



Ethical leadership, professional caregivers' well-being, and patients' perceptions of quality of care in oncology

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ABSTRACT

Purpose: Although quality of care and caregivers' well-being are important issues in their own right, relatively few studies have examined both, especially in oncology. The present research thus investigated the relationship between job-related well-being and patients' perceptions of quality of care. More specifically, we examined the indirect effects of ethical leadership on patients' perceived quality of care through caregivers' well-being.

Method: A cross-sectional design was used. Professional caregivers (i.e., doctors, nurses, assistant nurses, and other members of the medical staff; n = 296) completed a self-report questionnaire to assess perceptions of ethical leadership and well-being, while patients (n = 333) completed a self-report questionnaire to assess their perceptions of quality of care. The study was conducted in 12 different oncology units located in France.

Results: Results revealed that ethical leadership was positively associated with professional caregivers' psychological well-being that in turn was positively associated with patients' perceptions of quality of care.

Conclusions: Professional caregivers' well-being is a psychological mechanism through which ethical leadership relates to patients' perceptions of quality of care. Interventions to promote perceptions of ethical leadership behaviors and caregivers' mental health may thus be encouraged to ultimately enhance the quality of care in the oncology setting.

1. Introduction

For almost three decades, numerous studies have carefully built a body of knowledge about the effects of healthcare professionals' practice environment factors and work characteristics (e.g., management at the unit level, hospital management, organizational support) on their psychological health and quality of care (Jones et al., 2013). Indeed, many work-related factors may influence quality of care. For instance, transformational leadership practices are associated with high quality of care and weak turnover intentions. Conversely, abusive leadership practices relate to poorer quality of care and strong turnover intentions in a sample of nurses working in different units (Lavoie-Tremblay et al., 2016). In the nursing context, Wong and Laschinger (2013) also showed that the more managers are seen as authentic, by emphasizing transparency, balanced processing, self-awareness, and high ethical standards, the more nurses are satisfied with their work and report higher performance. Furthermore, leaders who are able to create empowering work environments facilitate a range of positive work attitudes and

behaviors among their subordinates (Bawafaa et al., 2015). Finally, ethical leadership predicts workers' well-being (e.g., work engagement) (Chughtai et al., 2015).

More generally, in the healthcare setting, the dominant approach has been to model simple sets of relationships whereby work-related factors are hypothesized to impact outcomes (e.g., well-being, quality of care) through unspecified or untested mechanisms. In addition, oncology studies on the determinants of healthcare professionals' well-being (i.e., experiencing high levels of positive affective states; Van Katwyk et al., 2000) and patients' perceptions of quality of care (i.e., patients' response given to their health care needs and expectations; Br edart et al., 2005) have been quite rare (Brown, 2014). However, some studies, outside of the oncology setting, showed that work-related factors had a significant impact on healthcare professionals' well-being (e.g., life satisfaction), which in turn significantly related to the patient experience and perceived quality of care (Montgomery et al., 2011).

For instance, Shirom et al. (2006) showed that overload indirectly predicted poor quality of care through its effect on physicians' burnout

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in a sample of specialists representing six medical specialties. Van Bogaert et al. (2014) also examined, in a sample of 1201 acute care staff nurses, the mechanisms (i.e., workload, social capital, decision latitude, and burnout) through which nurse practice environment dimensions related to nurse-assessed quality of care. The studied participants were registered nurses working in medical and surgical units, intensive care and medium care units, emergency room, operation theatre, and post anesthetic care units. Moreover, nurses' work engagement, conceptualized as an indicator of well-being (Hakanen and Schaufeli, 2012), mediated the relationship between ward service climate and patient-centered care in a sample of nurses working in 40 wards of retirement homes (Abdelhadi and Drach-Zahavy, 2012). Despite these encouraging findings, the relationships between ethical leadership, well-being, and patients' perceptions of quality of care have not yet been investigated. More generally, few studies sought to examine the mechanisms by which managerial practices have indirect effects on perceptions of quality of care (Westerberg and Tafvelin, 2014), especially in the oncology setting. We aimed to fill this gap in the present research and felt that this work may enhance our knowledge regarding the processes involved in delivering good quality of care. We may also identify modifiable factors that could be targets for managerial interventions.

Compared with other professions, healthcare professionals who provide direct care to patients generally display lower levels of well-being (e.g., satisfaction) (McHugh et al., 2011). More specifically, professionals working in oncology are at high risk for experiencing staff burnout because they often work in particularly stressful and burdensome environments (Penson et al., 2000). Yet, ethical leadership may be a means to enhance well-being and quality of care in oncology wards as the positive effects of these leadership behaviors on numerous individual and organizational outcomes (e.g., burnout, performance) have been extensively demonstrated in another settings (Ng and Feldman, 2015). Ethical leadership is defined as “the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement and decision making” (Brown et al., 2005, p. 120).

In the nursing context, numerous studies recently underlined the importance of ethical leadership (Eide et al., 2016; Gallagher and Tschudin, 2010; Makaroff et al., 2014). Elements that are necessary to underpin ethical leadership in the nursing practice are “respect, loyalty, commitment and understanding the impact that our behavior can have on others” (Gallagher, 2017, p. 515). She also emphasized that respect for patients and for those close to them, as well as for colleagues, is essential for ethical leadership. “Valuing people's individuality and contribution is essential. Respect and value for others is demonstrated by being open-minded, communicating and connecting well and showing sensitivity. A leader who is respectful and values others is more approachable and trustworthy, helps others to feel secure and sets a good example” (Gallagher, 2017, p. 515). Furthermore, “ethical leadership is all about establishing a culture that sets the tone – a culture where there's an epidemic of kindness, but also of good judgement, and where everyone feels committed to the shared daily work of giving excellent, safe, compassionate care. It's also about making sure that everyone enjoys their work, because if you don't, you won't do it well” (Gallagher, 2017, p. 516).

First, ethical leaders create an effective unit organizational culture for optimal patient care. Indeed, ethical leadership enables the development of cohesive and adaptive work teams sharing understanding, goals, and aspirations (Zheng et al., 2015), and increases loyalty and commitment to people and the organization (Gallagher, 2017), which may ultimately lead to enhanced patients' perceptions of quality of care. Ethical leaders also create a culture of patient- and family-centered care as a means to improve patients' perceptions of quality of care. More generally, followers of ethical leaders exhibit stronger job performance. Indeed, they report more positive attitudes (e.g., affective

organizational commitment, organizational identification) as they develop a positive perception of work environment. In turn, to reciprocate to ethical leaders for fair treatment, subordinates are likely to display greater work performance (Ng and Feldman, 2015), thus potentially improving patients' perceptions of quality of care.

Second, prior studies showed that ethical leadership behaviors enable supervisors to develop trust-based relationships with their subordinates (Brown et al., 2005). The presence of such relationships in the workplace can subsequently lead to higher levels of work engagement (Chughtai et al., 2015) and lower levels of burnout (Mo and Shi, 2018). Li et al. (2014) also showed that the positive relation of ethical leadership to subordinates' occupational well-being (i.e., job-related contentment and job-related enthusiasm) was mediated by distributive justice (i.e., perceptions of justice concerning the decisions about outcomes and resources allocation) and interpersonal justice (i.e., perceptions of justice concerning the treatment received) in a sample of workers from two 2010 Fortune 500 companies located in China. In other words, ethical leaders make decisions about resources and outcomes allocation with fairness and treat their followers with dignity and respect, leading to high levels of well-being among their subordinates.

Yet, healthcare professional well-being is widely believed to have significant and positive effects on patients' perceptions of quality of care. Indeed, burnout is negatively linked to the quality of care that patients receive and positively associated with maladaptive outcomes such as turnover and absenteeism, in a sample of registered nurses employed at a large metropolitan public health service in Australia (Cheng et al., 2016). Nurses' job satisfaction is also negatively and positively related to intent to leave and quality of care, respectively (Tervo-Heikkinen et al., 2009). The units where the participants worked were medical, surgical, and neurological inpatient wards. Moreover, Van Bogaert et al. (2013) showed that high levels of nurses' work engagement were associated with higher self-reported quality of care in a sample of nurses of two Belgian psychiatric hospitals.

Healthcare professionals with high levels of burnout may not put in as much effort into punctuality, take excessive time off or leave their jobs, thus disrupting the continuity of care (Cheng et al., 2016). Impaired mental health is also linked to cognitive impairments, including decreased attention (Sokka et al., 2016), which can alter the patients' perceptions of quality of care. Moreover, low well-being creates more emotional distance in the patient–healthcare professional relationship and reduces emotional resilience, thereby also contributing to degrade patients' perceptions of quality of care (Van Bogaert et al., 2014). However, in most previous studies on the link between healthcare professionals' well-being (e.g., work engagement) and quality of care, researchers used health professionals' self-evaluations of care quality (Van Bogaert et al., 2013, 2014). In this case, it is difficult to precisely evaluate the relationship between well-being and quality of care as common method bias is widely assumed to inflate relationships between constructs assessed using self-reports (Podsakoff et al., 2003). In addition, to our knowledge, no studies have examined staff well-being in relation to patients' perceptions of quality of care in oncology settings. We focus on these issues in the present research and formulate the following hypotheses:

Hypothesis 1. Ethical leadership is positively associated with patients' perceptions of quality of care.

Hypothesis 2. Oncology healthcare professionals' well-being mediates the positive relationship between ethical leadership and patients' perceptions of quality of care.

2. Methods

2.1. Participants

A cross-sectional design was used. Specifically, this survey was

conducted in 12 oncology units at 12 public and private hospitals in France. In France, a large majority of oncology units adopts a system that distributes the patient care amongst a team of professionals working together to provide a high quality of care (i.e., team nursing; Pronost et al., 2012). Both oncology healthcare professionals and patients completed a questionnaire.

2.2. Questionnaires

All questionnaires were administered in French and the two instruments not already available in this language (i.e., ethical leadership and well-being) were adapted to French using a standardized back-translation procedure (Hambleton, 2005) by a panel of experts. More specifically, two translators familiar with terminology of the area covered by each questionnaire translate the tool from English to French. They were asked to emphasize conceptual rather than literal translations and use natural and acceptable language for the broadest audience. Each instrument was then translated back to English by two independent translators, whose mother tongue was English and who have no knowledge of the questionnaire. As in the initial translation, emphasis in the back-translation was on conceptual and cultural equivalence, and not linguistic equivalence. Discrepancies were discussed between the experts (translators and members of the research team) until a satisfactory version was reached. More generally, these three tools were chosen because they have good psychometric properties and are considered as particularly appropriate for assessing the three constructs under study among samples of healthcare professionals (Balducci et al., 2017; Okpozo et al., 2017).

2.2.1. Ethical leadership

Ethical leadership was measured with the Ethical Leadership Scale developed by Brown et al. (2005) using the line manager as the referent. Oncology healthcare professionals were asked to rate the extent to which they agreed with each of the ten statements (e.g., “My line manager makes fair and balanced decisions”) on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The Cronbach's alpha coefficient for the scale was 0.91 in our study and was thus above the minimum criterion of 0.70 (Nunnally, 1978). We conducted a confirmatory factor analysis in which ethical leadership was specified as a latent variable defined by the ten items used in this study. This model yielded a good fit to the data: $\chi^2(30) = 33.04$, $p = .32$, GFI = 0.98, AGFI = 0.96, NFI = 0.98, RFI = 0.97, IFI = 1.00, TLI = 1.00, CFI = 1.00, and RMSEA = 0.02. These results provide supportive evidence for the construct validity of this scale.

2.2.2. Well-being

Well-being was assessed with five items drawn from the Job-related Affective Well-being Scale (JAWS) developed by Van Katwyk et al. (2000). These items (i.e., “ecstatic”, “enthusiastic”, “excited”, “energetic”, and “inspired”) correspond to the subscale High Pleasure High Arousal of the JAWS. They reflect positive emotions with high arousal and high scores indicate high levels of job-related affective well-being. Oncology healthcare professionals were asked to indicate for each emotion how often they have experienced it in the past 30 days. Answers were given on a Likert scale ranging from 1 (never) to 5 (always). The Cronbach's alpha coefficient for the scale was 0.81 in our study. We conducted a confirmatory factor analysis in which well-being was specified as a latent variable defined by the five items used in this study. This model yielded a good fit to the data: $\chi^2(2) = 2.12$, $p = .35$, GFI = 1.00, AGFI = 0.98, NFI = 1.00, RFI = 0.98, IFI = 1.00, TLI = 1.00, CFI = 1.00, and RMSEA = 0.01. These results provide supportive evidence for the construct validity of this scale.

2.2.3. Perceptions of quality of care

Patients' perceptions of the quality of care were assessed with nine items drawn from the EORTC IN-PATSAT32 questionnaire (Brédart

et al., 2005) developed by the European Organization for Research and Treatment of Cancer (EORTC) Quality of Life Group. These items include the exchange of information single-item subscale, the interpersonal quality/information subscale (3 items), the waiting time subscale (2 items), the accessibility subscale (2 items), and the comfort single-item subscale. Answers were given on a five-point Likert scale from 1 (poor) to 5 (excellent). A higher score reflects a higher level of perceived quality of care. The Cronbach's alpha coefficient for the scale was 0.90 in our study. We conducted a confirmatory factor analysis in which perceived quality of care was specified as a latent variable defined by the nine items used in this study. This model yielded a good fit to the data: $\chi^2(20) = 17.40$, $p = .63$, GFI = 0.99, AGFI = 0.97, NFI = 0.99, RFI = 0.99, IFI = 1.00, TLI = 1.00, CFI = 1.00, and RMSEA = 0.00. These results provide supportive evidence for the construct validity of this scale.

2.3. Procedure

According to local regulations, no formal ethical scrutiny was required as no ethics committee existed in the institution at the time of the study. However, nurses were surveyed only on approval from their centres' Committees for Health, Safety and Working Conditions. All centres' executives signed a written consent form. In return for their participation, all stakeholders were provided with an extensive feedback of study findings. Data was collected between June 2015 and January 2016. First, a research staff member presented the aim of the project and its design to the head of department and health executive in each oncology unit. Then, questionnaires were given to oncology healthcare professionals by the health executives and to patients by the research staff. All oncology healthcare professionals and patients in each unit were invited to participate in this study. Participants who agreed to partake in the present research received a survey packet including the questionnaire, a cover letter explaining the study's purposes, and a consent form stressing that participation was confidential and voluntary. Ethically valid consent is important to enable the development of a trusting researcher/patient relationship. To enable valid consent to be taken, researchers must allow patients to make an autonomous choice (e.g., acknowledge their right to hold views, to make choices, and to take actions based on their personal values and beliefs; Beauchamp and Childress, 2009). Participants completed the questionnaires and gave them back to their health executive (for oncology healthcare professionals) or to the research staff member (for patients). A strong emphasis was put on confidentiality of data and healthcare professionals were instructed not to write their names on the questionnaire and to put it with the completed and signed consent form in an unmarked envelope before returning it to their health executive. Patients have a legitimate expectation that confidential information will not be disclosed to third parties without their permission but this should not hinder a free flow of information from the bedside to the research team. If patients know they will get feedback of results, they may be less inclined to consent because of fear about what the results might mean (Lynch et al., 2003). Consent forms thus had a section for feedback about significant findings that patients were able to accept or decline.

2.4. Data analysis

Our dataset includes variables from oncology healthcare professionals and patients. Because a patient is treated by several healthcare professionals within the same unit, we aggregated data from healthcare professionals at the unit level and then integrated these aggregate data into the patients' dataset, using the correspondence between oncology units. Indeed, we were not able to match the data between one oncology healthcare professional and one patient. To explore the appropriateness of aggregating individual healthcare professionals' responses at the unit level, we examined the inter-rater agreement (r_{WGS}) and the

intra-class correlation coefficients (ICCs) as well as their corresponding F-tests. We also examined the size and direction of the correlations between the variables to provide preliminary support for the hypothesized associations.

Then, Baron and Kenny's (1986) 3-step regression analysis procedure was used to test whether the oncology healthcare professionals' well-being acted as a mediator between their perceptions of ethical leadership and patients' perceptions of quality of care. According to Baron and Kenny (1986), a variable functions as a mediator when it meets the following conditions: (a) variations in levels of the independent variable significantly account for variations in the presumed mediator (i.e., Path a); (b) variations in the mediator significantly account for variations in the dependent variable (i.e., Path b); and (c) when Paths a and b are controlled, a previously significant relation between the independent and dependent variables is significantly reduced. Therefore, we pursued the 3 following steps: (1) regressing the mediator (i.e., well-being) on the independent variable (i.e., ethical leadership), (2) regressing the dependent variable (i.e., perceived quality of care) on the independent variable (i.e., ethical leadership), and (3) regressing the dependent variable (i.e., perceived quality of care) on both the independent variable (i.e., ethical leadership) and mediator (i.e., well-being). Finally, the indirect effect of ethical leadership on perceived quality of care through well-being was tested using bootstrapping, as recommended by Shrout and Bolger (2002).

3. Results

3.1. Sample characteristics

A convenience sample of 296 oncology healthcare professionals (41 men, 243 women, and 12 who did not specify their gender) participated in the present study. The representation of women and men in the present sample is similar to that found in the population of healthcare professionals in France. This sample included 43 (15%) doctors, 101 (34%) nurses, 75 (25%) assistant nurses, 65 (22%) other oncology healthcare professionals (e.g., radio operators, medical equipment technicians, physiotherapists), and 12 (4%) participants who did not specify their profession. Furthermore, 333 patients (149 men, 172 women, and 12 who did not specify their gender) with different types of cancer (e.g., breast, lung, prostate, colon) agreed to complete the survey. These characteristics of oncology healthcare professionals and patients are summarized in Table 1.

3.2. Preliminary analyses

We applied two different distributions (i.e., uniform (UN) and slightly skewed (SS)) to calculate r_{WG^S} and account for potential biases in raters' judgments. For ethical leadership and well-being, F-tests indicated that average scores differed significantly across units, and ICCs and r_{WG^S} exceeded acceptable levels for aggregation (LeBreton and Senter, 2008), indicating sufficient within-unit agreement (ethical

Table 1
Demographics.

Item	Oncology healthcare professionals	Patients
Age: mean (range) in years	37.9 (20-65)	61.3 (22-93)
Gender: % female	82.1%	51.7%
Profession: % nurses	34.1%	
Organizational tenure: mean in years	10.6	
Tenure in the current job: mean in years	6.4	
Employment status: % full-time	68.9	
Length of treatment: mean in months		18.1

Table 2
Means, standard deviations, and correlations.

Variables	M	SD	Ethical leadership	Well-being
Ethical leadership	3.47	.41		
Well-being	3.20	.23	.58***	
Quality of care	3.81	.63	.16**	.19***

Note. ** $p < .01$; *** $p < .001$.

leadership: $r_{WG(J),UN} = 0.94$, $r_{WG(J),SS} = 0.83$, $ICC(1) = 0.17$, $ICC(2) = 0.83$; well-being: $r_{WG(J),UN} = 0.87$, $r_{WG(J),SS} = 0.73$, $ICC(1) = 0.07$, $ICC(2) = 0.65$). These results provided support for the aggregation of the individual-level measures of ethical leadership and well-being at the unit level in further analyses. An examination of the size and direction of the correlations also revealed good preliminary support for the hypotheses. Ethical leadership was positively correlated to well-being ($r = 0.58$, $p < .001$) and perceived quality of care ($r = 0.16$, $p < .01$). Moreover, well-being was positively correlated to perceived quality of care ($r = 0.19$, $p < .001$). Means, standard deviations, and correlations for all variables used in the present research are reported in Table 2.

Before regression analyses, the univariate distributions of the study variables were examined for normality via skewness and kurtosis coefficients. These values supported that quality of care (skewness = -0.07; kurtosis = 0.48) and well-being (skewness = 0.75; kurtosis = 1.02) were normally distributed, but not ethical leadership (skewness = -1.97; kurtosis = 2.97). Therefore, bootstrap resampling analyses were then conducted as they do not impose the assumption of normality of the sampling distribution, provide high statistical power, and reduce the likelihood of Type I error (MacKinnon, 2008; Preacher and Hayes, 2008).

3.3. Main analyses

The first regression step confirmed that ethical leadership was significantly related to oncology healthcare professionals' well-being ($p < .001$). Results of the second step confirmed that ethical leadership was significantly related to perceived quality of care ($p < .001$). Finally, well-being was significantly linked to perceived quality of care ($p < .05$), and the initial relationship between ethical leadership and perceived quality of care was no longer significant ($p = .17$). The mediation model was thus supported: oncology healthcare professionals' well-being significantly and fully mediated the relationship between ethical leadership and perceived quality of care. We then tested the indirect effect. Results indicated that ethical leadership had an indirect significant and positive effect on perceived quality of care through the mediation of well-being ($p < .05$) (see Table 3).

Table 3
Results of bootstrap analyses.

Stages	β^a	SE ^b	Lower CI ^c	Upper CI ^c	p	
Step 1	Ethical leadership → Well-being	.58	.04	.49	.66	< .001
Step 2	Ethical leadership → Quality of care	.16	.05	.08	.25	< .001
Step 3	Ethical leadership + Well-being → Quality of care	.08	.06	-.03	.20	.17
Indirect effect	Ethical leadership → Well-being → Quality of care	.08	.04	.01	.15	.03

Note.
^a Bootstrap point estimate (standardized regression coefficient).
^b Standard error.
^c Bias-corrected 95% confidence interval.

4. Discussion

Although previous studies have demonstrated that leader behavior was associated with quality of care in home help organizations (Westerberg and Tafvelin, 2014), not much is known about the psychological mechanisms through which leaders influence the quality of care of their followers, especially in the oncology setting. This study examined a model that used oncology healthcare professionals' well-being as an explanatory mechanism for the relationship of ethical leadership to patients' perceived quality of care. The present findings support previous research in this area (Brown, 2014) and extend our understanding of the mechanisms through ethical leadership relates to quality of care. These results bear important implications for theory and practice in oncology that we outline below.

4.1. Theoretical implications

First, we found ethical leadership to be positively associated with perceived quality of care in the oncology setting, providing support for *Hypothesis 1*. These results are consistent with findings reported in other domains which have highlighted the positive contribution of ethical leadership to favorable outcomes such as performance (Ng and Feldman, 2015). As suggested by Zheng et al. (2015), ethical leaders encourage the emergence of quality of care because they create an effective unit organizational culture and facilitate the development of cohesive and adaptive work teams. However, scholars need to pay greater attention to the relationships between leader behaviors and quality of care, especially patients' ratings of quality of care. Additionally, quality of care needs to be examined in relationship with other constructs in order to test models that have both theoretical and practical implications for the oncology setting. For example, research has shown that the receipt of work-based support potentially influences nurse perceived quality of care delivery in a sample of nurses working in four large district general hospitals in England (Jones and Johnston, 2013). Transformational and abusive leadership practices are also key variables associated with quality of care among nurses from the province of Quebec (Canada) (Lavoie-Tremblay et al., 2016) and among registered nurses in Australia (Cheng et al., 2016). Similarly, peer support, organizational support, and job control foster quality of care in home help organizations (Westerberg and Tafvelin, 2014). Finally, authentic leadership and structural empowerment may also have significant and positive effects on quality of care by promoting inter-professional collaboration (Regan et al., 2016).

Second, results also revealed that oncology healthcare professionals who viewed their supervisor as an ethical leader perceived higher levels of well-being. These findings are consistent with previous research, which has shown that ethical leadership is positively linked to work engagement and job satisfaction, and negatively associated with burnout and health complaints (Mo and Shi, 2018; Tanner et al., 2010). Indeed, ethical leaders develop trust-based relationships with their subordinates and increase oncology healthcare professionals' perceptions of organizational justice that in turn, may lead to higher levels of well-being and lower levels of ill-being (Brown et al., 2005). More generally, our results are in line with previous studies showing that transformational leadership, authentic leadership, and structural empowerment are positively related to nurses' well-being (e.g., satisfaction) (Read and Laschinger, 2015; Wong and Laschinger, 2013).

Third, our findings revealed a significant and positive relationship between healthcare professionals' well-being and patients' perceptions of quality of care in oncology. They are consistent with prior studies on psychological health and quality of care in other settings. Indeed, research has already demonstrated that burnout was negatively related to quality of care in a sample of specialists representing six medical specialties (Shirom et al., 2006). The present results are also consistent with Tervo-Heikkinen et al.'s (2009) findings that job satisfaction is positively associated with quality of care in various medical, surgical,

and neurological inpatient wards. More generally, our findings are in line with the notion that care professionals displaying high levels of well-being are more likely to deliver high-quality of care, as enhanced health increases their ability to provide the best care and reduces risks errors (Montgomery et al., 2011). In contrast, healthcare professionals with low levels of well-being are less likely to be fully attentive and concentrated. In this case, the quality of care may thus be altered (Sokka et al., 2016). However, it would be worth determining if oncology healthcare professionals' well-being would be more effective in fostering patients' perceptions of quality of care when job ambivalence is low. That's what Ziegler et al.'s (2012) study with managers of an information technology company suggests. Their study found job satisfaction to be more strongly related to performance when individuals experience low job ambivalence, as compared to when individuals experience high job ambivalence. A recent meta-analysis also showed that situational strength was a moderator of the satisfaction-performance relationship (Bowling et al., 2015).

Finally, the present study contributes to the literature by shedding light on the mechanisms through which ethical leadership leads to patients' perceptions of quality of care in oncology. Indeed, we found the relationship between ethical leadership and patients' perceived quality of care to be fully mediated by oncology healthcare professionals' well-being, providing support for *Hypothesis 2*. These results are in agreement with much field research which has reported ethical leadership to be associated with a host of positive consequences in another settings than oncology (Feng et al., 2018). In addition, our focus on well-being complements recent research that has examined the process whereby ethical leadership is associated with positive job attitudes and behaviors in a sample of employees and supervisors in a high-tech company located in China (Mo and Shi, 2018). Specifically, supervisors who score high on ethical leadership appear to be more successful at stimulating followers' well-being than supervisors who score lower on it, and thus indirectly influence patients' perceptions of quality of care. More generally, as shown in recent studies in the nursing context (Salanova et al., 2011), the present results confirm that followers' mental health explains the effects of leadership behaviors. They also suggest that well-being is an important dimension to consider when researchers are interested in identifying the mediating variables between work factors and healthcare professionals' attitudes and behaviors (Van Bogaert et al., 2014).

4.2. Limitations and future research

Some limitations should be taken into account when interpreting this study's results. First, the data are correlational in nature and conclusions about causality are unwarranted. Our findings revealed that healthcare professionals' well-being was positively associated with patients' perceptions of quality of care in oncology. However, the direction of the relationship between oncology healthcare professionals' well-being and patients' perceived quality of care is not clear. On the one hand, healthcare professionals who display high levels of psychological well-being may be more dedicated to their patients and thus deliver high quality of care. On the other hand, providing client-centered care is rewarding in itself and may also lead to higher levels of well-being among oncology healthcare professionals. Future longitudinal investigations are needed to examine these links over time. Second, although we collected data from both oncology healthcare professionals and patients in the present research, thus minimizing common method bias, self-reported measures were used. Yet, such measures can be impacted by social desirability. Moreover, due to the length of the instrument, we used only nine items from the EORTC IN-PATSAT32 questionnaire (Brédart et al., 2005). Therefore, future research would do well to consider patient outcomes (e.g., number of hospitalizations, recovery times, treatment participation), institutional-level incident reports of mistakes or supervisor ratings of staff behaviors as views on quality of care depend on one's perspective.

Third, to keep the length of the questionnaire manageable, we considered only one leadership style (i.e., ethical leadership) and used one subscale of the JAWS (Van Katwyk et al., 2000). It would be interesting in future research to examine the role of other dimensions of leadership (e.g., leader-member exchange, laissez-faire leadership, transformational leadership), well-being (e.g., high pleasure and low arousal), and mental health (e.g., burnout, stress, anxiety) to identify their effects on quality of care in oncology. Future investigation should also attempt collecting data from multiple sources (e.g., coworkers, supervisors). More generally, identifying organizational and managerial factors that lead to high levels of well-being and low levels of ill-being is critical for achieving high-quality and safe patient care. Fourth, although a strong emphasis was put on confidentiality of data, oncology healthcare professionals returned their completed questionnaire in an unmarked envelope to their health executive. The executives may thus know who accepted to take the questionnaire and also who gave back the completed questionnaire. In future studies, healthcare professionals might return the completed questionnaire in a collection box located outside of the executive's office. Fifth, our sample of oncology healthcare professionals included doctors, nurses, assistant nurses, and other oncology healthcare professionals (e.g., radio operators, medical equipment technicians, physiotherapists). Because these professionals have different line managers, future studies should only consider professionals with the same line manager (e.g., nurses) within each unit to accurately assess the ethical leadership in each single department. Sixth, we used convenience samples, potentially leading to the under-representation (e.g., doctors) or over-representation (e.g., nurses) of particular groups within our samples. Moreover, oncology healthcare professionals' well-being may vary between the different units. We also do not know why some professionals or patients agreed to take part in the survey, whilst others did not. Although these types of bias are quite typical in convenience sampling, we encourage researchers to conduct future investigations with stratified or cluster sampling. Finally, our sample comprised only French oncology healthcare professionals. The number of patients and healthcare professionals (e.g., 7 professionals completed the questionnaire in a unit and 69 did it in another unit) in each unit is very different and the staff to patient ratio also varies in each unit. Further research with healthcare professionals from other oncology units, other settings (e.g., cardiology, endocrinology, gastroenterology, geriatrics), and different cultures is thus needed to replicate and extend these findings.

4.3. Implications for nursing

The need to improve quality of care represents a major goal of all health care systems. However, healthcare professionals are under increasing pressure to continuously improve quality of care in work environments that are not naturally designed to contribute positively to either their well-being or the quality of care delivered to patients (Montgomery et al., 2013). To our knowledge, this study is a first attempt at looking at ethical leadership's effects on healthcare professionals' well-being and patients' perceptions of quality of care in the oncology context. These results represent a good starting point for French human resource professionals reflecting on how they can frame leadership development programs that can contribute to oncology healthcare professionals' growth, employability, and confidence in their value and competencies.

The practice of ethical leadership has become increasingly dominant in both private and public sectors (Eisenbeiß and Brodbeck, 2014). Recent studies outside the oncology setting (Heyler et al., 2016) have also observed an emerging trend in organizations to engage in developing training programs focused on learning ethical leadership skills. For instance, healthcare centres may set up organizational procedures that emphasize ethical leadership, by including ethical considerations into organizational values and management decisions (Feng et al., 2018). Organizations may communicate their ethical and socially

responsible initiatives, and the reasons why they are engaged in, so that healthcare professionals know the actions their organizations are taking (Duane Hansen et al., 2016). Managers in oncology units may emphasize promotions of work meaningfulness, fair treatment, healthcare professional participation, and two-way communication (Eisenbeiß and Boerner, 2010). Mozumder (2018) also recommends three measures that organizations can adopt in order to promote ethical leadership. First, organizations may use ethics tests to select managers at multiple levels. Mo and Shi (2018) also argued that organizations may identify, select, and promote individuals who present ethical values and the commitment to become leaders. Second, organizations may organize ethics training programs emphasizing the importance of serving as ethical role models and helping the oncology managers to become aware of the positive effects of ethical leadership behavior. Third and finally, organizations may develop and implement incentive systems that reward and support oncology healthcare professionals' ethical behavior.

5. Conclusion

We examined (a) the relationships between ethical leadership, well-being, and perceived quality of care in oncology, and (b) whether healthcare professionals' well-being mediated the ethical leadership-quality of care relationship. Psychological well-being has been identified as a significant mechanism through which ethical leadership relates to patients' perceptions of quality of care. We hope the present results will encourage future research on managers' leadership behaviors and healthcare professionals' mental health to enhance the quality of care in the oncology setting.

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Conflicts of interest

The authors do not have any conflicts of interest to declare.

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