Translation of Supportive Care Needs Survey Short Form 34 (SCNS-SF34) into Nepali Language with Cultural Validation

Kamala Dhakal  
Zhengzhou University

Panpan Wang  
Zhengzhou University

Joanes Faustine Mboineki  
Zhengzhou University

Mikiyas Amare Getu  
Zhengzhou University

Changying Chen  
First affiliated hospital of Zhengzhou University  
https://orcid.org/0000-0002-2639-0241

Allison Boyes  
The University of Newcastle

Chandrakala Sharma  
Institute of Medicine Nursing Campus Maharajgunj

Bijesh Raj Ghimire  
Nepal Cancer Hospital and Research Center, Hattiban, Lalitpur,Nepal

Abish Adhikari  
Kathmandu Cancer Center, Tathali, Nala Road, Bhaktapur Nepal

Bibhav Adhikari  
Little Angels College of Management

Research

Keywords: Supportive Care Needs Survey (SCNS), Nepali Language, Cultural Validation, SCNS –SF34

DOI: https://doi.org/10.21203/rs.3.rs-213979/v1

License: This work is licensed under a Creative Commons Attribution 4.0 International License.  
Read Full License
Abstract

Purpose

Supportive Care Needs Survey (SCNS) is one of the strongest and complete tools to assess the perceived supportive care needs of cancer patients. SCNS –SF34 has been translated into various other culture based languages, validated and established its psychometric properties. Till now no Nepali version, so we planned to assess the linguistic and cultural validity of Nepali version of the SCNS-SF34 in Nepali population.

Methods

Translation of Supportive Care Need Survey – Short Form 34 (SCNS-SF 34) was done by following Beaton's guidelines in collaboration with a research team. Cultural adaptation was established through content validity assessment, clarity assessment of questionnaire and pretest. Content validity in terms of semantic, cultural and conceptual was assessed by 10 experts by using Likert scale and clarity of questionnaire was assessed among 15 cervical cancer patients by using Likert scale. The pretest was done among 34 cervical cancer patients to assess the feasibility and practicality of the tool. For reliability of tool test – retest method was used among 50 cervical cancer patients.

Results

The Nepali version SCNS-SF 34 maintained the content validity (Item Content validity index (I-CVI) >0.78 in semantic, cultural and conceptual aspects and S-CVI (Scale Content Validity Index) was found, 89.00% (0.89) 91.88 % (0.91) 90.00% (0.90) in semantic, cultural and conceptual aspects respectively. Content validity ratio (CVR) - 0.9 to 1) and construct validity (0.902) with 91.29 % clarity of questionnaire. This version had good internal consistency, with Cronbach's alpha coefficients ranging from 0.89 to 0.91 with Composite Cronbach’s Alpha 0.90. Correlation significant at the 0.01 level (2-tailed). More simple Nepali words were chosen as suggested by participants in items no 2,3,7, 9,10, 12, 18,19, 25, 27and 30 than the preliminary Nepali version along with the acceptance of all original items.

Conclusions

This finding shows that the SCNS-SF34 was translated and culturally adapted for use in Nepal with high practicality. This translated instrument can be used to assess the supportive care need and correlation between supportive care need and health related quality of life among cervical cancer patients.

Introduction

Globally cancer is the second leading cause of deaths and 9.6 million people died of cancer in 2018 of which 70% were from middle and low-income countries. The main causes of deaths due to cancer worldwide were highest for lung cancer, followed by colorectal cancer, stomach cancer, liver cancer and
breast cancer[1]. Cancer mortality in Nepal is higher in females as compared to males—7,400 and 6,900 respectively as per the report published by WHO[2].

Globally Cervical cancer(CC) is the 4th most common cancer in women and 7th in overall. The projection of 528,000 new cases and the estimation of 266,000 deaths from CC. It covers for 7.5% of all[3]. In less developed countries, CC is identified as the most common gynecological cancer[4].

Worldwide, 266,000 women died of cervical cancer in 2012— the equivalent of one woman dying every 2 minutes. And 90% of these deaths were in low- and middle-income countries[5]. In 2018, the new cases of CC increased to 570,000[6].

**Cervical cancer in Nepal**

In Nepal, cancer is identified as major non-communicable disease (NCD) which is responsible for 42% of total death. Cancer is responsible for 7% contributing to a major public health burden[7].

Each year 2942 women are diagnosed with CC and 1928 die from CC in Nepal. it is 1st most frequent cancer among women in Nepal. It is the most first common cancer among Nepali women, along with diagnosed in an advanced stage so the mortality from cervical cancer is high [8].

According to a four-year retrospective study among twelve hospitals between 2010 and 2013 in Nepal found that cancer of bronchus and lung, stomach and larynx are most common among men whereas cervical/ uteri, breast, bronchus and lungs were listed as most common among women[9].

**Supportive Care Needs Survey (SCNS)**

CC patients faced with physical, psychological, social distress, spiritual suffering fatigue, irritability, memory loss, decreased energy level, recurring pain. To reach the quality of life (QOL) of CC patient at most favorable level SC is the key[10]. Compared to other gynecological cancers, CC Patient has been shown with worse emotional distress and QOL. [11]. For the holistic and unified health care management of cancer patients, supportive care is necessary [12]. Supportive care helps the patient and the family to cope with the illness in all phase of disease[13]. It is essential to measure the psycholinguistic language assessment and psychometric assessment in terms of validity and reliability to identify the validity and reliability of the scale. Hence, psychometrically Strong instruments for measuring the supportive care needs of cancer patients are essential for both clinical practice and research [14]. The commonly-used scales for this identification of these supportive care needs are Supportive Care Needs Survey & Cancer Patient Needs Questionnaire[15]. In English speaking countries many kinds of tools are established and used for the identification of supportive care needs of cancer patient[16].

The Supportive Care Needs Survey (SCNS), most complete and strong cancer-specific needs assessment tool, helps to find the kind and extent of cancer patients’ current needs faced by them in five domains (psychological, health system and information, physical and daily living, patient care and support, and sexuality)[17].
The SCNS is appropriate for all type of cancer patients because it is developed and validated with diverse samples of cancer patients in terms of cancer type, stage of the disease, and time since diagnosis[18].

At present, there are three versions of the SCNS are available: 59-item long-form (SCNS-LF59)[17], 34-item short-form (SCNS-SF34)[19], and 9-item screening tool (SCNS-ST9)[20].

All versions cover the same five domains, but the latter can reduce respondent burden in routine cancer care. These 3 versions carry the same five domains, but (SCNS-SF34) and (SCNS-ST9) can lessen the burden of the respondent in care. SCNS-LF 59 and SCNS-SF 34 Survey Questionnaire helps to the identification of the care needs of cancer patients[19].

SCNS-SF 34 is identified as a valid and reliable assessment instrument for identifying the supportive care needs and it has been already translated in original languages of China, Germany, France, Japan, Australia, Italy and Mexico[21]. It consists of 34 items along with 5 domains (psychology, healthcare system and information, physical and daily life and sexuality). A high score in the tool indicates that perceived supportive care need is high level[19].

### Materials And Methods

**Research team description**

In this study, the research team of following professional members were involved: medical oncologist, nurse working in the oncology area, psychiatric nurse, research nurse, statistician, bilingual translators, patient representative, method expert (project leader), English language, and Nepali language expert. Patient representatives were also involved in the process of a consensus conference.

**Brief description of the SCNS-SF34 instrument**

SCNS-SF 34 is identified as a valid and reliable assessment instrument for identifying the supportive care needs by means of self-reporting questionnaire regarding patients’ perceived supportive care needs [21]. It consists of 34 items along with 5 domains (psychological needs (10 items), healthcare system and information needs (11 items), physical and daily living needs (5 items), patient care and support needs (5 items) and sexuality needs (3 items). Patients report the current need and extent of support for help in the previous month as a result of having cancer (1—no need, not applicable; 2—no need, satisfied; 3—low need; 4—moderate need; 5—high need). A high score in the tool indicates that perceived supportive care need is high level[19].

**Translation and adaptation process**

Translation of original English version SCNS-SF 34 was translated in the Nepali Language by following Beaton's guideline. This guideline has the following 7 stages of translation.
Beaton's guideline was used in the study in Italy for Translation of Supportive Care Needs Survey Short Form 34 (SCNS-SF34) into Italian and cultural validation study[22].

**Stage (1): translation into the target language (Translation from English to Nepali):**

Independent forward translations of the original SCNS-SF34 was done by two native Nepali (T1 and T2). The first forward translation was done by a medical oncologist with long-experienced in oncology health care and clinical research. The second translation was done by a non-clinician specialized in translation and communication and in the translation of instruments and different contents for patient and caregiver education in general and special.

**Stage (2): Synthesis of the forward translations (Make one compile document from two forward translated documents):**

The two forward translated documents were made into one by the main researcher and also kept the written record of the main difference between two translations.

**Stage (3): Backward translations (Nepali to English):**

The new one combined version of the forward translated document was then backward translated by two independent native English speakers (a bilingual English teacher and a bilingual translator experience in scientific writing). The backward translated version (B1 and B2) were again made in one form with the written records of main differences in B1 and B2 by the main researcher. With the help and coordination of a third native bilingual (English, Nepali) speaker, Item equivalence(similarity) of the synthesized backward translated version was then assessed by comparing it with the original SCNS-SF34 English version.

**Stage (4): consensus conference (Make preliminary Nepali) version of the SCNS-SF34 questionnaire):**

A consensus conference was done by the team of medical oncologist, nurse working in the oncology area, psychiatric nurse, research nurse, statistician, bilingual translators, patient representative and main researcher by means of discussion (on translated and synthesized documents and keynotes on difference found during translation), meeting and email. The linguistics similarities of the two synthesized translations (forward into Nepali and backward into English) were carefully analyzed by the research team and chose the proper, simple and easily understandable terms to use in the preliminary Nepali version.

At the end, a decision was reached on the definitive format of the initial Nepali version of the SCNS-SF34 questionnaire and all the initial documents were shared with the research team.

**Methods**

**Participants and recruitment**
Ethical approval was taken from the School of Nursing and Health, Zhengzhou University, Henan, China (ZZU IRB 2019-028), Nepal Health Research Council, Nepal (Ref. No 1706). Formal permission was taken from Bhaktapur Cancer Hospital (BCH), Bhaktapur, Nepal and Bisweswar Prasad Koirala Memorial Cancer Hospital (BPKMCH), Bharatpur, Chitwan, Nepal cancer Hospital & Research center; Harisiddhi, National Hospital & Cancer center; Jawalakhel, Kathmandu Cancer Center; Tathali, Nepal. Participants were informed about the purpose of the study and written informed consent from each respondent. The pretest study was carried out from 1\textsuperscript{st} February 2020 to April 30\textsuperscript{th} 2020 in an outpatient department of the selected hospital. Pretest respondents included 34 cervical cancers patients’ representative of the target population of the questionnaire, cervical cancer, female patients >18 years of age with any stage or treatment setting, and from a variety of socioeconomic characteristics.

**Data collection**

For cultural adaptation (an expert panel and pre testing) was done. Experts reviewed the items of the Nepali version and compared it to the original version. They were doctor, nurse and educationist who were involved in treatment, management, education and research of cancer patient in Nepal (Oncologist, Nurse study and working in Oncology, Ph.D. nurse, Different level hospital nursing administrator, professor working in research and nursing education).

For the content validity index (CVI), experts needed to rate each item of the instrument concerning semantic/idiotic, cultural and conceptual aspects\[23,24\] based on scoring technique Davis (1992)

Data were collected from 10 experts for the assessment of content validity by using 4 points Likert scale, expert opinions on content validity were taken and the content validity index (CVI) was figured in terms of item level and scale level. The content validity test was carried out with the help of Davis (1992) technique that grades experts' opinion in a four-choice criteria: 1=not relevant, 2=somewhat relevant, 3=quite relevant, 4=highly relevant. The CVI is found out by dividing the number of the experts that mark the choices and with the total number of the experts and subtracting 1. Instead of comparing this value with a statistical scale, the 0.80 value is accepted as the criterion for scale level and more than 0.70 is accepted as the criterion for item level content validity index \[25\].

For the assessment of the clarity of the questionnaire, 15 patients were interviewed on the developed questionnaire by means of Likert scale and comments. The test-retest method was carried out among 50 respondents for the assessment of reliability. Test-retest reliability was analyzed using intra-class correlation coefficients (ICC). An ICC value of 0.70 or above was considered satisfactory \[26\]. Pretesting done among 34 respondents (10% of sample size=340) for the assessment Reliability and construct validity. After completing the self-administered questionnaires by the respondents, the respondents were again asked about each item, how they thought about the question, difficulty level, understanding level, easily understandable words/phrase, replacement of words/phrase, offensive or aggressive words. They had been encouraged to give comments in any section of the questionnaire to make it suitable in Final Nepali version.
Stage (5): Pretest Patient Survey

Pre-testing was carried out among 34 (10% of sample size) respondents. The demographic findings were as follows:

**Demographics Characteristics of Respondents**

Among 34 respondents, most of the respondents 35.3% of the respondents were above 60 years, and 29.4% of the respondents were between 46-55 years. Regarding educational status most of the respondents 64.7% were illiterate. Among them 70.6% were married, 55.9% of the respondents were in II stage of cervical cancer disease. Regarding treatment modalities, majority of the respondents, 67.6%, were on Radiation + Chemotherapy therapy (Refer to Table 1).

**Reliability of tool**

For the assessment of reliability of tool, 34 respondents were included to get the response on five point Likert of questionnaire. Scale Mean, Scale Variance, Total Correlation and Cronbach’s Alpha were calculated. The item-wise Cronbach's Alpha is more than 0.7 and average Cronbach's Alpha is 0.902. The reliability was confirmed after evaluating the inter-item correlation. The reliability was evaluated by using Cronbach's coefficient. Item wise Cronbach's Alpha was found more than 0.7 and scale Cronbach's Alpha was found 0.902 (Refer to Table 2).

**Validity of Instrument**

For the assessment of the content validity of the questionnaire, 10 experts were consulted. They were doctor, nurse and educationist who were involved in treatment, management, education and research of cancer patient in Nepal (Oncologist, Nurse study and working in Oncology, Ph.D. nurse, Different level hospital nursing administrator, professor working in research and nursing education).

Item level (I-CVI) and Scale level (S-CVI) content validity index was assessed. I-CVI was found more than 0.78 semantic/ idiomatic, cultural and conceptual aspects and S-CVA/Ave was found 89.00% (0.89) 91.88 % (0.91) 90.00%(0.90) in semantic/ idiomatic, cultural and conceptual aspects respectively.

CVR was calculated by using the formula \( \text{CVR} = \frac{(E-(N/2))}{(N/2)} \) where E indicates the number of experts who rated the objects as essential and N indicated total number of experts. CVR can measure between -1.0 and 1.0. The closer to 1.0 the CVR is, the more essential the object is considered to be. The results show that CVR was found 0.9 to 1 (Refer to Table 3).

**Clarity Assessment**

For the assessment of the clarity of the questionnaire, 15 patients were interviewed on the developed questionnaire by means of Likert scale and comments.
The item-wise clarity of the questionnaire and average clarity of the questionnaire was assessed. The average clarity of questionnaire was 91.29% (Refer to Table 3).

**Analysis of test-retest Method for reliability**

The test retest method was carried out among 50 respondents. The retest was carried out after 3 weeks of completion of test assessment. The mean score (3.0518 & 3.1176) and standard deviation (0.57585 &0.56590) in test and retest were found respectively. The correlation is significant at the 0.01 level (2-tailed) (Refer to Table 2).

**Results**

**Instructions and response scale**

- The majority of patients agreed that the instruction section was clear and understandable.
- Majority of patients said that the instruction of the alternatives of the level of needs (1,2,3, 4,5) Must include in the questionnaire section not only in the example section

- Half of the patients suggested substituting the example of a perceived need in the instruction section with one relating to a physical need (pain) because patients in a cancer setting would relate more easily to it and would better understand how to complete the questionnaire.

**Item clarity, comprehensiveness, and significance**

- Study participants considered all item clear and comprehensible.
- More simple Nepali words were choose as suggested by participants in item no2,3,7 9,10, 12, 18,19,21,22,23,24, 25, 27 and 30 than the preliminary Nepali version

**Item importance**

All of the study participants rated the importance of each item as ≥3 on a five-point Likert scale, and more than 80 % evaluated each one as ≥4.

**Item acceptability**

All of the study participants easily accept all the item

All of the patients positively commented on that item 14 (feelings about death and dying) although it was a distressing concept but inquiry about that feeling is essential to make the patient more comfortable.

All of the participants felt that items although 15 (change in sexual desires) and 16 (change in sexual relations) were embarrassing but need to explore the particular problem because it is hidden cultural problem in Nepal.
All of the participants wanted to aid finance-related problem, problem-related to caretaker, problems during the hospital stay.

**Construct validity of the preliminary Nepali version**

The construct validity of the preliminary Nepali version was assessed by calculating Cronbach's alpha, item wise Cronbach's Alpha is more than 0.7 and average Cronbach's Alpha is 0.902. These findings are alike with original SCNS-SF34 validation studies and other studies SCNS-SF34 translated into other languages.

**Modified phrases**

After finishing the pretesting study, Consensus conference meeting was done with the team of medical oncologist, nurse working in the oncology area, psychiatric nurse, research nurse, statistician, bilingual translators, patient representative and main researcher through discussion (on translated and synthesized documents and keynotes on difference found during translation), meeting and email. The team members agree with to change the simple Nepali language in the instruction section and other item section. (Majority of patients said that the instruction of the alternatives of the level of needs (1,2,3, 4,5) Must include in the questionnaire section not only in the example section. Half of the patients suggested substituting the example of a perceived need in the instruction section with one relating to a physical need (pain) because patients in a cancer setting would relate more easily to it and would better understand how to complete the questionnaire). More simple Nepali words were chosen as suggested by participants in item no 2,3,7, 9,10, 12, 18,19, 25, 27 and 30 than the preliminary Nepali version. At the end of this meeting the finalized Nepali version of the SCNS-34 SF was approved. The questionnaire items modified in the final version concerning to the preliminary version used in the pretest study were presented in the table (Refer to Table 4).

**Discussion**

According to this study, I-CVI is found more than 0.78 and Scale level content validity index (S-CVI) is found 0.91. Content validity Ratio (CVR) was found at 0.9 to 1. The item-wise Cronbach's Alpha is found more than 0.7 and average Cronbach's Alpha is found 0.902. correlation is significant at the 0.01 level (2-tailed). The average clarity of the questionnaire is found 91.29 %. Construct validity (0.902) of the preliminary Nepali version is found alike with original SCNS-SF34 validation studies and other studies SCNS-SF34 translated into other languages. These findings are similar with the study “Translation of Supportive Care Needs Survey Short Form 34 (SCNS-SF34) into Italian and cultural validation study” carried out among cancer patient found that Italian questionnaire maintained the construct validity of the original version and was easy to understand and use. The construct validity, evaluated by calculating Cronbach's alpha, was 0.924 [22]. These findings are also in line with the study “An Adaptation of the Short-Form Supportive Care Needs Survey Questionnaire (SCNS-SF 34) to Turkish among breast cancer patient found that the content validity index of the scale was calculated as 0.83. The Cronbach α coefficient is 0.93. [25]. These findings are supported by the study “Supportive care needs and quality of
life of patients with gynecological cancer undergoing therapy in Indonesia used the tool SCNS-SF 34 and found that it had a validity score of validity 0.302–0.792 and a reliability score of 0.933[27]. These findings are also supported by the study “Un-met Supportive Care Needs of Iranian Breast Cancer Patients” found that internal reliability coefficients (Cronbach Alpha) of the translated questionnaire was substantial, greater than 0.90[28].

Our research is further completed on validation of the questionnaire on a larger sample of the target population in different cancer-specific hospital in Nepal. In particular, we also aim to prospectively assess the supportive care needs of cervical cancer patients along with its associated factors.

**Conclusions**

In conclusion preliminary findings show that the SCNS-SF34 Nepali version is practicable in the Nepali population. Further research regarding assessment of psychometric properties of translated Nepali Version of SCNS SF 34 N has been completed in larger sample and assessment of supportive care needs among cervical cancer in Nepal is on progress.

**Abbreviations**

**SCNS-SF34**: Supportive Care Needs Survey Short Form, **SCNS –SF34N**: Supportive Care Needs Survey Short Form Nepali, **SCNS-LF59**: Supportive Care Needs Survey Long Form, **CVI**: Content Validity Index, **I-CVI**: Item Content Validity Index, **S-CVI**: Scale Content Validity Index, **CVR**: Content Validity Ratio, **CC**: Cervical cancer, **WHO**: World Health Organization, **NCD**: non-communicable disease, **QOL**: Quality of Life, **NHRC**: Nepal Health Research Council.

**Declarations**

**Ethical approval and Consent to Participate**

School of Nursing and Health, Zhengzhou University, Henan, China (ZZU IRB 2019-028), Nepal Health Research Council, Nepal (Ref. No 1706) approved the study proposal. Formal permission was granted from the setting of the study and informed consent was taken from participants before the data collection. Formal permission was granted from setting of the study and informed consent was taken from participants before the data collection.

**Consent for publication**

Informed consent for publication was taken from all participants included in the study, Nepal Health Research Council, Nepal and School of Nursing and Health, Zhengzhou University, Henan China.

**Availability of Data and Material**
The primary data are stored safely and confidently by the authors and agree to review the primary data upon the request of the journal.

**Competing interests**

All the authors declared that they have no competing interests for the declarations of this manuscript.

**Funding**

No funding was received for conducting this study.

**Authors’ contributions**

Kamala Dhakal, Panpan Wang, Joanes Faustine Mboineki, Mikiyas Amare Getu and Changying Chen contributed to design this study. Changying Chen, Kamala Dhakal, Chandrakala Sharma professor, Bijesh Raj Ghimire and Abish Adhikari carried out translation procedure. Bibhav Adhikari and Kamala Dhakal were involved in data collection and analysis. Kamala Dhakal, Allison Boyes, Chandrakala Sharma, Bijesh Raj Ghimire and Abish Adhikari involved in the finalization of preliminary and modify Nepali version of SCNS- SF 43. Kamala Dhakal and Joanes Faustine Mboineki, wrote the manuscript and the manuscript is reviewed and approved by all the authors.

**Acknowledgements**

This study is part of a larger study on the assessment of SCNs among cervical cancer patients in Nepal. The authors are grateful to the School of Nursing & Health, Zhengzhou University for the great backing to carry out the study and preparation of this manuscript. We are thankful to the Nepal Health Research Council and different Cancer-specific hospital in Nepal for permission to conduct the study. Our sincere gratitude goes to all the experts from Nepal especially Ms. Daya Laxmi Shrestha for her valuable guidance to carry out the study. Our heartfelt thanks go to all the experts who provided their valuable contribution to the assessment of content validity. We are also grateful to all the patient participants for their invaluable contribution by taking part in this study.

**References**

1. World Health Organization (WHO). Cancer;France (Key facts) 2018a. 2018. [https://www.who.int/news-room/fact-sheets/detail/cancer](https://www.who.int/news-room/fact-sheets/detail/cancer)

2. World Health Organization (WHO). Cancer Country Profiles: Nepal (2018b). [https://publichealthupdate.com/cancer-country-profile-nepal-world-health-organization/](https://publichealthupdate.com/cancer-country-profile-nepal-world-health-organization/)

3. Global Burden of Cancer (GBC). Cervical Cancer: Estimated Incidence. Mortality and Prevalence Worldwide. 2012. [http://globocan.iarc.fr/FactSheets/cancers/ cervix-new.asp](http://globocan.iarc.fr/FactSheets/cancers/ cervix-new.asp).

4. Torre LA, Bray F, Siegel RL, Ferlay J, Lortet- Tieulent J, Jemal A. Global cancer statistics. CA Cancer Journal for Clinicians. 2012; 65(2): 87–108.
5. World Health Organization (WHO). UN Joint Global Programme on Cervical Cancer Prevention and Control. 2016. http://www.who.int/ncds/un-task-force/un-joint-action-cervical-cancer-leaflet.pdf
6. Cohen PA, Jhingran A, Oacknin A, Denny L. Cervical cancer. The Lancet. 2019; 393(10167):169–182.
7. Nepal Health Research Council (NHRC). Prevalence of non communicable disease in Nepal Hospital based study. http://nhrc.gov.np/publication/prevalence-of-non-communicable-disease-in-nepal-hospital-based-study/

8. Gyenwali D, Khanal G, Paudel R, Amatya A, Pariyar J, Ona SR. Estimates of delays in diagnosis of cervical cancer in Nepal. BMC Women's Health. 2014; 14(29): 1–9.
9. Poudel KK, Huang Z, Neupane PR, Steel R, Kharel Poudel J. Hospital-Based Cancer Incidence in Nepal from 2010 to 2013. Nepal Journal of Epidemiology. 2017; 7(1): 659–665.
10. Fitch M, Maamoun J. Unmet supportive care needs and desire for assistance in patients receiving radiation treatment: Implications for oncology nursing. Canadian Oncology Nursing Journal. 2016; 26(1): 53–59.

11. Simonelli LE, Pasipanodya E. Health disparities in unmet support needs of women with gynecologic cancer: An exploratory study. Journal of Psychosocial Oncology. 2014; 32(6): 727–734.
12. Gaertner J, Wolf J, Frechen S, Klein U, Scheicht D, Hellmich M, et al. Recommending early integration of palliative care—does it work?. Support Care Cancer. 2012; 20(3) :507-13.
13. Yıldırım NK, Kaçmaz N, Özkan M. The Gap Between Supportive Care Needs and the Care Provided in Adult Cancer Patients. Journal of Dokuz Eylül University School of Nursing. 2013; 6: 231–240. https://www.researchgate.net/publication/315966440_An_Adaptation_of_the_Short-Form_Supportive_Care_Needs_Survey_Questionnaire_SCNS-SF_34_into_Turkish/link/5a47c991458515f6b05699a5/download .Accessed 20 September 2020
14. Akgül A. Statistical Analysis Techniques and SPSS Applications in Medical Research. Ankara: Dilek Türk;2005. file:///C:/Users/Dell/Downloads/AnAdaptationoftheShort-FormSupportiveCareNeedsSurveyQuestionnaireSCNS-SF34intoTurkish.pdf .
15. Richardson A, Medina J, Brown V, Sitzia J. Patients’ Needs Assessment in Cancer Care: A Review of Assessment Tools. Support Care Cancer. 2007; 15: 1125–1144.
16. Harrison JD, Young JM, Price MA, Butow PN, Solomon MJ. What are the unmet supportive care needs of people with cancer? A systematic review. Support Care Cancer. 2009; 17(8): 1117–1128.
17. Bonevski B, Sanson-Fisher R, Girgis A, Burton L, Cook P, Boyes A, et al. Evaluation of an instrument to assess the needs of patients with cancer. 2000; 88(1): 217–225. https://acsjournals.onlinelibrary.wiley.com/doi/epdf/10.1002/%28SICI%291097-0142%2820000101%292988%3A1%3C217%3A%3AAID-CNCR29%3E3.0.CO%3B2-Y
18. McEllduff P, Boyes A, Zucca A, Girgis A. The supportive care needs survey: a guide to administration, scoring and analysis. Newcastle: Centre for Health Research & Psycho-Oncology. 2004. https://www.researchgate.net/publication/239565229 file:///C:/Users/Dell/Downloads/SCNS-Aguidetoadminscoringanalysesv22014.pdf.
19. Boyes A, Girgis A, Lecathelinais C. Brief assessment of adult cancer patients’ perceived needs: Development and validation of the 34-item supportive care needs survey (SCNS-SF34). Journal of Evaluation in Clinical Practice. 2009; 15(4): 602–606.

20. Girgis A, Stojanovski E, Boyes A, King M, Lecathelinais C. The next generation of the supportive care needs survey: a brief screening tool for administration in the clinical oncology setting. 2012; 21(8): 827–835.

21. Lehmann C, Koch U, Mehnert A. Psychometric properties of the German version of the Short-Form Supportive Care Needs Survey Questionnaire (SCNSSF34-G). Support Care Cancer. 2012;20(10): 2415-2424.

22. Zeneli A, Fabbri E, Donati E, Tierney G, Pasa S, Berardi MA, et al. Translation of Supportive Care Needs Survey Short Form 34 (SCNS-SF34) into Italian and cultural validation study. Support Care Cancer. 2016; 24(2): 843–848.

23. Barroso EM, Carvalho AL, Paiva CE, Murphy BA, Paiva BSR. The Vanderbilt Head and Neck Symptom Survey Brazilian Portuguese version 2.0 (VHNSS 2.0): Psychometric properties for patients with head and neck cancer who have undergone radiotherapy. BMC Res. Notes. 2015;8(1):0–11.

24. Polit DF, Beck CT, Owen SV. Is the CVI an acceptable indicator of content validity? Appraisal and recommendations. Res Nurs Health. 2007; 30:459–67.

25. Turkan O, Soyer Geckil O, Aslan A. An Adaptation of the Short-Form Supportive Care Needs Survey Questionnaire (SCNS-SF 34) into Turkish. European Journal of Breast Health. 2017;13(4):183–188.

26. Miniotti M, Zeneli A, Bassino S, Pavan S, Ribero S, Leombruni P. Psychometric assessment of the Italian version of the melanoma module (SCNS-M12-Ita) of the Supportive Care Needs Survey (SCNS-SF34). Tumori. 2020; 106(2):101–108.

27. Putri RH, Afiyanti Y, Ungsianik T, Milanti A. Supportive care needs and quality of life of patients with gynaecological cancer undergoing therapy. Enfermería Clínica. 2018; 28(Supl 1 Part A): 222–226.

28. Rahmani A, Ferguson C, Jabarzadeh F, Mohammadpoorasl A, Moradi N, Pakpour V. Supportive care needs of Iranian cancer patients. Indian Journal of Palliative Care. 2014; 20(3): 224-228.

Tables
| Variables                  | Frequency | Percent |
|---------------------------|-----------|---------|
| **Age**                   |           |         |
| <= 45.00                  | 6         | 17.6    |
| 46.00 - 55.00             | 10        | 29.4    |
| 56.00 - 60.00             | 6         | 17.6    |
| 61.00+                    | 12        | 35.3    |
| **Education**             |           |         |
| Illiterate                | 22        | 64.7    |
| Literate without formal education | 4   | 11.8    |
| Primary                   | 3         | 8.8     |
| Secondary                 | 1         | 2.9     |
| Higher secondary          | 3         | 8.8     |
| Bachelor or above         | 1         | 2.9     |
| **Marital Status**        |           |         |
| Married                   | 24        | 70.6    |
| Single/Widow              | 10        | 29.4    |
| **Stage of Disease**      |           |         |
| Stage I                   | 2         | 5.9     |
| Stage II                  | 19        | 55.9    |
| Stage III                 | 12        | 35.3    |
| Stage IV                  | 1         | 2.9     |
| **Treatment Modalities**  |           |         |
| Radiation                 | 6         | 17.6    |
| Operation Chemotherapy    | 1         | 2.9     |
| Operation +Radiation      | 2         | 5.9     |
| Radiation +Chemotherapy   | 23        | 67.6    |
| Operation+Chemotherapy+Radiation | 2 | 5.9 |
| **Total**                 | 34        | 100     |
The frequency (n) and proportion (%) were used for the analysis of participant’s demographic characteristics.
| SCNS-SF 34                                      | Scale Mean | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha |
|------------------------------------------------|------------|-------------------------------|----------------------------------|------------------|
| 1. Pain                                        | 104.59     | 318.250                       | -0.020                           | .907             |
| 2. Lack of energy/tiredness                    | 104.56     | 297.466                       | .506                             | .898             |
| 3. Feeling unwell a lot of the time            | 104.24     | 296.246                       | .574                             | .897             |
| 4. Workaround the home                         | 104.38     | 292.486                       | .549                             | .897             |
| 5. Not being able to carry on the regular tasks, which you used to | 104.12 | 294.955 | .484 | .898 |
| 6. Anxiety                                     | 103.76     | 294.731                       | .604                             | .896             |
| 7. Feeling depressed                            | 104.12     | 301.258                       | .451                             | .899             |
| 8. Feeling sad                                  | 103.82     | 295.362                       | .625                             | .896             |
| 9. Fear of spreading the cancer                 | 103.50     | 298.197                       | .590                             | .897             |
| 10. The tension that health condition will be beyond control after the treatment | 103.62 | 298.122 | .649 | .896 |
| 11. Uncertainty about future                   | 103.59     | 291.159                       | .771                             | .894             |
| 12. The feeling of being yourself under control of the situation | 103.53 | 301.045 | .586 | .897 |
| 13. Maintaining positive thinking              | 103.74     | 296.928                       | .715                             | .896             |
| 14. Feeling the tension of death and dying     | 103.47     | 294.863                       | .675                             | .895             |
| 15. Changes in sexual experiences              | 104.44     | 311.163                       | .101                             | .907             |
| 16. Changes in your sexual relation             | 104.47     | 310.257                       | .120                             | .906             |
| 17. Worry about your loved one                 | 103.41     | 300.492                       | .418                             | .899             |
| 18. Many alternatives about choosing doctors/experts of cancer for treatment | 103.65 | 294.841 | .531 | .897 |
| 19. Many alternatives about choosing the hospital for treatment | 103.88 | 294.713 | .566 | .897 |
| 20. Assurance from health worker that whatever you are experiencing /thinking is normal | 104.21 | 300.471 | .573 | .897 |
| 21. Hospital staff attending promptly          | 104.29     | 303.971                       | .450                             | .899             |
to your physical problems/needs.

| Question                                                                                                                                       | Cronbach’s Alpha | Mean | Standard Deviation | Standard Error |
|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------|--------------------|-----------------|
| 22. Awareness and sensitivity of hospital staff to your feelings and emotional aspects and needs                                              | 0.900            | 104.47 | 307.832            | 0.376           |
| 23. Giving information about the important aspect of your treatment and care in written form                                                   | 0.899            | 103.76 | 301.701            | 0.416           |
| 24. Giving written information, diagrams and other clear information regarding ideas to manage the disease, its symptoms and side effects at home. | 0.894            | 103.76 | 291.579            | 0.731           |
| 25. Sharing the treatment and investigation reports with you, which you were interested to know                                               | 0.901            | 104.18 | 306.998            | 0.323           |
| 26. Giving adequate information about the treatment that you choose, its side effects before starting the treatment                            | 0.900            | 104.29 | 304.153            | 0.396           |
| 27. Sharing the reports of your tests/investigation with you soon as far as time allows                                                        | 0.901            | 104.41 | 308.553            | 0.273           |
| 28. Giving information about the status of cancer, its minimization or control                                                                  | 0.900            | 104.00 | 305.697            | 0.387           |
| 29. Giving information about the things that you can do yourself to improve your health                                                          | 0.897            | 104.26 | 300.746            | 0.565           |
| 30. Availability of professional counseling (like a psychologist, social worker, nurse specialist) to you or your family or your friends and relatives whenever needed | 0.894            | 103.65 | 291.872            | 0.723           |
| 31. Providing information about sexual relation                                                                                            | 0.912            | 104.15 | 318.372            | -.039           |
| 32. Being treated humanely and generously not only as a patient                                                                               | 0.899            | 104.74 | 307.110            | 0.456           |
| 33. Friendly structure/ environment in a hospital or clinic as far as possible                                                                   | 0.900            | 104.62 | 310.001            | 0.398           |
| 34. Easy availability of one staff from hospital with whom you can talk about your condition, treatment and follow up                           | 0.899            | 104.12 | 302.895            | 0.466           |

**Composite Cronbach’s Alpha:** 0.902

**Analysis of test-retest Method for reliability**

**Pair sample statistics**
|                  | Mean  | Std. Deviation | Std. Error Mean |
|------------------|-------|---------------|-----------------|
| _TEST score      | 3.0518| 0.57585       | 0.08144         |
| RETEST score     | 3.1176| 0.56590       | 0.08003         |

**Correlation**

|                  | Mean_TEST | Mean_RETEST |
|------------------|-----------|-------------|
| Mean_TEST        | Pearson correlation | 1         | 0.989** |
|                  | sig. (2-tailed test) |         | 0.000   |
| Mean_RETEST      | Pearson correlation | 0.989** | 1       |
|                  | sig. (2-tailed test) |         | 0.000   |

*Reliability was evaluated by using Cronbach’s α coefficient.*

*Item wise Cronbach's Alpha more than 0.7 was accepted.*

** sig at 0.01 level
Table 3: Validity and Clarity of Tool

| SCNS-SF 34                                                                 | Validity(%) | Clarity% |
|---------------------------------------------------------------------------|-------------|----------|
|                                                                           | Semantic (%) | Cultural (%) | Conceptual (%) | |
| 1. Pain                                                                   | 0.93 (93)   | 0.95 (95) | 0.92 (92.5) | 95 |
| 2. Lack of energy/tiredness                                              | 0.93 (93)   | 0.95 (95) | 0.94 (94.5) | 95 |
| 3. Feeling unwell a lot of the time                                      | 0.89 (89)   | 0.92 (92.5) | 0.91 (91) | 95 |
| 4. Workaround the home                                                   | 0.89 (89)   | 0.92 (92.5) | 0.90 (90.5) | 86 |
| 5. Not being able to carry on the regular tasks, which you used to       | 0.87 (87.5) | 0.9 (90) | 0.90 (90) | 91 |
| 6. Anxiety                                                               | 0.89 (89)   | 0.92 (92.5) | 0.91 (91) | 93.3 |
| 7. Feeling depressed                                                     | 0.92 (92)   | 0.95 (95) | 0.93 (93.5) | 95 |
| 8. Feeling sad                                                           | 0.87 (87)   | 0.9 (90) | 0.89 (89.5) | 93.3 |
| 9. Fear of spreading the cancer                                          | 0.87 (87)   | 0.9 (90) | 0.88 (88.5) | 91.6 |
| 10. The tension that health condition will be beyond control after the treatment | 0.84 (84) | 0.87 (87.5) | 0.88 (88) | 81.6 |
| 11. Uncertainty about future                                            | 0.87 (87.4) | 0.9 (90) | 0.89 (89) | 90 |
| 12. The feeling of being yourself under control of the situation         | 0.84 (84)   | 0.87 (87.5) | 0.86 (86.5) | 83.3 |
| 13. Maintaining positive thinking                                       | 0.85 (85)   | 0.87 (87.5) | 0.86 (86.5) | 93.3 |
| 14. Feeling the tension of death and dying                              | 0.84 (84)   | 0.87 (87.5) | 0.86 (86) | 88.3 |
| 15. Changes in sexual experiences                                       | 0.86 (86.4) | 90 (0.9) | 0.89 (89.5) | 90 |
| 16. Changes in your sexual relation                                      | 0.91 (91)   | 0.94 (94.4) | 0.93 (93) | 91.07 |
| 17. Worry about your loved one                                          | 0.93 (93)   | 0.95 (95) | 0.92 (92) | 96.6 |
| 18. Many alternatives about choosing doctors/experts of cancer for treatment | 0.94 (94) | 0.97 (97.5) | 0.95 (95) | 98.3 |
| 19. Many alternatives about choosing the hospital for treatment          | 0.91 (91)   | 0.95 (95) | 0.88 (88) | 95 |
| 20. Assurance from health worker that whatever you are experiencing /thinking is normal | 0.92 (92.2) | 0.95 (95) | 0.93 (93) | 91.6 |
|   |   |   |   |
|---|---|---|---|
| 21. | Hospital staff attending promptly to your physical problems/needs. | 0.93 (93) | 0.97 (93.2) | 0.95 (95) | 92.8 |
| 22. | Awareness and sensitivity of hospital staff to your feelings and emotional aspects and needs | 0.88 (88) | 0.92 (92.5) | 0.90 (90) | 88.3 |
| 23. | Giving information about the important aspect of your treatment and care in written form | 0.87 (87.5) | 0.92 (92.5) | 0.90 (90) | 96.6 |
| 24. | Giving written information, diagrams and other clear information regarding ideas to manage the disease, its symptoms and side effects at home. | 0.91 (91) | 0.92 (92.5) | 0.90 (90) | 93.3 |
| 25. | Sharing the treatment and investigation reports with you, which you were interested to know | 0.88 (88) | 0.90 (90) | 0.88 (88) | 95 |
| 26. | Giving adequate information about the treatment that you choose, its side effects before starting the treatment | 0.87 (87) | 0.90 (90) | 0.87 (87) | 91.6 |
| 27. | Sharing the reports of your tests/investigation with you soon as far as time allows | 0.90 (90) | 0.90 (90) | 0.88 (88) | 88.3 |
| 28. | Giving information about the status of cancer, its minimization or control | 0.87 (87.5) | 0.90 (90) | 0.89 (89) | 90 |
| 29. | Giving information about the things that you can do yourself to improve your health | 0.89 (89) | 0.92 (92.5) | 0.89 (89) | 90 |
| 30. | Availability of professional counseling (like a psychologist, social worker, nurse specialist) to you or your family or your friends and relatives whenever needed | 0.88 (88) | 0.90 (90) | 0.87 (87) | 86.6 |
| 31. | Providing information about sexual relation | 0.90 (90.5) | 0.92 (92.5) | 0.91 (91) | 91.6 |
| 32. | Being treated humanely and generously not only as a patient | 0.86 (86) | 0.87 (87.5) | 0.86 (86) | 86.6 |
| 33. | Friendly structure/environment in a hospital or clinic as far as possible | 0.92 (92) | 0.95 (95) | 0.93 (93) | 88.3 |
| 34. | Easy availability of one staff from hospital with whom you can talk about your condition, treatment and follow up | 0.90 (90) | 0.92 (92.5) | 0.91 (91) | 88.3 |

**Scale Content Validity Index (S-CVI)**

|   |   |   |   |
|---|---|---|---|
| 0.89 (89.01) | 0.91 (91.88) | 0.90 (90.04) | Average Clarity 91.29 |

*I-CVI and S-CVI was assessed. I-CVI more than 0.7 and S-CVA more than 0.8 was accepted.*
Item wise clarity of questionnaire more than 80% was accepted.
Table 4:
Preliminary Nepali version of the SCNS-SF34 and Modified items in the final version

| Item of the preliminary Nepali version | Modified item in the final version |
|----------------------------------------|-----------------------------------|
| !  b’vfO{ Dukhai                      |                                    |
| @ tfst gePsf] ysfg (Tagat nabhaeko/Thakan) | ysfg (Thakan)                     |
| # w} h;f; do c;j:ytf dx; ;la/fgLsf] cg’ej (Dherai jaso samaya aswasthata mahasus/biramiko anubhav) | w} h;f; do c;j:ytf dx; ; (Dherai jaso samaya aswasthata mahasus) |
| $ \{3/ leq–afx/sf] sfd ug( (Ghar bhitrabahirako kam garna) |                                    |
| % Klxnf ,w] cfk”mn] ub}{ cfPsf] sf dx? ug{ (Pahila sadhain ahpule gardai aaeko kamharu garna) |                                    |
| ^ lrGtf÷;’tf{ (Chinta/Surma) |                                    |
| & lg/fzf dx;; (Nirasa mahasus/Anubhav) | lg/fzf dx;; (Nirasa mahasus) |
| * b’lv dx;; (Dukhi mahasus) |                                    |
| ( SofG;/ km}lng] eo+8/ (Kyansar phailine bhaya/dar) | SofG;/ km}lng] 8/ (Kyansar phailine dar |
| !) pkrf/ kl5sf] c;j:yf cf”gf] IgoGq0f eGbf af/f x’G5 eGg] lrGtf (Upachar pachhiko awastha aafno niyantran bhanda bahira huncha bhanne chinta) | pkrf/ kl5sf] c;j:yf s] x’G5 eGg] af/] 9’S x’g glsg] s’/f (Upchar pachhiko awastha ke hunchha bhanne bare dhukka huna nasakine kura |
| !! eljiosf] clgZrttff (Bhabisyako anischitataa) |                                    |
| @ cfk”m kl/l:ytsf] IgoGq0sf df /x]sf] cg’ej (Aaphu paristhitiko niyantranama raheko anubhav) | cfk”m /f]usf] IgoGq0sf df /x]sf] cg’ej (Aaphu rogko niyantranama raheko anubhav |
|="# ;sf/fTds;f]r=b]li6sf]0f /fVg (Sakaratmak sochha/dristikon rakhna) | ;sf/fTds;f]r/fVg (Sakaratmak sochha rakhna |
| #$ d[To’, lrGtf / cfk”m df]{S’ eGg] cg’ej (Mirtyu chinta ra Aanphu mardaichhu bhanne anubhav) |                                    |
| % of]g cg’ejdf kl/jt(g x’Fbf (Yaun anubhavma paribartan hunda) |                                    |
| ^ tkfO[sf] cf”gf] of]g ;DaGwdf kl/jt(g x’Fbf (Tapaiko aafno yaun sambandhama paribartan hunda) |                                    |
| & cf”gf cflTdhosf af/]df lrGtf (Aafna aatmiyajanka barema chinta) |                                    |
सङ्ग्रहको स्वास्थ्य व बीमारीहरूको समस्याहरूको चिकित्सा प्राप्त र निदेश हुने आवश्यक हो भने यदि आपल्लो चिकित्सकलाई प्राप्त भयो तिनै आफ्नो आवश्यकतालाई पुरानो चिकित्सा प्राप्त गर्ने भएको छ।

शारीरिक समस्याहरूको विभेदित चिकित्सा प्राप्त गरी आफ्नो स्वास्थ्य समस्याको चिकित्सा सम्बन्धी आपल्लो स्मरण गर्नुहोस्।

रोग र रोग चिकित्साको लापराभुत र आदर्श सम्बन्धमा कार्यरत आफ्नो स्तर तथा स्वास्थ्य सम्बन्धी आवश्यकताको समझ हुनुहोस्।

रोग र रोग चिकित्साको सम्बन्धमा आफ्नो स्तर तथा स्वास्थ्य सम्बन्धी आवश्यकताका समझ हुनुहोस्।
janchabaare tapaailaai saabai bujhaune bare

@^ pkrf/ yfNg' cufl8 cfkm"n] /f[h]sf/ pkrf/ ljlwsf] k|efsf/tf / c./sf af/]df k|fof{Kt hfgsf/L lbOsf]
Upachaar thaalnu agaadi aaphule rojeko upachaar bidhiko prabhaabakaaritaa ra asarakaa baaremaa praayaapta jaanakaan dieko

@& tkfO{sf] k/lif0fsf/-hFrsf_] glthfx? tkfO{nfo{ ;Dejeo;Dd l5ş]t hfgsf/L lbg] af/].

Tapaaiko parichhanako (janchako) natijaaharu tapaailaai sambhawa bhaesamma chhittai jaanakaari dine baare

Kyaansar niyantranamaa raheko wa ghateko baare tapaailaai jaanakaari dine bare

SofG/ lgoGq0fdf /x]sf/ jf 36]sf] af/]

Kyaansar niyantranamaa raheko wa ghateko baare tapaailaai jaanakaari dine bare

( jastai:manobaigyaanika, saamaajika kaaryakartaa, narsa, bishesagya) ko upalabdha bhaeko

Tapaai aaphulaai wa pariwaara waa saathisangatalaai aawashyaka pareko awasthaaamaa byaawasaayika paraamarsa

Yauna sambandhakaa baaremee jaanakaari baare

Tapaai aaphulaai wa pariwaara waa saathisangatalaai aawashyaka pareko awasthaaamaa byaawasaayika paraamarsa

(jastai:manobaigyaanika, saamaajika kaaryakartaa, narsa, bishesagya) ko upalabdha bhaeko

Eutaa biraamile jastai hoina maanabiyaa tathaa sadbhaapurna dhangale
byawahaara paauna

---

| # | c:ktnf of LSnlsdf ,s]Dd d)qLk"0f{ ;+/rgf+jftfj/0f x'g'kg]{df |
|---|---|
|   | Aspataala wa klinikamaa sakesamma maitripurna samrachanaa/baataabarana hunuparnema |

---

| # | d]/f] /f]u pkrf/ ,f] ;DalGwt h'g klg s'/f ug{ ;f]Wg / cGo hfgsf/L kfgp c:ktnsf] s'g} Ps sd{rf/L ,ln} pknAw x'g |
|---|---|
|   | Mero roga upachaara so sambandhita juna pani kuraa garna sodhna ra anya jaanakaari paauna aspataalako kunai eka karmachaari sajilai upalabdha huna |