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## **Construction and validation of stressors in local political activity: An event-based study on predicting mayoral health**

Olivier TORRES<sup>1</sup>, Pr, ORCID ID 0000-0002-7104-0486

Mathieu LE MOAL<sup>1,2</sup>, PhD student, ORCID ID 0000-0002-7104-0486

FX LESAGE<sup>3</sup>, MD PhD, ORCID ID 0000-0002-9012-7923

<sup>1</sup>Université de Montpellier - MOMA, LabEx Entreprendre, MRM, Montpellier, France

<sup>2</sup>Université Paul-Valéry, Laboratoire EPSYLON, Montpellier, France

<sup>3</sup>Desbrest Institute of Epidemiology and Public Health, Univ Montpellier, INSERM,  
CHU, Montpellier, France

**Corresponding Author :** François-Xavier LESAGE

Address: Dr FX Lesage, Service de prévention et santé au travail, CHU de Montpellier, 371 avenue Doyen Gaston Giraud, 34000 Montpellier, France.

Phone +33 06 73 63 49 31

e-mail: fx-lesage@chu-montpellier.fr

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Both authors certify that they have NO affiliations with or involvement in any organization or entity with any financial or non-financial interest.

- **On behalf of all authors, I assure that the paper has been read and approved by all authors.**

## **Abstract**

**Objectives:** The aim of this study is to identify specific stressors within mayoral activities and to construct a mayors' life event inventory.

**Methods:** Two online questionnaires were administered at four-month intervals. The first one collecting verbatim related to the stressors experienced by mayors. The second one evaluating the intensity and occurrence of the different stressors identified.

**Results:** In total, we retained responses from 1,120 mayors. The first questionnaire has identified 25 work-related and 9 personal life stressors (the cumulative stressor scale). The beta coefficients of the mediation analysis revealed a statistically significant relationship between stressors and burnout. The total effect of stressors on burnout was substantial ( $\beta = 0.60, p < .001$ ).

**Conclusions:** This study sheds light on the specific stressors that affect mayors in France, revealing a complex interplay between work-related and personal life challenges.

**Key words:** mayor's health; life events inventory; burnout; stress

### **SMART Learning Outcomes**

- This article applies the occupational and life event theory to the mayoral function and presents 25 function-related and 9 personal-life stressors that significantly impact the health of French mayors.
- The reader will be able to explain the demonstrated validity of the cumulative stressor scale in both assessing perceived stress and predicting burnout among mayors, by citing the statistically significant correlation coefficients and the findings of the mediation analysis.
- The reader will be able to formulate targeted recommendations for support interventions for mayors, taking into account the varying intensity and occurrence of identified stressors to enhance well-being and prevent burnout, as suggested by the study's implications.

## 1. Introduction

The stress and health of elected politicians have been examined in few studies, with the notable exception of the pioneering work of Weinberg and Cooper<sup>1-5</sup>. However, in that case, British MPs were primarily used as subjects, and the sample size reached only a few dozen individuals, approximately 20% of the British Parliament. More recently, Isohanni<sup>6</sup> took an interest in the health of elected representatives, but that work involved high-level politicians. As Flinders et al.<sup>4</sup> noted, "there is a significant amount written about national leaders—in terms of both scholarship and autobiography—but relatively little about the vast majority of national politicians who never reach the summit and indeed may prefer to operate in the foothills of politics".

The focus of this research is on local councillors, particularly the mayors of small towns, who are by far the most numerous politicians, particularly in France, where there are 34935. The health of mayors is a subject that has not been addressed in a rigorous, methodical way, and established and tested measurement scales have not been applied to a representative sample of this specific population. This shortcoming is more regrettable given that mayors are sometimes ill treated in their role. Mayors are overworked and overburdened with responsibilities, as they have to deal with a wide range of issues on a daily basis. As public servants, mayors are exposed to a wide range of events. Some mayors are in a state of advanced exhaustion. The press is full of articles about violence, threats and the resignations of mayors. In a recent study, the mental health of mayors in France was assessed. The results revealed that 31.4% of French mayors experienced burnout in their elected functions, with 3.48% experiencing severe burnout<sup>7</sup>.

In his plea regarding the mental health of elected politicians, Weinberg advocated tackling the sources of stress, particularly 'the negative impact of events on politicians' lives'<sup>3</sup>. This study is based on the theory of life events initiated by Holmes and Rahe<sup>8</sup>, which has been the subject of numerous studies<sup>9,10</sup>.

The life events theory highlights the potential impact of significant life events on mental well-being and health, due to the adaptive burden they entail. In our study, we use this theory to show that the accumulation of stressful events in the daily lives of mayors contributes to the risk of burnout. Unlike other classic psychosocial models such as Karasek's<sup>12</sup> (focused on job demands and control), Life Events Theory allows us to take into account a diversity of both professional and personal events, which better reflects the multifaceted

reality of the mayoral role. Finally, because it is constructed from mayors' verbatim accounts, our inventory is better suited to the specificities of this population than Holmes and Rahe's original inventory.

This identification is meant to enable the construction of a tool, a mayoral stressometer. This inventory of stressors in a mayor's life will be useful from a prevention perspective. Beyond description, a structured inventory helps target the most health-relevant stressors for prevention (e.g., administrative simplification, protection against aggression, managerial training). Chronic stress among mayors can have a profound impact on organizational effectiveness and collective well-being. In the case of mayors, their psychological health can directly influence the quality of service provided to citizens, the ability to make long-term decisions, and the stability of local governance. Because a stressed or exhausted mayor not only jeopardizes their own well-being, but also that of their municipal community, mapping stressor hotspots at the municipal level offers concrete levers for action and policy design.

Stress occurs when individuals perceive that the demands placed upon them surpass their ability to cope with or exert control effectively over those demands. This understanding aligns with transactional models of stress, which emphasize the dynamic interplay between a person and their environment<sup>11</sup>. Mayors, as pivotal figures in local governance, have unique stressors stemming from both their professional responsibilities and personal life events. Life events theory suggests that significant life changes—either positive or negative—can contribute to stress and impact overall well-being<sup>8</sup>.

In the life-events tradition, stress arises from the accumulation of adaptive demands imposed by meaningful events across work and personal domains. For mayors—whose role blends public service, organizational leadership and personal exposure—this lens captures situational pressures that generic psychosocial models (e.g., demand-control) or brief perceived-stress items may overlook. Our inventory is purposely brief and easy to complete, tailored to time-constrained officeholders while retaining content specificity.

The need to assess and prevent stress for those in leadership roles is being increasingly recognized, especially given the profound impact that stressed leaders can exert on organizational effectiveness and community well-being. Traditional stress assessment tools, such as the perceived stress scale (PSS), or general models, such as Karasek's job demand-

control model, may not fully capture the specific stressors that are experienced by mayors due to their multifaceted roles and the unique challenges they encounter<sup>12</sup>. Moreover, these tools can be lengthy and complex, making them less practical for busy professionals.

Our study focuses on the identification and evaluation of the stressors that affect mayors in France. By utilizing life events theory<sup>10</sup> as a framework, we aim to provide a nuanced understanding of the stressors inherent in the mayoral role. This approach involves collecting verbatim accounts of stressful events from the mayors themselves, allowing for a grounded and authentic categorization of stressors. Assessing these stressors is crucial for the development of targeted interventions and support mechanisms that can enhance the well-being of mayors and, by extension, the communities they serve.

The aim of this study is to identify specific stressors within mayoral activities and to construct a mayors' life events inventory. Consistent with life events approaches, our intention is not to develop a new psychometric scale, but to produce a concise, field-grounded inventory (i.e., a practical checklist) of stressful events experienced by mayors. As such, classical psychometric requirements for scales (e.g., internal consistency, factor structure) are not our primary goal; rather, we prioritize ecological validity and preventive usefulness (Supplemental Digital Content, <http://links.lww.com/JOM/C203>).

## 2. Methods

In 2024, we conducted a national study to assess the health of mayors in France, in collaboration with the Association of Rural Mayors of France (AMRF). Two surveys were administered at four-month intervals (February and then June 2024). With the support of the AMRF, an online questionnaire was emailed to all 11,905 members. The purpose of the study was explained and voluntary and anonymous participation was offered in the invitation. These participants were informed that they could withdraw from the study at any time. This study was approved by the IRB (Institutional Review Board) of Montpellier Business School, Montpellier: SMBS-IMP-J225021016510. Participants recruited for the survey received study information, a description of the potential risks and benefits, and a statement that participation was voluntary and could be stopped at any time. To preserve the anonymity of the survey participants, written consent was not obtained; instead, consent was implied by clicking the link to proceed with the survey. Strengthening the Reporting of Observational studies in Epidemiology checklist was used in reporting of the study (Supplemental Digital Content, <http://links.lww.com/JOM/C204>). Only fully completed questionnaires were

included in the analysis. Additionally, responses from individuals who consistently provided the same answer across many questions were excluded to ensure data quality.

The method used in this study is based on life events theory<sup>10</sup>. Two independent online surveys were administered. The first survey involved collecting verbatim accounts related to the stressors experienced by mayors. The responses were collected through the use of grounded theory methodology<sup>13</sup>. To capture the life events that were perceived negatively by the mayors, the following open-ended questions were posed to each participant: "During the last month, what were the three most stressful events in your professional life?", and "During the last month, what were the three most stressful events in your personal life?"

The second survey was aimed at evaluating the intensity and occurrence of the different stressors identified from the responses to the first survey. Intensity was determined by calculating the average stress level that was induced by each stressful event, ranging from 1 (not stressful at all) to 5 (extremely stressful). Occurrence was determined as the sum of occurrences of each item among the respondents.

Additionally, we assessed convergent validity using a perceived stress item and predictive validity using a burnout scale (BMS10). The perceived stress item was assessed via a single item<sup>14</sup>. The stress experienced by the surveyed mayors was assessed via the following question: "In the past month, would you say that most of your days were 1 = *Not at all stressful*; 2 = *Not very stressful*; 3 = *A little stressful*; 4 = *Quite stressful*; 5 *Extremely stressful*."

Burnout is a state of fatigue or an inability to function normally in the workplace when demands exceed an individual's ability to meet them. The risk of burnout has been assessed using a measurement instrument (burn-out measure short version [BMS]), which was developed by A. Pines<sup>15</sup>. The 10-item version (BMS-10) of the instrument was administered in French<sup>16</sup>. This instrument results in a score on the basis of the answers to ten standardized questions. The items followed a headline stating "When you think about your work, currently, how often...". A sample item is "Do you feel tired?".

We did not perform a t test between the cumulative stressor inventory score and the single-item stress measure because of the structural differences in their scores. Rather, we conducted a correlation analysis to assess the relationship between the two, followed by conducting a mediation analysis to examine how perceived stress mediates the relationship between cumulative stressors and burnout. The mediation analysis was conducted through the

use of multivariable linear models, where sex and age were included as covariates to control for their potential confounding effects. These control variables were modelled as part of the linear regression framework to account for their influence on perceived stress and burnout.

### 3. Results

For the first survey, we retained verbatim responses from 1,120 mayors, representing 9.4% of the 11,905 mayors contacted. For the second survey, after removing incomplete questionnaires and straightliners, 900 responses out of 1,405 were included in the analysis, representing 7.6% of the mayors contacted. To avoid the risk of double counting, each mayor was asked to provide an anonymous personal code when completing the questionnaires.

The demographics of the mayors who responded to our two surveys are shown in Table 1.

Concerning the first survey, a total of 5,086 verbatim responses were collected and categorized. In order to exclude anecdotal events, we first identified words that appeared at least 15 times, which corresponded to 0.5% of the responses. This threshold ensures that each retained event was repeatedly mentioned by several respondents. This approach is consistent with qualitative analysis practices aimed at ensuring saturation and category stability. This process resulted in a list of the 88 most frequent words, which were then categorized to establish a final list of 25 work-related stressors and personal life stressors for mayors (Tables 2 and 3). The categorization work was carried out independently by two researchers specializing in the occupational health of leaders. Any divergences were discussed between the two researchers until an agreement was reached.

To ensure the reliability of the categorization process, a reliability test was conducted using the coding of two independent coders considered specialists in psychology and occupational health. The intercoder reliability rates were 78.5% for work-related stressors and 80.98% for personal life stressors, which are considered excellent<sup>17,18</sup>. Intracoder reliability was assessed one month later, and high levels of agreement were achieved, with concordance rates of 87% for coder 1 and 84% for coder 2. These results demonstrate the reliability and precision of the coding process, ensuring the robustness and validity of the analyses. Moreover, the strong intracoder reliability indicates that the categorization remains stable over time.

Concerning the second survey, the intensity and occurrence of each stressor identified from the first survey are shown in Tables 2 and 3.

Intensity was calculated as the mean score assigned by the mayors who had actually experienced the stressor. The participants rated each stressor on a Likert scale ranging from 1 (not at all stressful) to 5 (extremely stressful). Intensity corresponds to the average of these scores. For example, for the stressor ‘Municipal opposition,’ the mean score assigned by the 363 mayors concerned was 2.33. The stressor intensity scores ranged from 1.98 to 3.22 for work-related stressors and from 2.09 to 2.97 for personal life stressors.

Regarding occurrence, it corresponds to the number of mayors who mentioned the stressor, relative to the total sample of 900 respondents to the second questionnaire. Thus, 363 out of 900 mayors (40.33%) mentioned ‘Municipal opposition.’ The occurrence of stressors ranged from 359 (39.89% occurrence—the closure(s) of a school, class, or business) to 886 (98.44% occurrence—administrative complexity and bureaucracy).

The Spearman's rho correlation coefficient ( $\rho$ ) between the cumulative stressor inventory score and the single-item stress measure score was 0.55 (Table 4). Additionally, the correlation coefficient between the cumulative stressor inventory score and the burnout score was 0.61. All correlations were statistically significant, with p values of less than 0.001, which supports the validity of the cumulative stressor inventory score for both assessing stress and predicting burnout.

The beta coefficients of the mediation analysis revealed a statistically significant relationship between stress and burnout and between stress and mediation via perceived stress (Fig. 1). Stressors significantly influenced burnout both directly ( $\beta = 0.43$ ,  $p < .001$ ) and indirectly through perceived stress ( $\beta = 0.17$ ,  $p < .001$ ). The total effect of stressors on burnout was  $\beta = 0.60$  ( $p < .001$ ). The mediating pathway showed that stressors strongly predicted perceived stress ( $\beta = 0.45$ ,  $p < .001$ ), which in turn significantly predicted burnout ( $\beta = 0.31$ ,  $p < .001$ ). With respect to the control variables, sex had a low but significant influence on both perceived stress ( $\beta = 0.06$ ,  $p = .043$ ) and burnout ( $\beta = 0.05$ ,  $p = .044$ ). Conversely, age had no significant effect ( $p > .05$ ).

#### 4. Discussion

This study sheds light on the specific stressors that affect mayors in France, revealing a complex interplay between work-related and personal life challenges. By identifying 25 work-related and 9 personal life stressors through a rigorous qualitative analysis, a nuanced understanding of the pressures inherent in the mayoral role is provided.

Our results can be related to those of Flinders et al., who examined the psychological well-being of British parliamentarians<sup>4</sup>. Their analysis identified a set of stressors common to elected officials, such as workload, public distrust, electoral insecurity, and impact on private life. These stressors overlap with some in our inventory, including verbal aggression, time pressure, and interpersonal conflicts. However, our study makes an original contribution by focusing on mayors of small French municipalities, whose realities differ markedly from those of national parliamentarians. Stressors such as administrative complexity, staff management, and difficulties in reconciling public and private life appear particularly salient in the local context. This comparison suggests that while some stressors are transversal to political office, others are closely tied to the level of responsibility and the institutional setting, highlighting the importance of context-specific analyses.

The assessment of stressor intensity and occurrence offers valuable information regarding the impact of these stressors on mayors' health. The fact that certain stressors score high in both intensity and occurrence suggests that these stressors pose significant challenges to mayors' mental health. These findings highlight the need to develop targeted support strategies. Occupational health practitioners and policy-makers should collaborate to develop tailored interventions that address the specific stressors faced by mayors. By addressing both the intensity and prevalence of these stressors, such interventions can be prioritized to tackle the most pressing issues.

Beyond these general recommendations, our results suggest two complementary levels of intervention. At the individual level, mayors could benefit from training in conflict management, public speaking, or emotional regulation, as well as access to counseling, coaching, and programs that promote personal resources such as sleep, work–life balance, and time management. At the organizational level, collective actions are also required, including stronger administrative support to reduce bureaucratic complexity (the most frequent and intense stressor in our study), public awareness initiatives to clarify the mayor's role and expectations, and structural reforms such as resource-sharing across municipalities or clearer legal responsibilities. Since administrative complexity, workload, and conflicts with citizens

are both highly prevalent and highly stressful, combining individual strategies with organizational interventions appears most relevant.

Moreover, an important contribution of our study is the simultaneous focus on both professional and personal stressors. Our findings show that mayors do not experience these challenges in isolation, but through a constant interplay between public and private spheres. Professionally, workload, administrative complexity, and conflicts with citizens were among the most frequent and intense stressors. Personally, the difficulty of reconciling public, private, and professional life emerged as one of the most widespread, reported by more than 90% of respondents. Highlighting both domains underscores that the mayoral role exerts a global pressure on existence, with consequences extending beyond the occupational sphere. Preventive interventions must therefore address this dual register if they are to be effective and responsive to the specific constraints of local officials.

The methodology used in this study, which combines qualitative data collection with quantitative assessment, offers a comprehensive approach to understanding occupational stress<sup>19</sup>. Collecting verbatim accounts enables the capture of authentic experiences, and the subsequent quantitative evaluation provides measurable data on stressor impact. This mixed-methods perspective has also been promoted in occupational stress research more broadly, for example through the Occupational Stress Indicator<sup>20</sup> and in recent work by Hudson and Weinberg (2025)<sup>21</sup>, who show the added value of complementing psychometric scales with qualitative insights. Our study extends this line of research by applying such a combined approach to the underexplored population of local elected officials. This application provides a model for assessing stress in professions with unique or multifaceted roles.

Compared with the single-item measure of perceived stress, the cumulative stressor inventory demonstrated greater predictive value for burnout. In addition, the items on the cumulative stressor inventory lead to a better understanding of the risk factors than does a simple perceived stress scale, which can identify only a greater or lesser level of stress without providing any information regarding its causes. This highlights the utility of using a cumulative measure, as it captures a broader range of stressors and provides a more comprehensive assessment of the impact of stress on burnout. The scale's ability to account for unique variance in burnout suggests that the use of cumulative stressors offers valuable insights into the long-term effects of stress in predicting burnout. The integration of a cumulative measure adds depth to our understanding of how multiple stressors combine over time to influence health outcomes, such as burnout. This study further reinforces the

importance of considering both the breadth and intensity of stressors in the design of interventions.

However, this study has limitations that should be acknowledged. The use of self-reported data may introduce biases, such as underreporting or overreporting, due to social desirability or recall inaccuracies. Additionally, the cross-sectional nature of the study limits the ability to examine changes over time or establish causal relationships between stressors and outcomes.

Future research should consider longitudinal studies to monitor stress levels and the effectiveness of interventions over time. The incorporation of objective measures of stress that include physiological indicators such as cortisol levels could increase the validity of the findings. Future research should aim to validate this stressor inventory by comparing it with other established measures, such as existing burnout scales, to ensure that it effectively assesses the intended constructs and predicts the relevant outcomes. Expanding the study to include mayors from different regions or countries could provide comparative insights and broaden the generalizability of the results. Additionally, assessing the link between life events and mental health is an incomplete approach if positive events are not considered to create a balance between stressful and salutogenic events. Lechat and Torrès<sup>22</sup> deployed this mental health concept in the context of entrepreneurial activity. The addition of a positive inventory of satisfactors would counterbalance the deleterious effects of the mayor's function and provide a more complete and realistic view of the condition of existence of a local elected official.

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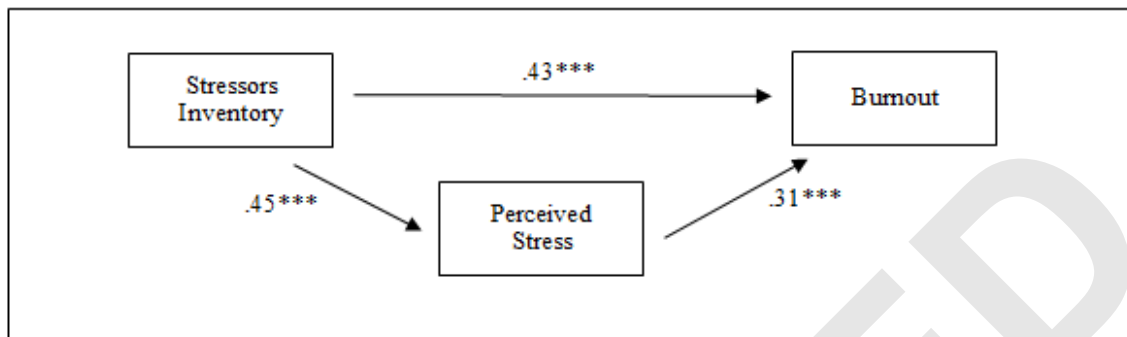
ACCEPTED

## Figure Legends

Fig. 1: Mediation analysis among the stressors inventory score, perceived stress scale score and burnout scale score (\*\*\*) =  $p < 0.001$ ).

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**Figure 1**



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**Table 1: Descriptive data**

Variables	Survey 1: n = 1120	Survey 2: n = 900
Sex [95% CI]	Female 33% (30-36)	Female 36% (33-39)
Age [95% CI]	61.4 years (60.8-62.0)	61.4 years (60.8-62.1)
Mean perceived stress (SD) (range 1 to 5)	/	3.51 (0.83)
Mean burnout (SD) (range 1 to 7)	/	3.46 (1.00)
Mean cumulative stressor scale (SD) (range 10 to 130)		63.7 (22.1)

ACCEPTED

**Table 2: The 25 function-related stressors encountered by mayors**

Categories	Intensity (range 1 to 5)	Occurrence (range 1 to 900)	Probability of occurrence
Administrative complexity and bureaucracy (prefecture, etc.)	3.22	886	98.44%
Workload /Lack of time	3.10	872	96.89%
Difficulties related to subsidies (loss, delay, refusal, etc.)	3.06	832	92.44%
Problems related to a project (investment, implementation, etc.)	2.94	846	94.00%
Legal issues (court, complaints, lawsuits, etc.)	2.89	469	52.11%
Closure(s) (school, class, business, etc.)	2.86	359	39.89%
Aggression/threats (verbal, physical, incivility, harassment, etc.)	2.81	580	64.44%
Work meetings (accumulation, tension, management, etc.)	2.76	880	97.78%
Conflicts/problems with an elected official	2.74	541	60.11%
Problem(s)/conflict(s) with (citizens, local residents, associations, etc.)	2.73	849	94.33%
Staff/agent management (resignation, absence, illness, recruitment, etc.)	2.69	754	83.78%
Urban planning (PLU, PLUI, etc.)	2.69	809	89.89%
Natural disaster/environmental issues (flood, fire, storm, etc.)	2.68	443	49.22%
File management	2.60	881	97.89%
Conflict(s)/disagreement(s) with a municipal agent/employee	2.60	499	55.44%
Construction work/site management	2.51	860	95.56%
Municipal opposition	2.33	363	40.33%
Water management	2.32	604	67.11%
Association of municipalities	2.32	836	92.89%
Neighbourhood	2.30	683	75.89%
Deaths (residents, elected officials, municipal agents, etc.)	2.19	640	71.11%
Public meetings (addresses, speeches, etc.)	2.13	853	94.78%
Secretary	2.12	654	72.67%
Municipal council	2.07	821	91.22%
Problems related to the budget (funding, preparation, approval, balance, etc.)	1.98	696	77.33%

**Table 3: The 9 personal-life stressors experienced by mayors**

Categories	Intensity (range 1 to 5)	Occurrence (range 1 to 900)	Probability of occurrence
Death of a family member/loved one	2.97	294	32.67%
Difficulty reconciling public life/personal life/professional life	2.71	824	91.56%
Problems related to working life (management, stress, finances, etc.)	2.70	572	63.56%
Health issues experienced by family/loved ones (illness, hospitalization, accidents, etc.)	2.68	564	62.67%
Personal health problems (illness, hospitalization, accidents, etc.)	2.57	512	56.89%
Problems related to parents (health, relationships, etc.)	2.35	529	58.78%
Relationship problems	2.25	447	49.67%
Problems related to children/grandchildren (schooling, work, relationships, etc.)	2.23	536	59.56%
Problems of a material nature (home, car, finance, etc.)	2.09	485	53.89%

**Table 4:** Spearman's rho correlation coefficients among the cumulative stressor scale score, the single item perceived scale score and the burnout scale score

	Single Item perceived stress scale	burnout scale
cumulative stressors scale	$\rho = 0.55$ ( $p < 0.001$ )	$\rho = 0.61$ ( $p < 0.001$ )

ACCEPTED

## GRAMMS (*Good Reporting of A Mixed Methods Study*) recommendations - Checklist

Item	Reported?	Details	Page(s)
1. Justification for using a mixed methods approach to the research question	<input type="checkbox"/> Yes	Explained in the <i>Introduction</i> : existing tools are insufficient to capture stressors specific to mayors, leading to a need for a custom scale.	p. 1–2
2. Description of the design in terms of the purpose, priority and sequence of methods	<input type="checkbox"/> Yes	Sequential exploratory design: qualitative collection → scale construction → quantitative validation (intensity, occurrence, mediation).	p. 3–4
3. Description of each method in terms of sampling, data collection and analysis	<input type="checkbox"/> Yes	First survey: open-ended questions analyzed using grounded theory. Second survey: Likert ratings + statistical modeling.	p. 3–5
4. Description of where integration occurred, how it occurred, and who participated in it	<input type="checkbox"/> Yes	Integration at the level of building a cumulative stressor scale and analyzing its relationship with stress/burnout.	p. 5–6, 9
5. Description of any limitations of one method associated with the presence of the other	<input type="checkbox"/> Yes	Self-report bias and lack of objective data mentioned; cross-sectional nature limits causality.	p. 15–16
6. Description of any insights gained from mixing or integrating methods	<input type="checkbox"/> Yes	Richer understanding of stressors vs. perceived stress alone; highlights both cause and predictive capacity of stress.	p. 14–15

STROBE Statement—checklist

Item No.	Recommendation	Reported?	Page(s)	Comment
1a	Indicate the study’s design with a commonly used term in the title or abstract	<input type="checkbox"/> Partial	Title + p. 1	“Validity...” suggests quantitative intent, but "observational" or "mixed methods" not explicitly stated.
1b	Provide an informative and balanced abstract	<input type="checkbox"/> Yes	Abstract	Abstract gives key objectives, methods, and findings.
2	Explain scientific background and rationale	<input type="checkbox"/> Yes	p. 1–2	Detailed rationale with theoretical framework (Holmes & Rahe, Lazarus, etc.).
3	State specific objectives or hypotheses	<input type="checkbox"/> Yes	p. 2	Clearly states goal: to identify mayoral stressors and build a life-event-based scale.
4	Present key elements of study design early in the paper	<input type="checkbox"/> Yes	p. 2–3	Describes sequential design and scale development logic.
5	Describe setting, locations, and relevant dates	<input type="checkbox"/> Yes	p. 3	National survey in France, 2 waves (Feb & June 2024).
6a	Give eligibility criteria and methods of participant selection	<input type="checkbox"/> Yes	p. 3	Email survey to all 11,905 AMRF members.
7	Clearly define all outcomes, exposures, confounders, etc.	<input type="checkbox"/> Yes	p. 4–5	Outcomes: stress perception, burnout. Exposure: cumulative stressor scale. Confounders: sex, age.
8	For each variable, give sources of data and methods of assessment	<input type="checkbox"/> Yes	p. 4–5	Detailed for each scale (BMS-10, stress item, stressors).
9	Describe efforts to address potential sources of bias	<input type="checkbox"/> Brief	p. 3, 15–16	Some quality controls (e.g. identical answers filtered); limitations discussed later.
10	Explain how study size was arrived at	<input type="checkbox"/> No	—	No mention of sample size calculation or power analysis.
11	Explain handling of quantitative	<input type="checkbox"/> Yes	p. 5–6	Likert scales, aggregation to cumulative score, use in

Item No.	Recommendation	Reported?	Page(s)	Comment
	variables			regression.
12a	Describe all statistical methods	<input type="checkbox"/> Yes	p. 5–6	Spearman correlations, mediation models, covariates used.
12b	Methods to examine subgroups/interactions	<input type="checkbox"/> No	—	No subgroup or interaction analyses reported.
12c	Explain how missing data were addressed	<input type="checkbox"/> No	—	No imputation or treatment of missing data described.
13a	Report numbers at each study stage	<input type="checkbox"/> Yes	p. 6	Clear mention: 1120 (Wave 1), 900 (Wave 2), 335 overlap.
13b	Reasons for non-participation	<input type="checkbox"/> No	—	No detail on dropouts/non-response bias.
14a	Give characteristics of participants	<input type="checkbox"/> Yes	Table 1, p. 6	Sex, age, stress, burnout described.
14b	Number of participants with missing data	<input type="checkbox"/> No	—	Not specified.
15	Report outcome events or summary measures	<input type="checkbox"/> Yes	p. 6–8	Means, SDs, % occurrence for each stressor.
16a	Give unadjusted and adjusted estimates with precision	<input type="checkbox"/> Yes	p. 8–9	Beta coefficients, p-values shown; some covariate control in mediation.
16b	Report category boundaries when continuous variables are categorized	<input type="checkbox"/> N/A	—	No recategorization reported.
17	Report other analyses (e.g. sensitivity, subgroups)	<input type="checkbox"/> No	—	No sensitivity or subgroup analyses included.
18	Summarize key results with reference to objectives	<input type="checkbox"/> Yes	p. 13–14	Summary ties results to aims clearly.
19	Discuss study limitations, sources of bias	<input type="checkbox"/> Yes	p. 15–16	Self-report, cross-sectional design, etc.
20	Give cautious interpretation, considering context	<input type="checkbox"/> Yes	p. 14–15	Balanced discussion with comparison to existing models.

Item No.	Recommendation	Reported?	Page(s)	Comment
21	Discuss generalisability (external validity)	<input type="checkbox"/> Brief	p. 15–16	Suggests expansion to other mayors, but limited discussion.
22	Describe funding sources and their role	<input type="checkbox"/> No	—	No mention of funding or support.

\*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

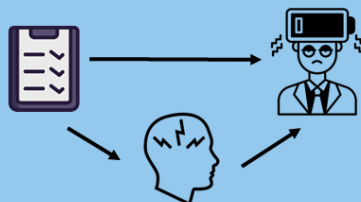
**Note:** An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at <http://www.plosmedicine.org/>, Annals of Internal Medicine at <http://www.annals.org/>, and Epidemiology at <http://www.epidem.com/>). Information on the STROBE Initiative is available at [www.strobe-statement.org](http://www.strobe-statement.org).

## Development of a life events scale specific to mayors

-25 function-related stressors  
-9 personal life stressors  
were identified among the  
verbatim statements of 1,120  
mayors.



Stressors significantly influenced  
burnout both directly and indirectly  
through perceived stress



Future research should:

-focus on prospective  
development;

-include protective factors  
for satisfaction;

-evaluate interventions.

Construction and validation of stressors in local political activity: An event-based study on predicting mayoral health.  
Torres O. Pr., Le Moal M. PhD Student, Lesage F-X. MD, PhD.

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