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► To cite this version:

Marie Bossard, Julien Lejeune, H el ene Coillot, Philippe Colombat, Evelyne Fouquereau. Oncologists' psychological flourishing: A driving force for positive attitudes at work. *Psycho-Oncology*, 2024, 33 (7), 10.1002/pon.6372 . hal-04714690

HAL Id: hal-04714690

<https://hal.science/hal-04714690v1>

Submitted on 30 Sep 2024

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ORIGINAL ARTICLE

Oncologists' psychological flourishing: A driving force for positive attitudes at work

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Amgen Company

Abstract

Objective: Oncologists' psychological health is a major challenge due to the consequential concerning the quality of the care they provide. However, only critical states of their health have been really examined by scientists. This study sought to plug this gap by investigating the mediating role of psychological flourishing in the relationship between the perception of the professional social context (*i.e.*, perceived workplace isolation and organizational support) and positive attitudes at work among oncologists (*i.e.*, work engagement, task adjustment and empathy).

Methods: The study was a cross-sectional, including 541 French oncologists. Participants completed a self-report questionnaire. Structural Equation Modeling was employed to test the hypotheses.

Results: The analysis revealed that workplace isolation and organizational support perceptions were related to oncologists' work engagement, task adjustment and empathy. Additionally, psychological flourishing acted as a partial mediator between these perceptions of professional social context and oncologists' work-related attitudes.

Conclusions: This research underlined the potential of enhancing the psychological flourishing of oncologists by improving organizational support and mitigating their sense of isolation, and in turn, to enhance some dimensions of their positive attitudes at work.

KEYWORDS

cancer, empathy, occupational health, oncologists, oncology, psychological functioning, psycho-oncology, social isolation, social support, work engagement

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1 | BACKGROUND

1.1 | The importance of psychological flourishing among oncologists

Oncologists experience a high level of emotional exhaustion at work, including burnout, disturbed sleep or depressive symptoms.¹ A European study reported that 71% of young oncologists scored highly on one of the three burnout factors.² The specificities of working with cancer patients can have a detrimental impact on the psychological health of oncologists. Indeed, given the high mortality rate of cancer, oncologists are frequently faced with the suffering and death of their patients.³ Moreover, oncologists are responsible for making decisions with far-reaching consequences and for communicating bad news.¹ These experiences can lead to feelings of exhaustion, stress and burnout.^{1,4} Other factors related to the professional context, such as workplace atmosphere, control over workload, team efficiency, poor work-life balance or a lack of vacation time can also lead to burnout among oncologists.^{2,5} The deterioration of the psychological well-being of oncologists represents a significant concern for patients. Indeed, burnout among healthcare professionals (including physicians) often leads to the delivery of poor-quality care.⁶ For example, burnout has been proven to reduce the clinical productivity of gynecologic oncologists, measured by the relative value unit.⁷ Stress among private practice oncologists may also impact the physician-patient relationship through abbreviated interactions, reduced physicians' empathic skills and an inclination to multitask.⁸ Consequently, improving the psychological health of physicians at work has now become a critical priority.

But reducing factors that inhibit negative aspects of psychological health at work may not be sufficient to promote overall well-being in the workplace.⁹ Therefore, this study explores the positive aspects of psychological health, through the concept of psychological flourishing. Psychological flourishing relates to the optimal state of individual functioning. It encompasses positive mental health, including perceptions of efficient psychological functioning and subjective well-being.¹⁰ The multidimensional construct of psychological flourishing includes the perception of having a supportive relationship, being respected by others, finding the meaning of life, being engaged with activities, experiencing self-respect, optimism, feeling competent and having the capacity to fulfill activities important to one's life.¹¹ High flourishing rates have been linked to decreased unprofessional behaviors (i.e., cheating and dishonest behaviors), decreased suicidal ideation, and fewer thoughts of dropping out among medical students.¹² To the best of our knowledge, no study has yet examined the psychological flourishing of oncologists.

Thus, this study aimed to examine the impact of some professional contextual factors on the psychological flourishing of oncologists, and in turn, on some positive attitudes of these professionals.

1.2 | Perceptions of professional social context as an antecedent of psychological flourishing

A systematic literature review identified various work-context variables as antecedents of psychological flourishing.¹³ Specifically, perceived organizational support and workplace isolation were found to have associations with well-being at work.

Perceived organizational support refers to employees' perceptions of how much their organization values their contributions and cares about their well-being.¹⁴ This, along with perceived social and organizational support, were associated with psychological flourishing among employees.¹⁵ Similarly, a study involving U.S. postgraduate-year-1 residents established a positive correlation between their psychological well-being and workplace support, including support from colleagues and supervisors.¹⁶ Furthermore, according to a French study involving oncologists, perceived organizational support has also been identified as an antecedent of psychological health at work.¹⁷ Based on the importance of perceived organizational support as an antecedent of psychological flourishing, we assumed that social support was positively linked to psychological flourishing among oncologists.

Workplace isolation refers to the perceived lack of availability of colleagues and supervisors to provide work-related social support.¹⁸ To the best of our knowledge, no study has investigated workplace isolation among oncologists and in relation to their psychological flourishing. Nevertheless, a study among French hospital physicians reported that good interpersonal relationships notably positively influenced well-being at work.¹⁹ Lastly, a French study among nurses found that isolation from colleagues was negatively associated with their well-being at work.²⁰ Based on the importance of workplace isolation as an antecedent of well-being at work, we hypothesized a negative correlation between workplace isolation and psychological flourishing among oncologists.

1.3 | Psychological flourishing and attitudes at work

Psychological flourishing could impact work-related attitudes such as in-role and, extra-role performance and work engagement.¹³ This study therefore looked at work engagement, as well as empathy and task adjustment, regarding in-role performance.

Work engagement includes three dimensions: vigor (i.e., "high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence, even in the face of difficulties"), dedication (i.e., "feelings of a sense of significance, enthusiasm, inspiration, pride, and challenge") and absorption (i.e., "being fully concentrated and deeply engrossed in one's work, whereby time passes quickly and one has difficulties with switching off").²¹ The positive link between psychological flourishing and work engagement has been demonstrated among employees from various professional fields.¹⁵ A study revealed a positive link between work

engagement and well-being among Finnish health care workers.²² To our knowledge, no study has investigated the work engagement among oncologists in relation to psychological flourishing. Nevertheless, a study conducted among Belgian oncologists demonstrated that work engagement is related to burnout.²³ Based on these findings, we posited that work engagement may be positively linked to psychological flourishing among oncologists.

Cognitive adjustment to the work refers to a process through which individuals may reach an optimal functioning at work. This construct helps to understand the way in which the individual is motivated to maintain and develop their resources according to the results of three investment objects namely: organizational adjustment, task adjustment and group adjustment. In this study, we focused on task adjustment, which pertains to the worker's knowledge and skills that enable them to overcome work-related challenges.²⁴ To our knowledge, no study has investigated the cognitive adjustment to the work among oncologists and in relation to psychological flourishing. Nevertheless, cognitive adjustment to the work of teachers from Quebec was found to be positively associated with their psychological well-being at work²⁴ and also linked to positive work behaviors such as individual creativity among Italian and British workers.²⁵ Based on this information, we assumed that task adjustment may be positively linked to psychological flourishing among oncologists.

Physicians' empathy refers to "a cognitive attribute that involves an understanding of the inner experiences and perspectives of the patient, combined with a capability to communicate this understanding to the patient".²⁶ Empathy can be examined through three dimensions: perspective taking, compassionate care and putting oneself in the patient's shoes.²⁷ Once more, to our knowledge, no study has investigated empathy among oncologists in relation to psychological flourishing. Nevertheless, a study among US Airforce officers revealed a positive link between empathy and psychological flourishing.²⁸ A Canadian study reported that among hospital nurses, empathy was positively linked to well-being at work.²⁹ Based on these findings, we posited that empathy may be positively linked to psychological flourishing among oncologists.

It can be posited that psychological flourishing, as a positive dimension of psychological health, may be a core outcome of social professional context and an antecedent of attitudes at work. Hence, we assumed, in an exploratory perspective, that psychological flourishing would mediate the relation between workplace isolation and perceived organizational support and the attitudes at work investigated (e.g. work engagement, task adjustment and empathy).

2 | METHOD

2.1 | Study design

After obtaining approval from the clinical research ethics group from Tours (France) University Hospital (RNI 2022-001), an online questionnaire was distributed to French oncologists from February to April 2022. The participants were contacted via oncology expert groups.

2.2 | Measures

Participants were first asked to provide informed consent in the online questionnaire. The questionnaire included demographic items and validated measurements, presented below.

2.2.1 | Demographic variables

Several sociodemographic data were collected such as age, gender, marital status and the number of children in total and living at home. Likewise, professional context data were collected such as their department specialty exercised, years of experience in this department, professional status and years of experience in this role.

2.2.2 | Psychological flourishing

To measure psychological flourishing, we used the validated French version of the flourishing scale (FS).³⁰ This dimension was investigated by 8 items covering Diener's 8 dimensions of psychological flourishing.¹¹ However, a single score was evaluated in the FS.

To ensure the consistency of the questionnaire, all the scales presented subsequently were investigated with items answered on a 5-point Likert scale (from 1 "strongly disagree", to 5 "strongly agree", except for work engagement which had answers from 1 "never", to 5 "always").

2.2.3 | Determinants of psychological flourishing

We administered Marshall's scale to measure workplace isolation.¹⁸ The original Marshall's scale includes 12 items covering 2 subscales ("the colleagues subscales focusing on co-workers' social support" and the "Company subscale focusing on workplace-based support").¹⁸ In this study we only used the colleague's subscale including 6 items. Items were translated according to the double reverse translation protocol.

To measure perceived organizational support, we used the French validation of Eisenberger's Survey of Perceived Organizational Support (SPOS).³¹ More specifically, the short four-item version of the SPOS was administered. The original short version of the SPOS includes 2 dimensions of organizational support as "valorization of employees' contributions" and "being concerned about employees' well-being", but a single score was calculated.

2.2.4 | Outcomes of psychological flourishing

To measure work engagement, the ultra-short, 3-item version of the Utrecht Work Engagement Scale was administered.²¹ These 3 items cover the 3 dimensions of work engagement as defined by Schaufeli

("vigor", "dedication" and "absorption"). Items were translated according to the double reverse translation protocol.

We only measured task adjustment, a part of Malo's cognitive adjustment to the work construct with their scale validated among Canadian teachers.²⁴ The original scale includes 12 items, but we only investigated task adjustment with 4 items.

To measure empathy, the French validation of the Jefferson Scale of physician Empathy (JSPE-Fr) was administered.²⁷ The original JSPE-Fr is composed of 20 items. We investigated empathy by 2 dimensions: "compassionate care" and "putting oneself in the patient's shoes" in 9 items.

2.3 | Statistical analyses

Data were analyzed using SPSS and AMOS 29 statistical software. Firstly, we checked the reliability of the measurement scales. Then, we checked that the variables did not deviate significantly from the normal distribution. Finally, we used a structural equation approach to investigate mediational pathways of psychological flourishing in the association between professional social context perception (*i.e.* isolation and perceived organizational support) and the physician's attitude at work (*i.e.* engagement at work, adjustment to the task and empathy). We conducted the analysis with the maximum-likelihood method of estimation controlling exercise service specialty and physicians' professional status.

3 | RESULTS

3.1 | Participant characteristics

Five hundred and forty-one oncologic physicians from various specialties completed the survey. The sample included 40% ($n = 214$) women for 60% ($n = 327$) men with an average age of 42 ($SD = 9.43$). The physicians practiced in various institutions: 74% ($n = 402$) worked in a public hospital, and 26% ($n = 139$) in a private hospital. They also came from several hospital departments: 36% ($n = 194$) came from onco-hematology, 21% ($n = 111$) from medical oncology, 16% ($n = 85$) from radiotherapy, 13% ($n = 68$) from digestive

oncology, 8% ($n = 44$) from pediatric oncology, 6% ($n = 34$) from thoracic oncology and 1% ($n = 5$) from dermatological oncology. The sample included 62% ($n = 334$) of hospital doctors, 13% ($n = 68$) of residents, 11% ($n = 61$) of assistant chiefs of clinic, 11% ($n = 62$) accounted for university lecturers and hospital practitioners, and lastly, 3% ($n = 16$) were associate hospital practitioners.

3.2 | Relationships among variables interest

Means, Standard deviations, Pearson correlations and Cronbach alpha coefficients are available in Table 1. Psychological flourishing exhibited positive correlations with perceived organizational support, work engagement and task adjustment, and negative correlations with workplace isolation and empathy. All variables are highly significantly ($p < 0.001$) correlated with psychological flourishing, which supported our hypotheses and the subsequently tested model.

Then, we tested the model through structural equation controlling exercise service specialty and physicians' professional status. Results reported a good fit of the model to the data: $\chi^2 = 1327.08$ (568), $\chi^2/df = 2.34$, $p < 0.001$, CFI = 0.90, RMSEA = 0.05, SRMR = 0.06, AIC = 1595.08. Organizational support perception and workplace isolation had a direct significant effect on psychological flourishing ($\beta = 0.23$, $p < 0.001$, and $\beta = -0.31$, $p < 0.001$, respectively). Psychological flourishing had a direct significant positive effect on work engagement, task adjustment and empathy ($\beta = 0.59$, $p < 0.001$, $\beta = 0.39$, $p < 0.001$, and $\beta = 0.19$, $p < 0.001$, respectively). Regarding organizational support perception, neither direct effects on work engagement nor task adjustment were significant ($\beta = -0.02$, $p > 0.05$ and $\beta = -0.06$, $p > 0.05$, respectively). Conversely, organizational support perception had a direct significant negative effect on empathy ($\beta = -0.15$, $p < 0.01$). Regarding workplace isolation, neither direct effects on work engagement nor task adjustment were significant ($\beta = 0.01$, $p > 0.05$ and $\beta = 0.04$, $p > 0.05$). Conversely, workplace isolation had a direct significant negative effect on empathy ($\beta = -0.14$, $p < 0.05$) (Figure 1).

After this, we performed resampling analyses using the Bootstrap to investigate the model's indirect effects. We generated 5000 samples from our original sample to calculate a 95% confidence

TABLE 1 Means, standards deviations and pearson correlations between variables interest.

| | M | SD | 1. | 2. | 3. | 4. | 5. | Cronbach alpha |
|------------------------------|------|------|----------|-------|----------|---------|------|----------------|
| 1. Psychological flourishing | 3.82 | 0.62 | | | | | | 0.77 |
| 2. Organizational support | 2.14 | 0.38 | 0.23*** | | | | | 0.92 |
| 3. Workplace isolation | 1.89 | 0.76 | -0.30*** | 0.11* | | | | 0.85 |
| 4. Work engagement | 3.78 | 0.62 | 0.37*** | 0.11* | 0.11** | | | 0.60 |
| 5. Task adjustment | 3.96 | 0.61 | 0.32*** | 0.06 | 0.07 | 0.22*** | | 0.84 |
| 6. Empathy | 2.02 | 0.52 | -0.14*** | 0.02 | -0.15*** | -0.13** | 0.03 | 0.75 |

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

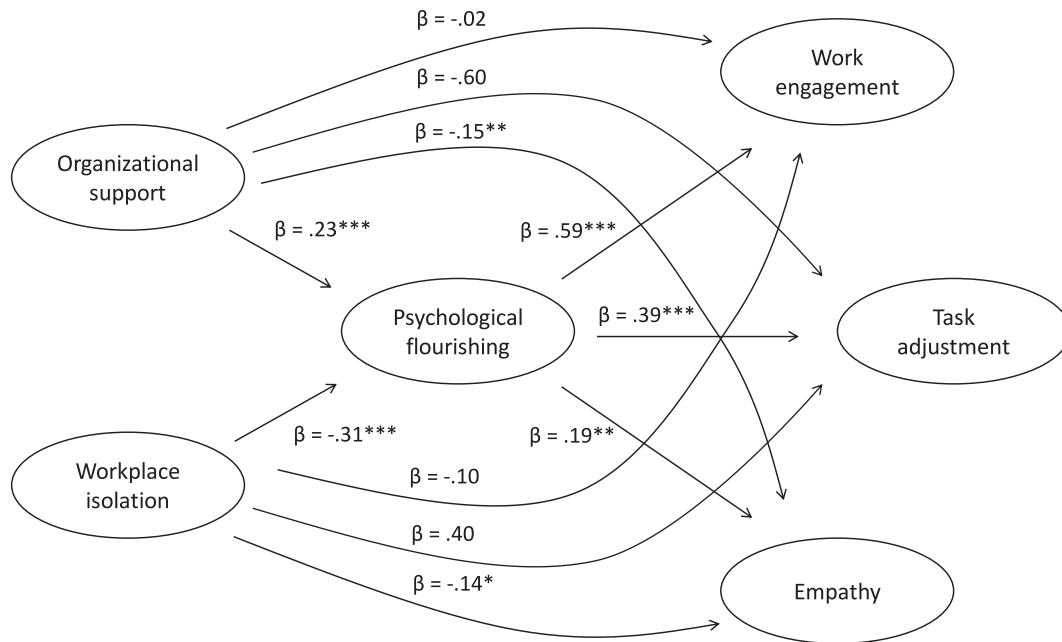


FIGURE 1 Mediation model. *** = $p < 0.001$, ** = $p < 0.01$, * = $p < 0.05$.

TABLE 2 Standardized estimates, standard deviation, and credibility for the multilevel structural equation modeling models.

| Indirects effects | β | SE | 95% CI | | p |
|--|---------|------|--------|-------|--------|
| | | | Lower | Upper | |
| Organizational support → Psychological flourishing → Work engagement | 0.14 | 0.03 | 0.08 | 0.20 | <0.001 |
| Organizational support → Psychological flourishing → Task adjustment | 0.09 | 0.02 | 0.05 | 0.14 | <0.001 |
| Organizational support → Psychological flourishing → Empathy | 0.04 | 0.02 | 0.01 | 0.08 | 0.002 |
| Workplace isolation → Psychological flourishing → Work engagement | -0.19 | 0.04 | -0.27 | -0.11 | <0.001 |
| Workplace isolation → Psychological flourishing → Task adjustment | -0.12 | 0.03 | -0.20 | -0.07 | <0.001 |
| Workplace isolation → Psychological flourishing → Empathy | -0.06 | 0.02 | -0.11 | -0.02 | <0.001 |

interval using the percentile bootstrap approach. Results are available below in Table 2. The results indicated that organizational support perception had an indirect significant positive effect on work engagement, task adjustment and empathy through the mediation of psychological flourishing. The results also showed that workplace isolation had an indirect significant negative effect on work engagement, task adjustment and empathy through the mediation of psychological flourishing.

Therefore, results indicated a total mediation of psychological flourishing in the relation between organizational support perception and work engagement on the one hand, and task adjustment on the other. They also showed a partial mediation of psychological flourishing in the relation between organizational support perception and empathy. A total mediation of psychological flourishing was identified in the results in the relation between workplace isolation on the one hand, and work engagement and task adjustment on the other. Lastly, there was a partial mediation of psychological flourishing in the relation between workplace isolation and empathy.

Moreover, the results showed that 17% of the variance in psychological flourishing was explained by organizational support perception and workplace isolation. Furthermore, perceived organizational support, workplace isolation and psychological flourishing explained 34% of the variance in work engagement, 17% of the variance in task adjustment and 9% in empathy.

4 | DISCUSSION

4.1 | Summary of study objectives, results and comparison with existing literature

As underlined at the beginning of this paper, factors that promote oncologists' psychological health have been studied to a lesser degree than factors which negatively affect it. Consequently, this study sought to plug this gap by adopting a positive approach to oncologists' psychological health, based on psychological flourishing. Moreover, the

factors enhancing this psychological state and its consequences on attitudes at work were poorly established. This exploratory research has thus introduced a novel perspective by delineating the relationship between perceived social professional contexts and attitudes at work, via the psychological flourishing among oncologists.

Firstly, our findings revealed that oncologists' perceptions of organizational support and workplace isolation were robust predictors of their psychological flourishing. These results were consistent with prior studies among workers from various fields at work, that have demonstrated on one hand the connection between psychological flourishing and perceptions of organizational support,¹⁵ and on the other hand the association between workplace isolation and well-being.³² Secondly, our results showed a strong and positive effect of oncologists' psychological flourishing on their work engagement, which was in line with previous observations on employees.¹⁵ Thirdly, our results concerning the positive effect of oncologists' psychological flourishing on their cognitive adjustment to the task agree with the literature about well-being at work among teachers from Quebec.²⁴ Moreover, our results showing a positive effect of psychological flourishing on oncologists' empathy are also consistent with a study among US air Force officers.²⁸ Finally, our findings provided empirical support for our model, which incorporated psychological flourishing as a mediating variable on the link between professional social context and attitudes at work among oncologists.

In summary, the results concerning the main role of psychological flourishing on attitudes at work are the first of their kind to be obtained in this context. The support provided by the organization and colleagues may increase psychological flourishing, which ultimately enables one to adjust to the task, develop greater empathy, and consequently, lead to greater commitment. In contrast, oncologists may experience impeded psychological flourishing without peer resources, which may negatively affect attitudes at work.

4.2 | Study limitations

Nevertheless, there are limitations to this study. Firstly, we used a cross-sectional design, which necessitates caution in attributing causal direction. Additionally, all variables were assessed through self-reported responses, consequently, there is a potential for self-reported bias. Hence, future research should diversify data sources, integrating objective measures of organizational support and workplace isolation, and adopting a longitudinal study design. Also, this study used a general fulfillment scale there may be inaccuracies when studies examine work-related psychological flourishing with its life domain counterpart tool.³³ It is therefore necessary to replicate this research with a measure instrument concerning psychological flourishing at work. Finally, future research that encompasses professionals from other countries and investigates other sociodemographic variables effect would be valuable in extending the applicability of these findings.

4.3 | Clinical implications

The perception of the socio-professional context may serve as a precursor to psychological flourishing. Thus, managerial practices could be employed to enhance oncologists' perceived organizational support and reduce their sense of isolation. For example, in using the participatory approach as a model of department organization, oncologists could receive social and organizational support.³⁴ Indeed, some tools of this model have implemented of multi-professional team meetings, in-service training, team support meetings and, management meetings. However, these dimensions are associated with quality of work life and perceived quality of care among pediatric oncologists.³⁴ The implementation of interventions, including support groups, training focused on personal work experience, and relationships between colleagues, has been proven to enhance collaboration between the oncology departments' various health care staff. This has been linked to a reduction in burnout among the latter.³⁵ Thus, the implementation of a new model of organization focused on collaboration and positive interactions by health organizations may be interpreted as an indicator of their willingness to improve the work conditions of oncologists, which in turn enhances their perceived organizational support. Moreover, using this model may serve to reduce their sense of isolation.

Furthermore, the proposed model could explain the effect of organizational and social support through psychological health on quality of care. Indeed, a German study focusing on hospital physicians revealed that work engagement was linked to a higher perceived quality of care.³⁶ A systematic review demonstrated a positive correlation between patients' perception of their physicians' empathy and both patient satisfaction and clinical outcomes.³⁷ Finally, among teachers from Quebec, cognitive adjustment to the task was found to be associated with self-reported task performance.²⁴ Thus, through the improvement of their psychological flourishing, oncologists may become more dedicated to their work, exhibit greater empathy, and demonstrate improved task adjustment. This process would ultimately enhance quality of care through the positive attitudes studied here.

5 | CONCLUSION

The mediational effect of psychological flourishing on the relation of workplace isolation and organizational support perceptions on work engagement, task adjustment and empathy has been empirically substantiated for the first time among French oncologists. Therefore, psychological flourishing can act as a lever for favorable attitudes at work, by enhancing a supportive health organization and mitigating their perception of isolation. Thus, it would be advantageous for both oncologists and the healthcare system to emphasize the collaborative aspect of oncologists' work.

AUTHOR CONTRIBUTIONS

Evelyne Fouquereau and Philippe Colombat conceptualized the study design and secured funding for the study. Philippe Colombat and Julien Lejeune collected the data. H el ene Coillot and Evelyne Fouquereau analyzed the data. Marie Bossard interpreted results and wrote the first draft of the manuscript. Evelyne Fouquereau, Philippe Colombat and Julien Lejeune provided critical comments and revisions. All authors read and approved the final manuscript.

ACKNOWLEDGMENTS

This project was funded by the AMGEN company. We want to particularly thank Jean-Philippe ALOSI for his implication. We thank all the study investigator groups and study staff at each of the clinical sites. The investigator study groups were as follows: French society of Hematology, Intergroupe Francophone du My elome, Acute Leukemia French Association; French Intergroup of myeloproliferative disease, Unicancer, French Society of Pediatric Oncology, French Society of Oncology Radiotherapy, National Union of Radiation Oncologists, F ed eration francophone de canc erologie digestive, The Association for Teaching and Research of Oncology Interns, The French group of pneumo-cancerology. We also thank the SPS Association (Health Professionals Care Association) and especially Catherine CORNIBERT et Florence ROBIN for their contributions. Lastly, we acknowledge the contributions of the study participants.

CONFLICT OF INTEREST STATEMENT

The authors declare they have no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data are not publicly available due to privacy or ethical restrictions.

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How to cite this article: Bossard M, Lejeune J, Coillot H, Colombat P, Fouquereau E. Oncologists' psychological flourishing: a driving force for positive attitudes at work. *Psychooncology.* 2024;e6372. <https://doi.org/10.1002/pon.6372>