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# Reliability and validity of the state–trait operation anxiety scale

## Abstract

**Background:** The development of novel assessment methods is imperative to identify the sources of patients' anxiety and facilitate their relaxation. To the best of our knowledge, no studies in Turkey have reported on changes in operative anxiety among adults during surgical procedures. This study used the state-trait operation anxiety (STOA) scale, a questionnaire to measure operation-related anxiety. It has two parts: STOA-S for state anxiety and STOA-T for trait anxiety. The objective of this study was to assess the reliability and validity of the STOA scale in Turkish.

**Methods:** This methodological study included 202 patients with a mean age of 55.58 years ( $\pm 14.47$ ). The common indicators for surgery were umbilical hernia, cholelithiasis and appendicitis in the hospital. Concurrent validity was evaluated for internal consistency, content validity, construct validity and the reliability of the instrument.

**Results:** The content validity index (CVI) indicated high content consistency for STOA-T items (CVI = 0.92) and STOA-S items (CVI = 0.88) as rated by experts. Factor analysis demonstrated high internal consistency reliability for all STOA models, including one-factor STOA-T (Cronbach's alpha = 0.879, item-total correlations 0.597-0.715) Two-factor STOA-T model for both cognitive anxiety (Cronbach's alpha = 0.806, item-total correlations 0.532-0.792) and emotional anxiety (Cronbach's alpha = 0.821, item-total correlations 0.544-0.781) and STOA-S (Cronbach's alpha = 0.879, item-total correlations 0.510-0.770).

**Conclusion:** The Turkish version of the STOA scale demonstrated high validity and reliability. Healthcare professionals in Turkey should use this scale to evaluate perioperative anxiety in adults.

**Keywords:** anxiety measurement, adult, validity, reliability, operation anxiety

## Introduction

Disease is recognised as having physical, psychological and social aspects<sup>1,2</sup>. Patients receiving hospital treatment may encounter numerous physical and emotional challenges during and after their treatment<sup>3,4</sup>. These challenges may elevate stress levels and negatively impact patients' daily lives<sup>5</sup>.

Disease-related psychological effects may manifest depression and anxiety symptoms<sup>5</sup>. These arise from the diagnostic process, uncertainty regarding treatment options and the adjustment to hospital life<sup>4</sup>. Furthermore, uncertainty regarding diagnosis and fear of death have been identified as significant stressors for patients<sup>3</sup>. Other factors include negative body image and impaired self-care ability<sup>4</sup>.

Physical changes to the body may lead to negative body image perception for the duration of the disease. These changes can have a detrimental effect on patients' social relationships, whereas the inability to meet basic self-care needs can engender feelings of helplessness and loneliness<sup>4</sup>. Surgical patients encounter a multitude of psychological challenges, including uncertainty in the pre-operative period, loss of autonomy during surgery, post-operative pain and fear of death<sup>4,6</sup>.

Surgical patients may also experience fears such as the potential inability to wake up during surgery, the loss of organs or limbs and concerns about the impact on their sex lives<sup>6-10</sup>. Emotional states such as anxiety, depression and denial are usually associated with such reactions<sup>9</sup>. These can cause further health problems by prolonging the post-operative recovery process<sup>6</sup>. Patients who have undergone

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surgical trauma have a higher risk of anxiety and depression<sup>3,7,11</sup>.

Emotional difficulties such as depression and anxiety are often experienced, especially in the pre-operative period and in individuals with chronic diseases<sup>4,5,7,8</sup>.

The incidence of anxiety in surgical patients in the pre-operative period varies between 5% and 45%, according to measurement tools, with the incidence of depression varying between 6% and 52%<sup>4,5,7,8,12</sup>. Anxiety and depression are more common in patients with difficult-to-treat chronic diseases<sup>4,5,7,8,12</sup>. In order to diagnose and treat both physical disease and psychological disorders observed in surgical patients with maximum efficacy, it is necessary to understand the risk factors associated with these diseases and disorders<sup>4</sup>.

Patients who stay in the hospital for a prolonged period, develop complications after surgery, lack family support or need to undergo surgery again are more likely to experience anxiety and depression than other surgical patients<sup>9</sup>. As anxiety and depression have been demonstrated to exert a detrimental effect on the surgical process, it is imperative to manage patients' anxiety during the pre-operative period to ensure a successful and uncomplicated operation<sup>9</sup>.

Psychological disorders, including anxiety and depression, which may occur pre, peri and postoperatively, have been shown to increase the requirement for post-operative painkilling medications, result in functional impairment, elevate the risk of suicide, diminish patient satisfaction and adversely affect quality of life and the healing process<sup>7-9,11</sup>. As demonstrated in studies<sup>2,4,9,13</sup>, the presence of psychological disorders prolongs hospital stays, thus increasing healthcare costs.

Elevated levels of anxiety and depression experienced by patients significantly increase the risks associated with surgical procedures and the incidence of psychiatric disorders post-discharge, as well as mortality and morbidity rates<sup>2,3,5</sup>. Determining patients' anxiety and depression levels is vital for ensuring the quality of their healthcare experience<sup>1,3,14</sup>. Evaluating patients' emotional states and risk levels facilitates early diagnosis of common psychological disorders, such as anxiety and depression<sup>5</sup>. It is imperative

that health professionals possess the requisite knowledge and skills to assess patients' emotional state and determine their anxiety-depression levels, as this is a fundamental component of quality healthcare<sup>1,3,14</sup>.

Available scales for measuring surgical anxiety include, but are not limited to, the state-trait operation anxiety (STOA) scale, the *Hospital Anxiety and Depression Scale* (HADS)<sup>5</sup> and the *Surgical Anxiety Questionnaire* (SAQ)<sup>15,16</sup>. Research indicates that psychosocial support enhances patients' confidence, alleviates their physical complaints and augments their capacity to cope with negative emotional reactions associated with the disease, thereby enhancing their overall quality of life<sup>1</sup>. These Likert-type instruments are similar to the STOA scale, which focuses on the post-operative period and complications arising from it<sup>15,16</sup>. Unlike the STOA scale, these scales could not report on changes in anxiety levels during surgery in adults<sup>15,16</sup>.

The management of patient concerns about the surgical process is essential for the patients' psychological well-being of patients, improved surgical outcomes and patient satisfaction<sup>9</sup>. The STOA scale employs a two-tiered approach to distinguish between state (situational) and trait (trait-level) anxiety, enabling the nurse to differentiate immediate surgical anxiety from general anxiety for tailored care plans.

This study evaluated the reliability and validity of the STOA scale for measuring post-operative anxiety in the Turkish patients. A validated and reliable instrument to measure post-operative anxiety in both the pre-operative and post-operative phases will enable nurses to integrate patients' psychological well-being into clinical care plans.

By excluding stress-inducing terms like 'fainting', 'injury' and 'cutting' found in other scales, the STOA scale minimises patient distress while offering potential to reduce surgical complications across perioperative and post-operative phases. The scale used in this present study excludes statements that may place undue stress on the patients. Traumatic expressions such as 'being knocked out' or 'being disabled' from the scale are also excluded to ensure that the assessment

is conducted in a safe manner that does not elicit anxiety in nurse-patient communication. In this respect, the matter is also advantageous from an ethical perspective.

The application's four-point Likert-type structure is conducive to efficiency, while its versatility across surgical disciplines and its capacity for seamless integration into nursing care plans are noteworthy merits.

## Material and Methods

### Design and participants

The study population included patients who underwent surgical procedures in the general surgery service of a hospital between August and December 2024. A simple random selection method was used to select the sample from among eligible patients. Only patients who had surgery and consented to participation in the research were included in the study. Those who did not have surgery or did not consent to the research, were excluded from the study.

For the scale study, the sample size was determined using the applied rule of 5–10 participants per item<sup>17</sup>, resulting in a sample of 202 patients for the 20-item scale.

### Data collection

The data was collected between August and December 2024. Participants were evaluated using the STOA scale, for both pre-operative (T1) and post-operative (T2) phases. To analyse the validity and reliability of the STOA scale, the study used pre-operative data for comparison because the pre-operative phase is characterised by elevated anxiety levels prior to surgery.

### Data collection forms

The information form collected demographic and procedural data, including age, gender, type of surgical procedure, whether patients had received information about the operation, prior surgical experience and the rationale for surgery.

For the STOA scale, responses were recorded on a four-point Likert scale ranging from 0 (not at all) to 3 (too much). There are two components to the STOA

scale used in the study – the state anxiety (STOA-S) and trait anxiety (STOA-T).

State anxiety measures the intensity of the current anxiety through two categories of anxiety, emotional anxiety and cognitive anxiety. There were five items each category. The emotional component represents physical reactions associated with negative moods (e.g., 'I'm nervous'), while the cognitive component reflects the level of anxiety related to surgery (e.g., 'I'm worried'). These two components exhibit distinct behaviours during the perioperative period. Cognitive anxiety typically manifests prior to a stressful event, while emotional anxiety peaks just before a triggering event and subsequently declines.

The score ranges from 0 to 30 with higher values indicating higher state anxiety.

For the trait anxiety component, the score ranges from 0 to 60. Like the state anxiety component, higher values indicate higher level of constant anxiety.

Patients respond to an expression using a four-point rating scale from 0 to 3 for each item. Examples of items include asking about the length of hospitalisation following surgery or the possibility of exposure to anaesthetists and the inability to regulate their own behaviour. This scale provides a general assessment of anxiety levels and the extent to which anxiety is a permanent aspect of an individual's personality<sup>15</sup>.

### Cross-cultural adaptation

The study was conducted in accordance with the scale's intercultural adaptation manual, which included forward translation of the original instrument, back-translation into English, synthesis of the translated version, expert review, pre-testing and pilot testing<sup>18,19</sup>.

The English version of the scale was translated into Turkish by three interpreters, independent of the study. Two of the independent, bilingual, bicultural translators have experience in health terminology and the linguistic and cultural aspects of English. Each translator made the translations independently, without knowledge of each other's version. Their Turkish translations were then compared and synthesised into a single version through discussion. The synthesised Turkish form was

subsequently back translated into English by two different bilingual translators who were blinded to the original scale.

After the back translation, the translators discussed their versions and synthesised their translations into a single unified Turkish translation of the STOA scale with all contributions being given due consideration.

The scale was submitted to an expert committee of ten experts for review of its scope and content validity. The experts were provided with the original and translation forms of the scale and asked to evaluate the scale items on a scale ranging from 1 (unrelated) to 4 (highly relevant). Discrepancies in expert opinions were evaluated using the content validity ratio (CVR) at the item level of the scale and the content validity index (CVI) at the scale level. The experts' assessments were found to be consistent with the English form of the scale. The final version of the scale was then subjected to a review by language experts to ensure linguistic and cultural appropriateness.

Ten patients who had undergone surgery participated in the pre-testing of the STOA scale. The researcher contacted the participants directly and collected the forms in person. Participants were invited to comment on any words or sentences they found difficult to understand. The researcher reviewed the deciphered words and items identified during pre-testing and consulted the expert committee again. The final form of the STOA scale was determined based on the subjective judgment of the researcher following discussions with experts.

### Analysis

The validity and reliability analyses of the scale were performed with IBM SPSS Version 22.0. Descriptive findings were presented with frequencies, percentages and arithmetic averages, while CVR and CVI analyses were performed for the content validity<sup>20,21</sup>. Bartlett's test of sphericity and Keiser-Meyer-Olkin (KMO) test were used to determine whether the data set was suitable for the analyses. Exploratory factor analysis (EFA) was conducted to examine the factor analysis of the scale. The EFA was performed by analysing the basic components. Confirmatory factor analysis (CFA) was then used to confirm the structure

resulting from the EFA<sup>22,23</sup>. Internal consistency analysis was evaluated using the Cronbach's alpha coefficient<sup>24</sup>. The results of the analysis of the obtained data were considered statistically significant ( $p < 0.05$ ).

### Ethical approach

Prior to commencement, the study obtained approval (protocol no. 2024-SBB-0573) from a Turkish university's social and health ethics committee on July 8, 2024. Institutional approval (approval no. E-30707382-799-252372360) for this study was granted by a provincial health directorate in Turkey on August 28, 2024. The study was conducted in accordance with the principles of the Declaration of Helsinki (2013), including respect for individuals, informed consent, confidentiality and the right to withdraw without penalty<sup>25</sup>.

## Results

### Participant characteristics

There was a total of 202 participants, with a mean age of 55.58 years (SD 14.44, range 23–78 years). Of 202 patients, 100 (49.5%) received information about their surgery, 75 (37.1%) of the patients reported a previous history of surgery and 10.9% had previously undergone surgery for appendicitis (Table 1). Umbilical hernia was the most common indication for surgery ( $n = 105$ , 52.0%), followed by cholelithiasis ( $n = 51$ , 25.2%), appendicitis ( $n = 27$ , 13.4%), stomach cancer ( $n = 12$ , 5.9%) and colon cancer ( $n = 7$ , 3.5%).

### Content validity

Content validity for both the STOA-T and STOA-S was assessed using ratings from 10 experts. For the STOA-T, the CVRs ranged from 0.81 to 1.00 and the CVI was 0.92. For the STOA-S, the CVRs ranged from 0.67 to 1.00 and the CVI was 0.88.

### Construct validity

Construct validity was assessed using principal components analysis. For the one-factor STOA-T model, the KMO value was 0.755 and Bartlett's test of sphericity was statistically significant ( $p < 0.001$ ). The single factor accounted for 67% of the total variance (Table 2). For the two-factor STOA-T model, the KMO value was 0.750 and Bartlett's test of sphericity was statistically significant,  $\chi^2 = 156.12$ ,  $p <$

Table 1: Participant characteristics

Characteristics of participants	Mean ± SD	Range
Age	55.58 ±14.44	23-78
<b>Sex</b>	<b>N</b>	<b>%</b>
Female	99	49.0
Male	103	51.0
<b>Surgical indication</b>		
Umbilical hernia	105	52.0
Cholelithiasis	51	25.2
Appendicitis	27	13.4
Stomach cancer	12	5.9
Colon cancer	7	3.5
<b>Getting information</b>		
Yes	100	49.5
No	102	50.5
<b>Surgical experience</b>		
Yes	75	37.1
No	127	62.9
<b>Previous reasons for past surgeries</b>		
Appendicitis	22	10.9
Haemorrhoids	18	8.9
Cholecystectomy	14	6.9
Umbilical hernia	5	2.5
Inguinal hernia	9	4.5
Caesarean	12	5.9

0.001 (Table 3). For STOA-S, the KMO value was 0.757 and Bartlett's test of sphericity was statistically significant,  $\chi^2 = 272.51$ ,  $p < 0.001$ . This indicated that STOA-S possessed a single-factor structure, accounting for 71% of the total variance in the measured variable (Table 4).

Internal consistency was assessed using Cronbach's alpha and item-total correlation coefficients. Cronbach's alpha for the one-factor STOA-T model was 0.879 and item-total correlation coefficients for the 10 items ranged from 0.597 to 0.715 (Table 2). Cronbach's alpha for the two-factor STOA-T model was 0.806, with item-total correlation coefficients ranging from 0.532 to 0.792 (Table 3). Cronbach's alpha

for the two-factor STOA-S model was 0.879 and item-total correlation coefficients for the 10 items ranged from 0.510 to 0.770 (Table 4).

According to the CFA, the following goodness-of-fit indices were obtained, indicating goodness-of-fit. For the one-factor STOA-T model model,  $\chi^2(37) = 123.18$ ,  $p < 0.001$ , RMSEA (root mean square error of approximation) = 0.014, CFI = 0.92 and TLI (Tucker-Lewis index) = 0.93. For the two-factor STOA-T model,  $\chi^2(36) = 133.44$ ,  $p < 0.001$ , RMSEA = 0.010, CFI = 0.93 and TLI = 0.94. For the STOA-S,  $\chi^2(185) = 224.38$ ,  $p < 0.001$ , RMSEA = 0.015, CFI = 0.94 and TLI = 0.95 (Table 5).

## Discussion

The purpose of this study was to adapt the STOA scale for use in a Turkish context to evaluate post-operative anxiety in adult patients who had undergone surgery. The study examined the validity and reliability of the Turkish version of the scale to evaluate both state and trait anxiety, in order to determine whether surgery-related anxiety is a transient condition or a more enduring characteristic of the individual.

In the original scale development study, both EFA and CFA results indicated that the scale accurately measures state and trait anxiety as distinct constructs<sup>15</sup>. In addition, the internal consistency of the scales was reported to be high (Cronbach's alpha  $\approx$  0.90). The Cronbach's alpha coefficients and internal consistency were evaluated in parallel and the results of this study were considered statistically significant at  $p < 0.05$ .

Based on the findings of this study, the ability of the STOA scale to assess both state and trait anxiety may help nurses determine whether a patient's anxiety is transient or personality driven. This, in turn, will assist nurses plan tailored interventions, such as pre-operative education, relaxation techniques and cognitive support. Furthermore, the scale's use allows monitoring of changes in anxiety over the duration of both the pre-operative and post-operative phases. This may support nurses' early recognition of patients' risk of post-operative complications and their ability to adapt psychological preparation and rehabilitation protocols accordingly.

### Validity of the scale

Content validity describes how well a measurement tool represents the construct it is supposed to measure. Experts assess whether a scale is valid by examining how well the scale items match the construct and whether they are easy to understand<sup>26,27</sup>.

The original scale development study confirmed the STOA scale's validity by analysing the relationships between adult coping mechanisms, anxiety levels before surgery and other variables such as compliance during surgery<sup>15</sup>. By measuring the different aspects of pre-operative

Table 2. One-factor STOA-T: EFA and internal consistency analysis results

Items	KMO	Bartlett's test of sphericity	Variance explained by component	Mean ± SD	One-factor loadings (EFA)	Item-total correlations	Cronbach's alpha
1. I'm worried that I'll be in hospital for too long.	0.755	X <sup>2</sup> : 254.528 p<0.001	67.668	1.27 ± 0.79	0.787	0.601	0.879
2. I'm worried that the anaesthetic will cause discomfort afterwards.				1.36 ± 0.72	0.663	0.641	
3. I'm worried the cut will take a long time to heal.				1.35 ± 0.87	0.756	0.597	
4. I worry about pain after surgery.				1.66 ± 0.64	0.713	0.627	
5. I'm worried that I won't be able to do many things for myself.				1.25 ± 0.88	0.744	0.606	
6. I'm worried that I will have to suffer the same way as other patients I see.				1.54 ± 0.57	0.839	0.715	
7. I'm worried that you won't wake up from the anaesthetic.				1.15 ± 0.90	0.718	0.687	
8. I would be worried that more treatments would be needed after the surgery.				1.79 ± 1.16	0.439	0.671	
9. I worry about being dependent on a device (such as an anaesthetic machine) that I can't control.				1.59 ± 0.63	0.870	0.660	
10. I'm worried about what it will be like when I wake up from the anaesthetic.				1.17 ± 0.96	0.694	0.682	

anxiety, the STOA scale demonstrated that it can accurately track the changes in anxiety levels experienced by patients before and after surgery<sup>15</sup>.

The present study examined the validity of both one-factor and two-factor models for the STOA-T. The one-factor model provided a sufficient structure for measuring general surgical anxiety, while the two-factor model allowed a more detailed assessment by distinguishing between cognitive and emotional anxiety. This distinction enables more targeted intervention planning in clinical practice. Specifically, information-focused interventions can be recommended for patients with high cognitive anxiety, while emotion-focused interventions can be recommended for those with high emotional anxiety. This approach underscores the importance of individualised care<sup>28</sup>.

In model fitting, an RMSEA value above 0.10 does not have a negative effect on model validity. An RMSEA value of 0.06 or less indicates satisfactory fit<sup>29</sup>. However, an RMSEA value between 0.08 and 0.10 is generally considered to indicate acceptable model fit<sup>30</sup>. This is particularly relevant in studies with small sample sizes, where an RMSEA value slightly above 0.10 may not compromise the validity of the model<sup>31</sup>. All the study models showed a satisfactory fit.

### Reliability of the scale

Reliability means that a measurement tool always gives the same results when it is used at different times or by different people<sup>26,32</sup>. In this study, the Cronbach's alpha values were below 0.80, demonstrating a good-to-excellent internal consistency.

The adapted STOA scale in this study demonstrated high internal consistency

and high content validity values indicate that the scale can be used in Turkish clinical settings. This will contribute to the standardisation of anxiety assessment in nursing protocols with an objective and reproducible measure.

This study measured how well each item fits with the other items of the adapted scale. The strength of this relationship is measured by the item-total score correlation<sup>26</sup>. All items in the adapted scale were positively correlated with each other.

### Strengths

This scale is more reliable than single-item scales because it contains more than one item<sup>33</sup>. The items are internally consistent and reliable, making the scale easy to administer and analyse. The study examines the use of the scale to study post-operative anxiety in adults by considering their personal characteristics.

Table 3. Two-factor STOA-T: EFA and internal consistency analysis results

Factors	Items	KMO	Bartlett's test of sphericity	Variance explained by component	Mean ± SD	One-factor loadings (EFA)	Item-total correlations	Cronbach's alpha				
Cognitive Anxiety	1. I'm worried that I'll be in hospital for too long.	0.750	X2: 156.118 p<0.001	67.778	1.23 ± 0.08	0.788	0.601	0.806				
	2. I'm worried that the anaesthetic will cause discomfort afterwards.				1.14 ± 0.31	0.652	0.712					
	3. I'm worried the cut will take a long time to heal.				1.15 ± 0.44	0.762	0.532					
	4. I worry about pain after surgery.				1.34 ± 0.12	0.718	0.667					
	5. I'm worried that I won't be able to do many things for myself.				1.25 ± 0.33	0.750	0.792					
Affective Anxiety	6. I'm worried that I will have to suffer the same way as other patients I see.								1.46 ± 0.46	0.722	0.781	0.821
	7. I'm worried that you won't wake up from the anaesthetic.								1.84 ± 0.84	0.721	0.746	
	8. I would be worried that more treatments would be needed after the surgery.								1.21 ± 1.99	0.395	0.544	
	9. I worry about being dependent on a device (such as an anaesthetic machine) that I can't control.								1.90 ± 0.93	0.878	0.729	
	10. I'm worried about what it will be like when I wake up from the anaesthetic.								1.33 ± 0.52	0.691	0.772	

One strength of this research is that, to date, no published study has reported changes in surgical anxiety in adults during the perioperative period.

### Limitations

The form collecting participants' social and demographic information was developed by the researcher for this study. The study was conducted on a relatively small sample in one centre. Hence, the findings may not be generalisable to the wider population. The scale is not suitable for use in children. Further research using this scale is needed, with a larger and more diverse sample.

### Conclusions

Anxiety is common in surgical patients perioperatively and may affect patients' surgical outcomes, especially their psychological well-being. Hence, tools, such as the STOA scale, are

important for measuring patient anxiety before and after a surgical procedure. The anaesthesia, psychiatry and surgical teams play an important role in identifying anxiety levels and implementing early interventions. This collaborative effort also enables the coordination of timely interventions, including non-pharmacological anxiety management strategies, patient education and support programs.

This study adapted the STOA scale to a Turkish clinical setting to evaluate its validity and reliability for use in different adult surgical procedures. The findings may encourage health professionals to consider using the adapted scale to measure anxiety in patients perioperatively. In addition, the STOA scale can also be used as a teaching tool for nursing students and clinicians. The integration of this framework into in-house training protocols has the

potential to enhance awareness regarding perioperative psychological care.

This study demonstrated that the STOA scale is a practical, age-appropriate, easy-to-use, reliable and valid tool suitable for adaptation to different cultures. Further research is required in evaluating the STOA scale in different surgical specialities, larger settings and other countries to highlight the importance of measuring anxiety.

### Conflict of interest and funding statement

The authors have declared no competing interests with respect to the research, authorship and publication of this article.

Table 4. STOA-S: EFA and internal consistency analysis results

Items	KMO	Bartlett's test of sphericity	Variance explained by component	Mean ± SD	One-factor loadings (EFA)	Item-total Correlations	Cronbach's alpha
I'm worried that I'll be in hospital for too long.	0.757	X <sup>2</sup> : 272.509 p<0.001	71.452	1.27 ± 0.79	0.719	0.628	0.879
I'm worried that the anaesthetic will cause discomfort afterwards.				1.36 ± 0.72	0.653	0.658	
I'm worried the cut will take a long time to heal.				1.35 ± 0.87	0.736	0.640	
I worry about pain after surgery.				1.66 ± 0.64	0.588	0.510	
I'm worried that I won't be able to do many things for myself.				1.25 ± 0.88	0.665	0.584	
I'm worried that I will have to suffer the same way as other patients I see.				1.54 ± 0.57	0.639	0.600	
I'm worried that you won't wake up from the anaesthetic.				1.15 ± 0.90	0.535	0.691	
I would be worried that more treatments would be needed after the surgery.				1.79 ± 1.16	0.618	0.648	
I worry about being dependent on a device (such as an anaesthetic machine) that I can't control.				1.58 ± 0.63	0.647	0.634	
I'm worried about what it will be like when I wake up from the anaesthetic.				1.17 ± 0.96	0.543	0.599	
I'm worried that I'll still feel something after the operation, even though I'll be numb.				1.95 ± 1.12	0.794	0.689	
I'm worried that my health has got worse since the operation.				1.85 ± 0.96	0.789	0.708	
I worry about pain that lasts or comes and goes.				1.58 ± 0.82	0.532	0.554	
I'm worried that the decision to have surgery might not be the right one.				1.20 ± 0.47	0.566	0.587	
I would worry that problems related to the anaesthetic, such as paralysis or circulatory problems, might happen.				1.23 ± 1.20	0.636	0.543	
I worry about patients catching infections while they are in hospital.				1.71 ± 0.45	0.535	0.770	
I'd be worried about seeing other patients singing after they've had anaesthesia.				1.02 ± 0.15	0.568	0.619	
I'm worried that problems like fainting and bleeding may happen after the operation.				1.44 ± 1.06	0.644	0.571	
I'm worried that I won't be treated fairly.	1.56 ± 0.62	0.602	0.520				
I worry that I won't be able to control myself during anaesthesia and that I will have to rely on the doctors.	1.57 ± 0.63	0.664	0.702				

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