 (*M*, SD)	Wave 22 (*M*, SD)
Job Insecurity	-0.60 (0.97)	-0.68 (0.95)	-0.76 (0.92)	-0.86 (0.91)
Life Satisfaction	3.79 (1.26)	3.92 (1.24)	4.02 (1.27)	3.97 (1.28)
Trust in Government	2.98 (1.14)	2.91 (1.17)	2.96 (1.19)	2.47 (1.10)
Hope (*Economic*)	0.14 (1.71)	-0.07 (1.66)	0.24 (1.64)	-0.17 (1.74)

Note: Listwise deletion was employed to handle missing data, ensuring that only cases with complete information across all variables were included in the analysis.

Table 2. Descriptive statistics for key measures across waves

We included responses from the 5th, 11th, and 22nd follow-up assessments with complete data for all key measures to examine changes over time. Specifically, 731 participants completed the survey during wave 5, 580 during wave 11, and 346 during wave 22.

Correlation analysis: Next, we explore the relationships between these key measures through Pearson correlation analyses. Table 3 presents Pearson correlations among the key measures at different waves.

Measure	1	2	3	4
Baseline				
1. Job Insecurity	1	-0.302**	-0.144**	-0.144**
2. Life Satisfaction	-0.302**	1	0.181**	0.189**
3. Trust in Government	-0.144**	0.181**	1	0.252**
4. Hope (*Economic*)	-0.144**	0.189**	0.252**	1
Wave 5				
1. Job Insecurity	1	-0.306**	-0.179**	-0.248**
2. Life Satisfaction	-0.306**	1	0.221**	0.214**
3. Trust in Government	-0.179**	0.221**	1	0.367**
4. Hope (*Economic*)	-0.248**	0.214**	0.367**	1
Wave 11				
1. Job Insecurity	1	-0.276**	-0.227**	-0.301**
2. Life Satisfaction	-0.276**	1	0.196**	0.179**
3. Trust in Government	-0.227**	0.196**	1	0.387**
4. Hope (*Economic*)	-0.301**	0.179**	0.387**	1
Wave 22				
1. Job Insecurity	1	-0.219**	-0.058	-0.207**
2. Life Satisfaction	-0.219**	1	0.166**	0.189**
3. Trust in Government	-0.058	0.166**	1	0.443**
4. Hope (*Economic*)	-0.207**	0.189**	0.443**	1

Note: $p < 0.01$ (2-tailed).

Table 3. Correlations among key measures across waves

Job insecurity is negatively related to life satisfaction and hope in all waves, as indicated in Table 3, suggesting that an increase in job insecurity is linked to a decrease in either life satisfaction or hope. Trust in government shows persistent positive correlations with life satisfaction and hope, except for a non-significant relationship with job insecurity at wave 22. These findings underscore the stable nature of these relationships over time.

Mediation Analysis: The mediation effects were assessed using the PROCESS macro [71], Model 6, designed for serial mediation analysis. Bootstrapping with 5,000 samples provided 95% bias-corrected confidence intervals for the indirect effects. MacKinnon et al. [72] noted that the bias-corrected bootstrap provides the most accurate confidence limits and the most significant statistical power. We utilized this method to test the mediation in our study. The results obtained using the PROCESS macro for SPSS [71] are presented in Figure 1, table 4 and 5.

Baseline model*:* Job insecurity significantly reduced trust in government (path a_1: $b = -0.1705$, $p < .001$) and hope (path a_2: $b = -0.1959$, $p < .001$). Trust in government positively influenced hope (path d_{12}: $b = 0.3542$, $p < .001$). Both trust in government (path b_1: $b = 0.1225$, $p < .001$) and hope (path b_2: $b = 0.0895$, $p < .001$) were positively associated with life satisfaction. Job insecurity directly negatively impacted life satisfaction (path *c*: $b = -0.3500$, $p < .001$). Indirect effects through trust in government (path *c*': $b = -0.0209$, $p < .001$), through hope (path *c*': $b = -0.0175$, $p < .001$), and through both mediators (path *c*': $b = -0.0054$, $p < .001$), were significant. Covariates (age, gender, education) did not alter these relationships, confirming their robustness.

Wave 5 model*:* Job insecurity negatively impacted trust in government (path a_1: $b = -0.2369$, $p < .001$) and hope (path a_2: $b = -0.3394$, $p < .001$), which in turn are positively associated with life satisfaction. Trust in government positively influenced hope (path d_{12}: $b = 0.4770$, $p < .001$). Both trust in government (path b_1: $b = 0.1525$, $p < .001$) and hope (path b_2: $b = 0.0754$, $p < .01$) were positively associated with life satisfaction. The direct negative effect of job insecurity on life satisfaction (path *c*: $b = -0.3269$, $p < .001$) and the indirect effects through trust in government (path *c*': $b = -0.0361$, $p < .001$), through hope (path

c': $b = -0.0256$, $p < .001$), and through both mediators (path c': $b = -0.0085$, $p < .001$) were significant. Covariates did not significantly change these relationships.

Wave 11 model: Job insecurity continued to negatively impact trust in government (path a_1: $b = -0.3052$, $p < .001$) and hope (path a_2: $b = -0.4091$, $p < .001$). Trust in government positively influenced hope (path d_{12}: $b = 0.4643$, $p < .001$). Both trust in government (path b_1: $b = 0.1259$, $p < .01$), and hope (path b_2: $b = 0.0587$, $p < .086$), were positively associated with life satisfaction. The direct negative effect of job insecurity on life satisfaction (path c: $b = -0.2639$, $p < .001$) and the indirect effects through trust in government (path c': $b = -0.0384$, $p < .001$), through hope (path c': $b = -0.0240$, $p < .001$), and through both mediators (path c': $b = -0.0083$, $p < .001$) were significant. Covariates did not alter these relationships.

Wave 22 model: Job insecurity did not significantly affect trust in government (path a_1: $b = -0.0671$, $p < .299$) but negatively impacted hope (path a_2: $b = -0.3404$, $p < .001$). Trust in government positively influenced hope (path d_{12}: $b = 0.6730$, $p < .001$). Trust in government was not significantly associated with life satisfaction (path b_1: $b = 0.0540$, $p < .390$), while hope (path b_2: $b = 0.0897$, $p < .030$) was positively associated with life satisfaction. The direct negative effect of job insecurity on life satisfaction (path c: $b = -0.2324$, $p < .001$) and the indirect effects through trust in government (path c': $b = -0.0036$, $p < .007$), through hope (path c': $b = -0.0305$, $p < .018$), and through both mediators (path c': $b = -0.0040$, $p < .005$) were significant. Covariates did not change these relationships.

Serial mediation analysis demonstrates that job insecurity significantly impacts life satisfaction through direct and indirect pathways. Specifically, the total effect (c') of job insecurity on life satisfaction is larger than the direct effect (c), indicating the presence of significant mediation effects. The indirect effects through trust in government ($a_1 \rightarrow b_1$) and hope ($a_2 \rightarrow b_2$), as well as the combined indirect effect through both mediators ($a_1 \rightarrow d_{12} \rightarrow b_2$), all significantly contribute to this relationship. This complementary partial mediation suggests that while job insecurity directly lowers life satisfaction, it also decreases trust in government and hope, negatively impacting life satisfaction. This is the classification of mediation by Zhao et al. [74].

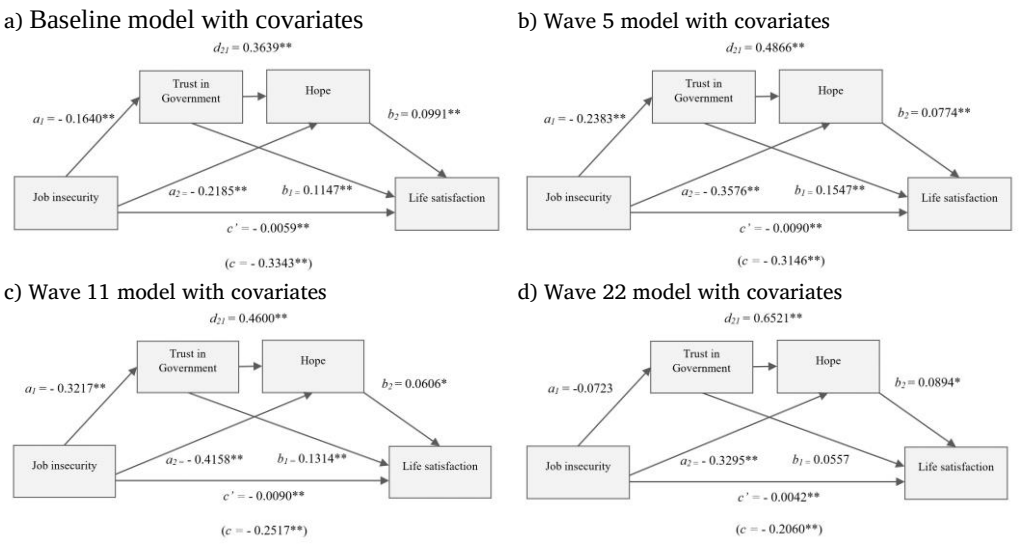

Figure 2. Serial mediation models

Models	JobIn → TrustG (path a_1)	JobIn → Hope (path a_2)	TrustG → Hope (path d_{12})	TrustG → LifeSat (path b_1)	Hope → LifeSat (path b_2)	JobIn → LifeSat (path c)	JobIn → TrustG → LifeSat (path c_1')	JobIn → Hope → LifeSat (path c_2')	JobIn → TrustG → Hope → LifeSat (path c_3')
Baseline	b = -0.1705 (0.000**)	b = -0.1959 (0.000**)	b = 0.3542 (0.000**)	b = 0.1225 (0.000**)	b = 0.0895 (0.000**)	b = -0.3500 (0.000**)	b = -0.0209 (0.000**)	b = -0.0175 (0.000**)	b = -0.0054 (0.000**)
Baseline[a]	b = -0.1699 (0.000**)	b = -0.2029 (0.000**)	b = 0.3563 (0.000**)	b = 0.1206 (0.000**)	b = 0.0921 (0.000**)	b = -0.3500 (0.000**)	b = -0.0205 (0.000**)	b = -0.0187 (0.000**)	b = -0.0056 (0.000**)

Baseline[b]	b = -0.1702 (0.000**)	b = -0.1986 (0.000**)	b = 0.3581 (0.000**)	b = 0.1203 (0.000**)	b = 0.0931 (0.000**)	b = -0.3477 (0.000**)	b = -0.0205 (0.000**)	b = -0.0185 (0.000**)	b = -0.0057 (0.000**)
Baseline[c]	b = -0.1640 (0.000**)	b = -0.2185 (0.000**)	b = 0.3639 (0.000**)	b = 0.1147 (0.000**)	b = 0.0991 (0.000**)	b = -0.3343 (0.000**)	b = -0.0188 (0.000**)	b = -0.0217 (0.000**)	b = -0.0059 (0.000**)
Wave 5	b = -0.2369 (0.000**)	b = -0.3394 (0.000**)	b = 0.4770 (0.000**)	b = 0.1525 (0.0002**)	b = 0.0754 (0.0070**)	b = -0.3269 (0.000**)	b = -0.0361 (0.000**)	b = -0.0256 (0.000**)	b = -0.0085 (0.000**)
Wave 5[a]	b = -0.2369 (0.000**)	b = -0.3394 (0.000**)	b = 0.4770 (0.000**)	b = 0.1543 (0.0001**)	b = 0.0754 (0.0069**)	b = -0.3269 (0.000**)	b = -0.0365 (0.000**)	b = -0.0256 (0.000**)	b = -0.0085 (0.000**)
Wave 5[b]	b = -0.2375 (0.000**)	b = -0.3347 (0.000**)	b = 0.4867 (0.000**)	b = 0.1569 (0.0001**)	b = 0.0727 (0.0099**)	b = -0.3268 (0.000**)	b = -0.0373 (0.000**)	b = -0.0243 (0.000**)	b = -0.0084 (0.000**)
Wave 5[c]	b = -0.2383 (0.000**)	b = -0.3576 (0.000**)	b = 0.4866 (0.000**)	b = 0.1547 (0.0001**)	b = 0.0774 (0.0063**)	b = -0.3146 (0.000**)	b = -0.0369 (0.000**)	b = -0.0277 (0.000**)	b = -0.0090 (0.000**)
Wave 11	b = -0.3052 (0.000**)	b = -0.4091 (0.000**)	b = 0.4643 (0.000**)	b = 0.1259 (0.0067**)	b = 0.0587 (0.0860*)	b = -0.2639 (0.000**)	b = -0.0384 (0.000**)	b = -0.0240 (0.000**)	b = -0.0083 (0.000**)
Wave 11[a]	b = -0.3100 (0.000**)	b = -0.4070 (0.000**)	b = 0.4665 (0.000**)	b = 0.1258 (0.0070**)	b = 0.0587 (0.0862*)	b = -0.2640 (0.000**)	b = -0.0390 (0.000**)	b = -0.0239 (0.000**)	b = -0.0085 (0.000**)
Wave 11[b]	b = -0.3100 (0.000**)	b = -0.4041 (0.000**)	b = 0.4668 (0.000**)	b = 0.1265 (0.0068**)	b = 0.0574 (0.0958*)	b = -0.2642 (0.000**)	b = -0.0392 (0.000**)	b = -0.0232 (0.000**)	b = -0.0083 (0.000**)
Wave 11[c]	b = -0.3217 (0.000**)	b = -0.4158 (0.000**)	b = 0.4600 (0.000**)	b = 0.1314 (0.0050**)	b = 0.0606 (0.0786*)	b = -0.2517 (0.000**)	b = -0.0423 (0.000**)	b = -0.0252 (0.000**)	b = -0.0090 (0.000**)
Wave 22	b = -0.0671 (0.2992)	b = -0.3404 (0.0001**)	b = 0.6730 (0.000**)	b = 0.0540 (0.3898)	b = 0.0897 (0.0300*)	b = -0.2324 (0.0008**)	b = -0.0036 (0.0070**)	b = -0.0305 (0.0185*)	b = -0.0040 (0.005**)
Wave 22[a]	b = -0.0743 (0.2503)	b = -0.3394 (0.0002**)	b = 0.6741 (0.000**)	b = 0.0516 (0.4130)	b = 0.0898 (0.0299*)	b = -0.2344 (0.0008**)	b = -0.0038 (0.0077**)	b = -0.0305 (0.0186*)	b = -0.0045 (0.0051**)
Wave 22[b]	b = -0.0704 (0.2735)	b = -0.3340 (0.0002**)	b = 0.6518 (0.000**)	b = 0.0523 (0.4077)	b = 0.0917 (0.0285*)	b = -0.2344 (0.0008**)	b = -0.0037 (0.0075**)	b = -0.0306 (0.0183*)	b = -0.0042 (0.0049**)
Wave 22[c]	b = -0.0723 (0.2668)	b = -0.3295 (0.0003**)	b = 0.6521 (0.000**)	b = 0.0557 (0.3730)	b = 0.0894 (0.0309*)	b = -0.2060 (0.0031**)	b = -0.0040 (0.0081**)	b = -0.0294 (0.0179*)	b = -0.0042 (0.0051**)

Note: In paths values are presented unstandardized coefficients B, whereas within the parenthesis are the p values.
*$p < 0.01$; **$p < 0.000$
a controlled for age
b controlled for age and gender
c controlled for age, gender and education

Table 4. Path coefficients for hierarchical regressions across all models

Model	Direct Effect (b)	SE	95% CI	Indirect Effect (Trust) (b)	SE	95% CI	Indirect Effect (Hope) (b)	SE	95% CI	Indirect Effect (Trust →Hope) (b)	SE	95% CI	Total Effect (b)	SE	95% CI
Baseline	-0.3500	0.0133	[-0.3760, -0.3239]	-0.0209	0.0027	[-0.0266, -0.0159]	-0.0175	0.0024	[-0.0225, -0.0132]	-0.0054	0.0007	[-0.0068, -0.0041]	-0.0438	0.0038	[-0.0516, -0.0368]
Baseline[a]	-0.3468	0.0133	[-0.3728, -0.3207]	-0.0205	0.0027	[-0.0260, -0.0154]	-0.0187	0.0024	[-0.0237, -0.0143]	-0.0056	0.0007	[-0.0070, -0.0043]	-0.0447	0.0038	[-0.0526, -0.0376]
Baseline[b]	-0.3477	0.0133	[-0.3737, -0.3216]	-0.0205	0.0026	[-0.0259, -0.0155]	-0.0185	0.0025	[-0.0235, -0.0138]	-0.0057	0.0007	[-0.0071, -0.0043]	-0.0446	0.0039	[-0.0523, -0.0371]
Baseline[c]	-0.3343	0.0134	[-0.3605, -0.3081]	-0.0188	0.0026	[-0.0243, -0.0141]	-0.0217	0.0027	[-0.0272, -0.0166]	-0.0059	0.0007	[-0.0074, -0.0045]	-0.0464	0.0041	[-0.0547, -0.0388]
Wave 5	-0.3269	0.0480	[-0.4211, -0.2328]	-0.0361	0.0121	[-0.0629, -0.0154]	-0.0256	0.0108	[-0.0490, -0.0065]	-0.0085	0.0038	[-0.0169, -0.0021]	-0.0702	0.0173	[-0.1058, -0.0391]
Wave 5[a]	-0.3265	0.0479	[-0.4205, -0.2326]	-0.0365	0.0120	[-0.0627, -0.0158]	-0.0256	0.0106	[-0.0485, -0.0067]	-0.0085	0.0037	[-0.0166, -0.0022]	-0.0707	0.0174	[-0.1073, -0.0390]
Wave 5[b]	-0.3268	0.0479	[-0.4207, -0.2328]	-0.0373	0.0123	[-0.0649, -0.0163]	-0.0243	0.0106	[-0.0473, -0.0055]	-0.0084	0.0038	[-0.0170, -0.0018]	-0.0700	0.0175	[-0.1084, -0.0389]
Wave 5[c]	-0.3146	0.0485	[-0.4097, -0.2194]	-0.0369	0.0122	[-0.0638, -0.0161]	-0.0277	0.0114	[-0.0522, -0.0070]	-0.0090	0.0039	[-0.0175, -0.0021]	-0.0735	0.0180	[-0.1115, -0.0402]
Wave 11	-0.2639	0.0592	[-0.3801, -0.1476]	-0.0384	0.0167	[-0.0733, -0.0082]	-0.0240	0.0155	[-0.0572, 0.0048]	-0.0083	0.0055	[-0.0201, 0.0015]	-0.0708	0.0229	[-0.1189, -0.0273]
Wave 11[a]	-0.2640	0.0593	[-0.3805, -0.1475]	-0.0390	0.0173	[-0.0762, -0.0073]	-0.0239	0.0153	[-0.0559, 0.0055]	-0.0085	0.0058	[-0.0215, 0.0018]	-0.0714	0.0233	[-0.1201, -0.0280]

Wave 11[b]	-0.2642	0.0594	[-0.3808, -0.1476]	-0.0392	0.0172	[-0.0760, -0.0089]	-0.0232	0.0153	[-0.0538, 0.0060]	-0.0083	0.0059	[-0.0216, 0.0020]	-0.0707	0.0226	[-0.1159, -0.0272]
Wave 11[c]	-0.2517	0.0598	[-0.3691, -0.1342]	-0.0423	0.0181	[-0.0808, -0.0089]	-0.0252	0.0157	[-0.0579, 0.0034]	-0.0090	0.0059	[-0.0219, 0.0012]	-0.0765	0.0239	[-0.1262, -0.0322]
Wave 22	-0.2324	0.0689	[-0.3679, -0.0970]	-0.0036	0.0070	[-0.0217, 0.0072]	-0.0305	0.0185	[-0.0718, 0.0005]	-0.0040	0.0050	[-0.0157, 0.0044]	-0.0382	0.0201	[-0.0818, -0.0028]
Wave 22[a]	-0.2344	0.0691	[-0.3704, -0.0985]	-0.0038	0.0077	[-0.0238, 0.0082]	-0.0305	0.0186	[-0.0722, 0.0010]	-0.0045	0.0051	[-0.0167, 0.0037]	-0.0388	0.0201	[-0.0834, -0.0034]
Wave 22[b]	-0.2343	0.0692	[-0.3704, -0.0982]	-0.0037	0.0075	[-0.0236, 0.0078]	-0.0306	0.0183	[-0.0707, 0.0000]	-0.0042	0.0049	[-0.0150, 0.0041]	-0.0385	0.0197	[-0.0808, -0.0034]
Wave 22[c]	-0.2060	0.0691	[-0.3418, -0.0701]	-0.0040	0.0081	[-0.0242, 0.0080]	-0.0294	0.0179	[-0.0701, 0.0014]	-0.0042	0.0051	[-0.0172, 0.0036]	-0.0377	0.0201	[-0.0844, -0.0040]

Note: $p < 0.01$ (2-tailed).
Effect size
SE: Standard Error
CI: Confidence Interval, $p < 0.01$
a controlled for age
b controlled for age and gender
c controlled for age, gender and education

Table 5. Direct and indirect effects in serial mediation analysis for baseline, wave 5, 11, and 22

5. Hypotheses Testing

H_1: Job insecurity will be negatively related to life satisfaction.

The regression analyses confirmed that job insecurity is significantly negatively related to life satisfaction across all data collection waves.

- ***Baseline model:*** Regression results indicated a significant negative relationship between job insecurity and life satisfaction ($b = -0.3343$, $SE = 0.0134$, *95%* CI [-0.3605, -0.3081]). The model was significant, accounting for 13.25% of the variance in life satisfaction ($R = .3640$, $R^2 = .1325$, $F(6,8716) = 221.8315$, $p < .001$).
- ***Wave 5:*** Consistent with baseline findings, wave 5 data showed a significant negative relationship ($b = -0.3146$, $SE = 0.0485$, *95%* CI [-0.4097, -0.2194]), explaining 13.62% of the variance in life satisfaction ($R^2 = .1362$).
- ***Wave 11:*** Job insecurity remained a significant predictor of lower life satisfaction ($b = -0.2517$, $SE = 0.0598$, *95%* CI [-0.3691, -0.1342]), accounting for 8.60% of the variance ($R^2 = .0860$).
- *Wave 22:* The relationship persisted at wave 22, with job insecurity significantly predicting lower life satisfaction ($b = -0.2060$, $SE = 0.0691$, *95%* CI [-0.3418, -0.0701]), explaining 9.29% of the variance ($R^2 = .0929$).

These results robustly support H_1, demonstrating that job insecurity consistently predicts lower life satisfaction across multiple waves, with explained variance ranging from 8.60% to 13.62%.

H_2: Trust in government will mediate the relationship between job insecurity and life satisfaction.

Mediation analyses indicated that trust in government partially mediates the relationship between job insecurity and life satisfaction across multiple waves.

- ***Baseline model:*** The indirect effect of job insecurity on life satisfaction via trust in government was significant ($b = -0.0188$, $SE = 0.0026$, 95% CI [-0.0243, -0.0141]), indicating partial mediation. The model explained 2.28% of the variance in life satisfaction ($R = .1510$, $R^2 = .0228$, $F(4,8718) = 50.8345$, $p < .001$).
- ***Wave 5:*** Partial mediation was also observed at wave 5 ($b = -0.0369$, $SE = 0.0122$, 95% CI [-0.0638, -0.0161]), accounting for 3.94% of the variance ($R = .1985$, $R^2 = .0394$, $F(4,725) = 7.4378$, $p < .001$).
- ***Wave 11:*** At wave 11, the mediation effect remained significant ($b = -0.0423$, $SE = 0.0181$, 95% CI [-0.0808, -0.0089]), explaining 6.81% of the variance ($R = .2610$, $R^2 = .0681$, $F(4,575) = 10.5093$, $p < .001$).
- ***Wave 22:*** However, the mediation effect was not significant at wave 22 ($b = -0.0040$, $SE = 0.0081$, 95% CI [-0.0242, 0.0080]), with marginal model significance ($R = .1538$, $R^2 = .0237$, $F(4,341) = 2.0652$, $p = .0850$).

H_2 received mixed support. Trust in government significantly mediated at baseline, wave 5, and wave 11 but not at wave 22, suggesting temporal variations in the mediating role of trust in government.

H_3: Hope will mediate the relationship between job insecurity and life satisfaction.

Mediation analyses demonstrated that hope partially mediates the relationship between job insecurity and life satisfaction across multiple waves.

- ***Baseline model:*** Significant mediation effect observed ($b = -0.0217$, $SE = 0.0027$, 95% CI [-0.0272, -0.0166]), accounting for 9.24% of the variance ($R = .3040$, $R^2 = .0924$, $F(5,8717) = 177.4995$, $p < .001$).
- ***Wave 5:*** Persistent mediation at wave 5 ($b = -0.0277$, $SE = 0.0114$, 95% CI [-0.0522, -0.0070]), explaining 18.97% of the variance ($R = .4356$, $R^2 = .1897$, $F(5,724) = 33.9083$, $p < .001$).
- ***Wave 11:*** Continued significance at wave 11 ($b = -0.0252$, $SE = 0.015$, 95% CI [-0.0579, -0.0034]), with 20.97% variance explained ($R = .4579$, $R^2 = .2097$, $F(5,574) = 30.4599$, $p < .001$).
- ***Wave 22:*** Mediation effect remained significant at wave 22 ($b = -0.0294$, $SE = 0.0179$, 95% CI [-0.0701, -0.0014]), accounting for 24.64% of the variance ($R = .4964$, $R^2 = .2464$, $F(5,340) = 22.2351$, $p < .001$).

These results robustly support H_3, hoping to consistently mediate the relationship, explaining between 9.24% and 24.64% of the variance across waves.

H_4: Trust in government and hope will sequentially mediate the relationship between job insecurity and life satisfaction.

Sequential mediation analyses revealed that trust in government and hope jointly mediate the relationship across multiple waves.

- ***Baseline model:*** The indirect effect of job insecurity on life satisfaction through trust in government and hope is significant ($b = -0.0059$, $SE = 0.0007$, 95% CI [-0.0074, -0.0045]). This indicates that job insecurity reduces trust in the government, lowering hope and ultimately decreasing life satisfaction. The model summary shows that the mediation model is significant, explaining 13.25% of the variance ($R = .3640$, $R^2 = .1325$, $F(6,8716) = 221.8315$, $p < .001$).
- ***Wave 5:*** Persistent effect observed ($b = -0.0090$, $SE = 0.0039$, 95% CI [-0.0175, -0.0021]). The model summary remains significant, indicating 13.62% of the variance in life satisfaction ($R = .3691$, $R^2 = .1362$, $F(6,723) = 19.0073$, $p < .001$).
- ***Wave 11:*** Significant effect at this wave ($b = -0.0090$, $SE = 0.0059$, 95% CI [-0.0219, -0.0012]), with 8.60% variance explained ($R = .2932$, $R^2 = .0860$, $F(6,573) = 8.9818$, $p < .001$).
- ***Wave 22:*** Sequential mediation was not significant at wave 22 ($b = -0.0042$, $SE = 0.0051$, 95% CI [-0.0172, 0.0036]). The model summary shows marginal significance, indicating 9.29% of the variance in life satisfaction ($R = .3048$, $R^2 = .0929$, $F(6,339) = 5.7853$, $p < .001$).

The sequential mediation by trust in government and hope is significant in the baseline, wave 5, and wave 11, explaining 8.60% and 13.62% of the variance in life satisfaction but not in wave 22. This indicates that while the combination of trust in government and hope can mediate the impact of job insecurity on life satisfaction, this effect may vary over time.

6. Discussion

This study's results provide significant insight into the multifaceted relationships between job insecurity, life satisfaction, trust in government, and hope. It also provides a solid understanding of the interaction of such variables, especially the COVID-19 pandemic in the European Union over time.

Job Insecurity and Life Satisfaction: The persistent negative relationship between job insecurity and life satisfaction aligns with a substantial body of literature highlighting the detrimental effects of job insecurity on well-being [2], [14], [30]. Job insecurity is linked to poorer mental health outcomes across various contexts and populations, indicating a universal threat to psychological well-being.

The effect of job insecurity on life satisfaction has also worsened due to the COVID-19 pandemic. This study's findings align with that of McNamara et al. [25], which found widespread job disruption and increased risks for those who remained employed during the pandemic. Wu [57] found that emotional precariousness and employment instability had a detrimental impact on employees' mental and subjective well-being, emphasizing the emotional aspect of job insecurity. Carr and Chung [12] found that perceived employment insecurity negatively affects life satisfaction but is less pronounced in countries with generous labor market policies. This aligns with the need for policy interventions that increase job stability and provide support systems for workers in times of uncertainty.

This longitudinal study demonstrates how job insecurity impacts life satisfaction not just at a single point in time but across multiple waves, indicating its persisting nature. According to Hobfoll's [58] Conservation of Resources (COR) theory, stress occurs because of the threat of resource loss. Job insecurity manifests as a threat of losing (depleting) resources that can yield stress, anxiety, and lowered well-being, consistent with COR theory.

Trust in Government as a Mediator: Trust in government is an important social resource that has the potential to mitigate the negative effects of job insecurity on life satisfaction, which is consistent with COR theory. During the pandemic, trust in government became essential. Effective and transparent governance is needed to provide support through this crisis. Studies by Poma and Pistoresi [74] and Lee [50] emphasize the importance of trust in public institutions during crises. Richter and Näswall [32] found that trust can mediate the relationship between job insecurity and well-being, aligning with our results. However, the erosion of trust in government over time, observed in wave 22, highlights the dynamic nature of trust. While earlier waves saw relatively stable trust levels, the later stages of the pandemic may have introduced external stressors that contributed to declining confidence in governmental institutions. Several possible factors could explain this shift, including growing economic instability, dissatisfaction with prolonged pandemic policies, and political turbulence in various European countries during that period. Research indicates that in prolonged crises, institutional trust tends to decline as public frustration mounts over governance decisions [53], [54]. Future studies should further investigate how evolving economic conditions, policy effectiveness, and political shifts influence long-term changes in governmental trust. Shoss et al. [75] further highlight that sustained efforts by governments, especially through transparent communication are crucial in maintaining public trust over time.

Hope as a Mediator: Across all waves, hope emerged as a strong mediator between job insecurity and life satisfaction. This is congruent with Positive Psychology [55], [18], which focuses on positive emotions and personal strength such as hope. Snyder [18] proposes two dimensions of hope: agency and pathways. High levels of hope enable people to cope with job insecurity since hope helps individuals find motivation and successful means of achieving career goals even in uncertain times. Han and Yan [17] and Alessandri et al. [56] also found that hope significantly predicts life satisfaction during crises. Practical measures to cultivate hope include career counseling, financial planning, and skill development programs.

Sequential Mediation by Trust in Government and Hope: The analysis presented in H_4 shows that trust in government and hope serve as sequential, complementary mediators of the association between job insecurity and life satisfaction. This process of sequential mediation indicates that job insecurity leads to less trust in government, which leads to less hope and less life satisfaction. This highlights the intricate relationship between individuals' trust in institutions and their psychological resources [3], [32]. Snyder [18] and Seligman [55] stress the importance of hope for well-being, which is consistent with our results. However, sustained job insecurity might undermine citizen trust in state governance, and diminish hopes and life satisfaction [75].

This study underlines the role of governmental trust and personal resources as key drivers of well-being. The trust in governmental structures offers stability and assurance, which can help keep hope alive even during the pandemic of job insecurity. This aligns with the Conservation of Resources (COR) theory [59], which assumes that people use external and internal resources when dealing with stress. The combination of these two constructs, governmental trust and hope, buffers the potentially negative impact of job insecurity on life satisfaction. These findings highlight the complex relationships among these variables and the need for further work to explore the factors influencing the efficacy of these mediators over time. The consistent negative impact of job insecurity on life satisfaction across multiple waves underscores the urgent need for interventions to address job insecurity.

Practical Implications: This finding has several practical implications for policymakers, employers, and mental health professionals:

- *Reducing job insecurity*: The persistent negative impact on life satisfaction highlights the need for interventions to reduce it and its associated stressors. Policymakers should prioritize creating stable and secure work environments, especially during times of crisis, to enhance overall life satisfaction and well-being among workers. Specific policy measures include expanding unemployment benefits to provide financial security, implementing wage subsidies to prevent layoffs, and promoting remote work incentives to improve job flexibility and stability. Investing in workforce retraining programs can also equip individuals with skills suited to evolving labor market demands, reducing long-term employment uncertainty.
- *Strengthening governmental trust*: The significant mediating role of trust in government in the earlier waves suggests that strengthening governmental trust can help buffer the adverse effects of job insecurity. This requires governments to build and preserve public trust through transparency,

competence, and responsiveness, especially during crises. Key strategies include enhancing transparent crisis communication through timely and data-driven updates, engaging citizens in participatory decision-making forums to build inclusivity, and strengthening oversight mechanisms to reinforce accountability in policy implementation. Tailored economic relief programs for vulnerable workers can further boost public confidence in governmental responsiveness.

- *Enhancing hope*: The only variable that consistently mediated the relationship was hope, underscoring the role that hope and optimism should play in those dealing with job insecurity. To combat the impending fear of unemployment or working from home, employers and mental health professionals can offer career counseling, financial planning, skill development, and other skills training programs to aide individuals in coping with employment uncertainties while promoting a positive outlook. Beyond career support, employers can take concrete steps to reduce job insecurity and enhance well-being. Flexible work arrangements, clear career pathways, and mentorship programs provide stability and growth opportunities. Employee Assistance Programs, mental health support, and stress management workshops help mitigate workplace uncertainty. Job redesign strategies, such as role predictability and cross-training, strengthen employment security, while financial safeguards, including severance protections and salary continuity measures, reduce economic stressors. Additionally, psychological interventions such as Cognitive Behavioral Therapy can help individuals reframe negative thoughts about job insecurity, encouraging a more constructive and hopeful mindset. Strengths-based coaching enables workers to recognize and leverage their strengths, improving motivation and adaptability. Mindfulness-based interventions, including meditation and guided visualization, can enhance emotional resilience during employment uncertainty. Narrative therapy techniques, combined with structured goal-setting frameworks like SMART goals, empower individuals to reframe their career trajectory with optimism, reinforcing pathways toward stability and professional growth.

7. Conclusion

This study fills a key gap in the literature by being one of the few longitudinal analyses examining the association between job insecurity and life satisfaction across multiple waves. Most prior research has relied on cross-sectional designs, which capture only a single time point and fail to account for the evolving nature of job insecurity during prolonged crises. Through a longitudinal approach, this study offers a dynamic perspective on how the effects of job insecurity, trust in government, and hope evolve over time, particularly within the unique context of the COVID-19 pandemic, a period marked by heightened employment instability and policy intervention. Policymakers, economic analysts, organizational leaders, and managers should consider these findings when designing targeted interventions to support individuals facing job insecurity. Beyond its applied contributions, this study also reinforces COR theory, showing that job insecurity reduces essential psychological and financial resources, leading to lower life satisfaction. Additionally, Positive Psychology highlights hope as a crucial mediator, with findings aligning with Snyder's agency and pathways model, indicating that hope strengthens resilience and adaptability in uncertain work conditions.

Limitations and Future Research: Further research could focus on the dynamic features of these interactions and discover other mediating variables leveraged in the influence of job insecurity on life satisfaction. This understanding will help operationalize the relevant mediators over time and context while enabling research to improve interventions to help people in these situations.

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