Palliative and Supportive Care

cambridge.org/pax

Measuring compassion in end-of-life cancer patients: The Italian validation of the Sinclair Compassion Questionnaire (SCQit)

Andrea Bovero, PSY.D.[1], Alessandra Fraoni, PSY.D.[1], Sara Urru, PH.D.[2], Paola Berchialla, PH.D.[2], Francesca Cotardo, PSY.D.[1,2], Irene Di Girolamo, PSY.D.[1,2], Luca Ostacoli, M.D.[1,2], Shane Sinclair, PH.D.[3,4,5] and Sara Carletto, PH.D., PSY.D.[1,2]

[1]Clinical Psychology Unit, University Hospital "Città della Salute e della Scienza di Torino," Torino, Italy; [2]Department of Clinical and Biological Sciences, University of Torino, Torino, Italy; [3]Faculty of Nursing, University of Calgary, Calgary, AB, Canada; [4]Compassion Research Lab, University of Calgary, Calgary, AB, Canada and [5]Department of Oncology, Cumming School of Medicine, University of Calgary, Calgary, AB, Canada

Original Article

Cite this article: Bovero A, Fraoni A, Urru S, Berchialla P, Cotardo F, Di Girolamo I, Ostacoli L, Sinclair S, Carletto S (2024) Measuring compassion in end-of-life cancer patients: The Italian validation of the Sinclair Compassion Questionnaire (SCQit). *Palliative and Supportive Care* **22**(5), 1370–1377. https://doi.org/10.1017/S1478951524001202

Received: 6 February 2024
Accepted: 6 August 2024

Keywords:
Compassion; validation; palliative care; end-of-life; cancer

Corresponding author: Sara Carletto; Email: sara.carletto@unito.it

Abstract

Objectives. Compassion is acknowledged as a key component of high-quality palliative care, producing positive outcomes for both patients and healthcare providers. The development of the Sinclair Compassion Questionnaire (SCQ) fulfilled the need for a valid and reliable tool to measure patients' experience of compassion. To validate the Italian version of the SCQ and to evaluate its psychometric properties in a sample of cancer patients with a life expectancy of less than 4 months.

Methods. Cronbach's alpha estimates were computed to evaluate the internal reliability. Exploratory Factor Analysis, Confirmatory Factor Analysis, and Item Response Theory analyses were performed to assess the validity of the construct. Divergent validity was assessed using the Functional Assessment of Chronic Illness Therapy-Treatment Satisfaction-Patient Satisfaction, the revised Edmonton Symptom Assessment Scale, and the Trust in Oncologist Scale-Short Form. Data were collected from 131 patients recruited in either a hospital or a hospice setting.

Results. The analyses confirmed the single factor structure of SCQit, with Confirmatory Factor Analysis factor loadings ranging between 0.81 and 0.92 and satisfactory internal reliability. Hospital setting and high diagnosis/prognosis awareness were associated with significantly lower SCQit scores, whereas practicing a religious faith was associated with greater experiences of compassion.

Significance of results. The Italian version of the SCQ (SCit) is a valid and reliable measure of patient-reported compassion. The SCQit can be used in clinical practice and research to measure the compassion experiences of terminally ill cancer patients and to evaluate the effectiveness of training to promote compassionate care in healthcare professionals.

Introduction

Compassion can be defined as "a virtuous response that seeks to address the suffering and needs of a person through relational understanding and action" (Sinclair et al. 2016a; 2017a). Compassion differs from sympathy and empathy (Sinclair et al. 2017a). Sympathy is a pity-based state that involves an emotional reaction to the suffering of another person who is often perceived as weak and inferior and is rooted in a lack of understanding (Perez-Bret et al. 2016; Strauss et al. 2016; Sinclair et al. 2017a). Empathy refers to the capacity to connect with and understand the inner state of another person emotionally and cognitively (Perez-Bret et al. 2016; Strauss et al. 2016; Sinclair et al. 2017a). Compassion differs from empathy as it involves, "feeling for and not feeling with the other" (Singer and Klimecki 2014) that is coupled with a sensitivity to others' suffering that leads to a prosocial response to take action to alleviate or prevent it (Singer and Klimecki 2014; Gilbert et al. 2017; Brito-Pons and Librada-Flores 2018). Accordingly, both the personalized and comprehensive nature of compassion has been recognized as salient and pivotal component of delivering high-quality holistic care to individuals (Sinclair et al. 2016a; Brito-Pons and Librada-Flores 2018) particularly in palliative care as it promotes a care model that addresses the psychological, social, emotional, and existential needs of individuals at the end of their life (Sinclair et al. 2016b; Brito-Pons and Librada-Flores 2018; Kang et al. 2018). Recent research has shown that compassion is positively associated with patient quality of life and satisfaction with the care received, as well as with reduced healthcare

© The Author(s), 2024. Published by Cambridge University Press. This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (http://creativecommons.org/licenses/by/4.0), which permits unrestricted re-use, distribution and reproduction, provided the original article is properly cited.

worker burnout, increased job satisfaction, and workplace well-being (Sinclair et al. 2016b; Sinclair et al. 2017a; Lown et al. 2017; Tehranineshat et al. 2019; Malenfant et al. 2022; Pavlova et al. 2023).

Despite the importance of providing compassionate care being well recognized by healthcare organizations and standards of practice (Riddick 2003; Canadian Medical Association 2004; Commissioning Board Chief Nursing Officer and DH Chief Nursing Adviser 2012), patients still report compassionate care as being inadequate in healthcare (Lown et al. 2017), while healthcare providers desire to provide compassionate care, they recognize the need for specific training to improve outcomes for patients and families (Coffey et al. 2019; Bovero et al. 2023). Furthermore, there are several barriers that hinder the implementation of compassionate care practice, including individual, professional, organizational, and educational factors (Christiansen et al. 2015; Sinclair et al. 2016b; Dev et al. 2019). Notably, the lack of a valid and reliable measure of patient experience of compassion has limited research in clinical practice and the development of evidence-based training approaches (Sinclair et al. 2017c; 2022).

A recent systematic review, assessing the design and psychometric attributes of various compassion measures, identified the Sinclair Compassion Questionnaire (SCQ) as the "gold standard" measure of compassion (Sinclair et al. 2022). The SCQ is a 15-item patient-reported measure of compassion (Sinclair et al. 2021) developed according to the Patient Compassion Model, an empirical model developed by Sinclair and his team, based on direct patient reports, which: defines and distinguishes compassion from related constructs; outlines the different components of compassion and their mutual relationships (Sinclair et al. 2016a; Brito-Pons and Librada-Flores 2018); and, importantly, is transferable across care settings and patient populations. The SCQ has been validated in a sample of patients living with an incurable, life-limiting illness, demonstrating excellent internal consistency (Cronbach's alpha of 0.96) and test–retest reliability (ranging from 0.74 to 0.89). The confirmatory factor analysis supported a single factor of compassion and item response theory analyses indicated that the SCQ precisely measures compassion across the wide range of patient experiences of healthcare providers (Sinclair et al. 2021, 2022). Convergent validity was assessed using the 12-item Schwartz Center Compassionate Care Scale (Lown et al. 2015), showing a significant positive correlation ($r = 0.75$, $p < 0.001$), which confirms that the SCQ effectively assesses the construct of compassion. Divergent validity was assessed using the PICKER Patient Experience Questionnaire (Jenkinson 2002) and the Edmonton Symptom Assessment Scale (ESAS-r) (Watanabe et al. 2012). The results showed a moderately strong positive correlation between SCQ and the PICKER Patient Experience Questionnaire ($r = 0.60$, $p < 0.001$), and a weak negative association with depression ($r = -0.13$) and poor well-being ($r = -0.17$), as measured by the ESAS-r ($p < 0.001$), indicating that the SCQ is related to, but sufficiently distinct from, patient satisfaction and symptom distress (Sinclair et al. 2021, 2022).

To date, the SCQ has been validated in English, Mandarin, and Spanish patient populations (Sinclair et al. 2017c; Chu et al. 2023; Soto-Rubio et al. 2024). The aims of the present study were to validate the SCQ in Italian in order to provide a valid and reliable measure of patient-reported compassion to apply in both clinical practice and research in Italy, by assessing its psychometric properties using a study sample of patients diagnosed with cancer and with a life expectancy of less than 4 months.

Methods

The research protocol was divided into 2 different phases: (1) translation and back-translation of the SCQ, involving input from a panel of experts, (2) data collection from cancer patients at the end-of-life. The forward translation and subsequent back-translation procedure aimed to obtain semantic and linguistic equivalence in the Italian version with respect to the original English. Permission for translation was obtained from the original authors in advance.

A native Italian speaker fluent in both languages and familiar with the measure translated the SCQ from English to Italian in consultation with 2 members of the authorship team (A.B. and S.S.). The measure was back translated into English by an external translator who was not familiar with the measure. The resulting English version was checked against the original English measure and discrepancies were resolved by a panel of experts.

Data collection

A sample of terminal cancer patients were recruited from February 2022 to October 2023 from "Città della Salute e della Scienza di Torino" University Hospital and "Vittorio Valletta" Hospice in Turin, Italy. Inclusion criteria were: $\geq$ 18 years old; having a diagnosis of cancer; being able to provide informed consent; and meeting eligibility criteria to access palliative care (National Law on Palliative Care and Pain Treatment, No. 38/2010). The criteria to access palliative care include being terminally ill with no available or appropriate curative treatment, having an unfavorable prognosis with a presumed life expectancy of 4 months or less, and scoring 50 or lower in the Karnofsky Performance Status (KPS). Exclusion criteria included having a diagnosis of a severe psychiatric disorder and/or cognitive impairment with an inability to provide informed consent or to complete the study procedures. Patients were approached by a research assistant to complete the self-report scales and sociodemographic information, with clinical data being collected from medical records and clinical charts. Ethical approval of the study was obtained from the Hospital's and Hospice's Ethics Committee (#0034403). All patients included in the study were informed about the aims of the research and provided informed written consent.

Measures

The SCQ

Compassion was assessed using the Italian version of the Sinclair Compassion Questionnaire (SCQit), a 15-item scale developed to assess patients experiences of compassion across a variety of settings (Sinclair et al. 2020). Patients were asked to rate their experience of compassion from their healthcare providers using a 5-point Likert scale of agreement (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree) (Sinclair et al. 2021). The SCQit overall score is determined by calculating the mean score of all items, with higher scores indicating greater reported compassion.

The Edmonton Symptom Assessment Scale (ESAS)

Presence and levels of cancer-related physical distress was assessed using the Edmonton Symptom Assessment System (ESAS-Revised) (Bruera et al. 1991) in its validated Italian version (Ripamonti et al. 2022). It rates the severity of 9 common symptoms of advanced cancer (i.e., pain, tiredness, nausea, depression,

https://doi.org/10.1017/S1478951524001202 Published online by Cambridge University Press

anxiety, drowsiness, appetite, well-being, and shortness of breath). Each symptom's severity is rated from 0 (no symptoms) to 10 (worst symptom severity).

The Functional Assessment of Chronic Illness Therapy-Treatment Satisfaction-Patient Satisfaction (FACIT-TS-PS) measurement system

Quality of care and patient satisfaction were assessed using the Italian version of the Functional Assessment of Chronic Therapy-Treatment Satisfaction-Patient satisfaction (Guglielmetti 2013) tool. This 30-item scale is composed of 5 subscales, namely: physician communication; treatment staff communication; technical competence; nurse communication; confidence and trust. Higher scores indicate better patient satisfaction (Peipert et al. 2014).

The Trust in Oncologist Scale-Short Form (IT-TIOS-SF)

Trust in the oncologist was assessed using the Italian version of the Trust in Oncologist Scale-Short Form (IT-TIOS-SF) (Hillen et al. 2017; Bani et al. 2021). It is a 5-item scale, using a 5-point Likert answering scale ranging from 1 (strongly disagree) through to 5 (strongly agree).

Statistical analysis

Descriptive statistics of demographic characteristics are reported as means and standard deviations for continuous variables, and frequencies and percentages for categorical variables. We computed descriptive statistics on the 15-item SCQit, including: means, SD, skewedness, kurtosis, and range, together with absolute frequency and response percentages. The internal reliability of the questionnaire was assessed by calculating Cronbach's alpha. To ensure that data were suitable for factor analysis the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were performed. Exploratory factor analysis (EFA) was performed using the principal axis factor method and oblimin rotation. A scree plot and parallel analysis were performed to choose the number of factors, and the factor structure identified by EFA was tested through confirmatory factor analysis (CFA) and item response theory (IRT). To assess the divergent validity FACIT-TS-PS, IT-TIOS-SF, and ESAS questionnaires were considered. Finally, the relationships between SCQit and demographic variables were assessed by means of univariate linear regression. All the statistical analyses were performed using the statistical software R version 4.2.1.

Results

A total of 131 patients were enrolled on the study, and their characteristics are reported in Table 1. Descriptive statistics on the 15-item SCQit are reported in Table 2, and the frequencies and percentages of responses are shown in Figure 1. A Cronbach' alpha value of 0.98 was obtained for the 15-item SCQit. Cronbach's alpha remained stable when removing one item at time, thus all the items were considered for the following analyses. The criteria for running EFA were confirmed; indeed, the KMO measure of sample adequacy was 0.96 and Bartlett's test statistic significant, with $\chi^2 = 1692.22$, df = 105, $p < 0.001$. The scree plot (Figure S1) indicated a single latent compassion factor that was determined with parallel analysis and that explained 79% of the variance. Factor loadings and communalities are reported in Table 3. To confirm the EFA results, we performed CFA and IRT, and to evaluate the model's fit we computed the χ^2, comparative fit index (CFI)

Table 1. Descriptive characteristics of the patients ($n = 131$)

Sex (%)	Male	64 (48.9)
	Female	67 (51.1)
Place (%)	Hospice	54 (41.2)
	Palliative care	3 (2.3)
	Hospital ward	74 (56.5)
Age, mean (SD)		66.40 (13.93)
Education (%)	Elementary school	25 (19.1)
	Middle school	42 (32.1)
	High school	51 (38.9)
	University	13 (9.9)
Marital status (%)	Married	77 (58.8)
	Single	21 (16.0)
	Widow	18 (13.7)
	Divorced	10 (7.6)
	Cohabitant	5 (3.8)
Employment (%)	Retired	69 (52.7)
	Unemployed	14 (10.7)
	Employed	45 (34.4)
	Housewife	3 (2.3)
Religion (%)	Catholic	117 (89.3)
	Atheist	13 (9.9)
	Other	1 (0.8)
Religion practicing (%)	No	83 (63.4)
	Yes	48 (36.6)
Diagnosis (%)	Respiratory	36 (27.5)
	Gastrointestinal	15 (11.5)
	Hepatic pancreatic	17 (13.0)
	Breast/gynecological	30 (22.9)
	Other	33 (25.2)
Stage (%)	Local	15 (11.5)
	Local-regional	28 (21.4)
	Metastatic	88 (67.2)
KPS (%)	20	5 (3.8)
	30	40 (30.5)
	40	43 (32.8)
	50	43 (32.8)
Patient awareness (%)	Absent	8 (6.1)
	Diagnosis awareness	21 (16.0)
	Overestimated prognosis	42 (32.1)

(*Continued*)

https://doi.org/10.1017/S1478951524001202 Published online by Cambridge University Press

Table 1. (*Continued.*)

	Terminality awareness, no diagnosis	1 (0.8)
	Total awareness	59 (45.0)
Practitioner awareness (%)	Total awareness	131 (100.0)
Caregiver awareness (%)	Absent	5 (3.8)
	Diagnosis awareness	9 (6.9)
	Overestimated prognosis	10 (7.6)
	Terminality awareness, no diagnosis	1 (0.8)
	Total awareness	106 (80.9)

Table 2. Descriptive statistics of SCQit items

Item	*n*	Min	Max	Mean	SD	skew	kurt
Feel cared for	131	1	5	3.79	1.12	−1.32	1.13
Genuine concern	131	1	5	3.66	1.03	−1.12	0.87
Communicated sensitive	131	1	5	3.89	1.09	−1.16	0.87
Attentive	131	1	5	3.86	1.11	−1.21	0.87
Provided comfort	131	1	5	3.61	1.13	−0.66	−0.23
Very supportive	131	1	5	3.73	1.17	−0.90	0.02
Provided care	131	1	5	4.08	1.00	−1.15	0.76
Spoke with kindness	131	1	5	4.11	0.98	−1.27	1.38
Saw as person	131	1	5	3.74	1.19	−0.80	−0.25
Behaved in caring way	131	1	5	3.76	1.05	−0.97	0.54
Really understood needs	131	1	5	3.54	1.17	−0.84	−0.09
Good relationship	131	1	5	3.76	1.10	−1.03	0.64
See my perspective	131	1	5	3.47	1.12	−0.67	−0.21
Warm presence	131	1	5	3.65	1.14	−0.90	0.18
Sincere	131	1	5	3.85	1.00	−1.15	1.32

and root-mean-square error of approximation (RMSEA) (Table 4). CFA factor loadings ranged between 0.81 and 0.92, and correlated ($r = 0.97$) with IRT factor loadings (see Supplementary materials for IRT results and Figures S2 and S3) ranging from 0.86 and 0.96.

In assessing divergent validity, as expected the SCQit correlated positively with both the FACIT-TS-PS ($r = 0.81$; 95% CI 0.71–0.88) and TIOS-SF ($r = 0.75$; 95% CI 0.65–0.83). This confirms that the SCQit is related to, but sufficiently distinct from, patient satisfaction and trust. Moreover, a slight negative correlation was revealed between the SCQit and ESAS ($r = -0.17$ 95% CI −0.36–0.03).

The results of univariate linear regression models, performed to evaluate the relationship between SCQit and demographic characteristics, are shown in Table 5. Significant differences emerged between score of compassion and care location, with patients in hospitals experiencing less perceived compassion in comparison to patients in hospices (−0.42, $p = 0.015$). Religious patients reported slightly higher experiences of compassion (0.37, $p = 0.043$); while patients with high prognosis/diagnosis awareness reported significantly lower levels of compassion (−0.37, $p = 0.023$).

Discussion and conclusion

Discussion

The aim of the present study was to evaluate the psychometrics properties of the SCQit in terminally ill cancer patients with a life expectancy of less than 4 months. As in the original validation (Sinclair et al. 2021), a single factor model was identified, and excellent internal consistency was confirmed in an Italian context, with each of the 15 items mapping onto each of the domains of the patient informed Compassion Model (Sinclair et al. 2016a). Thus, this study provides evidence confirming that the Italian version of the SCQ is a valid and reliable measure of compassion, that is equally robust as the original English version of the SCQ.

Likewise, divergent validity analyses confirmed that the SCQit is related to, but sufficiently distinct from, patient satisfaction and trust. Furthermore, the positive association found between SCQit and FACIT-TS-PS and TIOS-SF suggests that patient experiences of compassion, enhances patient satisfaction and trust in their healthcare professionals. While future research is needed, we postulate that compassion is likely a predictor of patient satisfaction, while relating to patients as fellow human beings, understanding them as persons with unique needs, and actively attending to their suffering engenders deeper patient–provider trust. These results are important as patients who report greater trust in their physicians exhibit greater healthy behaviors, less symptoms, higher quality of life, and were more satisfied with their overall care (Sinclair et al. 2016a, 2016b). Notably, these findings further substantiate our previous findings (Chandra et al. 2018), that suggested compassionate healthcare providers are better able to meet patients' needs in a more authentic manner while improving the patient–doctor therapeutic alliance. Moreover, the SCQit was slightly negatively correlated with the severity of distress related to overall symptoms (measured with the ESAS-r). This negative association implies that compassionate care was perceived as lower in participants reporting higher symptom distress, and consequently experienced a lower quality of life.

Secondary analysis aimed at evaluating the sociodemographic and care setting variables associated with SCQit showed no significant correlations between compassion and sex, age, marital status, employment, diagnosis, and stage of illness. However, lower levels of compassion were found among patients admitted to a hospital in comparison to those in hospice. A similar result was found also in Sinclair's original validation, which found long-term care patients experienced lower levels of compassion in comparison to patients in hospice and an acute palliative care unit (Sinclair et al. 2017c). These findings are in line with previous data which highlighted hospices as a preferential place of care for patients facing the

https://doi.org/10.1017/S1478951524001202 Published online by Cambridge University Press

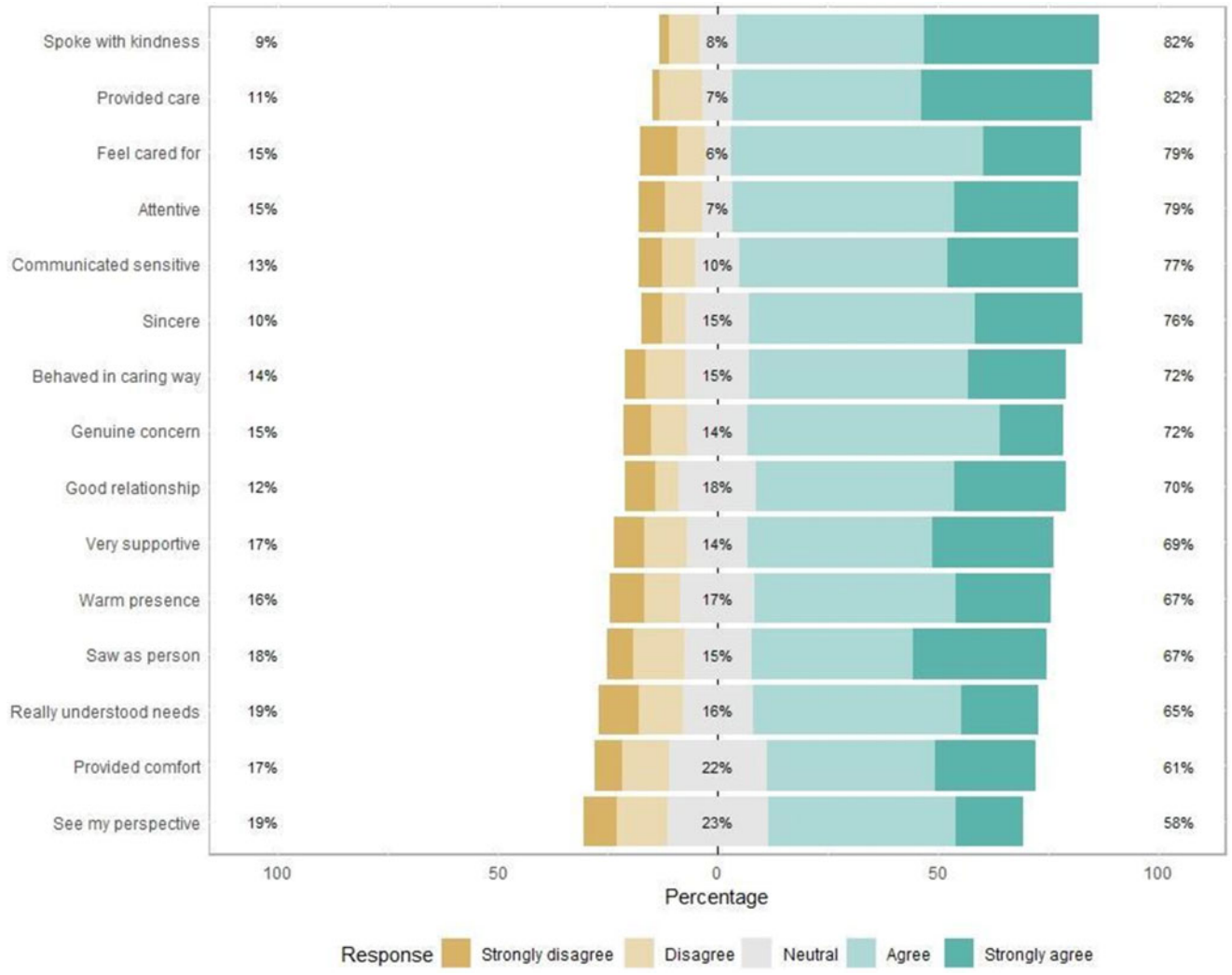

Figure 1. Percentage of responses for each item.
The figure describes the frequencies and percentages of responses of the 15-item SCQit.

end-of-life (Currow et al. 2020; Seale and Kelly 1997; Tatum 2020). Interestingly, our results revealed that religious patients perceive their healthcare providers as being more compassionate. While this may be due to a variety of factors such as lower expectations, differences in conceptualizations of compassion, additional sources of compassion (e.g. religious communities, God), other studies have demonstrated that religion, spirituality, and culture are external factors that affect individual's perception of compassionate care (Sinclair et al. 2018; Singh et al. 2020).

Finally, our data also revealed that patients who with high prognostic awareness reported less compassion than those who were only partially aware of their condition. We are somewhat perplexed by this finding and recommend further research to investigate this phenomenon. Perhaps perceptions of compassion vary when the hope for a cure is no longer possible, or perhaps oncologists are less competent in expressing compassion at the end-of-life, or perhaps as has been reported in other studies (Hayuni et al. 2019; Sinclair et al. 2017b), burnout associated with care at the end-of-life diminishes healthcare providers' ability to provide compassion.

Strengths and limitations of the study

The main strength of the present study is that it has produced a valid, reliable, and easy-to-use tool for assessing the provision of compassionate care by healthcare providers toward Italian patients facing the end-of-life. Being able to better understand patients' experiences of compassion can guide intervention research and facilitate the development of clinical cultures of compassion, which can enhance the patient's quality of life and equipe healthcare providers with the necessary clinical skills to do so, while also mitigating burnout (Sinclair et al. 2016b; 2021).

This study also has some limitations. First, future studies with larger samples are needed to confirm further the psychometric properties of the SCQit. Moreover, the generalizability of the SCQit to other patient populations is limited as this study was focused exclusively on end-of-life cancer patients. Another limitation is our inability to assess the convergent validity of the SCQit, as no other validated compassion measures are available in Italian, further highlighting the paucity of studies on this topic in this

https://doi.org/10.1017/S1478951524001202 Published online by Cambridge University Press

Table 3. Factor loadings and communalities from EFA

	Loadings	Communality
Feel cared for	0.915	0.838
Genuine concern	0.900	0.809
Communicated sensitive	0.885	0.783
Attentive	0.880	0.774
Provided comfort	0.885	0.782
Very supportive	0.916	0.839
Provided care	0.909	0.826
Spoke with kindness	0.881	0.776
Saw as person	0.836	0.699
Behaved in caring way	0.915	0.836
Really understood needs	0.888	0.789
Good relationship	0.875	0.766
See my perspective	0.887	0.787
Warm presence	0.916	0.839
Sincere	0.808	0.653

Table 4. Model fit metrics for CFA and IRT

	χ^2 (*p*-value)	CFI	RMSEA (95% CI)
CFA	$\chi^2 = 310.26$ ($p < 0.001$)	0.92	0.14 (0.12–0.15)
IRT	202.28 ($p < 0.001$)	0.99	0.08 (0.08–0.12)

Table 5. Linear Regression Model: effects of demographic variables on SCQ

Variables		Coefficients (95% CI, *p*-value)
Sex	Male	
	Female	0.29 (−0.05 to 0.62, $p = 0.092$)
Place	Hospice	
	Palliative care	−0.51 (−1.63 to 0.62, $p = 0.376$)
	Hospital ward	−0.42 (−0.76 to −0.08, $p = 0.015$)
Age	[25.0,98.0]	−0.00 (−0.02 to 0.01, $p = 0.478$)
Education (%)	Elementary school	
	Middle school	−0.06 (−0.54 to 0.41, $p = 0.786$)
	High school	−0.02 (−0.48 to 0.43, $p = 0.922$)
	University	−0.99 (−1.62 to − 0.35, $p = 0.003$)
Marital status (%)	Married	
	Single	0.02 (−0.46 to 0.50, $p = 0.933$)
	Widow	0.16 (−0.34 to 0.67, $p = 0.522$)
	Divorced	−0.23 (−0.88 to 0.42, $p = 0.490$)
	Cohabitant	0.58 (−0.31 to 1.48, $p = 0.199$)
Employment (%)	Retired	
	Unemployed	0.09 (−0.48 to 0.66, $p = 0.748$)
	Employed	0.08 (−0.29 to 0.46, $p = 0.653$)
	Housewife	0.64 (−0.50 to 1.79, $p = 0.269$)
Religion practicing (%)	No	
	Yes	0.36 (0.01 to 0.71, $p = 0.041$)
Diagnosis (%)	Respiratory	
	Gastrointestinal	−0.07 (−0.67 to 0.53, $p = 0.814$)
	Hepatic pancreatic	0.23 (−0.34 to 0.80, $p = 0.426$)
	Breast/gynecological	0.16 (−0.32 to 0.64, $p = 0.518$)
	Other	−0.10 (−0.57 to 0.37, $p = 0.671$)
Stage (%)	Local	
	Local-regional	−0.08 (−0.70 to 0.54, $p = 0.795$)
	Metastatic	−0.15 (−0.69 to 0.39, $p = 0.585$)
KPS	20	
	30	1.35 (0.47 to 2.23, $p = 0.003$)
	40	1.38 (0.50 to 2.26, $p = 0.002$)
	50	0.95 (0.08 to 1.83, $p = 0.033$)
Patient awareness	Partial awareness	
	Total awareness	−0.39 (−0.72 to −0.05, $p = 0.023$)
Caregiver awareness	Partial awareness	
	Total awareness	0.05 (−0.38 to 0.48, $p = 0.818$)

context. Finally, this study is limited in its cross-sectional design, which did not allow us to assess whether terminally ill patients experienced changes in the compassion they received during their final months – including changes in perceptions of compassion

https://doi.org/10.1017/S1478951524001202 Published online by Cambridge University Press

among patients with high prognostic awareness. Future studies could conduct a longitudinal assessment of compassion, although we recognize that the challenges associated with recruiting and losing patients before the end of a study is an inherent challenge in end-of-life research. Moreover, it could be interesting to investigate sociodemographic and clinical factors associated with compassion in other clinical populations, to determine if experiences of compassion vary across clinical settings, patient populations, and healthcare provider teams.

Conclusion

The results of the present study demonstrate that the SCQit is a valid and reliable measure of compassion in terminal cancer patients with a life expectancy of less than 4 months. The SCQit has the potential to improve patients' perception of compassion during end-of-life care while providing healthcare providers with the necessary attitudes, knowledge, and skills to improve the compassion they provide in their practice. These findings underscore the important role that compassion plays in enhancing patient–provider relationships, in understanding patients' personhood and unique needs, and in improving quality palliative care.

Practice implications

The SCQit can be used in both clinical practice and research in Italy to assess patients' perception of compassion during end-of-life care and to evaluate the effectiveness of training to promote compassionate care in healthcare providers. Further research is needed to validate the SCQit in other populations and healthcare settings.

Supplementary material. The supplementary material for this article can be found at https://doi.org/10.1017/S1478951524001202.

Acknowledgments. The authors would like to thank for the time given the individuals who participated in the study. The authors are also grateful to Stephanie Parsley for the proofreading of the manuscript.

Use of the SCQ, authored by Dr. Shane Sinclair, Dr. Tom Hack, Dr. Cara MacInnis, Harrison Boss, Priya Jaggi, Dr. Susan McClement, Dr. Aynharan Sinnarajah and Dr. Genevieve Thompson was made under license from UTI Limited Partnership.

The SCQit and other versions of the SCQ are available at www.compassionmeasure.com; by emailing the contact author directly (sinclair@ucalgary.ca) or by emailing ipm@innovatecalgary.com.

Author contributions. Conceptualization, A.B., A.F., S.S., and S.C.; data collection, A.F., F.C., and I.D.G.; statistical analysis: S.U. and P.B.; interpretation of data, all authors; writing – original draft preparation, A.B., A.F., and S.C.; figure preparation, S.U. and P.B.; writing – review and editing, all authors; supervision, A.B., L.O., and S.C. All authors have read and approved the final version of the manuscript.

Funding. This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Competing interests. The authors declare that there is no conflict of interest.

We confirm all patient identifiers have been removed or disguised so the patients described are not identifiable and cannot be identified through the details of the story.

References

Bani M, Rossi E, Cortinovis D, *et al.* (2021) Validation of the Italian version of the full and abbreviated trust in Oncologist Scale. *European Journal of Cancer Care* **30**(1), e13334. doi:10.1111/ecc.13334

Bovero A, Adriano B, Di Girolamo I, *et al.* (2023) Compassion: Learning needs and training opportunities—a survey among palliative healthcare providers in Italy. *Journal of Cancer Education* **38**(1), 161–166. doi:10.1007/s13187-021-02093-0

Brito-Pons G and Librada-Flores S (2018) Compassion in palliative care: A review. *Current Opinion in Supportive & Palliative Care* **12**(4), 472–479. doi:10.1097/SPC.0000000000000393

Bruera E, Kuehn N, Miller MJ, *et al.* (1991) The Edmonton Symptom Assessment System (ESAS): A simple method for the assessment of palliative care patients. *Journal of Palliative Care* **7**(2), 6–9. doi:10.1177/082585979100700202

Canadian Medical Association (2004) CMA Code of Ethics.

Chandra S, Mohammadnezhad M and Ward P (2018) Trust and communication in a doctor-patient relationship: A literature review. *Journal of Healthcare Communications* **03**(03). doi:10.4172/2472-1654.100146

Christiansen A, O'Brien MR, Kirton JA, *et al.* (2015) Delivering compassionate care: The enablers and barriers. *British Journal of Nursing* **24**(16), 833–837. doi:10.12968/bjon.2015.24.16.833

Chu XR, Jaggi P, Louis JS, *et al.* (2023) Initial validation of a patient-reported compassion measure in a Mandarin-speaking long-term care patient population. *Journal of Nursing Measurement* **32**(2), 300–311. doi:10.1891/JNM-2022-0097

Coffey A, Saab MM, Landers M, *et al.* (2019) The impact of compassionate care education on nurses: A mixed-method systematic review. *Journal of Advanced Nursing* **75**(11), 2340–2351. doi:10.1111/jan.14088

Commissioning Board Chief Nursing Officer and DH Chief Nursing Adviser (2012) Compassion in practice. Nursing, Midwifery and Care Staff. Our Vision and Strategy.

Currow DC, Agar MR and Phillips JL (2020) Role of hospice care at the end of life for people with cancer. *Journal of Clinical Oncology* **38**(9), 937–943. doi:10.1200/JCO.18.02235

Dev V, Fernando AT, Kirby JN, *et al.* (2019) Variation in the barriers to compassion across healthcare training and disciplines: A cross-sectional study of doctors, nurses, and medical students. *International Journal of Nursing Studies* **90**, 1–10. doi:10.1016/j.ijnurstu.2018.09.015

Gilbert P, Catarino F, Duarte C, *et al.* (2017) The development of compassionate engagement and action scales for self and others. *Journal of Compassionate Health Care* **4**(1), 4. doi:10.1186/s40639-017-0033-3

Guglielmetti C (2013) A model-based approach to validate a measuring instrument for assessing the quality of care. *Quaderni Di Statistica* **15**, 203–217.

Hayuni G, Hasson-Ohayon I, Goldzweig G, *et al.* (2019) Between empathy and grief: The mediating effect of compassion fatigue among oncologists. *Psycho-Oncology* **28**(12), 2344–2350. doi:10.1002/pon.5227

Hillen MA, Postma R-M, Verdam MGE, *et al.* (2017) Development and validation of an abbreviated version of the trust in Oncologist Scale—the Trust in Oncologist Scale–short form (TiOS-SF). *Supportive Care in Cancer* **25**(3), 855–861. doi:10.1007/s00520-016-3473-y

Jenkinson C (2002) The Picker Patient Experience Questionnaire: Development and validation using data from in-patient surveys in five countries. *International Journal for Quality in Health Care* **14**(5), 353–358. doi:10.1093/intqhc/14.5.353

Kang JH, Go SI and Bruera E (2018) Compassion is a key quality for palliative care teams. *Cancer Medicine* **7**(11), 5325–5326. doi:10.1002/cam4.1804

Lown BA, Dunne H, Muncer SJ, *et al.* (2017) How important is compassionate healthcare to you? A comparison of the perceptions of people in the United States and Ireland. *Journal of Research in Nursing* **22**(1–2), 60–69. doi:10.1177/1744987116679692

Lown BA, Muncer SJ and Chadwick R (2015) Can compassionate healthcare be measured? The Schwartz Center Compassionate Care Scale^{TM}. *Patient Education and Counseling* **98**(8), 1005–1010. doi:10.1016/j.pec.2015.03.019

Malenfant S, Jaggi P, Hayden KA, *et al.* (2022) Compassion in healthcare: An updated scoping review of the literature. *BMC Palliative Care* **21**(1), 80. doi:10.1186/s12904-022-00942-3

Pavlova A, Paine S, Sinclair S, *et al.* (2023) Working in value-discrepant environments inhibits clinicians' ability to provide compassion and reduces well-being: A cross-sectional study. *Journal of Internal Medicine* **293**(6), 704–723. doi:10.1111/joim.13615

Peipert JD, Beaumont JL, Bode R, ***et al.*** (2014) Development and validation of the functional assessment of chronic illness therapy treatment satisfaction (FACIT TS) measures. *Quality of Life Research* **23**(3), 815–824. doi:10.1007/s11136-013-0520-8

Perez-Bret E, Altisent R and Rocafort J (2016) Definition of compassion in healthcare: A systematic literature review. *International Journal of Palliative Nursing* **22**(12), 599–606. doi:10.12968/ijpn.2016.22.12.599

Riddick FA (2003) The code of medical ethics of the american medical association. *Ochsner Journal* **5**(2), 6–10.

Ripamonti C, Leporati R, De Feo G, ***et al.*** (2022) Italian version of the Edmonton Symptom Assessment System (ESAS)–Total Care (TC): Development and psychometric validation in patients undergoing cancer treatment or follow-up. *Supportive Care in Cancer* **30**(3), 1923–1933. doi:10.1007/s00520-021-06594-y

Seale C and Kelly M (1997) A comparison of hospice and hospital care for people who die: Views of the surviving spouse. *Palliative Medicine* **11**(2), 93–100. doi:10.1177/026921639701100202

Sinclair S, Beamer K, Hack TF, ***et al.*** (2017a) Sympathy, empathy, and compassion: A grounded theory study of palliative care patients' understandings, experiences, and preferences. *Palliative Medicine* **31**(5), 437–447. doi:10.1177/0269216316663499

Sinclair S, Hack TF, MacInnis CC, ***et al.*** (2021) Development and validation of a patient-reported measure of compassion in healthcare: The Sinclair Compassion Questionnaire (SCQ). *BMJ Open* **11**(6), e045988. doi:10.1136/bmjopen-2020-045988

Sinclair S, Jaggi P, Hack TF, ***et al.*** (2018) Assessing the credibility and transferability of the patient compassion model in non-cancer palliative populations. *BMC Palliative Care* **17**(1), 108. doi:10.1186/s12904-018-0358-5

Sinclair S, Jaggi P, Hack TF, ***et al.*** (2020) Initial validation of a patient-reported measure of compassion: Determining the content validity and clinical sensibility among patients living with a life-limiting and incurable illness. *The Patient - Patient-Centered Outcomes Research* **13**(3), 327–337. doi:10.1007/s40271-020-00409-8

Sinclair S, Kondejewski J, Hack TF, ***et al.*** (2022) What is the most valid and reliable compassion measure in healthcare? An updated comprehensive and critical review. *The Patient - Patient-Centered Outcomes Research* **15**(4), 399–421. doi:10.1007/s40271-022-00571-1

Sinclair S, McClement S, Raffin-Bouchal S, ***et al.*** (2016a) Compassion in health care: An empirical model. *Journal of Pain and Symptom Management* **51**(2), 193–203. doi:10.1016/j.jpainsymman.2015.10.009

Sinclair S, Norris JM, McConnell SJ, ***et al.*** (2016b) Compassion: A scoping review of the healthcare literature. *BMC Palliative Care* **15**(1), 6. doi:10.1186/s12904-016-0080-0

Sinclair S, Raffin-Bouchal S, Venturato L, ***et al.*** (2017b) Compassion fatigue: A meta-narrative review of the healthcare literature. *International Journal of Nursing Studies* **69**, 9–24. doi:10.1016/j.ijnurstu.2017.01.003

Sinclair S, Russell LB, Hack TF, ***et al.*** (2017c) Measuring compassion in healthcare: A comprehensive and critical review. *The Patient - Patient-Centered Outcomes Research* **10**(4), 389–405. doi:10.1007/s40271-016-0209-5

Singer T and Klimecki OM (2014) Empathy and compassion. *Current Biology* **24**(18), R875–R878. doi:10.1016/j.cub.2014.06.054

Singh P, King-Shier K and Sinclair S (2020) South Asian patients' perceptions and experiences of compassion in healthcare. *Ethnicity & Health* **25**(4), 606–624. doi:10.1080/13557858.2020.1722068

Soto-Rubio A, Andrew Y, Beatriz GJ, ***et al.*** (2024) The adaptation and validation of a patient reported compassion measure in the Spanish population: The Spanish Version of the Sinclair Compassion Questionnaire (SCQesp). *Research in Nursing and Health* **47**(3), 344–355.

Strauss C, Lever Taylor B, Gu J, ***et al.*** (2016) What is compassion and how can we measure it? A review of definitions and measures. *Clinical Psychology Review* **47**, 15–27. doi:10.1016/j.cpr.2016.05.004

Tatum PE (2020) End-of-life care: Hospice care. *FP Essentials* **498**, 26–31.

Tehranineshat B, Rakhshan M, Torabizadeh C, ***et al.*** (2019) Compassionate care in healthcare systems: A systematic review. *Journal of the National Medical Association* **111**(5), 546–554. doi:10.1016/j.jnma.2019.04.002

Watanabe SM, Nekolaichuk CL and Beaumont C (2012) The Edmonton Symptom Assessment System, a proposed tool for distress screening in cancer patients: Development and refinement. *Psycho-Oncology* **21**(9), 977–985. doi:10.1002/pon.1996

https://doi.org/10.1017/S1478951524001202 Published online by Cambridge University Press