Original article

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Work engagement of nurses in palliative care — a validation study of the UWES scale-9 and selected socio-demographic and professional determinants

Abstract

Introduction: Commitment to work is one of the more expected attitudes towards work, characterized by respect for the values presented by the employing institution and accompanied by positive emotions such as excitement, enthusiasm, satisfaction, a feeling of full energy, pleasure, or even happiness. The study aimed to test the psychometric properties of the Utrecht Work Engagement Scale (UWES) and to assess the work engagement of nursing staff in palliative care, as well as to determine the association of UWES with selected socio-demographic and occupational determinants.

Participants and methods: This study is cross-sectional and validated in line with the STROBE checklist for research reporting. The survey was conducted in 2023, among nurses working in palliative care centres in Poland using the survey technique Paper And Pencil Interview (PAPI) and Computer Assisted Web Interview (CAWI).

Results: The mean work engagement scores of the UWES-9 version 2 palliative care nurses are as follows: the mean score was 4.26 (M = 4.26; SD = 1.09); Me = 4.56, min–max (0.33–6.00). A regression analysis, in which the overall UWES-9 questionnaire score was the dependent variable and demographic and occupational variables were the independent variables, showed $R^2 = 0.32$ and its significance $p < 0.001$.

Conclusions: The research carried out showed that the UWES-9 version 2 is a reliable and relevant tool to measure the work engagement of nursing staff providing services in palliative care. Work engagement in the surveyed group of nurses is influenced by the female sex, greater number of full-time jobs, longer tenure, and place of residence.

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Keywords: work engagement, nurses, palliative care, UWES-9, psychometric analysis

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Introduction

Nowadays, many employers understand the value of engagement at work as an essential and decisive factor in the efficiency and effectiveness of the activities carried out in various institutions. Individuals who demonstrate higher levels of engagement are able to deliver higher levels of productivity and quality at work [1]. At the same time, the engaged employee experiences his or her work as stimulating and energy-giving is fully focused on it, and evaluates it as something valuable, relevant, meaningful, and significant to the achievement of the goals he or she values [2]. The concept of work engagement is defined by the state in which employees relate to work as part of their lives, identify with it, and think positively about it, even when they are not at work [3]. Schaufeli et al. [4] present work engagement as "a positive, satisfying and work-related psychological state characterized by vigor, preoccupation and dedication". The above states refer to the three pillars of human development: physical (vigor), cognitive (absorption), and emotional (dedication/surrender). Vigor is characterized by a high level of mental toughness at work, energy, willingness to put in effort, and perseverance even in the face of great difficulties. One can speak of preoccupation when one is fully concentrated and deeply absorbed in one's work, time passes quickly and it is difficult to break away from it. Challenge at work, inspiration, enthusiasm, a sense of importance, pride, and altruism are all characteristics of dedication [5, 6].

Commitment to work is one of the more expected attitudes towards work, characterized by respect for the values presented by the employing institution and accompanied by positive emotions such as excitement, enthusiasm, satisfaction, a feeling of full energy (energized), pleasure, or even happiness. Commitment plays a special role especially in difficult and tense situations, as committed employees are able to mobilize effectively under pressure [7], change their work environment (job crafting), modify both the demands of the job and adjust their resources [8]. Engaged health professionals provide high-quality, cost-effective care and carry out activities beyond their formal responsibilities [9, 10]. Commitment to work is key to high-quality care in palliative care. Nurses in hospice care characterized by higher work engagement tend to be highly productive in their work, are more likely to have positive attitudes towards the care of dying patients and their families, and provide patient-centered care [11]. Among the numerous empirically validated factors with a reinforcing effect on nurses' commitment to working with patients are: perceived vocation [12], psychological resilience [13], individual intrinsic and altruistic work values [14], psychological flexibility [15], and positive affectivity [16].

In nursing practice, on the other hand, low levels of work engagement could manifest themselves in poor quality patient care, adverse events, and even increased patient mortality [17]. Understanding the potentially modifiable factors associated with work engagement is an important goal and can help managers of hospice care organizations in their efforts and research to develop effective workplace interventions to increase the resilience of staff caring for dying patients. Up to the present, no studies promoting the importance of work engagement among palliative care staff and their socio-demographic and professional determinants have been reported in Poland. Furthermore, involvement in the care of dying patients and their families is expected to be at a high level, hence the psychometric value of specific measurement tools for this phenomenon in nurses' work needs to be confirmed. In this sense, engagement in palliative care is a topic of great importance for organizations related to professionals in this field of nursing.

The study aimed to test the psychometric properties of the Utrecht Work Engagement Scale (UWES) and to assess the work engagement of nursing staff in palliative care, as well as to determine the association of UWES with selected socio-demographic and occupational determinants.

Participants and methods

Study design

This research has a cross-sectional and validation design, adhering to the STROBE statement checklist for reporting [18]. The study used a diagnostic survey method with a Paper And Pencil Interview (PAPI) and Computer Assisted Web Interview (CAWI) survey technique, conducted in 2023 Poland.

Participants and setting

The Raosoft Sample Size Calculator was used to determine the sample size [19]. Assumed: population size maximum — 9,473 nurses based on data reported to the National Health Fund (NFZ) for the implementation of palliative and hospice care services in Poland in 2022 [20]; margin of error — 5% (margin of error of 0.05); confidence level — 95% (confidence level of 0.950); fraction size — 50% (response distribution of 0.50). With the parameters given above, a minimum sample size of 370 respondents was obtained. Considering the loss of 10% of the sample, a sample size of 424 was required. In the self-study, 424 respondents were surveyed, which demonstrates the correct sample size of the sample group. Inclusion

criteria for study participants included: 1) practice as a nurse, 2) providing palliative and hospice care, and 3) giving informed consent to participate in the study.

Measures

Two survey instruments were used in this study:

1. The Utrecht Work Engagement Scale (UWES) [21] is available in Polish on the author's website [22]. The questionnaire consists of 17 statements relating to the respondent's work, rated using a 7-point Likert scale from 0 ("never") to 6 ("always"), grouped into three subscales: vigor, absorption, and dedication. By entering a number from 1 to 6, the respondent chooses the one that best describes the frequency of his or her feelings. Each nurse's total score on the UWES survey was calculated to determine overall reported work engagement, with higher scores indicating greater engagement [23]. The UWES is the most commonly used scale to measure engagement. The scale originally presented 17 items (UWES-17) [24]. To date, no universal way of measuring work engagement has been clearly established. The different categories of the UWES questionnaire (17-item, 9-item, 3-item) prove to be accurate in different countries and different cultures. Despite this, the questionnaire is emerging as a forward-looking and promising tool. This is because it is one of the few tools that places work engagement, within the broader context of Job Demands-Resources theory [25]. In Poland, the above questionnaire operates under the name: *Praca i Samopoczucie* (Work and Self--Employment) (UWES) [26]. The linguistic and cultural adaptation and psychometric evaluation of this scale into Polish was carried out by a team consisting of: Szabowska-Walaszczyk, Zawadzka, Wojtaś [27] and Kulikowski and Madej [28], who recommend replicating its psychometric properties on a different sample, as the sample was relatively small (n = 142), which may make it difficult to generalize the results obtained. Several attempts have been made to test the usefulness and validation of the UWES. Research shows that the 9-item UWES scale has the best psychometric properties and should be created from covariate data from the study sample. This is also influenced by socio-demographic and cultural conditions, as shown in various studies, including Germany [29], Vietnam [30], Utrecht [31] and Poland [32, 33].
   Work engagement was assessed with the use of the Polish version [34] of the UWES-9 questionnaire [35]. This tool enables measuring the overall engagement and its three variants: vigor, absorption, and dedication. The answers are given on a scale from 0 (never) to 6 (always). The results for the overall scale can range from 0 to 54 points.
2. A short questionnaire of self-questions: socio-demographic data (sex, age, place of residence, marital status, education, attitude to faith) and professional data (length of service, length of service in palliative care, and number of posts) were collected using standard questions.

Data collection

Nurses working in palliative care from across the country were selected for the study by using convenience sampling between June and August 2023. The study included 424 nursing staff delivering palliative care. The PAPI method yielded 197 paper questionnaires from postal correspondence addressed to 228 palliative care units and hospices in different provinces in Poland. Of the 454 survey questionnaires carried out using the PAPI method, 197 correctly completed survey questionnaires were returned (a return rate of 43.2%).

The CAWI survey was conducted using an online questionnaire. Administrators on the seven Facebook fan pages targeting nurses with the highest number of likes were asked to share a link to the survey on the message board. The posted link redirected the survey participant to the survey questionnaire. The CAWI technique was used to obtain 227 completed survey questionnaires. All respondents were informed of the purpose of the survey and the opportunity to take part voluntarily and anonymously when they accessed the survey link. In addition, each participant in the study had to give their consent to take part in the study by ticking the appropriate box. After this activity, the subject was able to access the questionnaire form.

Ethical consideration

This study has been approved by the ethics committee of the first author's institution with ethics approval code opinion of the Bioethics Committee at the Witold Chodźko Institute of Rural Health in Lublin (No. 7/2023).

In the PAPI study, participants signed an Informed Consent Form to participate in the study. The online survey conducted by the CAWI method commenced with an electronic informed consent form in Poland. This introductory section detailed the study's purpose, participation risks, respondent confidentiality, anticipated benefits, voluntary nature of participation, and withdrawal rights. Agreement to participate was indicated by selecting "agree", while "don't agree" redirected respondents to finish the survey.

Statistical analysis

Nurses' work engagement was assessed in the light of sociodemographic (such as sex and age) and work-related variables (including length of service, number of posts, or place of work). To compare two independent samples, the Student's t-test was used if the assumptions of a normal distribution were met, or the Mann–Whitney test if the distribution deviated from a normal distribution. An ANOVA test (parametric F-test or non-parametric Kruskal–Wallis test) was used to compare the values of quantitative variables between more than two independent groups. Where differences occurred, the post-hoc test was used to demonstrate the nature of the variation. Correlation analysis was used to analyze the relationship between the two quantitative variables.

A confirmatory factor analysis (CFA) factor analysis was conducted to assess the construct validity of the UWES. Structural equation modeling was used to test the emergent structure of the UWES Scale using the maximum likelihood estimation method. The global fit of the model was assessed using the following fit statistics: the Tucker–Lewis index (TLI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA). It has been assumed that a very good fit is obtained when the CFI and TLI are 0.90 or more and the RMSEA is 0.10 or less [36].

A regression analysis was conducted to determine the relationship of work engagement (UWES-9 ver. 2 scale) with the other variables. The coefficient of determination (R2), the analysis of variance in the regression, and the significance of the model parameters were assessed. A significance level of $\alpha = 0.05$ was used throughout the analysis. Analyses were carried out using Statistica 13.3.

Results

Demographic and occupational characteristics

The average age was 50.65 years (M = 50, 65; SD = 9.99), and the subjects ranged in age from 23 to 76 years. The vast majority of respondents were women (94.34%, n = 400), urban residents (68.4%; n = 290), and married (68.4%; n = 290). Masters in nursing were the largest group (36.79%, n = 156), and those with years of experience in palliative care or less accounted for 29.48% (n = 125). The mean length of service in palliative care was 11.89 years (M = 11.89; SD = 8.34) and the mean length of service was 25.45 years (M = 25.45; SD = 12.32). The demographic and occupational characteristics of the 424 study participants are detailed in Table 1.

Factor analysis of the UWES scale

The descriptive statistics of the Utrecht Work Engagement Scale (UWES-17), together with the items assigned to the scale, are presented in Table 2. The confirmatory factor analysis conducted showed that the 3-factor model was a poor fit for the data. The scales were shown to be univariate but were not shown to be orthogonal. It was further shown that the correlations between the scores of the individual subscales of the questionnaire were ($r = 0.77$; $p < 0.001$). The above results showed that a one-factor model of involvement was adopted in further analyses.

The analyses did not show that any of the proposed models: the 17-item model (UWES-17) and the 9-item model (UWES-9) achieved satisfactory parameters that would allow the conclusion of a good model fit (Table 3). Therefore, an attempt was made to fit a model better suited to the data collected in this study. The analysis began by testing a 17-factor model. The questions were then manipulated to get the best fit. Questions were removed one by one to obtain the best goodness-of-fit parameters for the data. Questions that had a low factor load and high correlation with errors were removed. The results of the analysis yielded a model consisting of nine items (UWES-9 ver. 2).

The Cronbach's alpha reliability estimate for the proposed UWES-9 version 2 model was 0.939. The results obtained demonstrate the very good reliability of the tool (Table 4).

Work engagement in accordance with UWES-9 version 2 and the relationship between the UWES-9 version 2 scale and demographic and occupational variables

Descriptive statistics of work engagement for the univariate 9-item model (UWES-9 ver. 2) were as follows: the mean score was 4.26 (M = 4.26; SD = 1.09); Me = 4.56, min–max (0.33–6.00). Detailed results for subscales are presented in Table 5. The highest mean score was noticed in the dedication subscale (M = 4.58; SD = 1.02), and the lowest score was found in the absorption subscale (M = 3.92; SD = 1.05). Skewness for particular subscales was negative, which indicates left skewed distribution. Kurtosis, which is a measure of the aspect's concentration around the mean, measured for studied variables fell within the range between 0.02 and 0.499. Assessed aspects had a positive kurtosis, which shows a higher score concentration around the mean than in the case of normal distribution.

Table 6 presents the distribution of mean scores by UWES-9 dimension due to demographic and occupational variables. Differences on the borderline of statistical significance as above in terms of involvement by sex (p = 0.087). Women were characterized

Table 1. Characteristics of the study group

Variables	Indicators	n = 424	[%]
Sex	Woman	400	94.34
	Man	24	5.66
Age	Under 40 years old	66	15.57
	40 to 49 years old	92	21.70
	50 to 59 years old	198	46.70
	60 to 69 years old	66	15.57
	70 years old and over	2	9.47
Education	Certified nurse	62	14,62
	Certified nurse with a specialization	73	17,22
	Bachelor of Science in Nursing	53	12.50
	Bachelor of Science in Nursing with specialization	40	9.43
	Master of Science in Nursing	28	6.60
	Master of Science in Nursing with specialization	156	36.79
	Doctor of health sciences/doctor of medicine	5	1.18
	Other	7	1.65
Marital status	Married	290	68,40
	Single	45	10.61
	Divorced	46	10.85
	Widow/widower	33	7.78
	Cohabitation/informal relationship	10	2.36
Residence	Village	134	31.60
	City	290	68,40
Seniority	Under 10 years	61	14.39
	10 to 19 years	62	14,62
	20 to 29 years	113	26.65
	30 to 39 years	164	38.68
	40 years and over	24	5.66
Seniority in palliative care	5 years and under	125	29.48
	6 to 10 years	96	22.64
	11 to 15 years	71	16.75
	16 to 20 years	51	12.03
	Over 20 years	81	19.10
Number of posts in the test group	One	250	58.96
	Two	128	30.19
	Three and more	17	4.01
	I work under a contract other than a full-time job	29	6.84
Relationship to the Catholic faith	Believer	363	85.61
	Agnostic	5	1.18
	I am of a different faith	10	2.36
	I don't want to answer that question	46	10.85

Table 2. Averages, standard deviations, and factor loadings for the questions included in the individual subscales of the questionnaire (confirmatory factor analysis using the maximum likelihood method)

Items	Scale	Factor load	M	SD
1. At work, I feel that I am bursting with energy*	VI	0.627	3.68	1.23
2. For me, the work I do is full of meaning and purpose#	DE	0.726	4,82	1.20
3. Time passes quickly when I'm working	AB	0.640	4.91	1.15
4. At work I feel strong and full of energy*#	VI	0.804	4.31	1.22
5. I am dedicated to my work	DE	0.642	5.12	1.02
6. When I work, I forget everything around me	AB	0.628	3.79	1.50
7. My work is an inspiration to me*#	DE	0.819	3.93	1.42
8. When I get up in the morning, I feel like going to work*#	VI	0.787	4.10	1.38
9. I feel happy when I am working intensively*#	AB	0.826	3.99	1.34
10. I am proud of the work I do*#	DE	0.781	4.85	1.17
11. I am absorbed by my work*#	AB	0.875	4.24	1.36
12. I can continue working for very long stretches of time#	VI	0.829	3.94	1.30
13. Work is a challenge for me#	DE	0.799	4.20	1.49
14. I forget myself when I am working*#	AB	0.519	3.18	1.58
15. I am mentally resilient at work	VI	0.478	4.03	1.19
16. I find it hard to tear myself away from my work	AB	0.676	3.42	1.36
17. I work persistently, even when things are not going well	VI	0.652	4.21	1.24

VI — the question is part of the vigor scale; DE — the question is part of the devotion to work scale; AB — the question is part of the preoccupation scale, * questions included in the UWES-9 scale: 1, 4, 5, 7–11, 14, # questions included in the UWES-9 version 2 scale: 2, 4, 7–14

Table 3. Fit indices for the 9- and 17-item versions of the UWES scale*

Model	Chi^2	p-value	CFI	RMSEA (95% CI)
UWES-17	1030.42	< 0.001	0.74	0.145 (0.138–0.153%)
UWES-9	244.13	< 0.001	0.86	0.138 (0.123–0.154%)
UWES-9 version 2	162.51	< 0.001	0.94	0.099 (0.094–0.126%)

* Questions included in the UWES-9 scale: 1, 4, 5, 7–11, 14; questions included in the UWES-9 version 2 scale: 2, 4, 7–14

Table 4. Cronbach's alpha coefficients*

Model	Cronbach's alpha
UWES-17	0.939
UWES-9	0.903
UWES-9 version 2	0.939

* Questions included in the UWES–9 scale: 1, 4, 5, 7–11, 14; questions included in the UWES-9 version 2 scale: 2, 4, 7–14

by a higher scale score (M = 4,29; SD = 1.06) compared to men (M = 3.81; SD = 1.39). Statistically significant differences were observed by marital status (p = 0.049). Those in the widow/widower group had the highest scores (M = 4.64; SD = 0.77), while those in the single group had the lowest scores (M = 3.97; SD = 1.35). Urban residents showed significantly higher UWES-9 engagement (M = 4.42; SD = 1.03) compared to rural residents (M = 3.89; SD = 1.16) (p < 0.001).

Table 5. Descriptive statistics for UWES-9 version 2 scale

Variables	Descriptive statistics						
	Mean	Median	Minimum	Maximum	SD	Skewness	Kurtosis
Vigor	4.04	4.17	1.33	6.00	0.93	−0.50	0.02
Dedication	4.58	4.80	0.60	6.00	1.02	−0.75	0.14
Absorbtion	3.92	4.00	0.00	6.00	1.05	−0.55	0.49

SD — standard deviation

However, differences were found in the length of service in palliative care ($p = 0.031$). The highest commitment was observed for those working between 16 and 20 years ($M = 4.51$; $SD = 0.99$). For the number of full-time equivalent (FTEs) statistically significant differences were shown ($p = 0.028$). Those working on contracts other than full-time were characterized by the highest level of commitment ($M = 4.84$; $SD = 0.68$). Attitude towards the Catholic faith, age, education, and length of service in the profession do not statistically significantly differentiate the level of commitment on the UWES-9 scale (Table 6).

Regression analysis

A regression analysis, in which the overall UWES-9 questionnaire score was the dependent variable and the independent variables were the other demographic and occupational variables, showed $R^2 = 0.32$ and its significance $p < 0.001$ (Table 7). This means that the model explains approximately 32% of the variability in engagement according to UWES-9. In addition, the individual significance of sex, number of posts, length of service in palliative care, and place of residence was revealed ($p < 0.05$). The remaining variables were not entered into the model due to the lack of statistical significance of the coefficients ($p > 0.05$).

Discussion

The goal of the above study was to assess the work engagement of nursing staff in palliative care, preceded by testing the psychometric properties of the UWES version 2 scale 9-item and to identify the relationship with selected work-related socio-demographic and occupational determinants. Nursing staff providing palliative care services ($n = 424$) from all over Poland were surveyed. The vast majority of people surveyed were women (94.34%, $n = 400$). The average age was 50.65 years old ($M = 50.65$; $SD = 9.99$) and the subjects ranged in age from 23 to 76 years old. Masters of nursing were the largest group (36.79%, $n = 156$). The mean length of service in palliative care was 11.89 years (*M* = 11.89; SD = 8.34) and the mean length of service was 25.45 years ($M = 25.45$; $SD = 12.32$). Although the study sample was not representative of the entire population of nurses providing palliative care services, it is one of the more numerous samples of nurses working in palliative care in recent times: Mickiewicz et al. [37] ($n = 103$); Dąbrowska-Cołostiakow and Kocbach [38] ($n = 112$).

One of the main medical areas that requires a huge commitment to staff is palliative care. It places enormous demands on medical staff also in personal resources: physical activity, hobbies, resilience, spirituality, special personality, and empathy, as well as sociodemographic factors or age [39–41]. The mean engagement score of the palliative care nurses surveyed, for the univariate UWES 9-item version 2 model, was 4.26 points ($M = 4.26$; $SD = 1.09$). In a study conducted in a sample of nurses in southern Spain ($n = 527$), the total work engagement score was 4.00 ($M = 4.0$; $SD = 1.2$) [42], and in another Spanish study in a group of 508 nurses, the obtained work engagement score was 4.10 ($M = 4.10$; $SD = 0.6$) [43]. In a group of Greek palliative care nurses ($n = 150$), work engagement scores on the UWES-17 scale were slightly lower at 3.91, $SD = 1.19$ [44]. The nurses in the following study showed a high level of overall work engagement, and these results are consistent with many previous studies, including those conducted in Egypt [45], Spain [46, 47], and the United States [48], which showed high or very high levels of work engagement among nurses. Nurses who are engaged in their work may feel high levels of energy and be absorbed in their work, which can lead to a better quality of service and enhance their positive image [49].

Nurses providing services in palliative care and fulfilling their work with a high level of commitment increase the quality of services, comfort, and satisfaction of patients [50, 51]. It is expected that a high level of engagement at work will increase the provision of

Table 6. Distribution of mean scores by UWES-9 dimension by demographic and occupational variables

Variable	Indicators	UWES-9 average (SD)	p-value
Sex	Woman	4.29 (1.06%)	0.087
	Man	3.81 (1.39%)	
Age	Under 40 years old	4.40 (1.09%)	0.101
	40 to 49 years old	4.30 (0.90%)	
	50 to 59 years old	4.15 (1.16%)	
	60 to 69 years old	4.37 (1.08%)	
	70 years old and over	5.90 (0.00%)	
Education	Certified nurse	4.03 (1.51%)	0.160
	Certified nurse with a specialization	4.31 (0.85%)	
	Bachelor of Science in Nursing	4.10 (1.29%)	
	Bachelor of Science in Nursing with specialization	4.14 (0.94%)	
	Master of Science in Nursing	4.40 (0.88%)	
	Master of Science in Nursing with specialization	4.42 (0.91%)	
	Doctor of health sciences/doctor of medicine	2.69 (1.80%)	
	Other	4.73 (0.52%)	
Marital status	Married	4,23 (1.06%)	0.049
	Single	3.97 (1.35%)	
	Divorced	4.43 (1.09%)	
	Widow/widower	4.64 (0.77%)	
	Cohabitation/informal relationship	4.59 (1.05%)	
Residence	Village	3.89 (1.16%)	0.001
	City	4.42 (1.03%)	
Seniority	Under 10 years	4.42 (1.01%)	0.156
	10 to 19 years	4.22 (1.01%)	
	20 to 29 years	4.23 (1.03%)	
	30 to 39 years	4.17 (1.20%)	
	40 years and over	4.74 (0.79%)	
Seniority in palliative care	5 years and under	4.37 (1.02%)	0.031
	6 to 10 years	4.38 (1.01%)	
	11 to 15 years	3.97 (1.27%)	
	16 to 20 years	4.51 (0.99%)	
	Over 20 years	4.11 (1.08%)	
Number of posts	One	4.14 (1.17%)	0.028**
	Two	4.32 (0.96%)	
	Three and more	4.46 (0.94%)	
	I work on a contract other than full-time	4.84 (0.68%)	
Relationship to the Catholic faith	Believer	4.24 (1.10%)	0.694
	Agnostic	4.17 (0.92%)	
	I am of a different faith	4.08 (1.10%)	
	I don't want to answer that question	4.45 (0.98%)	

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.001$; SD — standard deviation

Table 7. Regression results of the association of UWES-9 with demographic and occupational variables

Variables	Coefficient	df	p-value
Place of residence	0.23	1	< 0.001
Length of service in a palliative care setting	–0.09	5	0.043
Number of posts	0.17	3	< 0,001
Sex	0.13	1	0.005
$R^2 = 0.32$; F (4.429) = 12.792 p < 0.001			

df — degrees of freedom

healthcare to patients at the end of life, contribute to better quality of care, and improve comfort. Preoccupation (enjoyment, concentration, and difficulty in disengaging from work), commitment (identification with work and strong involvement) and vigor (mental resilience, energy, perseverance in the face of difficulties at work, and willpower) are elements that explain the development of the lived experience at work. This is perfectly demonstrated in studies by Schaufeli et al. [52] and Perry et al. [53].

Increased workload, lack of staff resources, fear, and the suffering and death of patients place a significant emotional burden on nursing staff [54]. Terakado [55] believes that stress among nursing staff providing palliative care services can be predicted by the degree of fatigue and emotional coping. The above-mentioned burdens can have negative consequences for nursing staff causing professional burnout, stress, depression, anxiety, or psychoactive substance abuse [56, 57]. In their research, Frey et al. [58] show that a lack of engagement can lead to reduced satisfaction, job abandonment, and resignation from the profession.

Among the socio-demographic and occupational factors, the regression results of the following study showed that the individual importance of sex, number of full-time jobs, length of service in a palliative care setting, and place of residence had a significant impact on work engagement. A longer length of service in palliative care is positively related in a statistically significant way to the level of work engagement. This is in line with the findings of Saiga and Yoshioka [59], who showed that work engagement was significantly associated with age, length of service in nursing, marital status, having children, job position, and workplace. What is more, regression results of this study showed that the female sex, more than one full-time position, and the city being the place of residence have a significant impact on the work engagement of studied palliative care nurses. Amongst many determinants of female sex in nurses' work engagement in palliative care, a number of studies most often show specific abilities of women connected with empathy and emotional support [60, 61].

Nurses' work engagement aspects connected with the number of full-time positions are rather complex. Study results [62] suggest that nursing staff working part-time showed lower levels of work engagement when compared to their colleagues working full-time. However, on the other hand, studies also confirm that the longer working time of the hospital nurses is connected with adverse effects for those nurses. Some of those adverse effects, such as high burnout, may pose safety risks for both patients and nurses [63].

Limitations

Firstly, this study used convenience sampling, which potentially affected the generalizability of the results. Secondly, the use of self-completed survey tools may lead to reporting bias, as nurses may have given more favorable answers. Finally, the small number of male participants and those with a master's degree may have led to an unbalanced representation of sex and educational level in the sample. Furthermore, due to the use of self-completed questionnaires, the accuracy of the data depends on the honesty of the participants' answers.

Conclusions

The present findings demonstrate that the UWES-9 version 2 is a reliable and relevant tool for measuring engagement with palliative care nursing staff. It can therefore be concluded that the above parameters of the UWES-9 version 2 can be recommended for further research in the health professions. Work engagement in the study group of palliative care nurses is influenced by the individual qualities of the female sex, more full-time positions, longer tenure in palliative care, and place of residence. The results of this study may be useful in planning effective workplace interventions to increase the engagement of staff caring for dying patients, taking into account important socio-demographic and professional factors.

Article information and declarations

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Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Ethics statement

The standards stipulated in the Declaration of Helsinki were followed during each step of the study. Ethical approval was obtained from the Bioethics Committee of Witold Chodźko Institute of Rural Health in Lublin (No. 7/2023).

Author contributions

Conception and design: KC, BŚ; design: KC, BŚ; data collection and processing: KC, BŚ; analysis and interpretation: KC, BŚ, MG, GN; writing — original draft preparation: KC, BŚ; supervision: MG, GN; writing, reviewing and editing: KC, BŚ, MG, GN.

Conflict of interest

No potential conflict of interest was reported by the authors.

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Supplementary material

None.

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