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Perioperative anxiety and depression among adults undergoing elective surgery: a cross-sectional survey

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Abstract

Introduction: Perioperative anxiety and depression are common disorders worldwide. They are not only associated with significant surgical and anaesthetic morbidity, but also mortality. Hence, we aim to determine the prevalence and risk factors associated with perioperative anxiety and depression in a single study centre. *Methods:* This cross-sectional study was conducted from April 1 to August 31 2022, among patients undergoing elective surgery in Hospital Tuanku Fauziah, Perlis. Patients scheduled for perioperative assessment in the Anaesthesiology clinic were invited to participate. The validated Hospital Anxiety and Depression Scale (M-HADS) was used to assess anxiety and depression symptoms before the scheduled surgery. Multiple logistic regression was performed to determine the associated factors to perioperative anxiety and depression.

Results: A total of 340 participants were included in analysis: 15.6% scored significant perioperative depression and 17.4% scored significant perioperative anxiety. High levels of self-rated fear were significantly associated with both anxiety (adjusted OR: 27.46, 95% CI: 5.37, 140.38) and depression (adjusted OR: 2.81, 95% CI: 1.08, 7.27).

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Otherwise, there were no demographic risk factors associated with perioperative anxiety, while male gender was found to be predictive of perioperative depression (adjusted OR: 2.08, 95% CI: 0.36, 12.15).

Conclusions: Our study found that 1 in every 6 patients undergoing surgery suffers from perioperative anxiety or depression. Self-rated fear was the independent risk factor for perioperative anxiety, while gender and self-rated fear were independent risk factors for perioperative depression. Hence, effective screening strategies to detect patients at risk of perioperative anxiety or depression is essential for appropriate risk stratification and intervention.

Keywords: elective surgery, fear, perioperative anxiety, perioperative depression

Introduction

The global prevalence of perioperative anxiety ranges from 48 to 60%.[1,2] Asians had the second highest prevalence worldwide after Africans. As for perioperative depression, the prevalence varies across different surgical specialities ranging from 9.3% to 31.3%.[3,4] These mental disorders do not only have negative psychophysiological adverse effects on the patients, but also come with direct implications on the surgical and anaesthetic outcome.

Studies have shown perioperative anxiety is associated with haemodynamic instabilities during induction,[5] increased risk of bronchospasm,[6] delayed extubation, and prolonged hospital stay.[7] Anxiety can also increase acute postoperative pain,[8,9] increase analgesic consumption,[7] and increase the risk of developing chronic postsurgical pain.[10] On the other hand, perioperative depression can lead to adverse cardiovascular outcomes and cognitive function declines such as poor memory and prolonged delirium.[8] The consequences of perioperative anxiety and depression are not only confined to morbidity and poor surgical outcome. They are also associated with increased mortality risk,[11] particularly for elderly patients.[12]

The Hospital Anxiety and Depression Scale (HADS) is a self-screening questionnaire developed by Zigmond and Snaith[13] and is used as a research tool in this study. This psychometric instrument was designed to assess and diagnose the severity of two psychological distress variables: anxiety and depression. This self-assessment scale is widely used for psychopathological comorbidity and has been employed in various clinical and non-clinical settings. HADS is a short questionnaire consisting of 14 items: 7 items were constructed to assess anxiety and

the remaining 7 items for depression. Three stages of anxiety and depression are classified based on predetermined cut-off scores.

Even though anxiety and depression may cause many unwanted perioperative consequences, not much attention and effort have been given to screen for these conditions in clinical settings. To the best of our knowledge, there have been no published studies on the prevalence of perioperative anxiety and depression as well as their associated risk factors in Malaysia.

Methods

Setting and design

This prospective cross-sectional study was conducted among patients undergoing elective surgery in our hospital between April 1 and August 31, 2022.

Population

Our sampling frame included patients scheduled for perioperative assessment in the Anaesthesiology clinic one day before the scheduled operation. Those aged 18 years and above, with Malaysian citizenship, able to read and write in Bahasa Malaysia, and not diagnosed with any mental illness or neurological disorders (*i.e.*, learning disabilities or dementia) were invited to participate, while those who refused to participate were excluded. Written informed consent was obtained from the participants.

Data collection

The data collection form was designed in 2 sections: (i) baseline sociodemographic characteristics and (ii) assessment of hospital anxiety and depression. The information collected for baseline sociodemographic characteristics included age, presence of past surgical history, presence of comorbidities, education level, and rating of self-rated fear of the upcoming surgery. Self-rated fear levels were determined using a self-rated numerical scale:

- 1: no fear
- 2: mild fear
- 3: moderate fear
- 4: severe fear.

Assessment for hospital anxiety and depression was performed using a validated M-HADS in Malay language (Appendix).[14] This psychometric instrument was designed to measure and detect the severity of 2 psychological distress variables: anxiety and depression.[13,14] In this psychometric instrument, 7 items were constructed to assess anxiety and the remaining 7 items for depression. Three levels of anxiety and depression are classified based on a predetermined cut-off score. A total score of 0–7 indicates normal; 8–10 indicates borderline abnormal, while 11–21 represents an abnormal level of anxiety and depression among participants.

HADS is considered a valid and reliable tool. Cronbach's α coefficient for both domains (HADS-Anxiety and HADS-Depression) was 0.82.[15] This self-assessment scale is widely used for psychopathological comorbidity and has been employed in various clinical and non-clinical settings.

Statistical analysis

Statistical analyses were performed using IBM SPSS Statistics version 26.0. Descriptive statistics was used to illustrate the baseline demographic, clinical characteristics and the reasons for fear cited among the study subjects.

A mixed-effect logistic regression was performed to determine the factors associated with perioperative depression and anxiety. Variables with $p < .25$ from simple logistic regression were selected for multiple logistic regression (MLR) using Enter method. Omnibus tests of model coefficients ($p < .001$) in MLR determined the new model is explaining more of the variance in the outcome, hence is significantly better than the baseline model. Nagelkerke's R^2 explained the percentage of variations explained in the outcome, while Hosmer and Lemeshow test the overall goodness-of-fit. A probability value (p-value) of less than .05 indicates statistical significance.

Sample size

The sample size was calculated by using G Power 3.1. The main objective was to determine the risk factors for perioperative anxiety and depression; hence, a proportion formula was set to calculate the sample size. An effect size of 0.1 was determined from previous published data where females were found to have 1.66 increased odds for perioperative anxiety as compared to males, in a proportion of 0.721.[15] Therefore, with α set at 0.05 in a two-tailed test, and power of 0.80, we needed to study 180 samples. With an additional of 20% dropout rate or heavily missing data, the minimum sample size required was 216 samples.

Ethical approval

The study received ethical approval from the Medical Research and Ethics Committee (MREC) Malaysia (Ref: KKM/NIHSEC/P21-400(4)) and was registered in the National Medical Research Register of the Ministry of Health Malaysia (NMRR-20-258-58809).

Results

A total of 340 participants were included in analysis. There were no dropouts. The sociodemographic characteristics of the study participants are presented in Table 1. Table 2 presents the scheduled surgery characteristics and medical history of the study participants. Among our participants, 15.6% scored significant perioperative depression and 17.4% scored significant perioperative anxiety (Table 3). Comparison in baseline demography between patients with and without perioperative anxiety or depression is shown in Table 4.

The level of self-rated fear was the only statistically significant factor associated with perioperative anxiety (Table 5). After adjusting for age, gender, education level, previous surgical history, and surgical grade, individuals with high levels of self-rated fear had 27 times increased odds of having perioperative anxiety (95% CI: 5.37, 140.38) as compared to those with no self-rated fear.

Table 1. Sociodemographic characteristics of study participants (*N* = 340)

Variable(s)	**Mean ± SD**
Age (years old)	38.9 ± 13.34
Gender, n (%)	
Male	91 (26.8)
Female	249 (73.2)
Highest education level, n (%)	
Primary	23 (6.8)
Secondary	165 (48.5)
Higher secondary	89 (26.2)
Tertiary	63 (18.5)

Data expressed as mean ± standard deviation and frequency (%).

Table 2. Scheduled surgery characteristics and medical history of study participants (*N* = 340)

Variable	***n* (%)**
Department	
Orthopaedics	55 (16.2)
General surgery	82 (24.1)
Obstetrics & gynaecology	155 (45.6)
Oral maxillofacial surgery	29 (8.5)
Otorhinolaryngology	16 (4.7)
Ophthalmology	3 (0.9)
Elective surgical grade	
Major	72 (21.2)
Intermediate	127 (37.4)
Minor	141 (41.5)
Past surgical history	
No	136 (40.0)
Yes	204 (60.0)
Past medical history	
No	184 (54.1)
Yes	156 (45.9)
Diabetes mellitus	
No	238 (70.0)
Yes	102 (30.0)
Hypertension	
No	278 (81.8)
Yes	62 (18.2)
Dyslipidaemia	
No	327 (96.2)
Yes	13 (3.8)
Ischaemic heart disease	
No	331 (99.1)
Yes	9 (2.6)
Chronic kidney disease	
No	337 (99.1)
Yes	3 (0.9)
Bronchial asthma	
No	321 (94.4)
Yes	19 (5.6)
Chronic obstructive pulmonary disease	
No	340 (100.0)
Yes	0 (0.0)

Table 3. Self-rated fear level, and depression and anxiety level and scores of study participants (*N* = 340)

Variable	n (%)
Self-rated fear level	
None	59 (17.4)
Low	178 (52.4)
Moderate	86 (25.3)
High	11 (3.2)
Unsure	6 (1.8)
Depression score	3.8 ± 3.46
Depression level	
< 8	287 (84.4)
≥ 8	53 (15.6)
Anxiety score	4.8 ± 3.13
Anxiety level	
< 8	281 (82.6)
≥ 8	59 (17.4)

Table 4. Comparison in baseline demography between patients with and without perioperative anxiety or depression

Variable	Perioperative anxiety		*p*-value[a]	Perioperative depression		*p*-value[a]
	Absent	Present		Absent	Present	
Mean score	3.7 ± 2.17	9.7 ± 2.08	< 0.001*b	2.6 ± 2.11	10.2 ± 1.99	< 0.001*b
Age (years)	39.2 ± 13.92	37.1 ± 10.06	0.263	38.3 ± 12.67	42.3 ± 16.25	0.094
Gender, n (%)			0.798			
Male	76 (83.5)	15 (16.5)		68 (74.7)	23 (25.3)	0.003*
Female	205 (82.3)	44 (17.7)		219 (88.0)	30 (12.0)	
Presence of past surgical history, n (%)			0.483			0.807
Yes	171 (83.8)	33 (16.2)		173 (84.8)	31 (15.2)	
No	110 (80.9)	26 (19.1)		114 (83.8)	22 (16.2)	
Education level, n (%)			0.725b			
Primary	19 (82.6)	4 (17.4)		15 (65.2)	8 (34.8)	
Secondary	138 (83.6)	27 (16.4)		139 (84.2)	26 (15.8)	0.026*b
Higher secondary	75 (84.3)	14 (15.7)		75 (84.3)	14 (15.7)	
Tertiary	49 (77.8)	14 (22.2)		58 (92.1)	5 (7.9)	
Self-rated fear level, n (%)			< 0.001*c			0.041*c
None	54 (91.5)	5 (8.5)		50 (84.7)	9 (15.3)	
Low	161 (90.4)	17 (9.6)		158 (88.8)	20 (11.2)	
Moderate	57 (66.3)	29 (33.7)		64 (74.4)	22 (25.6)	
High	4 (36.4)	7 (63.6)		9 (81.8)	2 (18.2)	
Unsure	5 (83.3)	1 (16.7)		6 (100.0)	0 (0.0)	

Data presented as mean ± standard deviation.
[a]Independent *t*-test; [b]Pearson chi-square test of independence; [c]Fisher's exact test

Table 5. Regression analyses on factors associated with preoperative anxiety

Variable	No anxiety *n* (%)	Anxiety *n* (%)	Simple logistic regression		Multiple logistic regression	
			Crude OR (95% CI)	*p*-value	Adjusted OR (95% CI)	*p*-value
Age (years)	39.2 ± 13.92	37.1 ± 10.06	0.99 (0.97, 1.01)	0.263	0.98 (0.95, 1.01)	0.978
Gender				0.798		0.973
Male	76 (83.5)	15 (16.5)	0.92 (0.48, 1.75)		1.01 (0.45, 2.30)	
Female	205 (82.3)	44 (17.7)	1.00 (Ref.)		1.00 (Ref.)	
Education level				0.728		0.178
Primary	19 (82.6)	4 (17.4)	0.74 (0.22, 2.52)		2.13 (0.46, 9.88)	
Secondary	138 (83.6)	27 (16.4)	0.69 (0.33, 1.41)		0.59 (0.26, 1.36)	
Higher secondary	75 (84.3)	14 (15.7)	0.65 (0.29, 1.49)		0.55 (0.22, 1.38)	
Tertiary	49 (77.8)	14 (22.2)	1.00 (Ref.)		1.00 (Ref.)	
Previous surgical history				0.483		0.727
No	110 (80.9)	26 (19.1)	1.23 (0.70, 2.16)		0.89 (0.45, 1.74)	
Yes	171 (83.8)	33 (16.2)	1.00 (Ref.)		1.00 (Ref.)	
Surgical grade				0.753		0.492
Major	60 (83.3)	12 (16.7)	0.84 (0.40, 1.79)		0.74 (0.30, 1.82)	
Intermediate	107 (84.3)	20 (15.7)	0.79 (0.42, 1.49)		0.62 (0.28, 1.38)	
Minor	114 (80.9)	27 (19.1)	1.00 (Ref.)		1.00 (Ref.)	
Self-rated fear level				< 0.001*		< 0.001*
None	54 (91.5)	5 (8.5)	1.00 (Ref.)		1.00 (Ref.)	
Low	161 (90.4)	17 (9.6)	1.14 (0.40, 3.24)		1.38 (0.46, 4.13)	
Moderate	57 (66.3)	29 (33.7)	5.50 (1.98, 15.23)		7.75 (2.54, 23.65)	
High	4 (36.4)	7 (63.6)	18.9 (4.08, 87.50)		27.46 (5.37, 140.38)	

*Statistically significant.

Table 6. Regression analyses on factors associated with preoperative depression

Variable	No depression *n* (%)	Depression *n* (%)	Simple logistic regression		Multiple logistic regression	
			Crude OR (95% CI)	*p*-value	Adjusted OR (95% CI)	*p*-value
Age (years)	38.3 ± 12.67	42.3 ± 16.25	1.02 (1.00, 1.04)	0.047*	0.99 (0.97, 1.02)	0.891
Gender				0.004*		0.030*
Male	68 (74.7)	23 (25.3)	2.47 (1.35, 4.53)		2.27 (1.08, 4.74)	
Female	219 (88.0)	30 (12.0)	1.00 (Ref.)		1.00 (Ref.)	
Education level				0.038*		0.143
Primary	15 (65.2)	8 (34.8)	6.19 (1.77, 21.57)		5.60 (1.27, 24.63)	
Secondary	139 (84.2)	26 (15.8)	2.17 (0.79, 5.93)		1.93 (0.68, 5.46)	
Higher secondary	75 (84.3)	14 (15.7)	2.17 (0.74, 6.36)		1.66 (0.54, 5.08)	
Tertiary	58 (92.1)	5 (7.9)	1.00 (Ref.)		1.00 (Ref.)	
Previous surgical history				0.807		0.826
No	114 (83.8)	22 (16.2)	1.08 (0.59, 1.95)		0.93 (0.48, 1.80)	
Yes	173 (84.8)	31 (15.2)	1.00 (Ref.)		1.00 (Ref.)	
Surgical grade				0.236		0.494
Major	57 (79.2)	15 (20.8)	1.35 (0.66, 2.78)		1.56 (0.68, 3.59)	
Intermediate	112 (88.2)	15 (11.8)	0.69 (0.34, 1.38)		0.98 (0.43, 2.23)	
Minor	118 (83.7)	23 (16.3)	1.00 (Ref.)		1.00 (Ref.)	
Self-rated fear level				0.035*		0.011*
None	50 (84.7)	9 (15.3)	1.00 (Ref.)		1.00 (Ref.)	
Low	158 (88.8)	20 (11.2)	0.70 (0.30, 1.64)		0.85 (0.35, 2.10)	
Moderate	64 (74.4)	22 (25.6)	1.91 (0.81, 4.51)		2.81 (1.08, 7.27)	
High	9 (81.8)	2 (18.2)	1.24 (0.23, 6.68)		2.08 (0.36, 12.15)	

*Statistically significant.

As for depression, increasing age, male gender, lower education level, and moderate-to-high level of self-rated fear level were independently predictive of perioperative depression (Table 6). After adjusting for all potential confounders, gender and self-rated fear level were the significant factors associated with perioperative depression. Males had a 2.27 increase in odds to have perioperative depression as compared to females (95% CI: 1.08, 4.74), while patients with moderate and high self-rated fear had 2.81 and 2.08 increase in odds, respectively, to develop perioperative depression as compared to those who reported no fear.

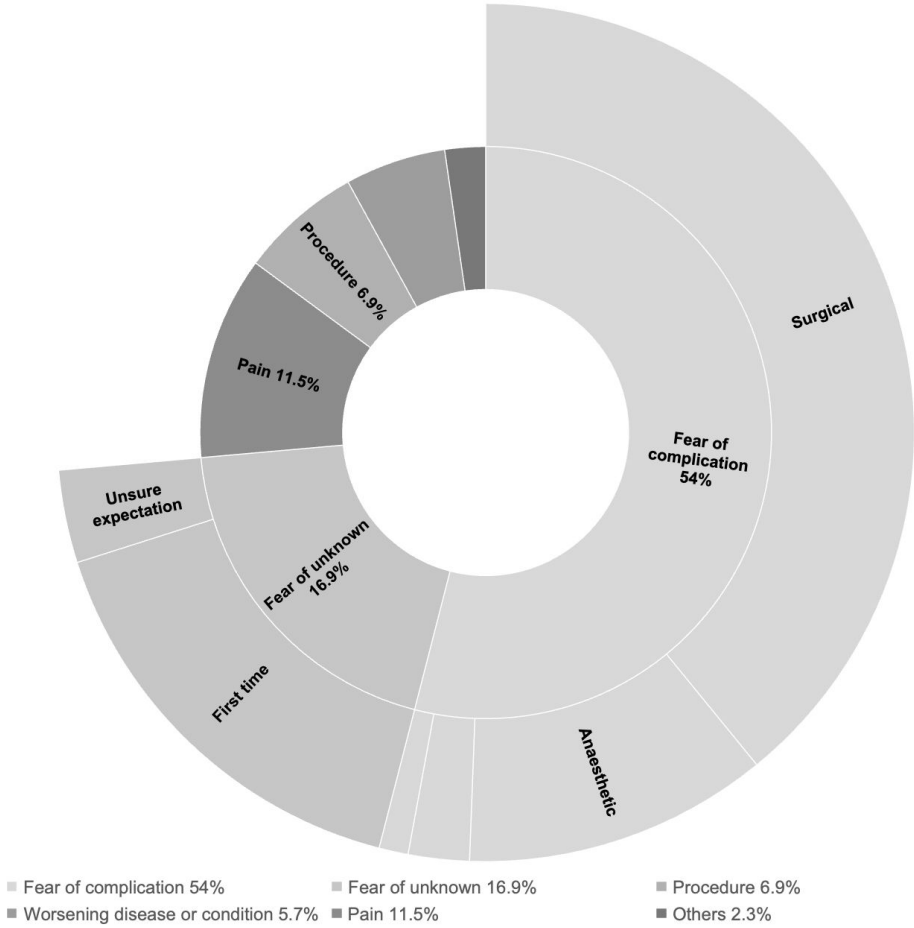

Fig. 1. Reasons underlying fear fear among adults undergoing elective surgery in the study population.

The reasons cited for fear among adults undergoing elective surgery in our study are shown in Figure 1.

Discussion

Prevalence of perioperative anxiety and depression

Compared to global data, our study population had a relatively lower prevalence of perioperative anxiety and depression at 17.4% and 15.6%, respectively. However, the mean score for patients with perioperative depression was relatively higher than those with perioperative anxiety (10.2 versus 9.7).

The variation found in the prevalence of anxiety and depression across different studies may be attributed to the different study instruments being used, such as the State and Trait Anxiety Scale[2] and the Beck Depression Inventory,[16] as well as the differences in baseline sociodemographic characteristics and cultural beliefs of the study participants. Our study was conducted in a suburban region with lower population density and less demanding lifestyle, hence mental health issues are less prevalent.[17,18] Despite our prevalence of perioperative depression and anxiety being comparatively lower to other studies, having 1 in every 6 perioperative patients with anxiety and depression is indeed alarming and warrants intervention given the risk of associated adverse outcomes.

Risk factors for perioperative anxiety

We did not find any significant demographic factors associated with perioperative anxiety, similar to several other studies that found equivocal results when comparing prevalence of anxiety based on gender distribution.[19,20] Oftentimes, women were found to be more anxious than men when scheduled for surgery.[1,21] Apart from gender, there were also contradictory findings in the role of education level and anxiety. Some studies found higher education level increases anxiety,[22,23] while others found that education protected against anxiety.[20,24]

The type of surgery did not predict anxiety, as similarly reported by Woldegerima *et al.*[19] and Erkilic *et al.*[25] However, a systematic review on the global prevalence and determinants of anxiety showed that type of surgery significantly increases anxiety perioperatively, with obstetric patients having the highest prevalence.[1] In our study, we did not specifically analyse obstetric patients as a single patient group, which may negate a similar observation. The same systematic review also showed that previous anaesthesia or surgical exposure significantly reduced perioperative anxiety among surgical patients, which was not evident in our study.

Risk factors for perioperative depression

Our study showed that male gender, lower education level, and moderate self-rated fear were significantly associated with perioperative depression. We suggest that

individuals with lower education levels may be less aware of the anticipated perioperative complications, hence may overthink and become dispirited.[22] However, education level was not statistically significant upon multiple regression modelling.

We found that male gender was the only statistically significant demographic risk factor for perioperative depression. The unexpected finding of male gender with increased risk for depression contradicts previous research that suggested female preponderance towards perioperative depression.[3] Globally, depression in the general population is higher in females,[26] but more men died by suicide at a rate of 4 to 5 times more often than women.[27] We postulate that depression in males may be underdiagnosed as the typical depressive symptoms such as sadness and crying are at odds with societal ideas of masculinity, leading to reluctance in reporting these symptoms among males. Therefore, assessment of depression using scales that do not include alternative depression symptoms such as anger attacks, aggression, substance abuse, and risk-taking behaviour could possibly result in missed diagnosis of depression in men.[28] Men are also less likely to seek help when it comes to perturbed emotional and mental health as compared to women.

Self-rated fear

The most common reason for fear cited in our study population was the fear of surgical complications, which accounts for more than half of all concerns. These include surgical, anaesthetic, and iatrogenic complications. Following, was the fear of the unknown, including fear of "firsts" as well as being unsure of expectations. Many studies have found similar concerns,[20,21] although each study and population have their own order of frequency and degree. Therefore, we recommend that patients with self-rated moderate to high levels of fear be further assessed using standardised psychometric tools and directed toward psychological experts for further management.

Study highlights and limitations

Our paper presented significant demographic factors that may insinuate patients who could be at increased risk of perioperative depression or anxiety. This information is relevant to our local setting for further risk-stratification and intervention. Apart from that, the level of self-rated fear, which was found significantly predictive of both perioperative depression and anxiety, is a more universal predictor that can be generally applied. It is a simple, easy, and practical screening question that clinicians can ask patients undergoing perioperative assessment. The relationship between fear, anxiety, and depression has been established by several studies in both international[29] and local settings.[30]

Our study is limited due to its observational methodological approach in a single study centre. The skewed distribution of elective surgical grade also hinders generalisability. Despite the limitations, we did provide evidence of significant perioperative anxiety and depression among patients undergoing elective surgery in our local population.

Conclusion

Our study found that 1 in every 6 patients undergoing surgery suffers from perioperative anxiety or depression. Male gender was the only significant demographic risk factor for perioperative depression, while moderate to high levels of self-rated fear were associated with both perioperative anxiety and depression. This alarming finding should prompt effective screening strategies for further risk-stratification and intervention.

Declarations

Ethics approval and consent to participate
Study procedures were performed in accordance with the Declaration of Helsinki, with informed and written consent obtained from study participants. The study received ethical approval from the Medical Research and Ethics Committee (MREC) of the Ministry of Health Malaysia (20-258-58809).

Competing interests
None to declare.

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Appendix

HOSPITAL ANXIETY AND DEPRESSION SCALE (HADS) – MALAY VERSION

Saya berasa tertekan / tersepit / serabut: A
- □ Sepanjang masa 3
- □ Banyak kali / kerapkali 2
- □ Kadang-kadang 1
- □ Tiada langsung 0

Saya masih seronok melakukan perkara yang dahulunya menyeronokkan: D
- □ Seperti dahulu/biasa (tiada perubahan) 0
- □ Tidak seseronok dahulu 1
- □ Seronok sedikit sahaja 2
- □ Tidak lagi/hampir tiada lagi keseronokan 3

Saya selalu berasa ketakutan seolah-olah seperti sesuatu yang buruk akan berlaku: A
- □ Sememangnya dan amat teruk sekali 3
- □ Ya tetapi tidaklah terlalu teruk 2
- □ Ada sedikit tetapi tidak membimbangkan saya 1
- □ Tidak ada langsung 0

Saya boleh ketawa dan dapat menyukai / Nampak perkara-perkara yang melucukan: D
- □ Sememangnya seperti dahulu 0
- □ Tidaklah seperti dahulu 1
- □ Sememangnya tidak seperti dahulu 2
- □ Hanya kadang-kadang 3

Perkara-perkara yang merisaukan / membimbangkan kerap bermain di fikiran saya: A
- □ Hampir sepanjang masa 3
- □ Banyak kali 2
- □ Dari masa kesemasa 1
- □ Hanya jarang-jarang / kadang-kadang 0

Saya berasa ceria: D
- □ Tidak ada langsung 3
- □ Tidak selalu 2
- □ Kadang-kadang 1
- □ Sepanjang masa 0

Saya boleh berasa relaks dan duduk dengan selesa: A
- □ Sememangnya 0
- □ Selalunya / kerap kali 1
- □ Tidak selalu / kadang-kadang 2
- □ Tidak boleh langsung 3

Saya berasa kurang / tidak secergas dahulu: D
- □ Hampir sepanjang masa 3
- □ Kerap kali 2
- □ Kadang-kadang 1
- □ Tidak langsung 0

Saya berasa takut / berdebar-debar / gementar: A
- □ Tidak langsung 0
- □ Jarang-jarang 1
- □ Agak kerap 2
- □ Kerap kali 3

Saya sudah hilang minat terhadap keterampilan diri sendiri: D
- □ Sememangnya agak kurang minat dari biasa 3
- □ Kurang minat dari biasa / yang seharusnya 2
- □ Kadang-kadang mungkin kurang minat dari biasa 1
- □ Tidak hilang minat – masih seperti biasa 0

Saya berasa tidak tenang / gelisah / seolah-olah saya perlu sentiasa membuat kerja / bergerak: A
- □ Sememangnya banyak kali 3
- □ Agak kerap 2
- □ Tidak terlalu kerap 1
- □ Tidak langsung 0

Saya sentiasa mengharapkan kecerlaan / kegembiraan apabila melakukan sesuatu perkara: D
- □ Sama seperti dahulu 3
- □ Tidak seperti dahulu 2
- □ Sememangnya amat kurang daripada dahulu 1
- □ Tidak / hampir tidak berasa ceria langsung 0

Saya mengalami panik / keadaan gementar secara tiba-tiba: A
- □ Sememangnya banyak kali / kerap kali 3
- □ Agak kerap 2
- □ Tidak kerap / kadang-kadang 1
- □ Tidak pernah langsung 0

Saya dapat merasai nikmat / keseronokan apabila melakukan sesuatu seperti membaca buku yang menarik / mendengar radio / menonton rancangan televisyen yang menarik: D
- □ Kerap kali 0
- □ Kadang-kadang 1
- □ Tidak selalu 2
- □ Jarang-jarang sekali 3

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