

ALEXITHYMIA AND SOMATIZATION
IN
PSYCHIATRIC AND MEDICAL PATIENTS

MOHD RAZALI SALLEH

NIK NOOR AZMI MOHD YUNUS

N.KUMARASWAMY



BAHAGIAN PENYELIDIKAN & PEMBANGUNAN
CANSELORI
UNIVERSITI SAINS MALAYSIA

Laporan Akhir Projek Penyelidikan Jangka Pendek

1) Nama Penyelidik: **Prof. Mohd. Razali Salleh**

Nama Penyelidik-Penyelidik
Lain (Jika berkaitan) :

1) **Dr. Nik Noor Azmi Mohd. Yunus**

2) **Dr. N. Kumaraswamy**

2) Pusat Pengajian/Pusat/Unit : **Pusat Pengajian Sains Perubatan,
Universiti Sains Malaysia, Kampus Kesihatan.**

3) Tajuk Projek: **Alexithymia and Somatization in Psychiatric
and Medical Patients.**



4) (a) Penemuan Projek / Abstrak

ABSTRACT

315 subjects comprising of equal number of psychiatric and medical patients; and control group were randomly selected for the study. Neuroses and depressive illness of the psychiatric group was chosen through psychiatric clinic. The medical out-patients attending physician clinic formed the medical group; while the control group was identified from staff and patients relatives. The selected patient was administered a series of questionnaires such as Toronto Alexithymia Scale (TAS), Middlesex Hospital Questionnaires (MHQ) and Duke Health Profile (DUKE) after the diagnosis was confirmed. The psychiatric patient was further evaluated using Hamilton Depression Rating Scale (HDS) and Hamilton Anxiety Rating Scale (HAS) for assessment of severity of depression and anxiety respectively.

172 (55 %) subjects had positive TAS score and considered as alexithymia. The prevalence of alexithymia was significantly higher in psychiatric and medical patients than the control group. The number of alexithymia among patients with underlying depression and anxiety were significantly increased. In general individual with alexithymia had significantly higher number of personality trait than healthy volunteer. There were marked psychosocial impairments and physical disability in psychiatric and medical patients respectively. However the difference was small and did not reach the level of significant. Although we cannot link alexithymia with a specific factor, most likely it is the product of personality disturbances aggravated by medical and psychiatric illness, especially depression and anxiety.

ABSTRAK

315 subjek yang terdiri dari kumpulan-kumpulan psikiatri, perubatan dan kawalan dengan jumlah yang sama dipilih secara rawak untuk kajian ini. Pesakit-pesakit neurotik dan kemurungan dari kumpulan psikiatri dipilih melalui klinik psikiatri. Pesakit yang menghadiri klinik pakar perubatan pula dipilih untuk kumpulan perubatan; manakala kumpulan kawalan adalah terdiri dari kakitangan dan keluarga pesakit yang tidak mengalami apa-apa masalah perubatan. Pesakit yang bersetuju untuk kajian dikehendaki menjawab satu set soalan yang terdiri dari Skala Alexithymia Toronto (TAS), Soalan Hospital Middlesex (MHQ) dan Profile Kesihatan DUKE (DUKE) setelah disahkan diagnosisnya. Pesakit-pesakit psikiatri dikehendaki menjawab soalan tambahan yang terdiri dari Skala Kemurungan Hamilton (HDS) dan Skala Kebimbangan Hamilton (HAS).

Didapati 170 (55%) subjek memperolehi skor TAS yang positif dan dianggap sebagai alexithymia. Prevalens alexithymia adalah lebih tinggi dengan ketara dikalangan pesakit-pesakit psikiatri dan perubatan bebanding dengan subjek kawalan. Bilangan alexithymia yang mengalami kemurungan dan kebimbangan adalah meningkat dengan ketara. Pada umumnya prevalens sifat keperibadian pada alexithymia adalah lebih tinggi dengan ketara daripada subjek kawalan. Prevalens sifat keperibadian dikalangan semua subjek yang memperolehi skor TAS yang positif juga meningkat.. Terdapat gangguan psikososial dan fizikal pada pesakit-pesakit psikiatri dan perubatan; walau bagaimana pun perbezaan ini adalah kecil dan tidak ketara jika dibandingkan dengan gangguan pada kumpulan kawalan. Walau pun kita tidak dapat menghubungkan alexithymia dengan faktor yang khusus, kemungkinan besar ianya hasil dari gangguan keperibadian yang menjadi lebih teruk dengan adanya penyakit-penyakit psikiatri; terutamanya kemurungan dan kebimbangan.

(b) Senaraikan Kata Kunci yang digunakan di dalam abstrak:

<u>Bahasa Malaysia</u>	<u>Bahasa Inggeris</u>
Somatization	Somatization
Alexithymia	Alexithymia
Kemurungan	Depression
Kebimbangan	Anxiety
Penyakit psikosomatik	psychosomatic illness
Keperibadian	Personality
.....
.....
.....
.....
.....
.....

5) Output Dan Faedah Projek

(a) Penerbitan (termasuk laporan/kertas seminar)
(Sila nyatakan jenis, tajuk, pengarang, tahun terbitan dan di mana telah diterbit/dibentangkan).

.....

- Belum -

.....

.....

.....

.....

.....

.....

.....

.....

.....

- (b) Faedah-Faedah Lain Seperti Perkembangan Produk,
Prospek Komersialisasi Dan Pendaftaran Paten.
(Jika ada dan jika perlu, sila gunakan kertas berasingan)

.....
.....
.....
Tiada
.....
.....
.....
.....
.....

(c) Latihan Gunatenaga Manusia

i) *Pelajar Siswazah*

.....
.....
.....

ii) *Pelajar Prasiswazah:*

.....
.....
.....

iii) *Lain-Lain :*

.....
.....
.....

6. Peralatan Yang Telah Dibeli:

.....
.....
.....
Tiada
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

UNTUK KEGUNAAN JAWATANKUASA PENYELIDIKAN UNIVERSITI

.....
.....
.....
.....
.....
.....
.....

TANDATANGAN PENERUSI
JAWATANKUASA PENYELIDIKAN
PUSAT PENGAJIAN

BAHAGIAN PENYELIDIKAN & PEMBANGUNAN
CANSELORI
UNIVERSITI SAINS MALAYSIA

Laporan Akhir Projek Penyelidikan Jangka Pendek

1) Nama Penyelidik: **Prof. Mohd. Razali Salleh**

Nama Penyelidik-Penyelidik
Lain (Jika berkaitan) : **1) Dr. Nik Noor Azmi Mohd. Yunus**

2) Dr. N. Kumaraswamy

2) Pusat Pengajian/Pusat/Unit : **Pusat Pengajian Sains Perubatan,
Universiti Sains Malaysia, Kampus Kesihatan.**

3) Tajuk Projek: **Alexithymia and Somatization in Psychiatric
and Medical Patients.**



4) (a) Penemuan Projek / Abstrak

ABSTRACT

315 subjects comprising of equal number of psychiatric and medical patients; and control group were randomly selected for the study. Neuroses and depressive illness of the psychiatric group was chosen through psychiatric clinic. The medical out-patients attending physician clinic formed the medical group; while the control group was identified from staff and patients relatives. The selected patient was administered a series of questionnaires such as Toronto Alexithymia Scale (TAS), Middlesex Hospital Questionnaires (MHQ) and Duke Health Profile (DUKE) after the diagnosis was confirmed. The psychiatric patient was further evaluated using Hamilton Depression Rating Scale (HDS) and Hamilton Anxiety Rating Scale (HAS) for assessment of severity of depression and anxiety respectively.

172 (55 %) subjects had positive TAS score and considered as alexithymia. The prevalence of alexithymia was significantly higher in psychiatric and medical patients than the control group. The number of alexithymia among patients with underlying depression and anxiety were significantly increased. In general individual with alexithymia had significantly higher number of personality trait than healthy volunteer. There were marked psychosocial impairments and physical disability in psychiatric and medical patients respectively. However the difference was small and did not reach the level of significant. Although we cannot link alexithymia with a specific factor, most likely it is the product of personality disturbances aggravated by medical and psychiatric illness, especially depression and anxiety.

ABSTRAK

315 subjek yang terdiri dari kumpulan-kumpulan psikiatri, perubatan dan kawalan dengan jumlah yang sama dipilih secara rawak untuk kajian ini. Pesakit-pesakit neurotik dan kemurungan dari kumpulan psikiatri dipilih melalui klinik psikiatri. Pesakit yang menghadiri klinik pakar perubatan pula dipilih untuk kumpulan perubatan; manakala kumpulan kawalan adalah terdiri dari kakitangan dan keluarga pesakit yang tidak mengalami apa-apa masalah perubatan. Pesakit yang bersetuju untuk kajian dikehendaki menjawab satu set soalan yang terdiri dari Skala Alexithymia Toronto (TAS), Soalan Hospital Middlesex (MHQ) dan Profile Kesihatan DUKE (DUKE) setelah disahkan diagnosisnya. Pesakit-pesakit psikiatri dikehendaki menjawab soalan tambahan yang terdiri dari Skala Kemurungan Hamilton (HDS) dan Skala Kebimbangan Hamilton (HAS).

Didapati 170 (55%) subjek memperolehi skor TAS yang positif dan dianggap sebagai alexithymia. Prevalens alexithymia adalah lebih tinggi dengan ketara dikalangan pesakit-pesakit psikiatri dan perubatan bebanding dengan subjek kawalan. Bilangan alexithymia yang mengalami kemurungan dan kebimbangan adalah meningkat dengan ketara. Pada umumnya prevalens sifat keperibadian pada alexithymia adalah lebih tinggi dengan ketara daripada subjek kawalan. Prevalens sifat keperibadian dikalangan semua subjek yang memperolehi skor TAS yang positif juga meningkat. Terdapat gangguan psikososial dan fizikal pada pesakit-pesakit psikiatri dan perubatan; walau bagaimana pun perbezaan ini adalah kecil dan tidak ketara jika dibandingkan dengan gangguan pada kumpulan kawalan. Walau pun kita tidak dapat menghubungkan alexithymia dengan faktor yang khusus, kemungkinan besar ianya hasil dari gangguan keperibadian yang menjadi lebih teruk dengan adanya penyakit-penyakit psikiatri; terutamanya kemurungan dan kebimbangan.

(b) Senaraikan Kata Kunci yang digunakan di dalam abstrak:

<u>Bahasa Malaysia</u>	<u>Bahasa Inggeris</u>
Somatization	Somatization
Alexithymia	Alexithymia
Kemurungan	Depression
Kebimbangan	Anxiety
Penyakit psikosomatik	psychosomatic illness
Keperibadian	Personality
.....
.....
.....
.....
.....

5) Output Dan Faedah Projek

(a) Penerbitan (termasuk laporan/kertas seminar)
(Sila nyatakan jenis, tajuk, pengarang, tahun terbitan dan di mana telah diterbit/dibentangkan).

.....

- Belum -

.....

.....

.....

.....

.....

.....

.....

.....

- (b) Faedah-Faedah Lain Seperti Perkembangan Produk,
Prospek Komersialisasi Dan Pendaftaran Paten.
(Jika ada dan jika perlu, sila gunakan kertas berasingan)

.....
.....
.....
Tiada
.....
.....
.....
.....
.....

(c) Latihan Gunatenaga Manusia

i) *Pelajar Siswazah*

.....
.....
.....

ii) *Pelajar Prasiswazah:*

.....
.....
.....

iii) *Lain-Lain :*

.....
.....
.....

6. Peralatan Yang Telah Dibeli:

.....
.....
.....
Tiada
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

UNTUK KEGUNAAN JAWATANKUASA PENYELIDIKAN UNIVERSITI

.....
.....
.....
.....
.....
.....
.....

Tahawal

mm

TANDATANGAN Pengerusi
Jawatankuasa Penyelidikan
Pusat Pengajian
PROF. MADYA ZABIDI AZHAR MOHD. HUSSIN
Dekan
Pusat Pengajian Sains Perikanan
Universiti Islam Malaysia
16150 Kubang Keratan
Kelantan.

ABSTRACT

315 subjects comprising of equal number of psychiatric and medical patients; and control group were randomly selected for the study. Neuroses and depressive illness of the psychiatric group was chosen through psychiatric clinic. The medical out-patients attending physician clinic formed the medical group; while the control group was identified from staff and patients relatives. The selected patient was administered a series of questionnaires such as Toronto Alexithymia Scale (TAS), Middlesex Hospital Questionnaires (MHQ) and Duke Health Profile (DUKE) after the diagnosis was confirmed. The psychiatric patient was further evaluated using Hamilton Depression Rating Scale (HDS) and Hamilton Anxiety Rating Scale (HAS) for assessment of severity of depression and anxiety respectively.

172 (55 %) subjects had positive TAS score and considered as alexithymia. The prevalence of alexithymia was significantly higher in psychiatric and medical patients than the control group. The number of alexithymia among patients with underlying depression and anxiety were significantly increased. In general individual with alexithymia had significantly higher number of personality trait than healthy volunteer. The prevalence of personality traits of all the subjects was also significantly increased among those with positive TAS score. There were marked psychosocial impairments and physical disability in psychiatric and medical patients respectively. However the difference was small and did not reach the level of significant. Although we cannot link alexithymia with a specific factor, most likely it is the product of personality disturbances aggravated by medical and psychiatric illness, especially depression and anxiety.

INTRODUCTION

Alexithymia which literally means 'no words for mood' was coined by Sifneos in 1972 to explain people who lack an ability to describe feeling verbally (1). Subsequently it was found that those who are unable to relate their feelings, possess minimal fantasies, utilize repetitive details and tend to focus on somatic concern (2). Alexithymia has been linked with classical psychosomatic illness but subsequently reported in patients with a wide range of medical and psychiatric disorder (3,4). The alexithymic trait has been postulated as related to psychosomatic pathology (3). On the other hand, alexithymic characteristic may arise as secondary state reaction in response to severe and chronic medical illness (4) or a widespread phenomenon not necessarily associated with somatization or other illness (5).

There is lack of reliable information, especially local data on the relationship of alexithymia to personality style, depressive state and somatic symptoms in psychiatric and medical patients. The objective of this study are to:-

1. Explore the relationship between alexithymia, neuroses and medical illness.
2. Evaluate personality traits of alexithymic individuals.
3. Explore the link between alexithymia, psychosocial impairment and physical disability of the study groups.

METHODOLOGY

1. All neurotic patients presented to the psychiatric clinic, HUSM will be screened for the study. Those diagnosed as having depressive illness, anxiety, panic and somatoform disorders were selected for the study after their DSM-IV (6) diagnoses were confirmed by the research psychiatrists and they are verbally agreed to participate. They are referred as psychiatric group.
2. The second group is medical patients drawn from physician clinic. They are chosen after their diagnoses were established and verbally agreed to participate in the study. The third group is healthy volunteers chosen from medical staff and patients relatives who are willing to take part in the study..
3. Toronto Alexithymia Scale (TAS) for assessment of alexithymic characteristics, Middlesex Hospital Questionnaires (MHQ) for personality trait assessment, and Duke Health Profile (DUKE) for evaluation of psychosocial impairment and physical disability are administered to all the selected patients after completing their biodata and socio-demographic variables. They are given two choices, whether to answer the questionnaires on the spot or sending the answer through the provided envelope with stamp.
4. The psychiatric patients are further evaluated using Hamilton Depression Rating Scale (HDS) and Hamilton Anxiety Rating Scale (HAS) to assess the severity of underlying depression and anxiety respectively.

5. Statistical analyses were performed using the Statistical Package for Social Sciences (SPSS) programs.

RESULTS

1. Socio-demographic variables

315 subjects were randomly selected for the study. The samples were equally divided into psychiatric, medical and volunteer groups. Their age, sex, races, marital status, highest educational level and occupation were summarized in bar chart in appendix I, II and III. Malays were the majority in each group with a total of 292 or 92.7% of the whole sample. TAS scores were evenly distributed throughout all the parameters of socio-demographic variables of the study groups.

2. Diagnoses

The diagnoses, duration of illness, status of treatment for psychiatric and medical patients were presented in bar chart in appendix I and II respectively. Majority of the psychiatric patients were diagnosed as major depression and generalized anxiety disorder; while the diagnoses of the medical patients were well distributed with heart problem at the top of the list.

3. TAS Score

Alexithymic characteristics were defined as following: positive TAS score was 73 and above; indeterminate TAS score of 64-72; and a negative TAS score was 63 and below. 172 (55 %) of the subjects had positive TAS score and they were considered as alexithymia. The prevalence of alexithymia in psychiatric, medical and control groups were 64%, 68% and 32% respectively. Table I compared the prevalence of alexithymia between the three groups. The alexithymia was found significantly higher in psychiatric ($\chi^2 = 19.533$, $df = 1$, $p < 0.0001$) and medical ($\chi^2 = 24.686$, $df = 1$, $p < 0.0001$) patients as compared with the control group. However the difference between psychiatric and medical patients did not reach statistical significance. The negative scores were predominated in the control group. Please refer to bar chart in appendix I, II and III for detail TAS score in each group.

Table I: The TAS score among the three study groups

TAS Score	Control (n = 105)	Psychiatric (n = 105)	Medical (n = 105)
≥ 73	34	67 ^a	71 ^b
64 - 72	50	30	31
≤ 63	21	8	3

^a $\chi^2 = 19.533, df = 1, p < 0.0001$

^b $\chi^2 = 24.686, df = 1, p < 0.0001$

4. Depression and anxiety

Table II showed the comparison of TAS score of psychiatric patients in relation to the severity of depression (HDS score) and anxiety (HAS score). The score of 73 and above were significant higher among patients with depression ($\chi^2 = 0.343, df = 1, p < 0.05$) and anxiety ($\chi^2 = 0.029, df = 1, p < 0.05$). Please refer to bar chart in appendix I for the distribution of HDS and HAS scores in detail.

Table II: The comparison of TAS Score among psychiatric patients in relation to depression and anxiety

	≥ 73	63 - 72	≤ 63
A. Depression			
No depression	24	11	4
Depressed (HDS ≥ 8)	46	17	3
B. Anxiety			
No anxiety	18	9	2
Anxiety (HAS ≥ 6)	47	22	7

5. MHQ score

The alexithymia (positive TAS score) from medical and psychiatric groups as compared with those of control group, except FFA of medical patients scored significantly higher in all categories of personality traits (Table III). The distributions of 6 personality traits among 315 subjects in relation to TAS score were shown in

table IV. It showed that the prevalence of personality traits was significantly higher among those with positive TAS score than those with lower score. The analysis of each personality trait were shown in bar chart in appendix I, II and III.

Table III: The personality traits of alexithymia in each group

Personality trait	Control (n = 105)	Psychiatric (n = 105)	Medical (n = 105)
FFA	21	57 ^a	38 ^b
PHO	28	61 ^a	68 ^a
OBS	19	40 ^a	54 ^a
SOM	10	38 ^a	46 ^a
DEP	32	64 ^a	65 ^a
HYS	24	52 ^a	52 ^a

^ap < 0.001

^bp > 0.05

Table IV: The personality trait distribution of all the sample

TAS Score Personality trait	≥ 73	63 - 72	≤ 63
FFA	116 ^a	59	8
PHO	157 ^b	100	24
OBS	113 ^b	63	18
SOM	94 ^a	44	10
DEP	161 ^a	82	21
HYS	128 ^a	58	16

^ap < 0.001

^bp > 0.05

6. DUKE Score

The comparison of subjects who had more than 50% impairment in each category of basic health (physical, mental, social, general, perceived), self-esteem and specific morbidity was shown in table V.

Table V: The comparison of subjects with more than 50% impairment in health parameters and related morbidity

No	Health Parameters And Morbidity	Control (n=105)	Psychiatric (n=105)	Medical (n=105)
1.	Physical health	93	56	50
2.	Mental health	94	57	72
3.	Social health	98	56	91
4.	General health	95	61	70
5.	Perceived health	104	45	91
6.	Self-esteem	101	88	100
7.	Anxiety	32	58	48
8.	Depression	40	63	61
9.	Pain	74	80	95
10.	Disability	14	31	42

- No 1 – 6 (health parameters): positive correlation
- No 7 – 10 (specific morbidity): negative correlation

The control groups had less impairment in 5 sub-component of basic health (physical, mental, social, general and perceived) and self-esteem as compared with the other 2 groups. In contrast, the medical patients had higher morbidity in relation to pain and disability; while psychosocial impairments (severity of depression and anxiety) were higher in psychiatric patients. However the difference between the two groups was small and did not reach the level of significant. The analysis of each category of health parameter and related morbidity scores were summarised in bar chart in appendix I, II and III.

DISCUSSION

We need to modify the methodology of the study because of difficulty to find large number of somatizers and patients with psychosomatic illness. The study group was reduced from 5 to 3 groups (psychiatric, medical and control group). With this simpler approach, a few initial objective of the study was dropped. However, we are happy with the modified methodology because we could finish the study on time

We found that the prevalence of alexithymia is high, even among the control group. This is not surprised because 93 % of the subjects in the study are Malays and they are well known for their soft spoken, obedience and timidnes. Unfortunately we are unable to compare with other races in Malaysia because we could not find other related study. This attitude will reflect on their communication and expression of emotion which was described as 'non-verbal or quiet'; It is obvious that the problem is not due to the difficulty of selecting a right word (poor vocabulary) because it effected all level of education, even the educated people. The point is stressed here because it encroaches the basic concept of alexithymia which literally means 'no words for mood' (1)

Among the factors examined in the study, we found that personality play the most important role contributing to alexithymic characteristics. Although at this stage we could not find a specific personality trait which linked to alexithymia, we hope the problem would be solved by performing advanced statistical method such as factor analysis or ANOVA in later analysis. Others had found that obsessoid personality style significantly correlated with TAS score (6). Along the same line we found that the 6 personality traits of 315 subjects measured in the study was significantly higher in alexithymia than non-alexithymia. At the group level, the prevalence of personality trait of alexithymic individual was significantly higher among those in psychiatric and medical groups as compared with the healthy volunteers.

The underlying medical and psychiatric illness aggravated the alexithymic characteristic in these two groups of patients. This is correlated with the finding that the prevalence of alexithymia was significantly higher in depressed and anxious patients. Unfortunately, the percentage of patient with psychosomatic illness in the medical group is too small to analysed. Alexithymia is known to be associated with depressive illness, anxiety states and psychosomatic illness (7,8). Even more interesting is that lately a numbers of clinical research studies also discovered the presence of alexithymic characteristics in various percentages in patients suffering from different medical and psychiatric disorders such as PTSD, substance abuse, eating disorders, panic attack, borderline and sociopathic personality disorders, as well as in individuals in normal population (9). This is interesting field in psychosomatic research to explore in future study.

REFERENCES:

1. Sifneos PE. Short-term psychotherapy and emotional crisis. Cambridge, Mass: Harvard University Press, 1972.
2. Taylor GJ, Bagby RM, Parker JDA. The alexithymia construct: A Potential paradigm for psychosomatic medicine. *Psychosomatics* 1991; 32: 153 – 164.
3. Sifneos PE. The prevalence of alexithymic characteristic in psychosomatic patients. *Psychotherapy and Psychosomatics* 1973; 22: 255 – 262.
4. Wise TN, Jani NN, Kass E, Sonnenschein K, Mann LS. Alexithymia: Relationship to severity of medical illness and depression. *Psychotherapy and Psychosomatics* 1988; 50: 68-71.
5. Shipko S Alexithymia and somatization. *Psychotherapy and Psychosomatics* 1982; 37:193-201
6. Wise TM, Mann LS, Hill B. Alexithymia and depressed mood in the psychiatric patient. *Psychotherapy and Psychosomatics* 1990; 54: 26-31.
7. Rebavilas AD. Electrodermal activity in low and high alexithymia neurotic patients. *Psychotherapy and Psychosomatics* 1987; 47: 101-104
8. Joukamaa M, Karlson H, Sohlman B, Lehtinen V. Alexithymia and psychological distress among frequent attendance patients in health care. *Psychotherapy and Psychosomatics* 1996; 65: 199-202
9. Sifneos PE. Alexithymia, clinical issues, politics and crime. *Psychotherapy and Psychosomatics* 2000; 69: 113-116.

ALEXITHYMIA AND SOMATIZATION
IN
PSYCHIATRIC AND MEDICAL PATIENTS

MOHD RAZALI SALLEH

NIK NOOR AZMI MOHD YUNUS

N.KUMARASWAMY

GERAN USM JANGKA PENDEK
(NO GERAN: 304 / PPSP / 613 / 1121)

TAJUK

**ALEXITHYMIA AND SOMATIZATION
IN PSYCHIATRIC AND MEDICAL PATIENTS**

TEMPOH GERAN

1 JUN 2000 HINGGA 31 OGOS 2001

PENYELIDIK

PROF. MOHD. RAZALI SALLEH
DR. NIK NOOR AZMI MOHD. YUNUS
DR. N. KUMARASWAMY

ABSTRACT

315 subjects comprising of equal number of psychiatric and medical patients; and control group were randomly selected for the study. Neuroses and depressive illness of the psychiatric group was chosen through psychiatric clinic. The medical out-patients attending physician clinic formed the medical group; while the control group was identified from staff and patients relatives. The selected patient was administered a series of questionnaires such as Toronto Alexithymia Scale (TAS), Middlesex Hospital Questionnaires (MHQ) and Duke Health Profile (DUKE) after the diagnosis was confirmed. The psychiatric patient was further evaluated using Hamilton Depression Rating Scale (HDS) and Hamilton Anxiety Rating Scale (HAS) for assessment of severity of depression and anxiety respectively.

172 (55 %) subjects had positive TAS score and considered as alexithymia. The prevalence of alexithymia was significantly higher in psychiatric and medical patients than the control group. The number of alexithymia among patients with underlying depression and anxiety were significantly increased. In general individual with alexithymia had significantly higher number of personality trait than healthy volunteer. The prevalence of personality traits of all the subjects was also significantly increased among those with positive TAS score. There were marked psychosocial impairments and physical disability in psychiatric and medical patients respectively. However the difference was small and did not reach the level of significant. Although we cannot link alexithymia with a specific factor, most likely it is the product of personality disturbances aggravated by medical and psychiatric illness, especially depression and anxiety.

INTRODUCTION

Alexithymia which literally means 'no words for mood' was coined by Sifneos in 1972 to explain people who lack an ability to describe feeling verbally (1). Subsequently it was found that those who are unable to relate their feelings, possess minimal fantasies, utilize repetitive details and tend to focus on somatic concern (2). Alexithymia has been linked with classical psychosomatic illness but subsequently reported in patients with a wide range of medical and psychiatric disorder (3,4). The alexithymic trait has been postulated as related to psychosomatic pathology (3). On the other hand, alexithymic characteristic may arise as secondary state reaction in response to severe and chronic medical illness (4) or a widespread phenomenon not necessarily associated with somatization or other illness (5).

There is lack of reliable information, especially local data on the relationship of alexithymia to personality style, depressive state and somatic symptoms in psychiatric and medical patients. The objective of this study are to:-

1. Explore the relationship between alexithymia, neuroses and medical illness.
2. Evaluate personality traits of alexithymic individuals.
3. Explore the link between alexithymia, psychosocial impairment and physical disability of the study groups.

.METHODOLOGY

1. All neurotic patients presented to the psychiatric clinic, HUSM will be screened for the study. Those diagnosed as having depressive illness, anxiety, panic and somatoform disorders were selected for the study after their DSM-IV (6) diagnoses were confirmed by the research psychiatrists and they are verbally agreed to participate. They are referred as psychiatric group.
2. The second group is medical patients drawn from physician clinic. They are chosen after their diagnoses were established and verbally agreed to participate in the study. The third group is healthy volunteers chosen from medical staff and patients relatives who are willing to take part in the study..
3. Toronto Alexithymia Scale (TAS) for assessment of alexithymic characteristics, Middlesex Hospital Questionnaires (MHQ) for personality trait assessment, and Duke Health Profile (DUKE) for evaluation of psychosocial impairment and physical disability are administered to all the selected patients after completing their biodata and socio-demographic variables. They are given two choices, whether to answer the questionnaires on the spot or sending the answer through the provided envelope with stamp.
4. The psychiatric patients are further evaluated using Hamilton Depression Rating Scale (HDS) and Hamilton Anxiety Rating Scale (HAS) to assess the severity of underlying depression and anxiety respectively.

5. Statistical analyses were performed using the Statistical Package for Social Sciences (SPSS) programs.

RESULTS

1. Socio-demographic variables

315 subjects were randomly selected for the study. The samples were equally divided into psychiatric, medical and volunteer groups. Their age, sex, races, marital status, highest educational level and occupation were summarized in bar chart in appendix I, II and III. Malays were the majority in each group with a total of 292 or 92.7% of the whole sample. TAS scores were evenly distributed throughout all the parameters of socio-demographic variables of the study groups.

2. Diagnoses

The diagnoses, duration of illness, status of treatment for psychiatric and medical patients were presented in bar chart in appendix I and II respectively. Majority of the psychiatric patients were diagnosed as major depression and generalized anxiety disorder; while the diagnoses of the medical patients were well distributed with heart problem at the top of the list.

3. TAS Score

Alexithymic characteristics were defined as following: positive TAS score was 73 and above; indeterminate TAS score of 64-72; and a negative TAS score was 63 and below. 172 (55 %) of the subjects had positive TAS score and they were considered as alexithymia. The prevalence of alexithymia in psychiatric, medical and control groups were 64%, 68% and 32% respectively. Table I compared the prevalence of alexithymia between the three groups. The alexithymia was found significantly higher in psychiatric ($\chi^2 = 19.533$, $df = 1$, $p < 0.0001$) and medical ($\chi^2 = 24.686$, $df = 1$, $p < 0.0001$) patients as compared with the control group. However, the difference between psychiatric and medical patients did not reach statistical significance. The negative scores were predominated in the control group. Please refer to bar chart in appendix I, II and III for detail TAS score in each group.

Table I: The TAS score among the three study groups

TAS Score	Control (n = 105)	Psychiatric (n = 105)	Medical (n = 105)
≥ 73	34	67 ^a	71 ^b
64 – 72	50	30	31
≤ 63	21	8	3

^a $\chi^2 = 19.533$, $df = 1$, $p < 0.0001$

^b $\chi^2 = 24.686$, $df = 1$, $p < 0.0001$

4. Depression and anxiety

Table II showed the comparison of TAS score of psychiatric patients in relation to the severity of depression (HDS score) and anxiety (HAS score). The score of 73 and above were significant higher among patients with depression ($\chi^2 = 0.343$, $df = 1$, $p < 0.05$) and anxiety ($\chi^2 = 0.029$, $df = 1$, $p < 0.05$). Please refer to bar chart in appendix I for the distribution of HDS and HAS scores in detail.

Table II: The comparison of TAS Score among psychiatric patients in relation to depression and anxiety

	≥ 73	63 - 72	≤ 63
A. Depression			
No depression	24	11	4
Depressed (HDS ≥ 8)	46	17	3
B. Anxiety			
No anxiety	18	9	2
Anxiety (HAS ≥ 6)	47	22	7

5. MHQ score

The alexithymia (positive TAS score) from medical and psychiatric groups as compared with those of control group, except FFA of medical patients scored significantly higher in all categories of personality traits (Table III). The distributions of 6 personality traits among 315 subjects in relation to TAS score were shown in

table IV. It showed that the prevalence of personality traits was significantly higher among those with positive TAS score than those with lower score. The analysis of each personality trait were shown in bar chart in appendix I, II and III.

Table III: The personality traits of alexithymia in each group

Personality trait	Control (n = 105)	Psychiatric (n = 105)	Medical (n = 105)
FFA	21	57 ^a	38 ^b
PHO	28	61 ^a	68 ^a
OBS	19	40 ^a	54 ^a
SOM	10	38 ^a	46 ^a
DEP	32	64 ^a	65 ^a
HYS	24	52 ^a	52 ^a

^a p < 0.001

^b p > 0.05

Table IV: The personality trait distribution of all the sample

TAS Score Personality trait	≥ 73	63 - 72	≤ 63
FFA	116 ^a	59	8
PHO	157 ^b	100	24
OBS	113 ^b	63	18
SOM	94 ^a	44	10
DEP	161 ^a	82	21
HYS	128 ^a	58	16

^a p < 0.001

^b p > 0.05

6. DUKE Score

The comparison of subjects who had more than 50% impairment in each category of basic health (physical, mental, social, general, perceived), self-esteem and specific morbidity was shown in table V.

Table V: The comparison of subjects with more than 50% impairment in health parameters and related morbidity

No	Health Parameters And Morbidity	Control (n=105)	Psychiatric (n=105)	Medical (n=105)
1.	Physical health	93	56	50
2.	Mental health	94	57	72
3.	Social health	98	56	91
4.	General health	95	61	70
5.	Perceived health	104	45	91
6.	Self-esteem	101	88	100
7.	Anxiety	32	58	48
8.	Depression	40	63	61
9.	Pain	74	80	95
10.	Disability	14	31	42

- No 1 – 6 (health parameters): positive correlation
- No 7 – 10 (specific morbidity): negative correlation

The control groups had less impairment in 5 sub-component of basic health (physical, mental, social, general and perceived) and self-esteem as compared with the other 2 groups. In contrast, the medical patients had higher morbidity in relation to pain and disability; while psychosocial impairments (severity of depression and anxiety) were higher in psychiatric patients. However the difference between the two groups was small and did not reach the level of significant. The analysis of each category of health parameter and related morbidity scores were summarised in bar chart in appendix I, II and III.

DISCUSSION

We need to modify the methodology of the study because of difficulty to find large number of somatizers and patients with psychosomatic illness. The study group was reduced from 5 to 3 groups (psychiatric, medical and control group). With this simpler approach, a few initial objective of the study was dropped. However, we are happy with the modified methodology because we could finish the study on time

We found that the prevalence of alexithymia is high, even among the control group. This is not surprised because 93 % of the subjects in the study are Malays and they are well known for their soft spoken, obedience and timidness. Unfortunately we are unable to compare with other races in Malaysia because we could not find other related study. This attitude will reflect on their communication and expression of emotion which was described as 'non-verbal or quiet'; It is obvious that the problem is not due to the difficulty of selecting a right word (poor vocabulary) because it effected all level of education, even the educated people. The point is stressed here because it encroaches the basic concept of alexithymia which literally means 'no words for mood' (1)

Among the factors examined in the study, we found that personality play the most important role contributing to alexithymic characteristics. Although at this stage we could not find a specific personality trait which linked to alexithymia, we hope the problem would be solved by performing advanced statistical method such as factor analysis or ANOVA in later analysis. Others had found that obsessoid personality style significantly correlated with TAS score (6). Along the same line we found that the 6 personality traits of 315 subjects measured in the study was significantly higher in alexithymia than non-alexithymia. At the group level, the prevalence of personality trait of alexithymic individual was significantly higher among those in psychiatric and medical groups as compared with the healthy volunteers.

The underlying medical and psychiatric illness aggravated the alexithymic characteristic in these two groups of patients. This is correlated with the finding that the prevalence of alexithymia was significantly higher in depressed and anxious patients. Unfortunately, the percentage of patient with psychosomatic illness in the medical group is too small to analysed. Alexithymia is known to be associated with depressive illness, anxiety states and psychosomatic illness (7,8). Even more interesting is that lately a numbers of clinical research studies also discovered the presence of alexithymic characteristics in various percentages in patients suffering from different medical and psychiatric disorders such as PTSD, substance abuse, eating disorders, panic attack, borderline and sociopathic personality disorders, as well as in individuals in normal population (9). This is interesting field in psychosomatic research to explore in future study.

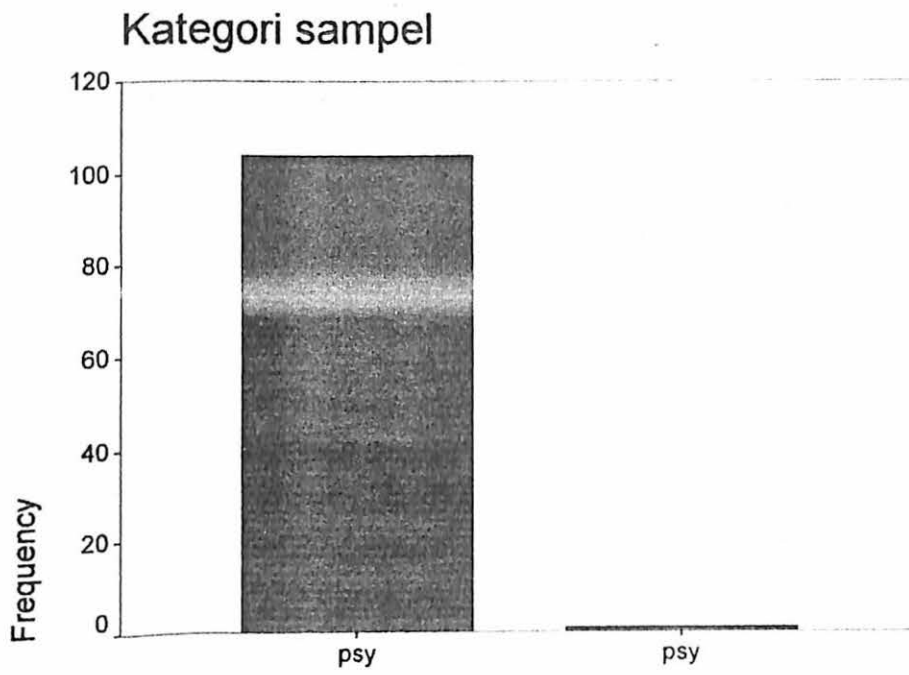
REFERENCES:

1. Sifneos PE. Short-term psychotherapy and emotional crisis. Cambridge, Mass: Harvard University Press, 1972.
2. Taylor GJ, Bagby RM, Parker JDA. The alexithymia construct: A Potential paradigm for psychosomatic medicine. *Psychosomatics* 1991; 32: 153 – 164.
3. Sifneos PE. The prevalence of alexithymic characteristic in psychosomatic patients. *Psychotherapy and Psychosomatics* 1973; 22: 255 – 262.
4. Wise TN, Jani NN, Kass E, Sonnenschein K, Mann LS. Alexithymia: Relationship to severity of medical illness and depression. *Psychotherapy and Psychosomatics* 1988; 50: 68-71.
5. Shipko S Alexithymia and somatization. *Psychotherapy and Psychosomatics* 1982; 37:193-201
6. Wise TM, Mann LS, Hill B. Alexithymia and depressed mood in the psychiatric patient. *Psychotherapy and Psychosomatics* 1990; 54: 26-31.
7. Rebavilas AD. Electrodermal activity in low and high alexithymia neurotic patients. *Psychotherapy and Psychosomatics* 1987; 47: 101-104
8. Joukamaa M, Karlson H, Sohlman B, Lehtinen V. Alexithymia and psychological distress among frequent attendance patients in health care. *Psychotherapy and Psychosomatics* 1996; 65: 199-202
9. Sifneos PE. Alexithymia, clinical issues, politics and craime. *Psychotherapy and Psychosomatics* 2000; 69: 113-116.

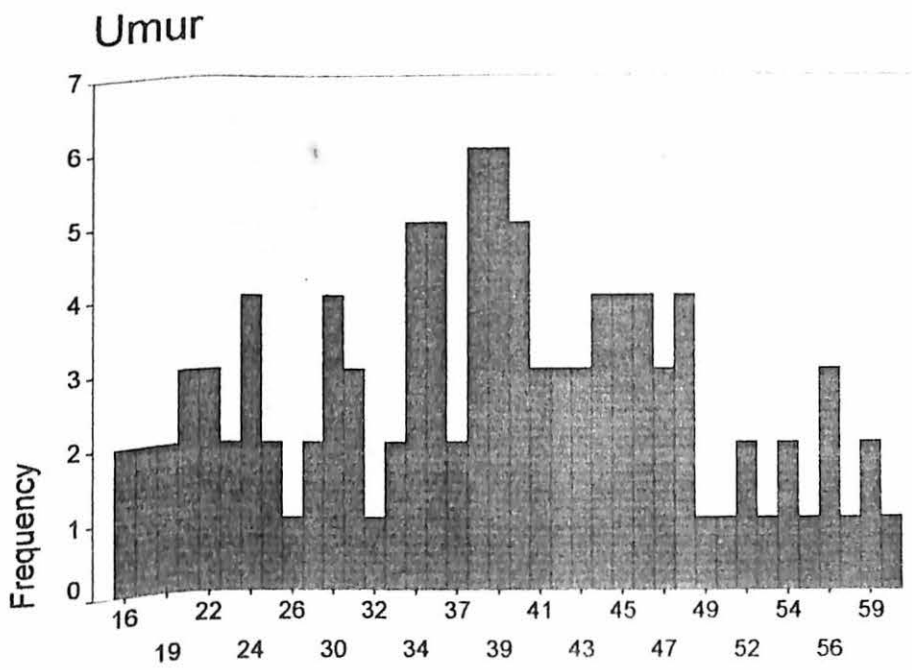
APPENDIX I:

PSYCHIATRIC PATIENTS

Bar Chart

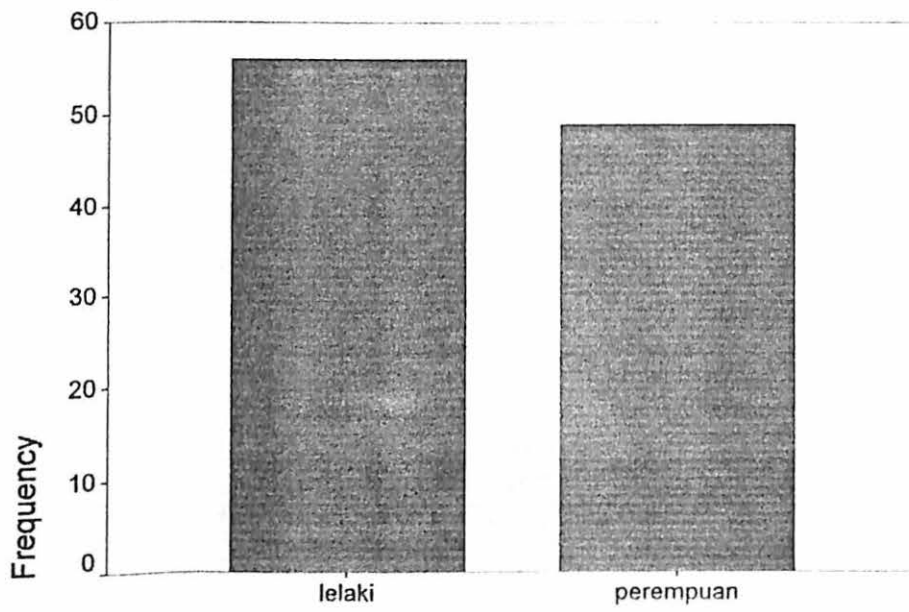


Kategori sampel



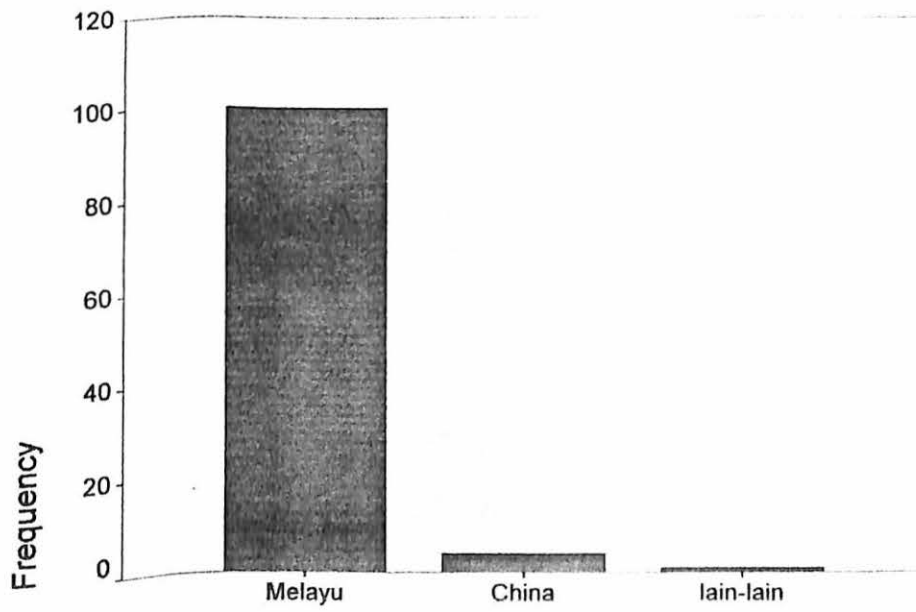
Umur

jantina



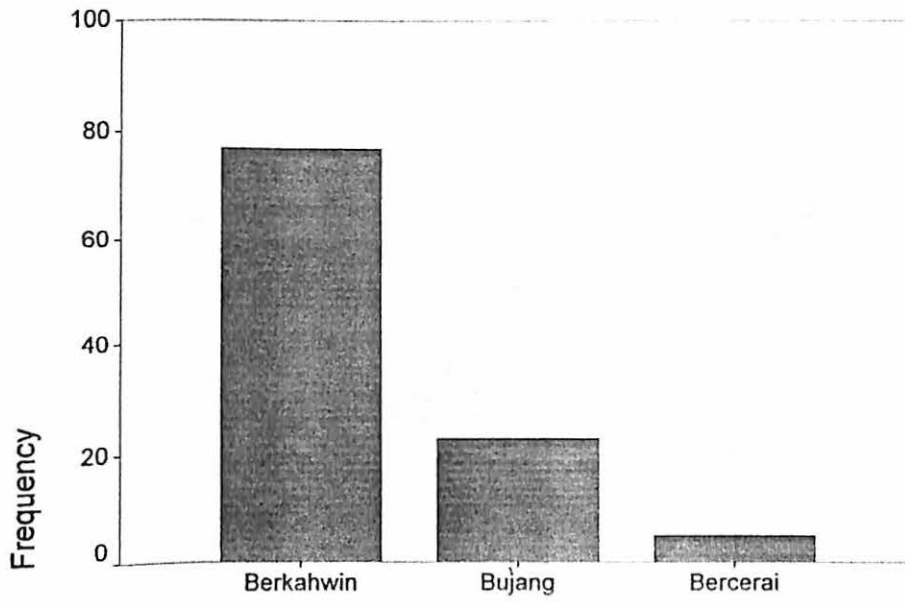
jantina

Bangsa



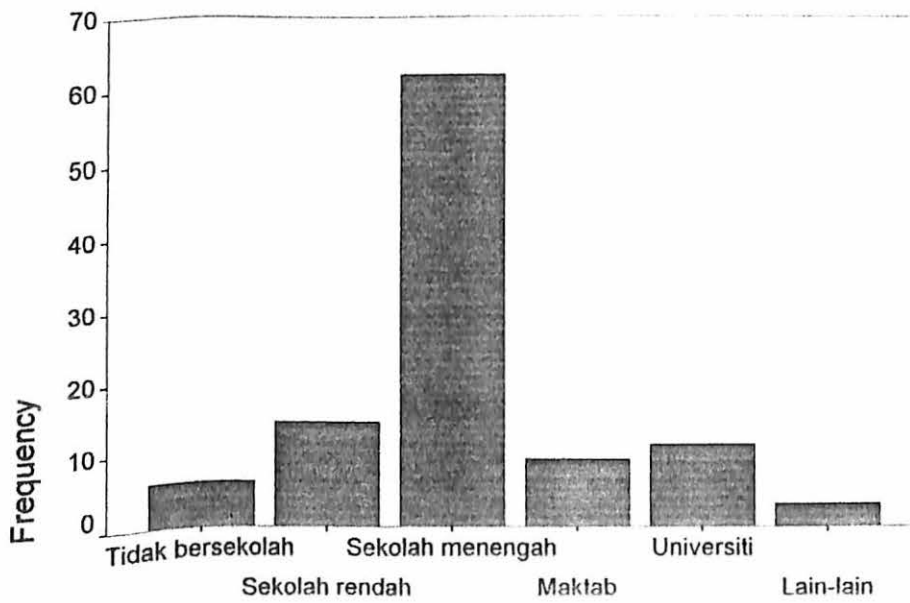
Bangsa

Taraf perkahwinan



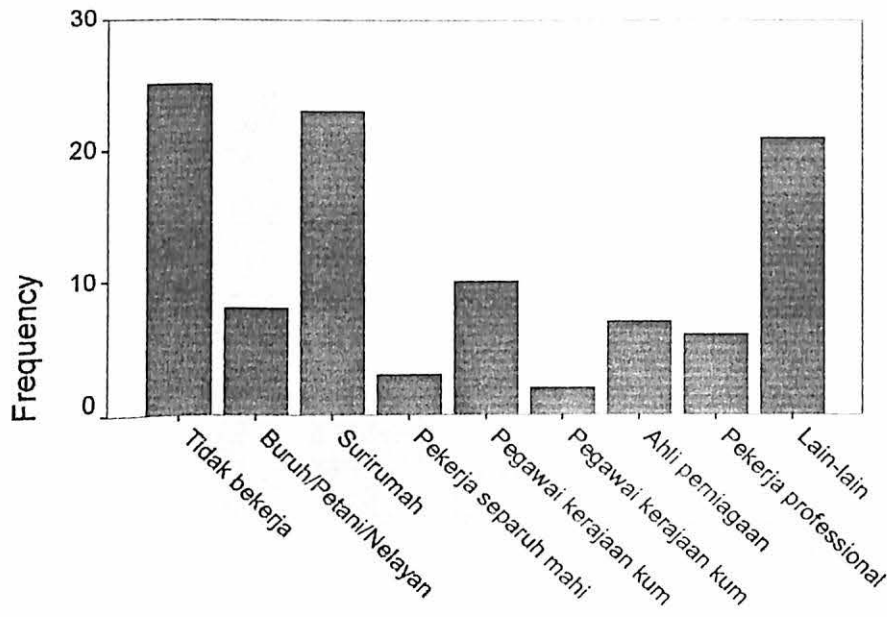
Taraf perkahwinan

Taraf pelajaran



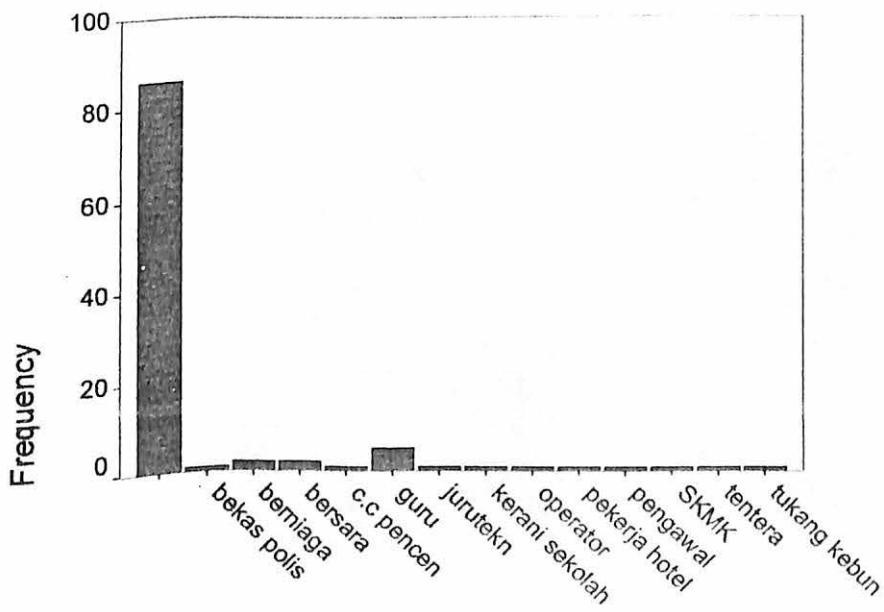
Taraf pelajaran

pekerjaan



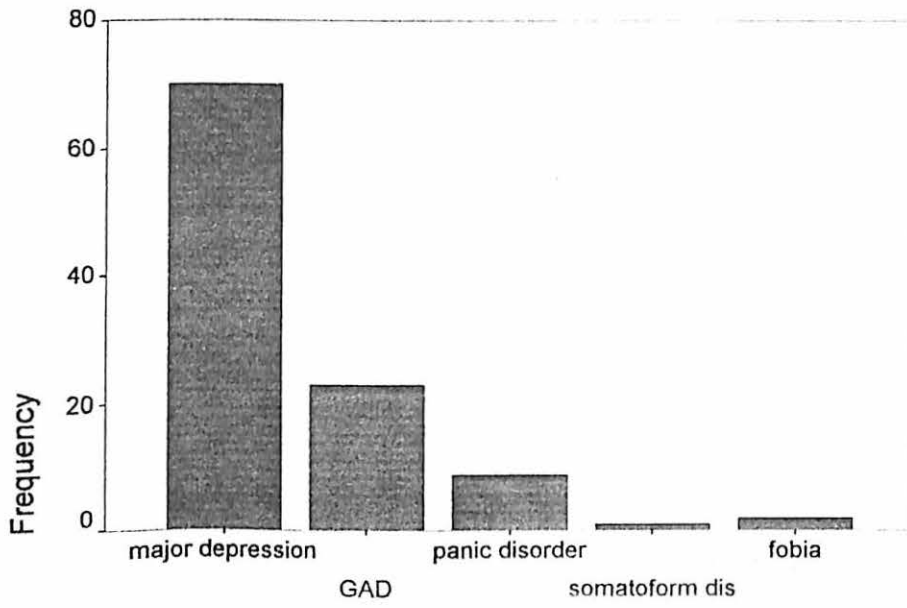
pekerjaan

lain-lain kerja



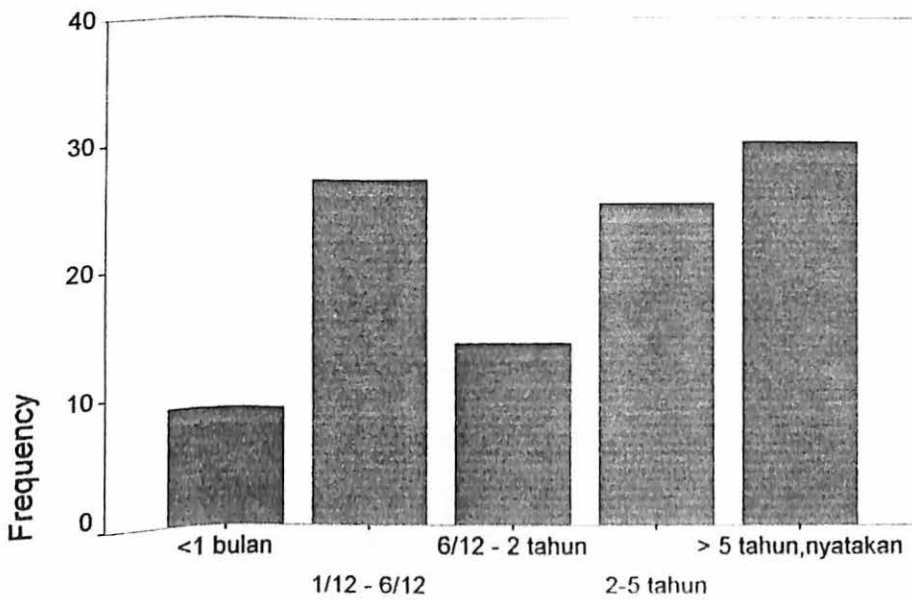
lain-lain kerja

diagnosis1



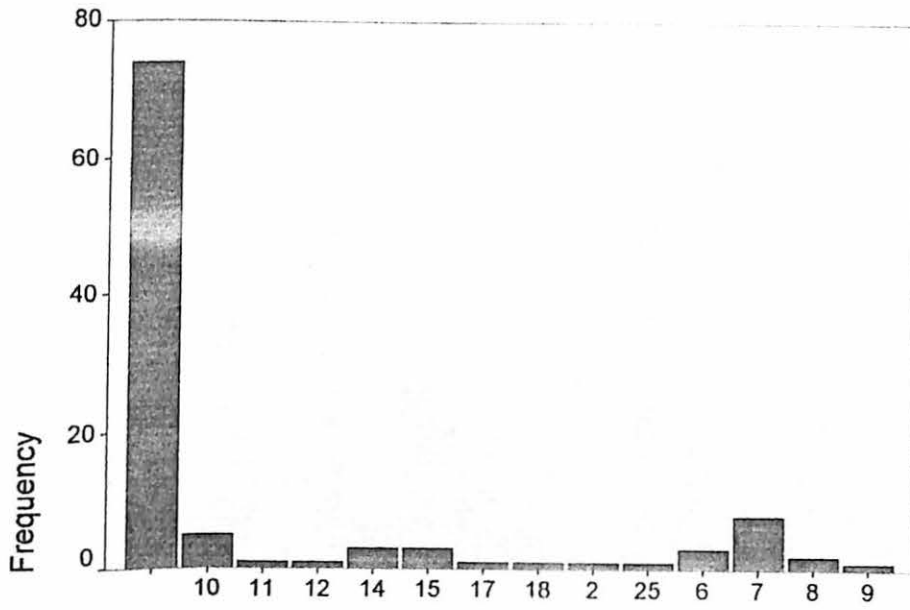
diagnosis1

tempoh penyakit

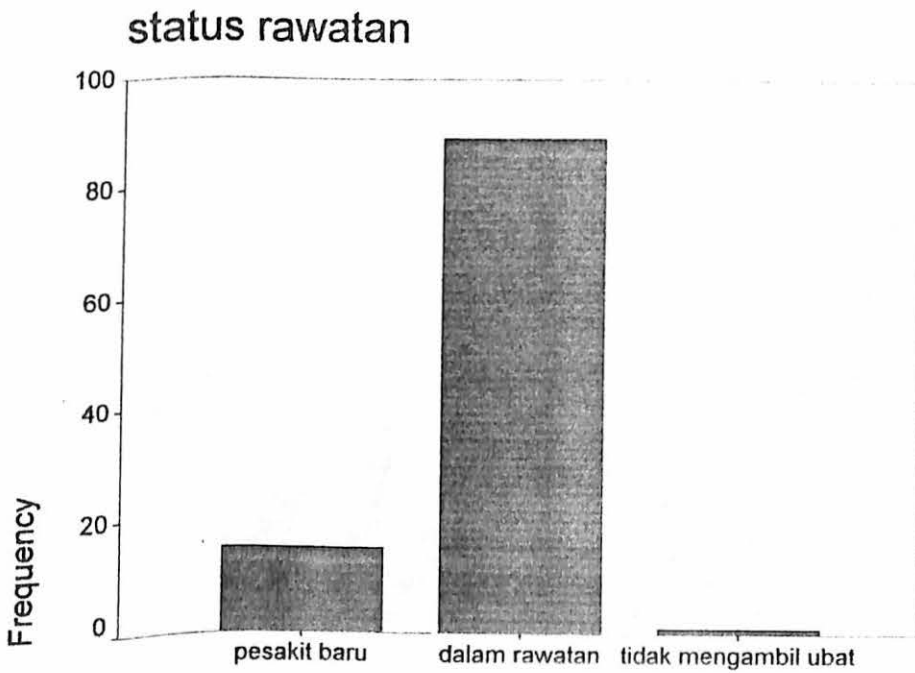


tempoh penyakit

nyatakan jumlah tahun

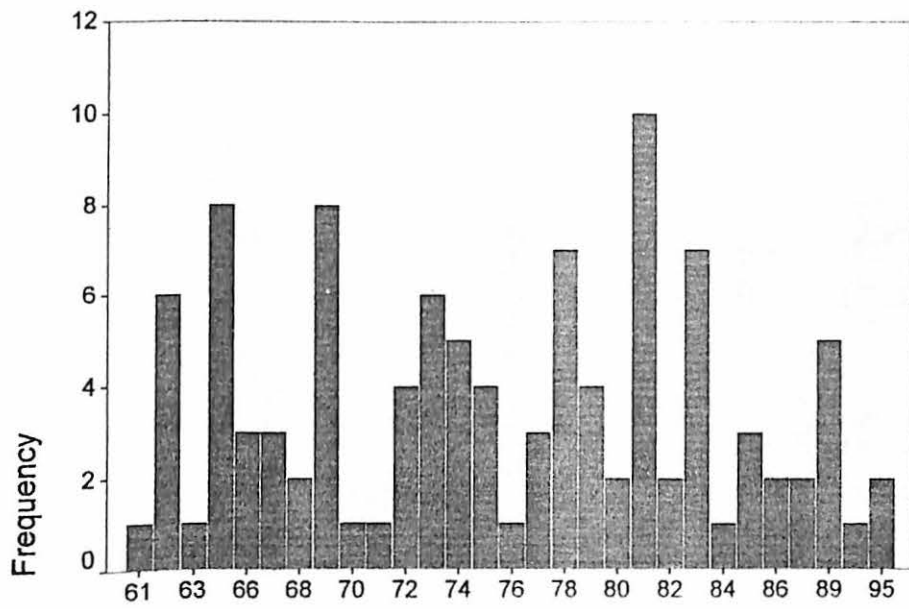


nyatakan jumlah tahun



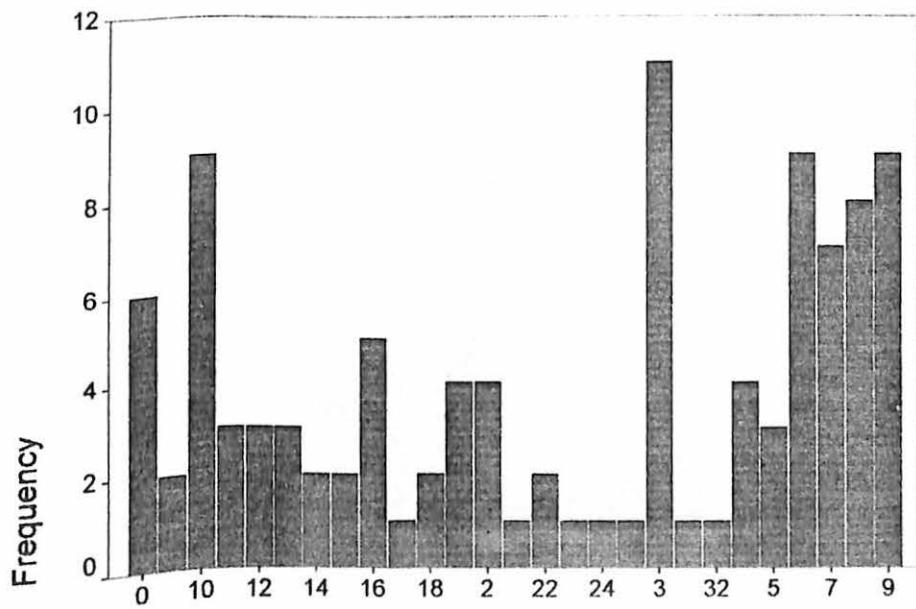
status rawatan

Jumlah skor TAS



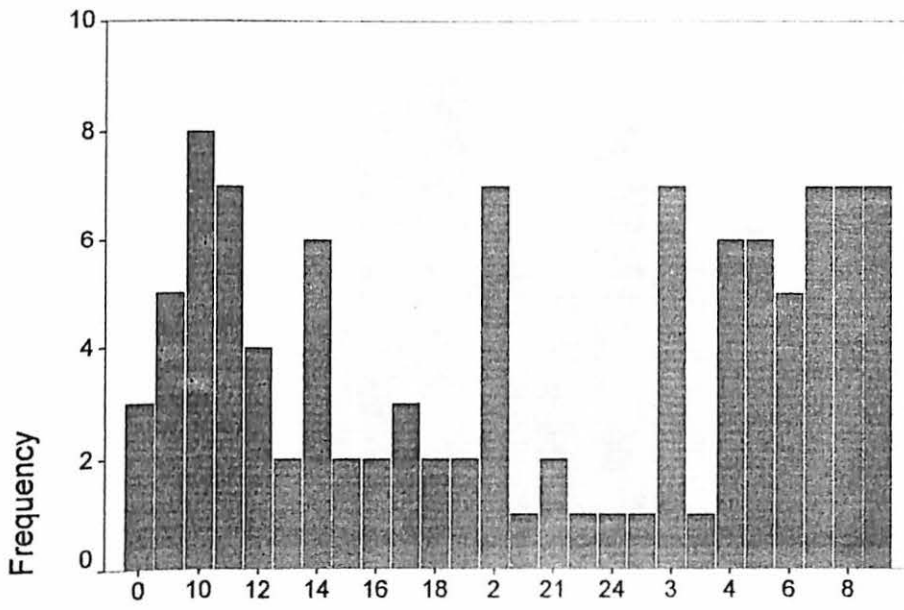
Jumlah skor TAS

HAS score



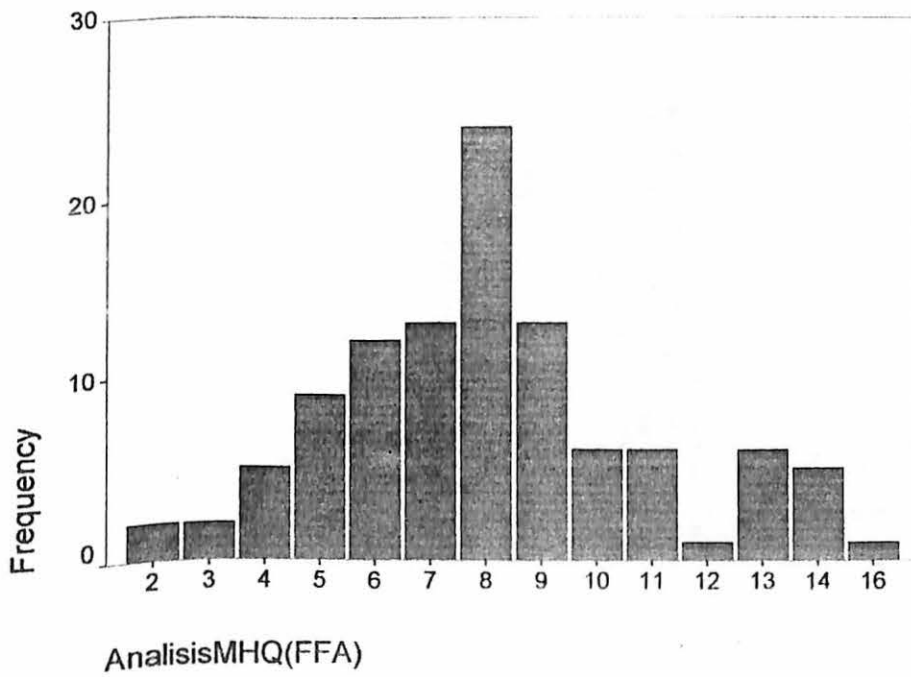
HAS score

HDS score

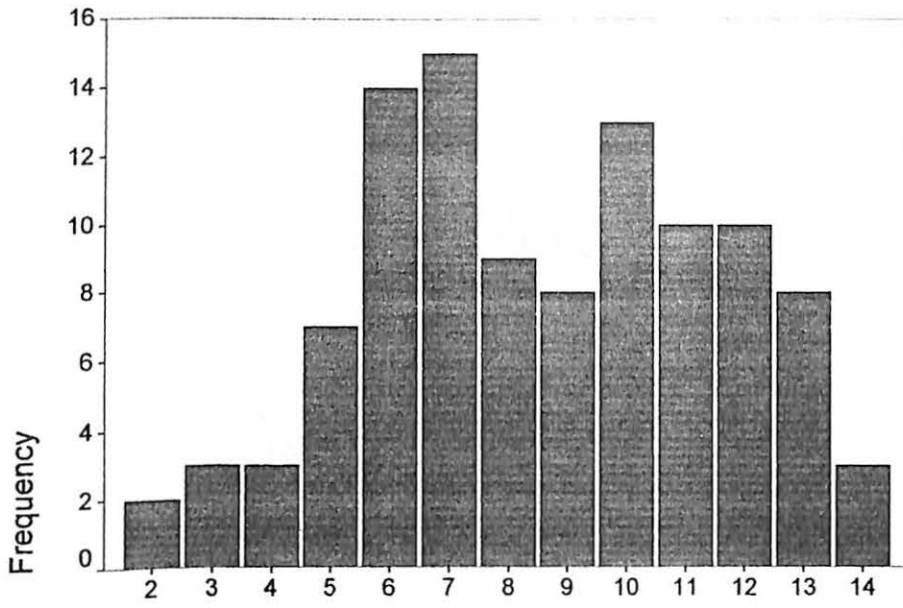


HDS score

AnalisisMHQ(FFA)

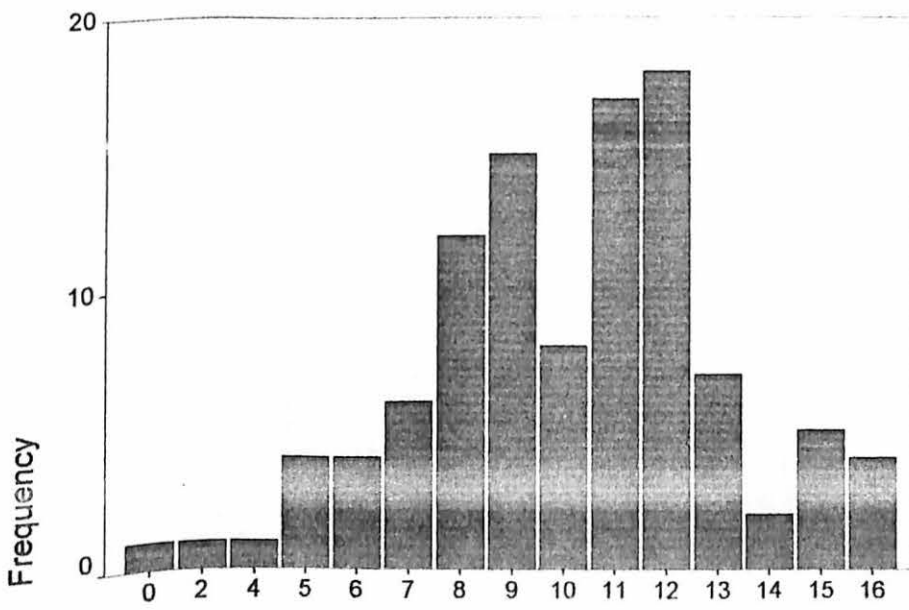


AnalisisMHQ(PHO)



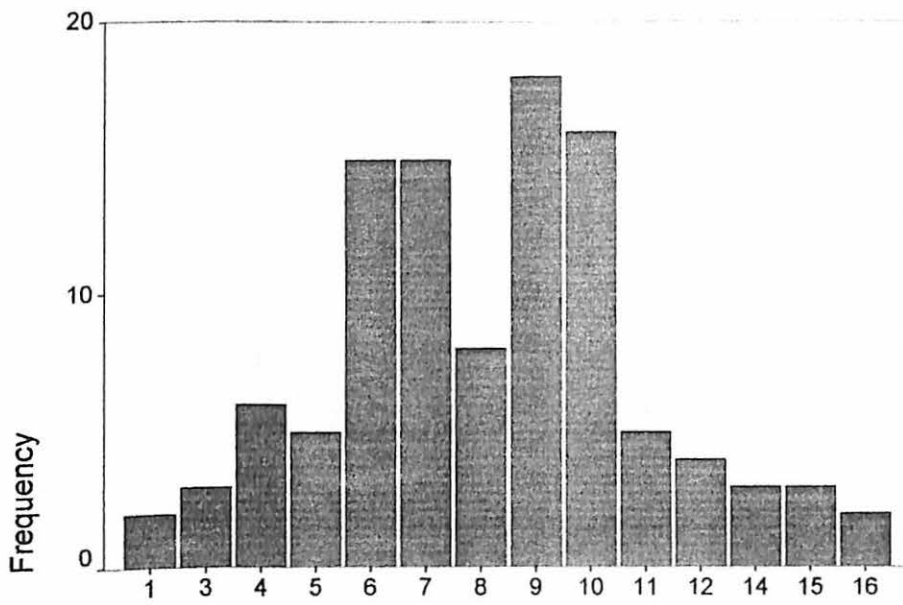
AnalisisMHQ(PHO)

AnalisisMHQ(OBS)



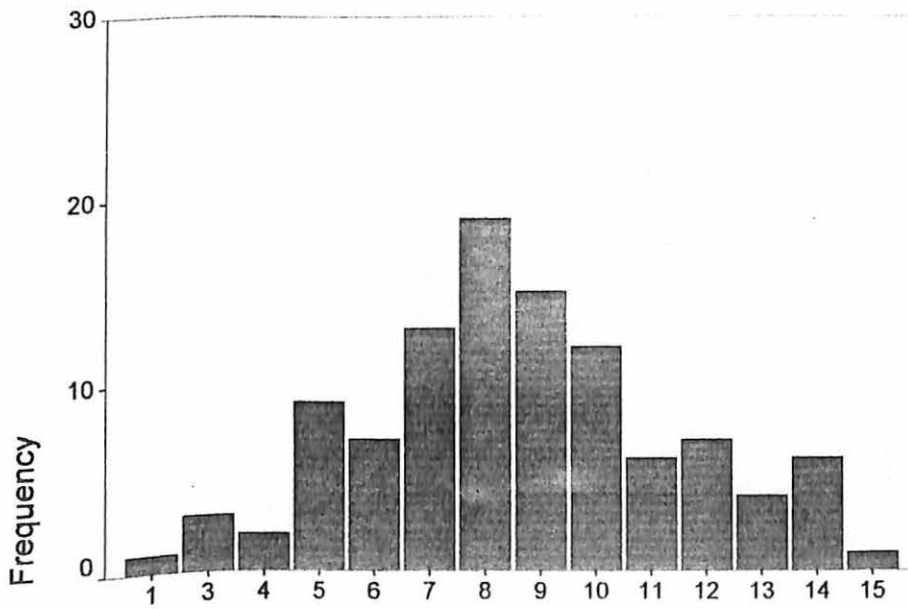
AnalisisMHQ(OBS)

AnalisisMHQ(SOM)



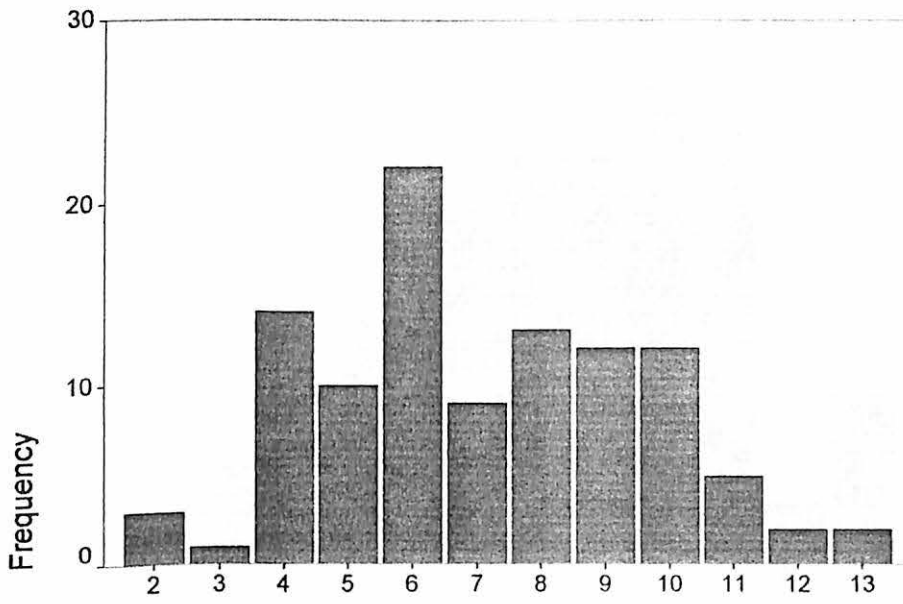
AnalisisMHQ(SOM)

AnalisisMHQ(DEP)



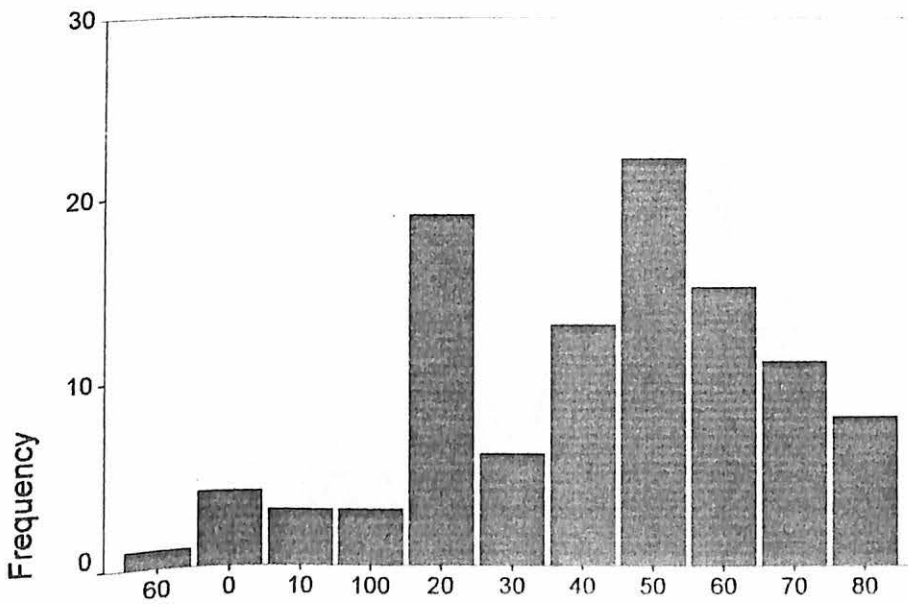
AnalisisMHQ(DEP)

AnalisisMHQ(HYS)



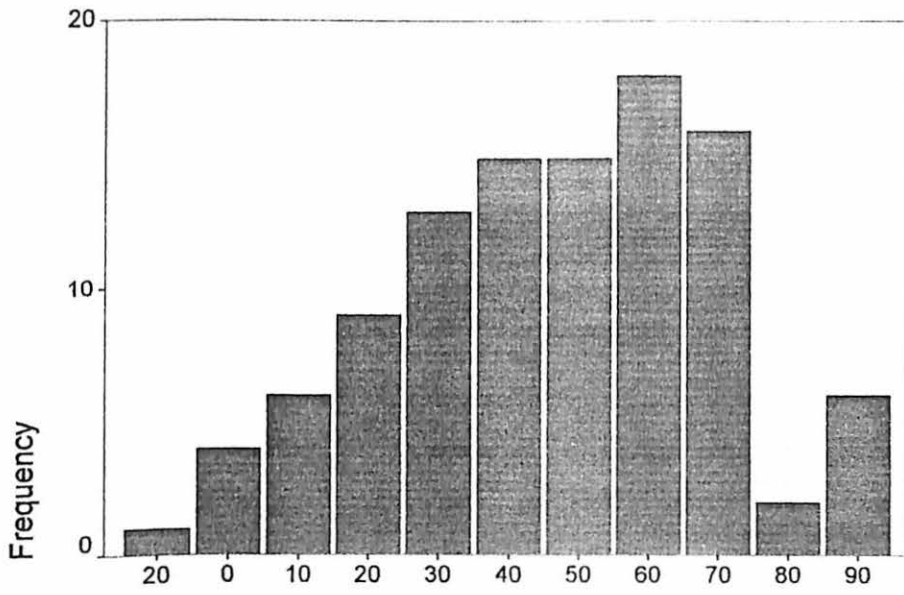
AnalisisMHQ(HYS)

physical health score (DUKE)



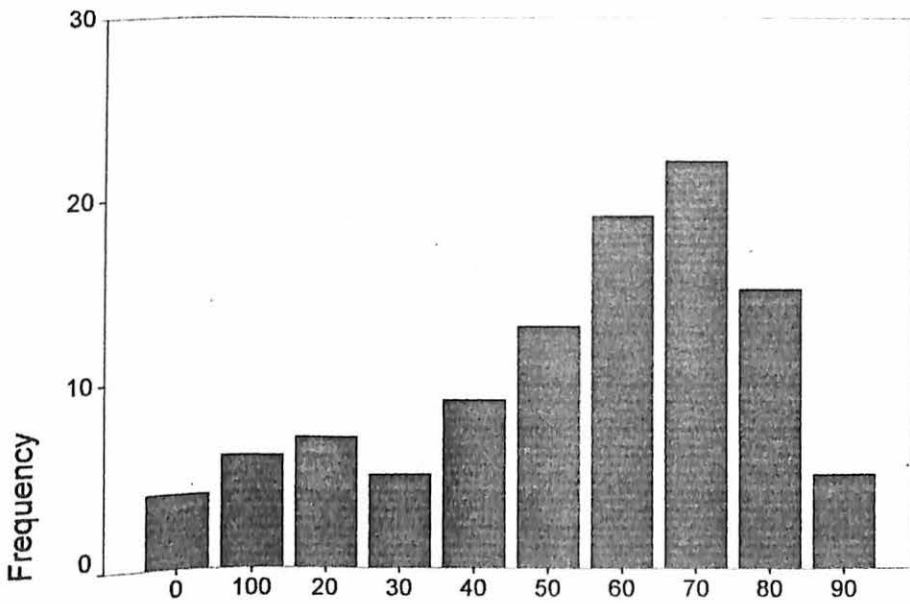
physical health score (DUKE)

mental health score



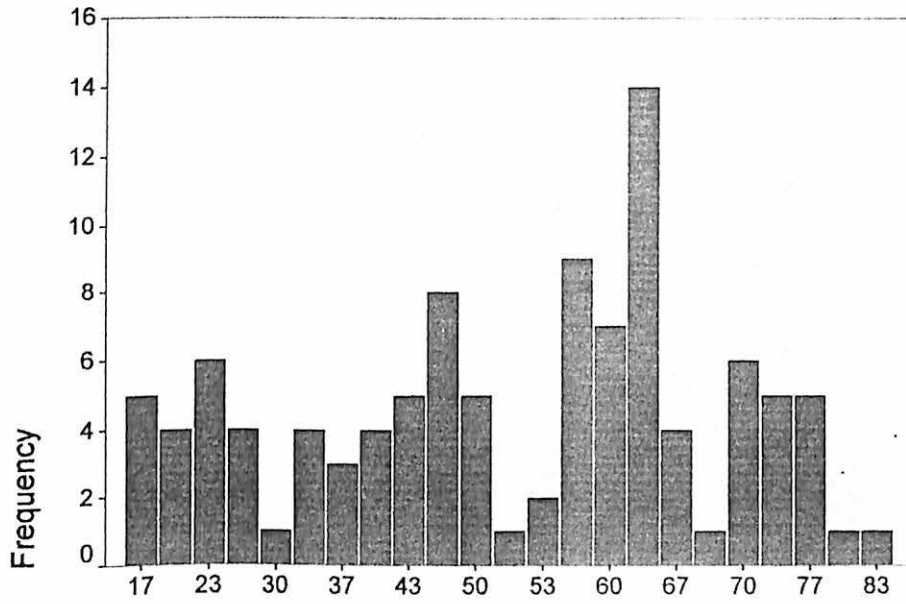
mental health score

social health score



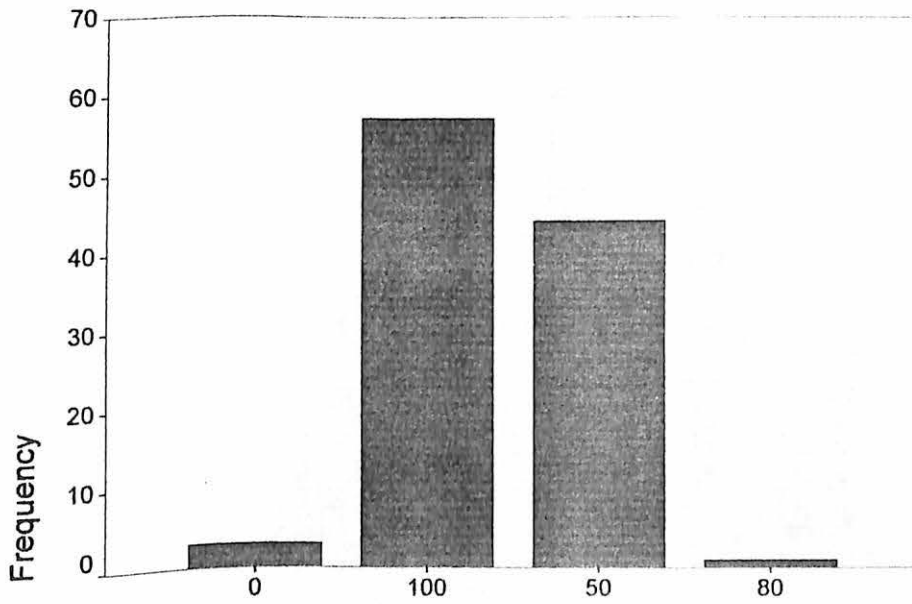
social health score

general health score



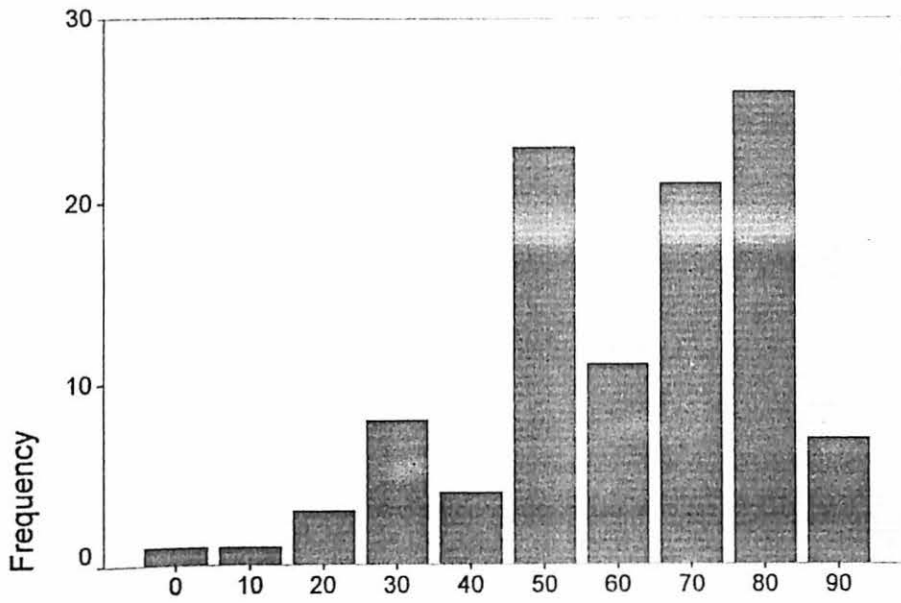
general health score

perceived health score



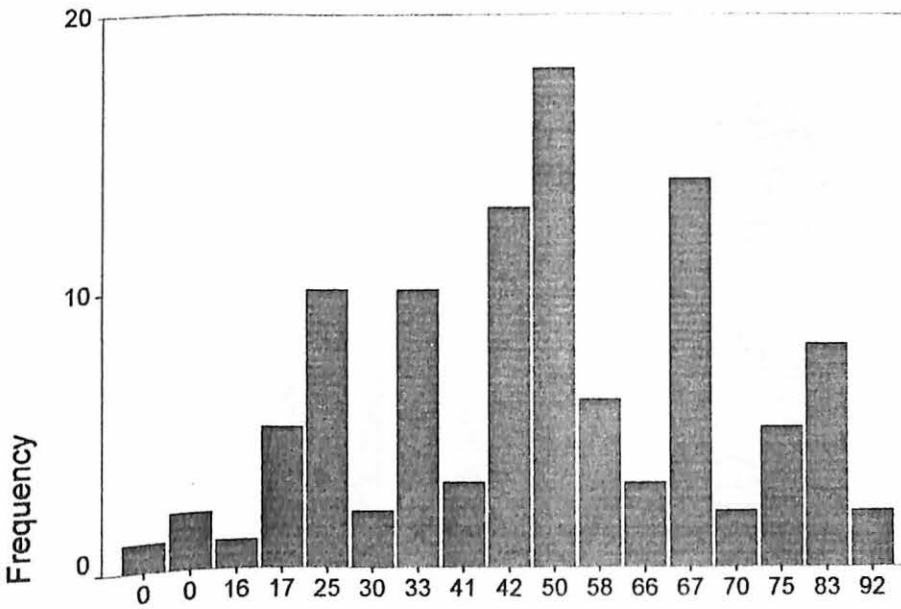
perceived health score

self esteem score



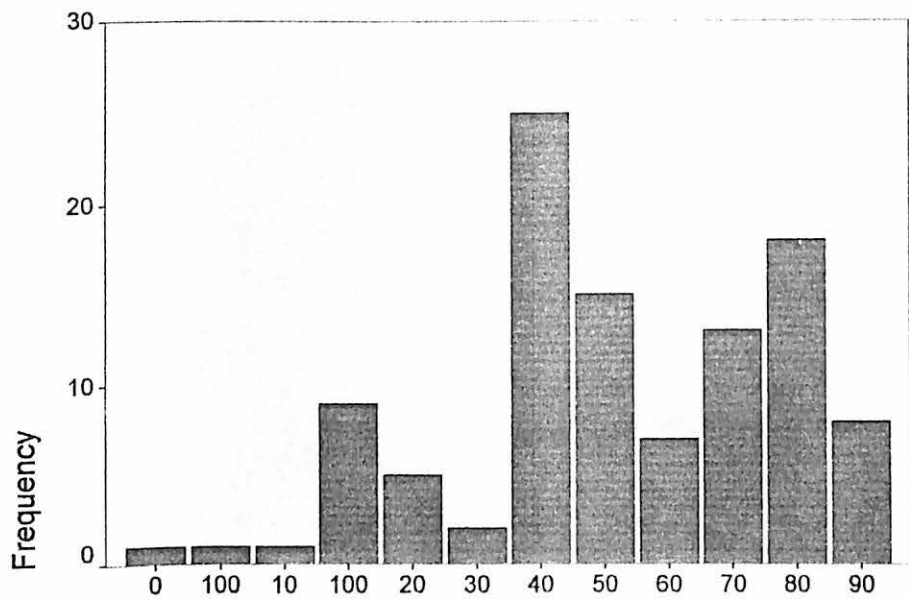
self esteem score

anxiety score



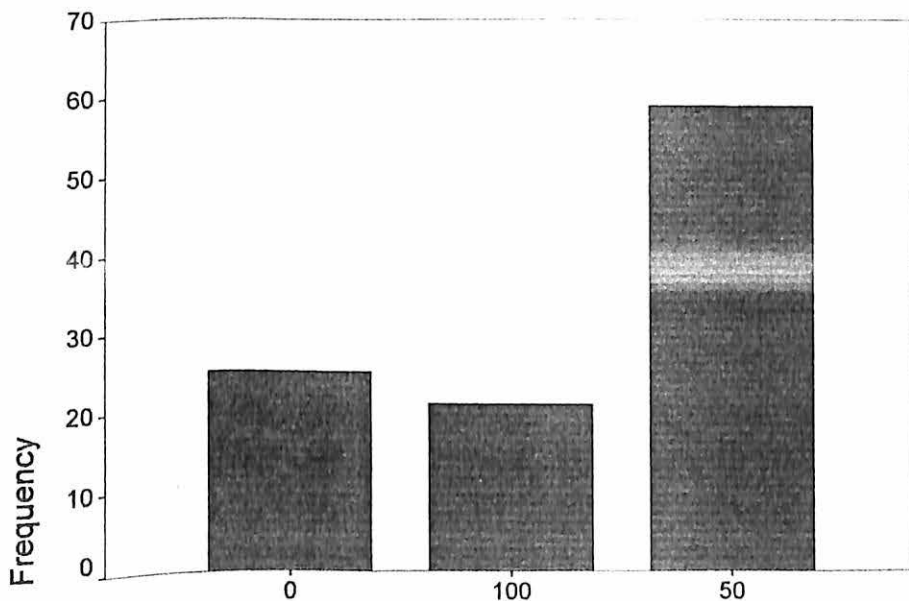
anxiety score

depression score



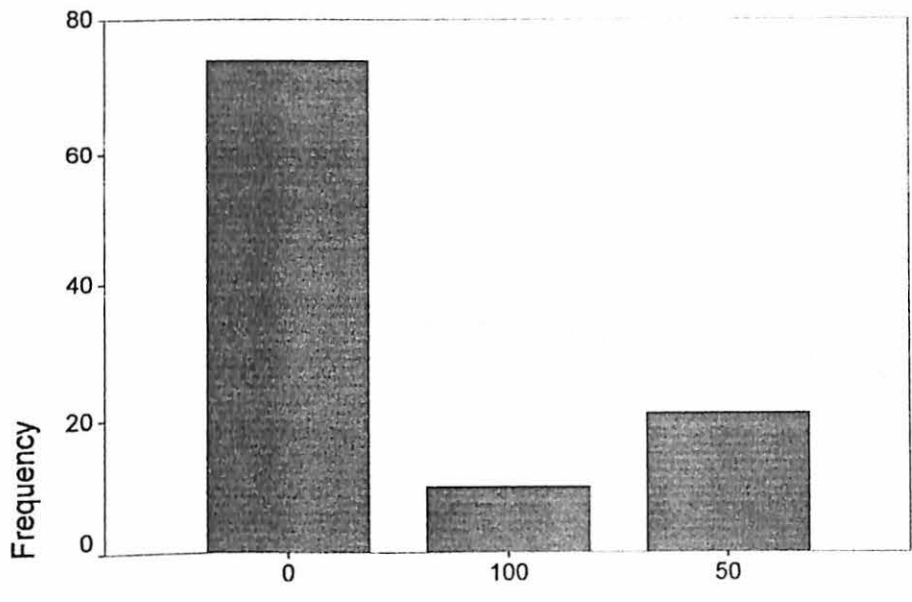
depression score

pain score



pain score

disability score

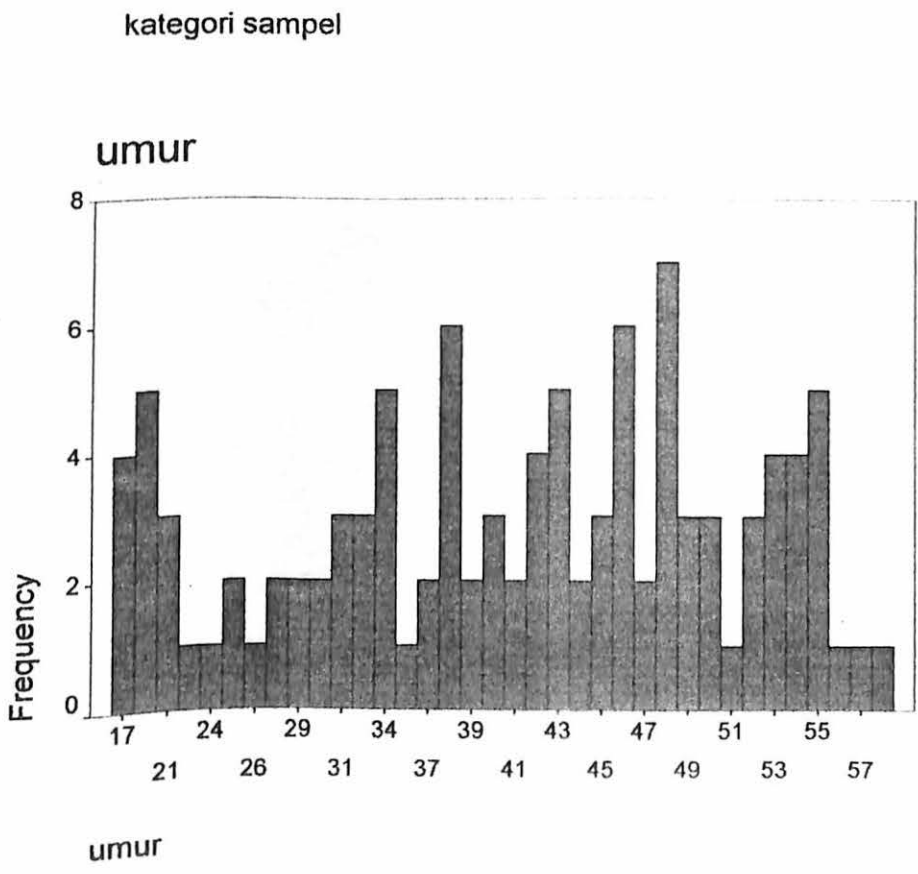
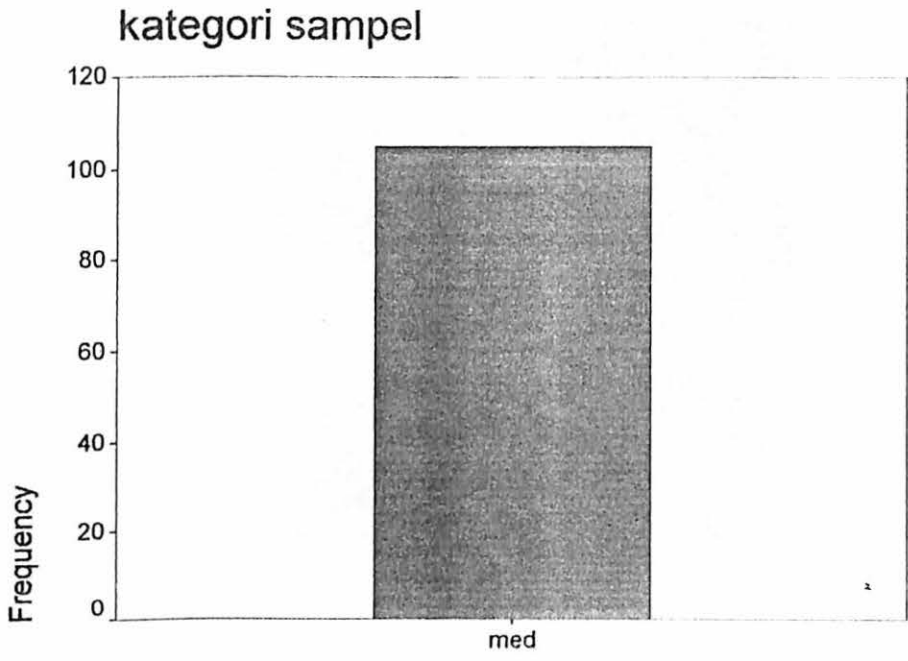


disability score

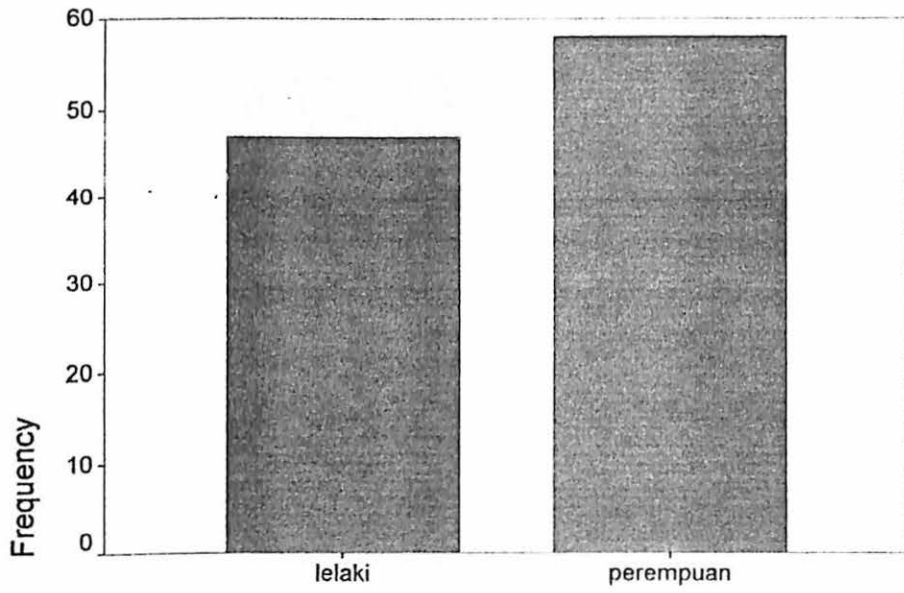
APPENDIX II:

MEDICAL PATIENTS

Bar Chart

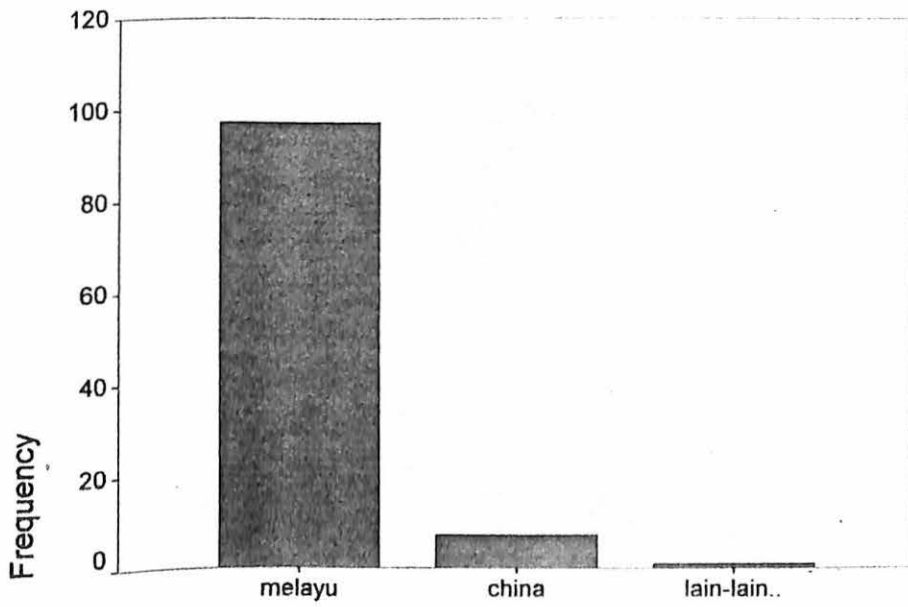


jantina



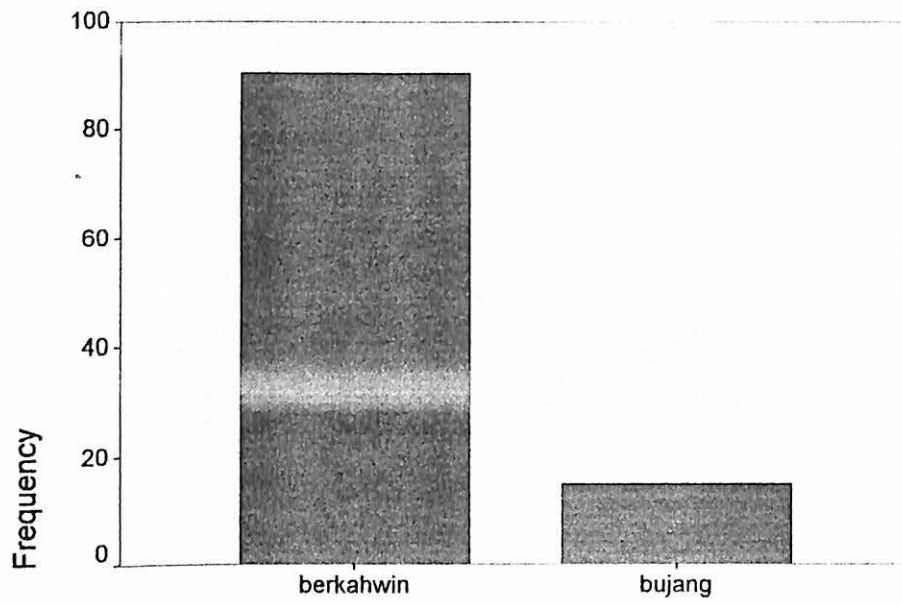
jantina

bangsa



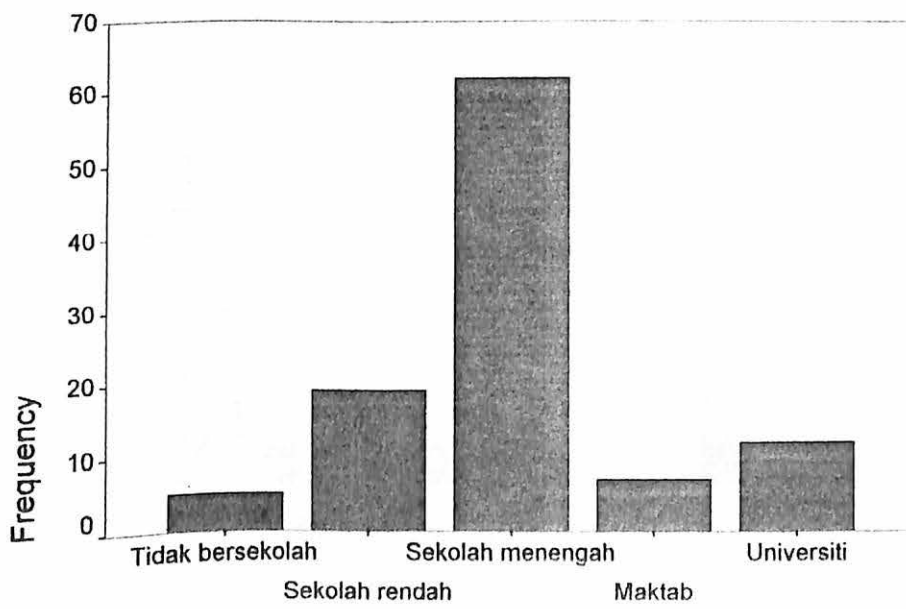
bangsa

taraf perkahwinan



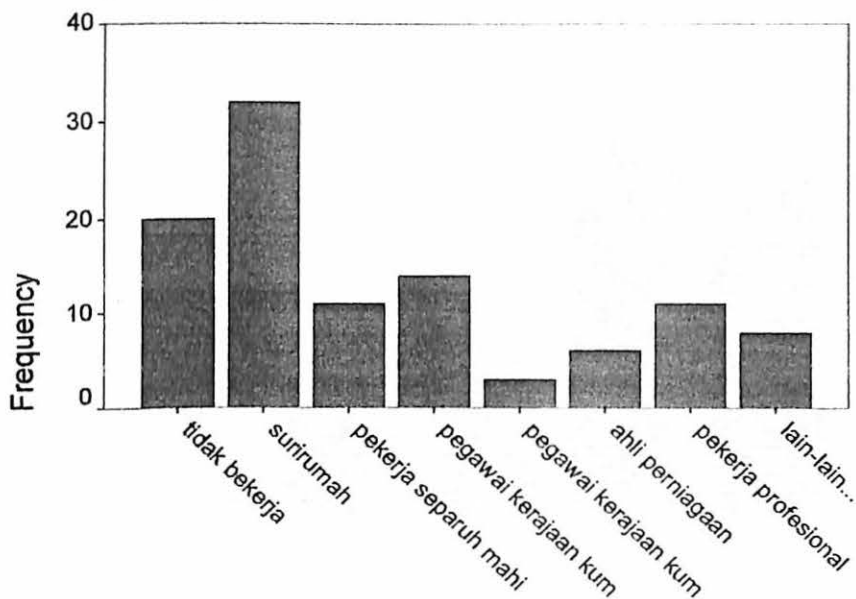
taraf perkahwinan

taraf pelajaran



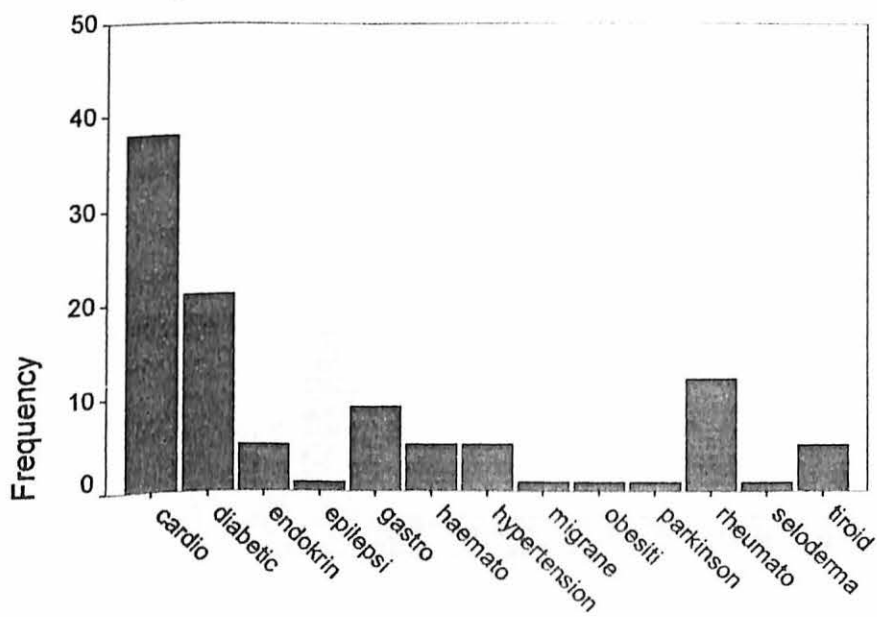
taraf pelajaran

pekerjaan



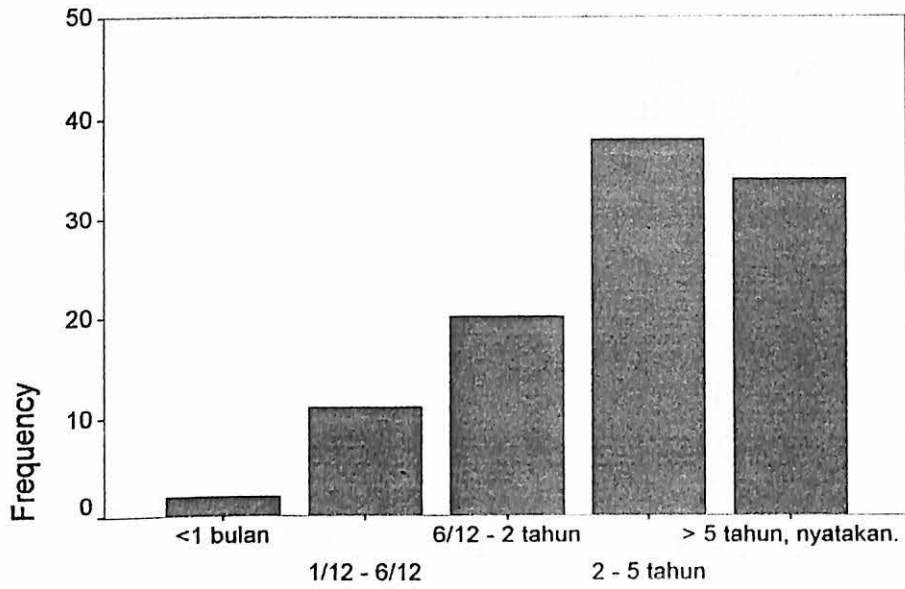
pekerjaan

diagnosis1



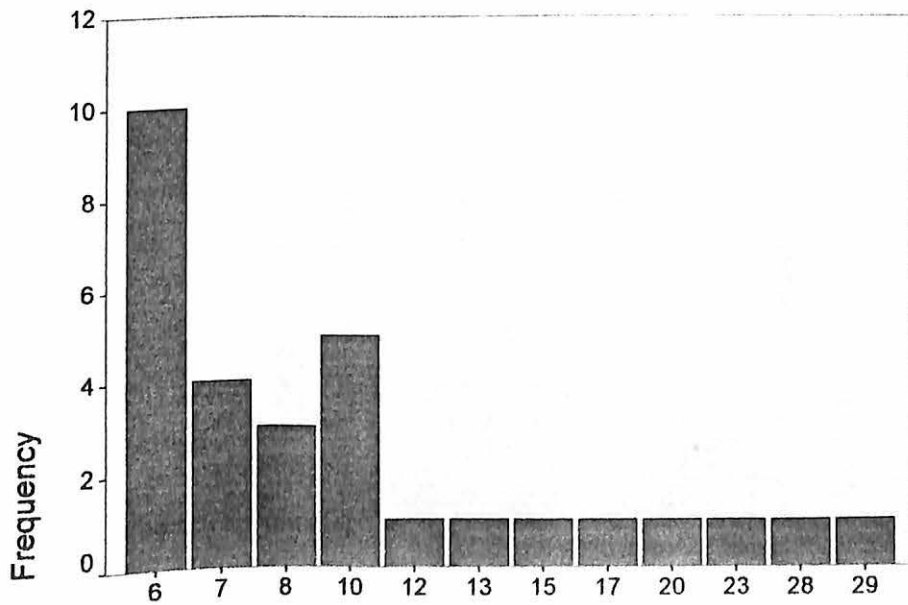
diagnosis1

tempoh penyakit



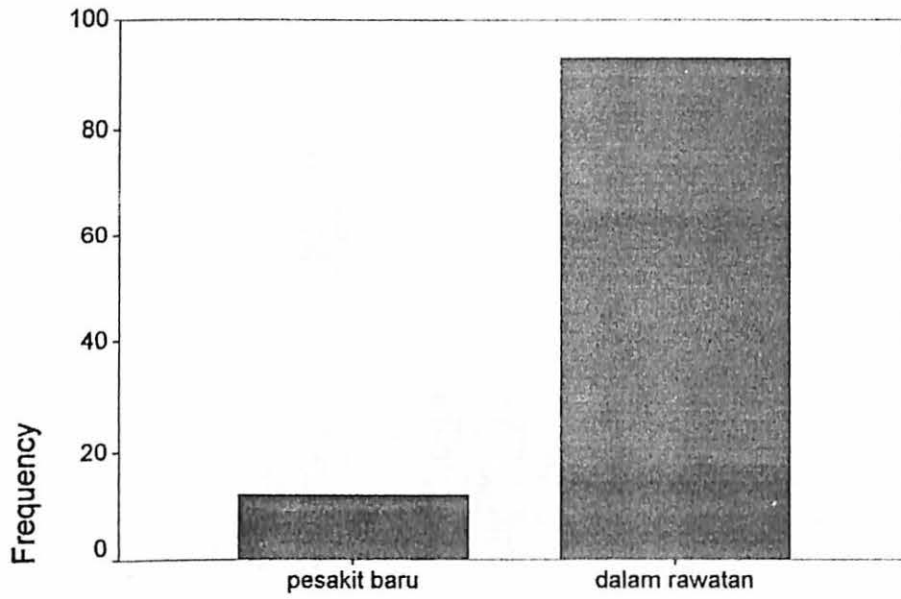
tempoh penyakit

nyatakan jumlah tahun



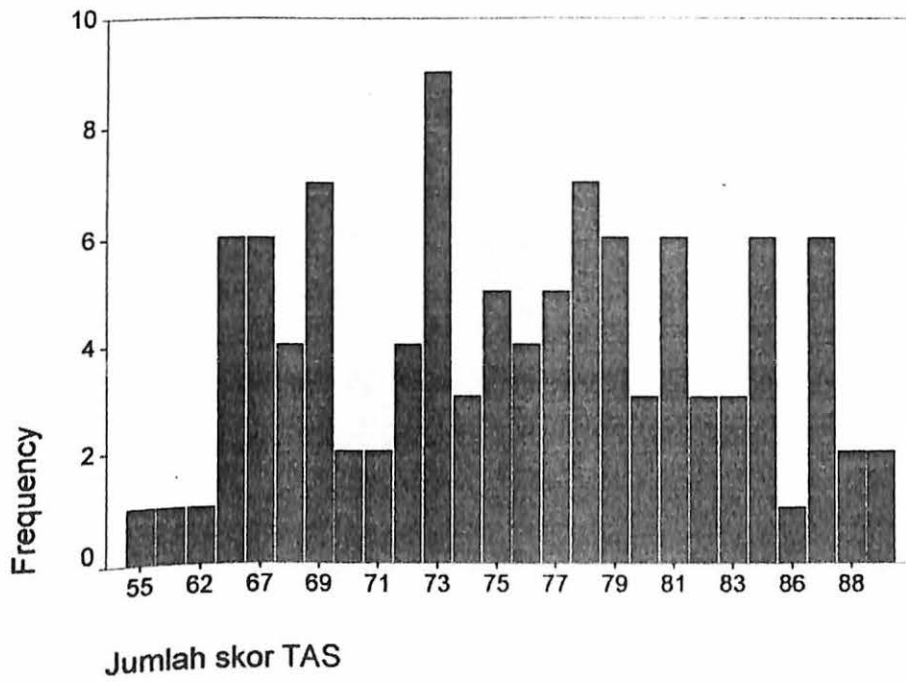
nyatakan jumlah tahun

status rawatan

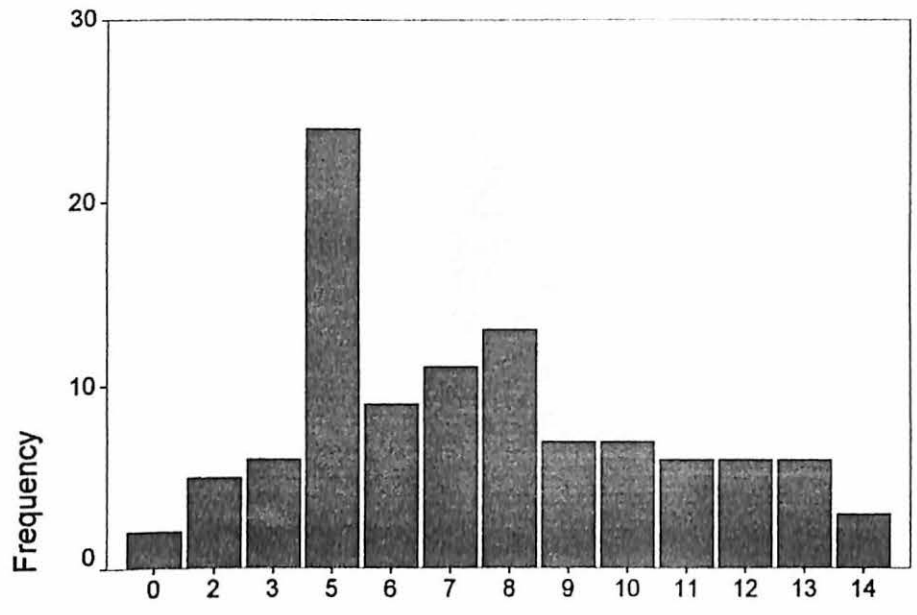


status rawatan

Jumlah skor TAS

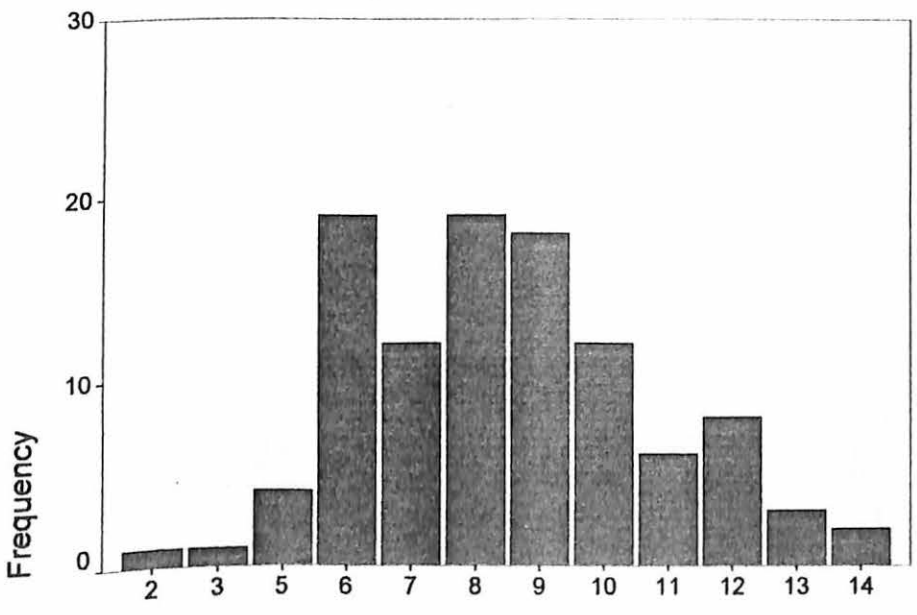


analisis MHQ (FFA)



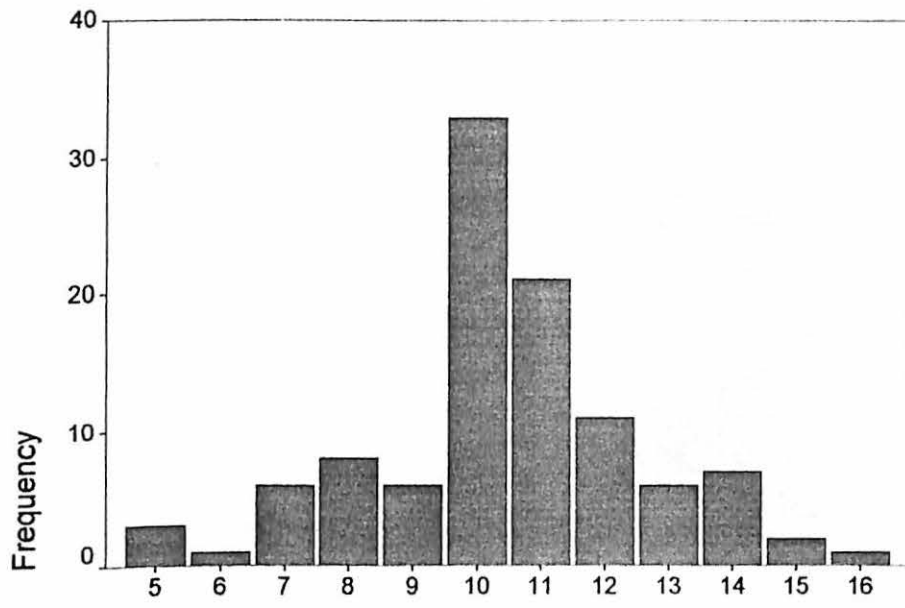
analisis MHQ (FFA)

analisis MHQ(PHO)



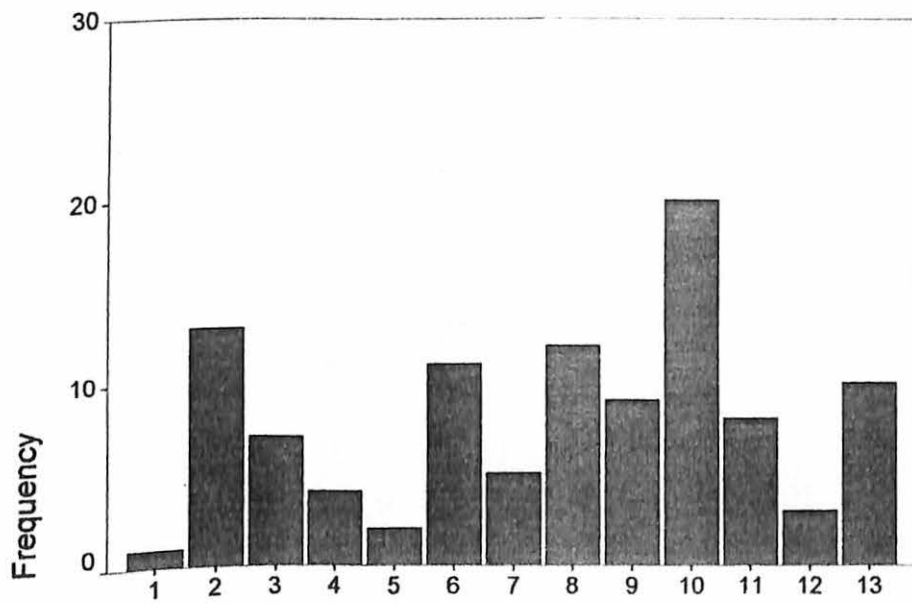
analisis MHQ(PHO)

analysis MHQ (OBS)



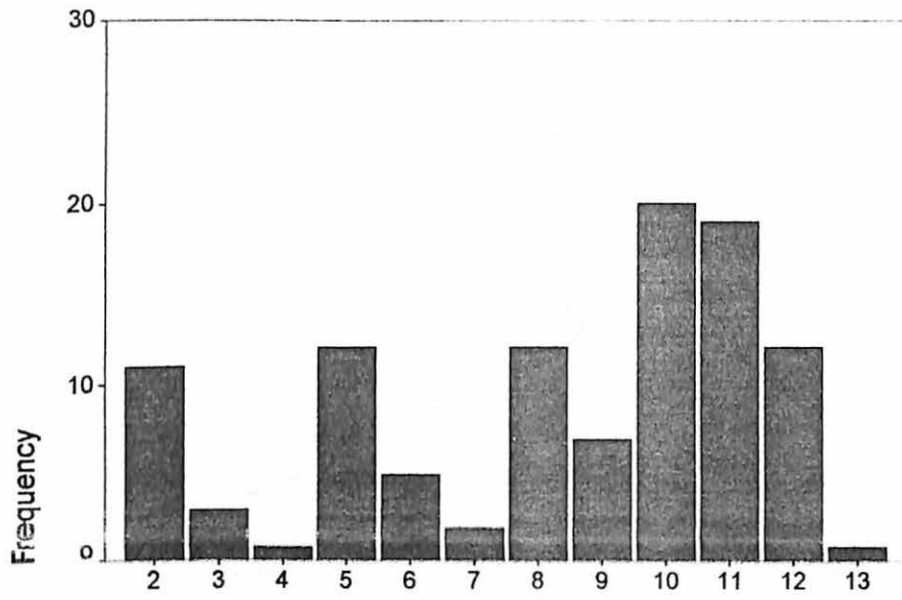
analysis MHQ (OBS)

analysis MHQ (SOM)



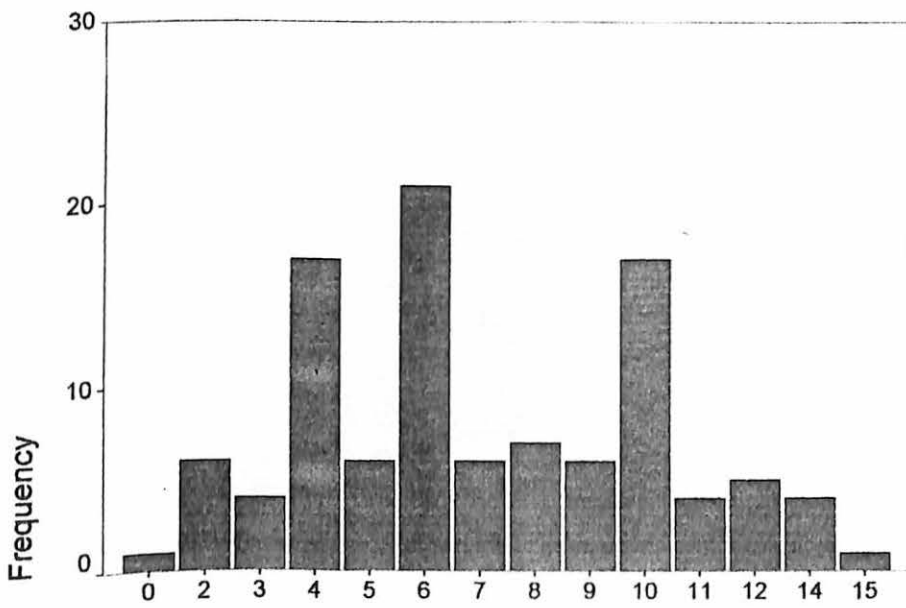
analysis MHQ (SOM)

analysis MHQ (DEP)



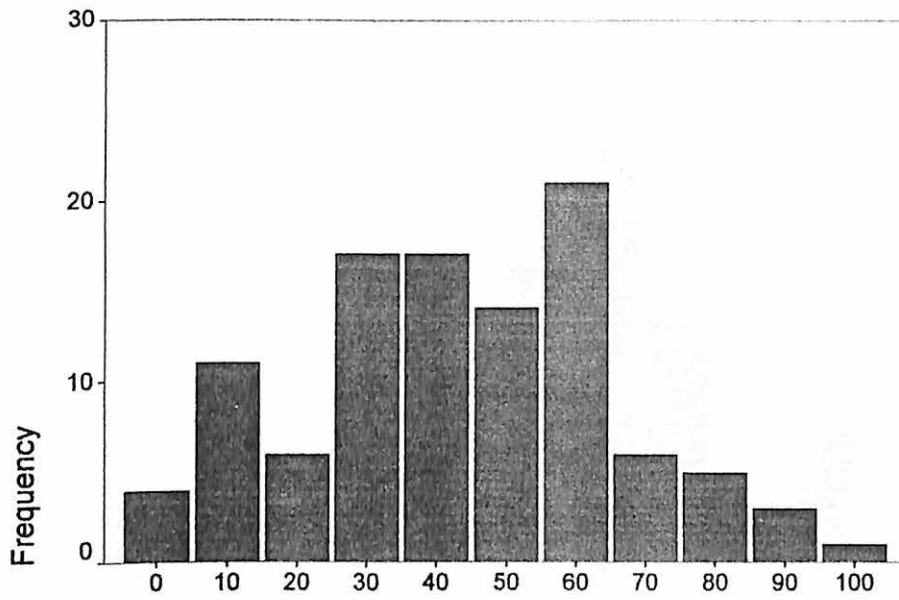
analysis MHQ (DEP)

analysis MHQ(HYS)



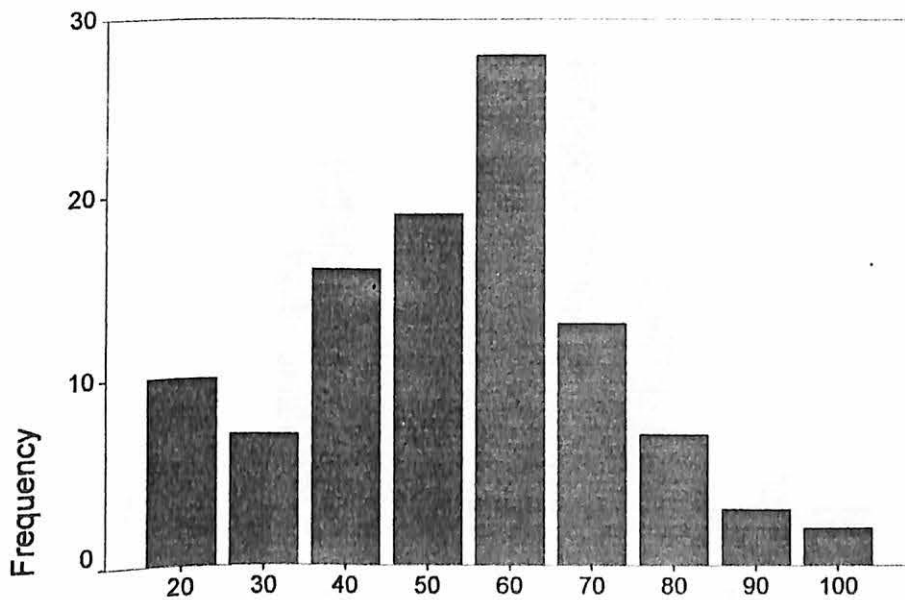
analysis MHQ(HYS)

physical health score (DUKE)



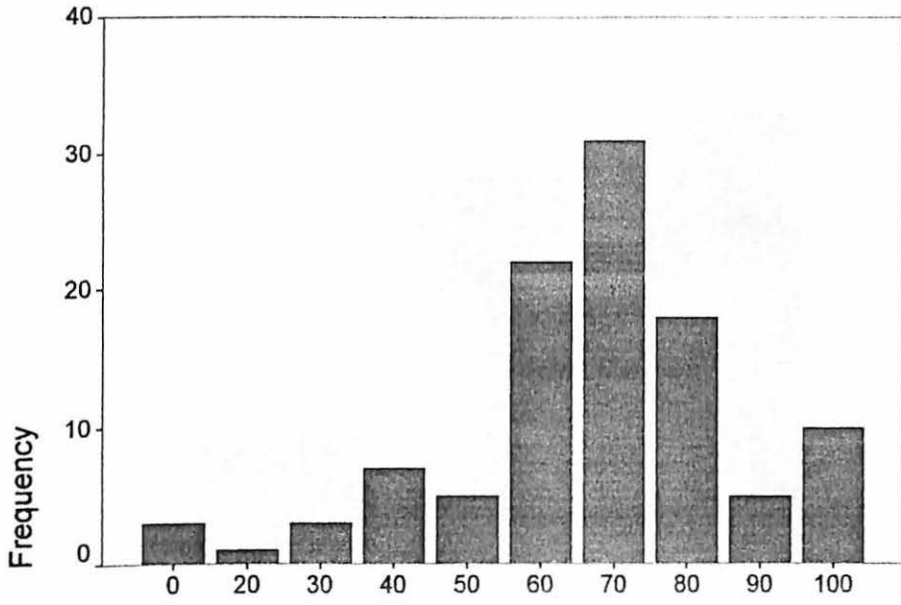
physical health score (DUKE)

mental health score(DUKE)



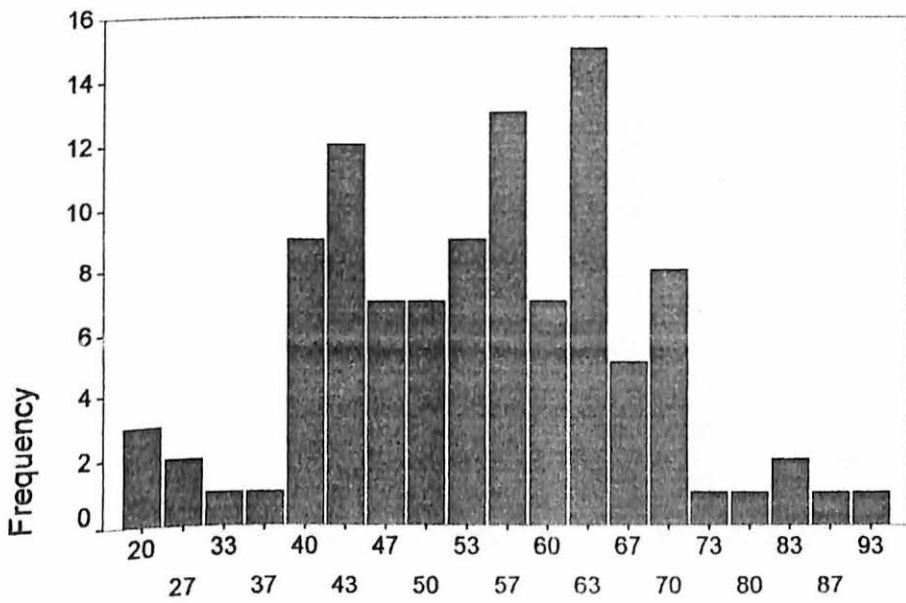
mental health score(DUKE)

social health score (DUKE)



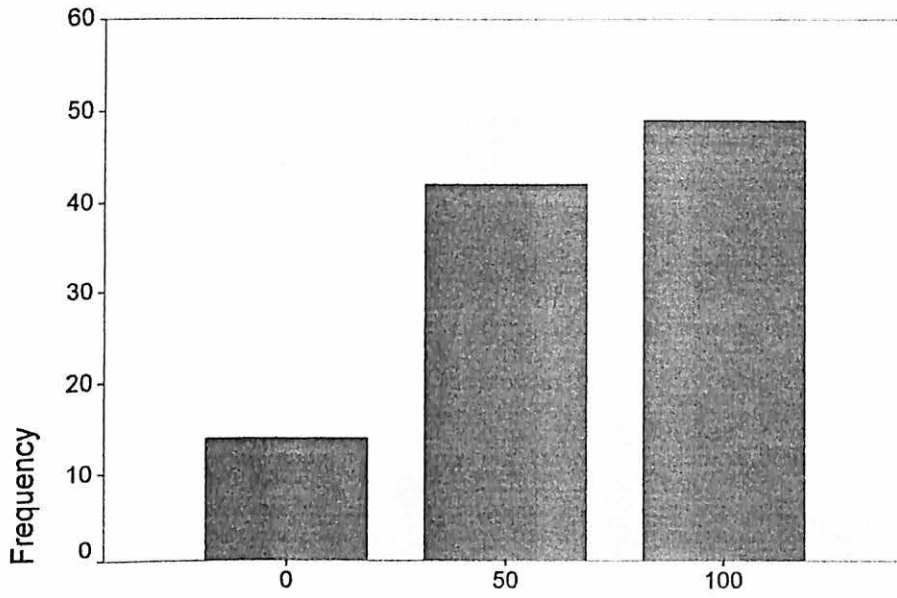
social health score (DUKE)

general health score(DUKE)



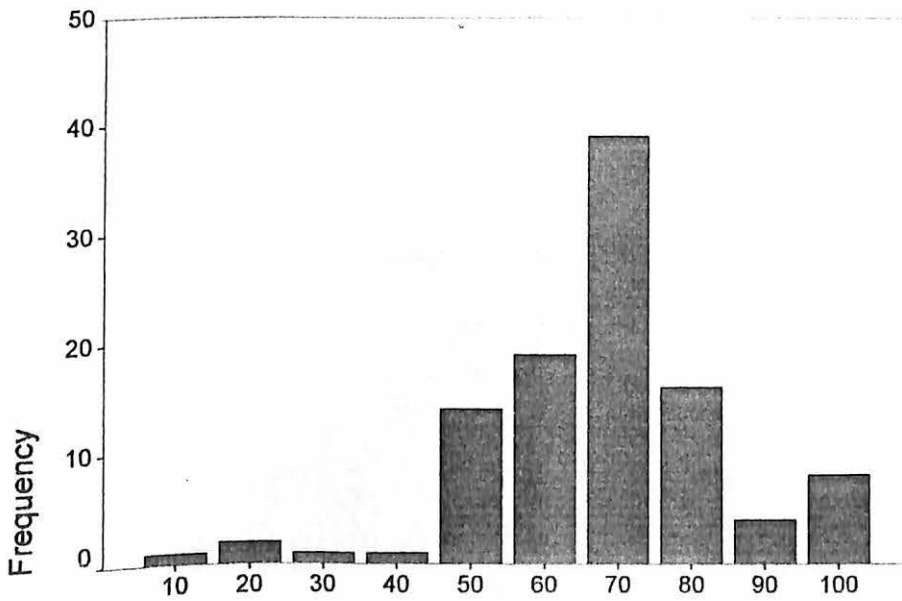
general health score(DUKE)

perceived health score(DUKE)



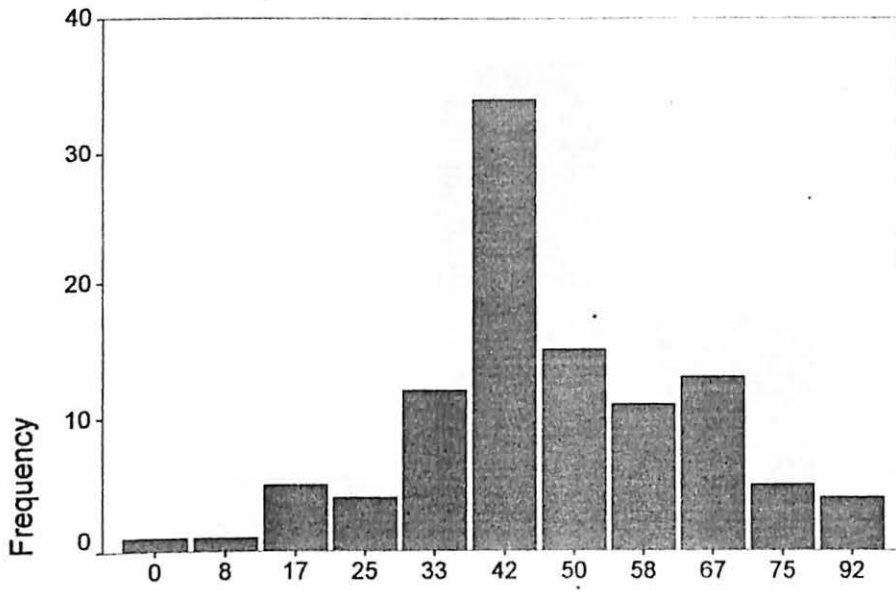
perceived health score(DUKE)

self_esteem score (DUKE)



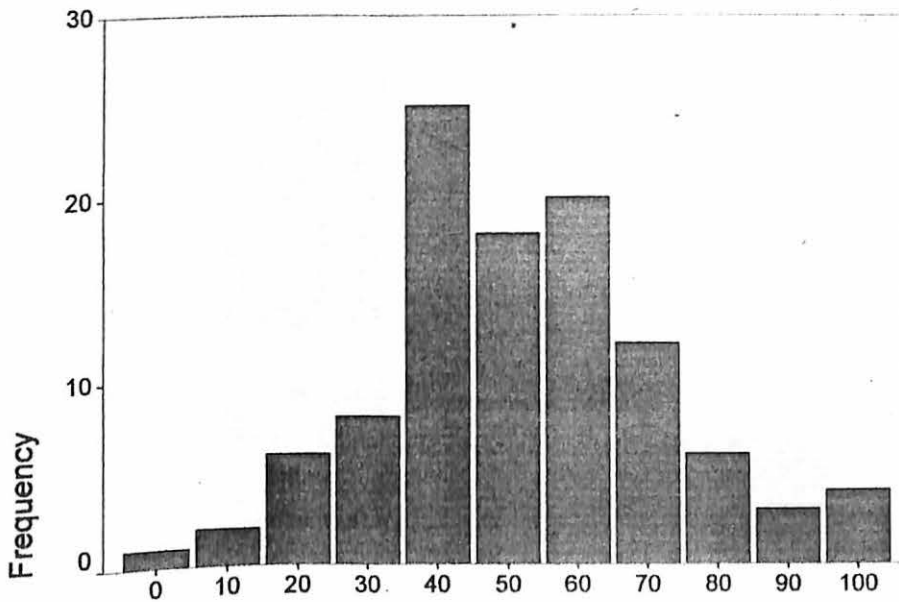
self_esteem score (DUKE)

anxiety score (DUKE)



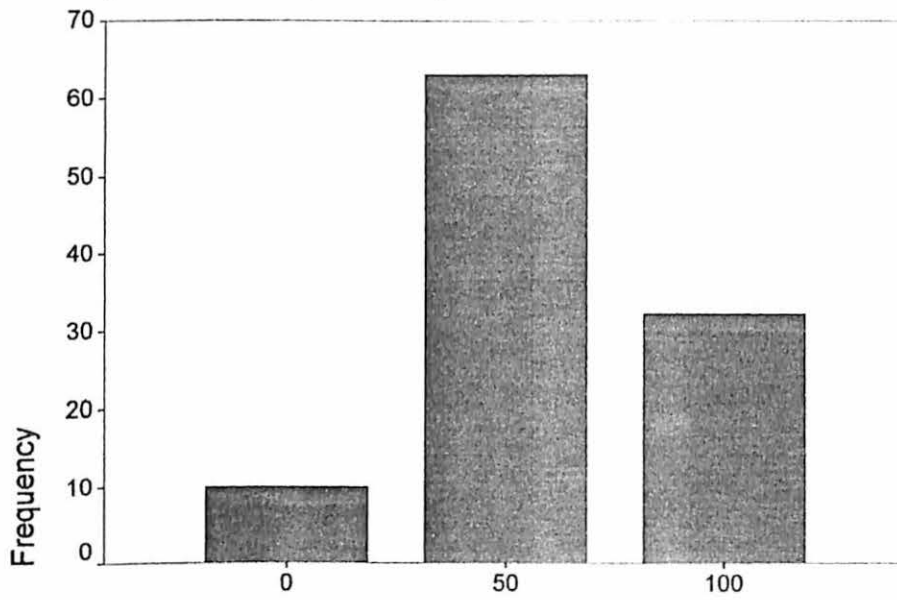
anxiety score (DUKE)

depression score (DUKE)



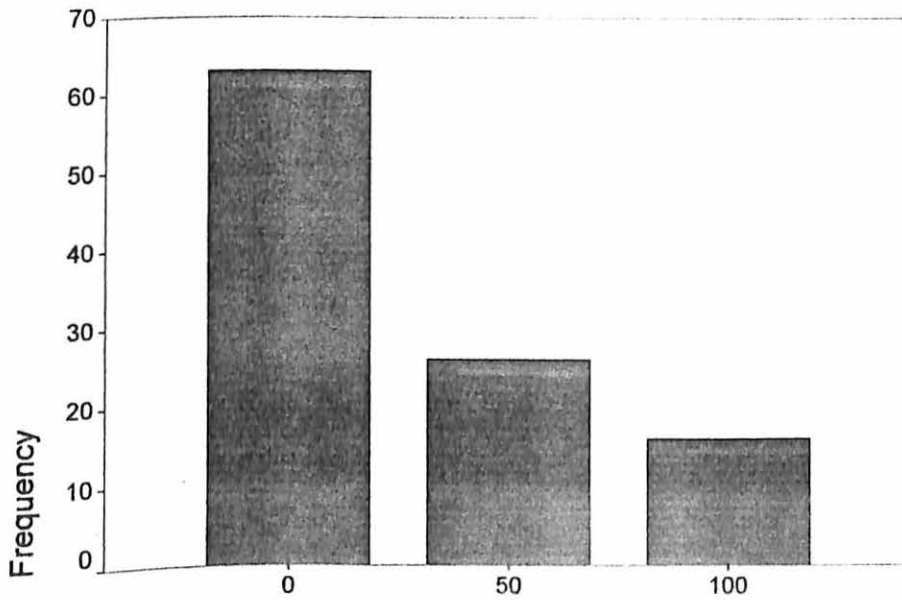
depression score (DUKE)

pain score(DUKE)



pain score(DUKE)

disability score(DUKE)

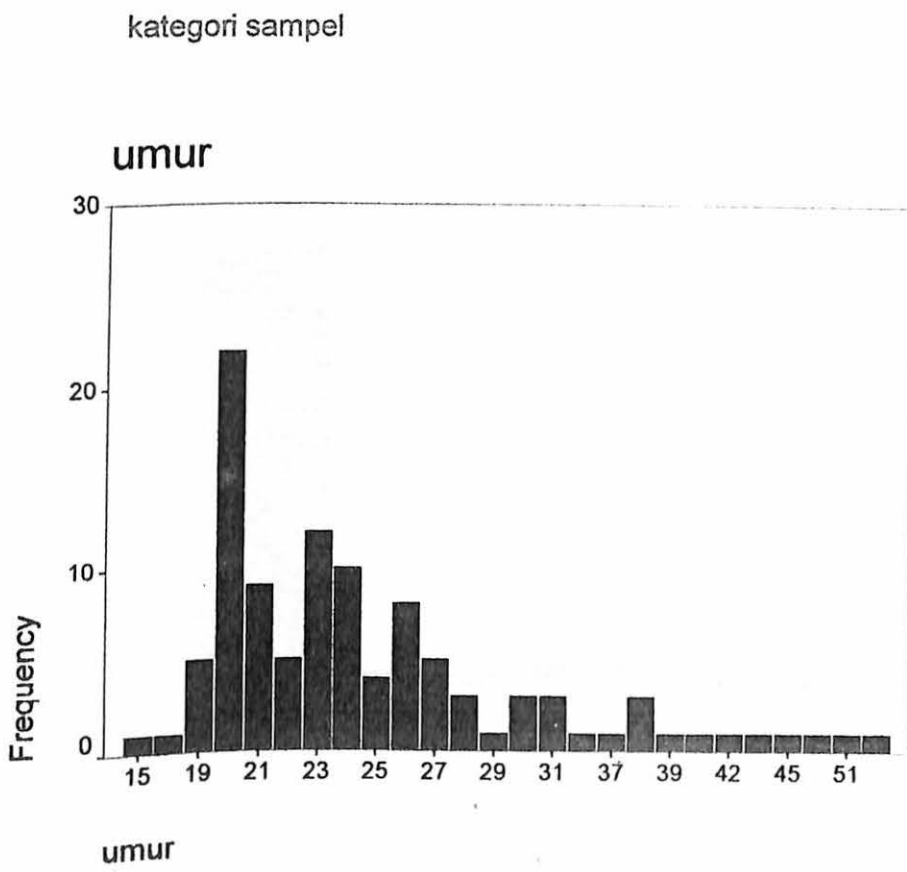
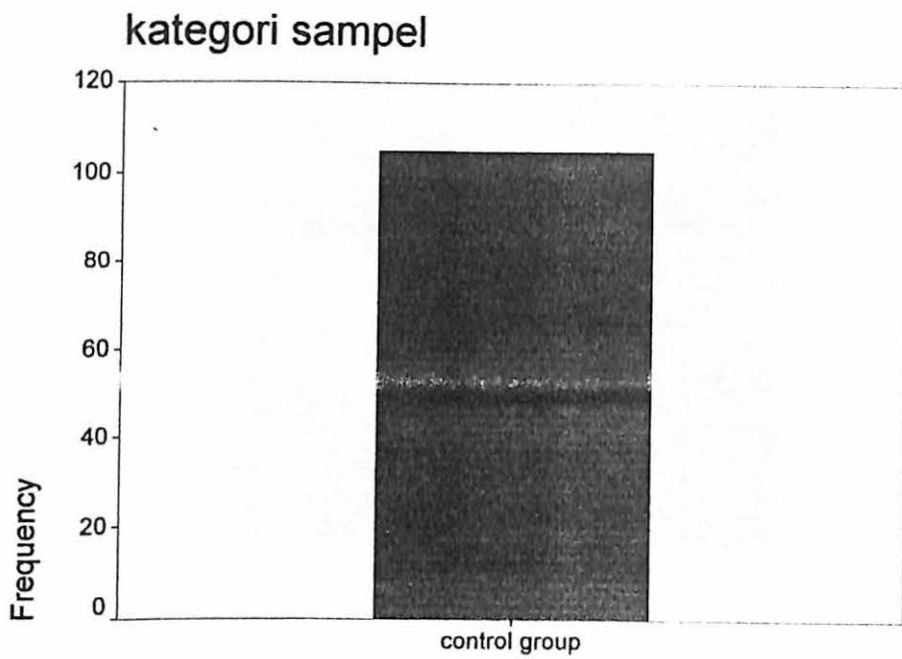


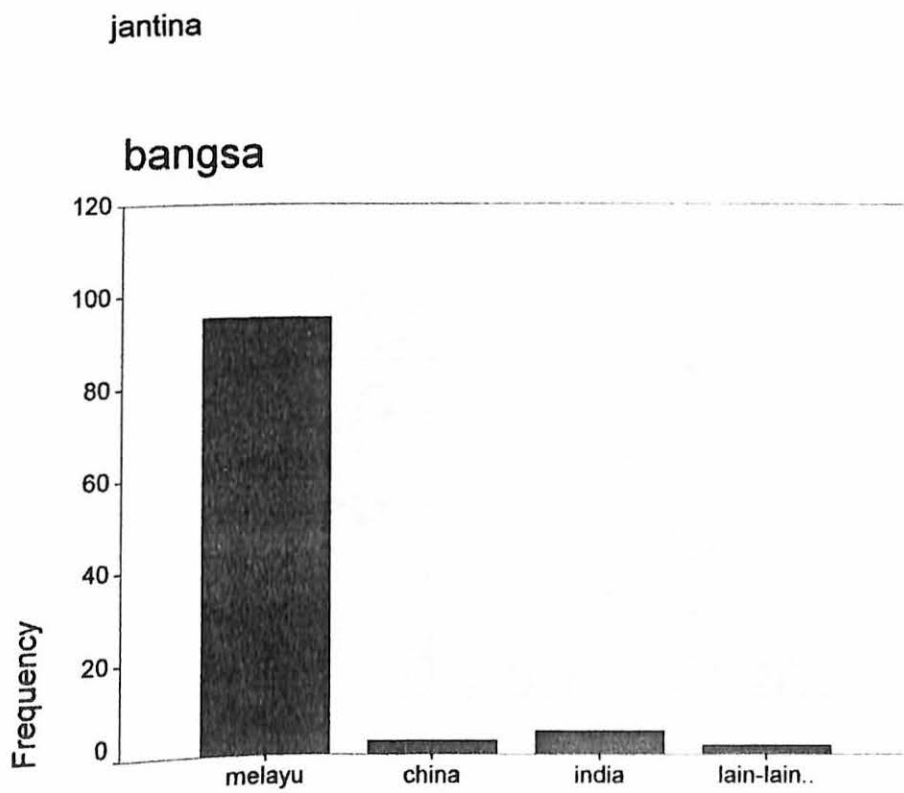
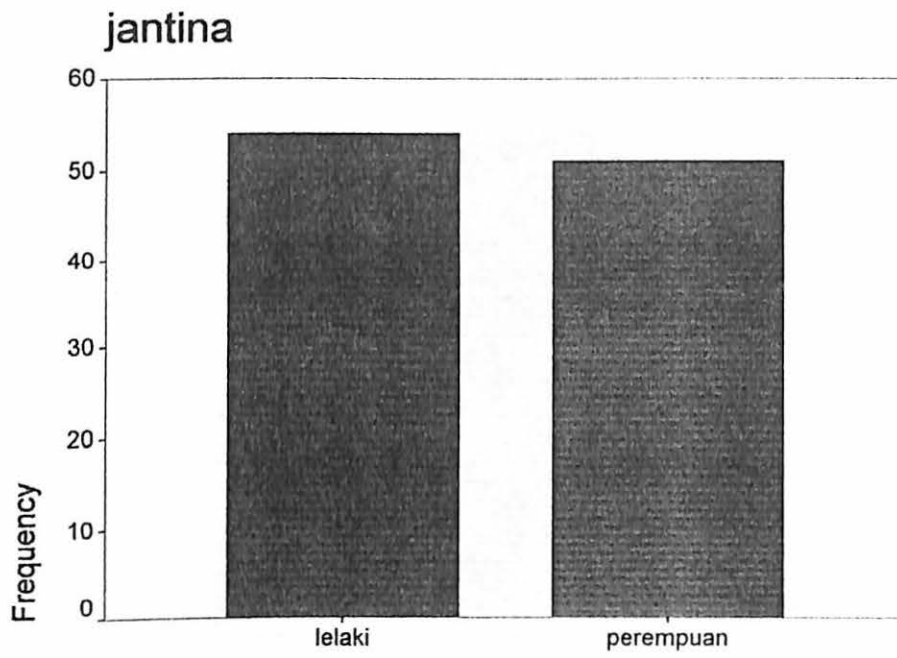
disability score(DUKE)

APPENDIX III:

HEALTHY VOLUNTEERS

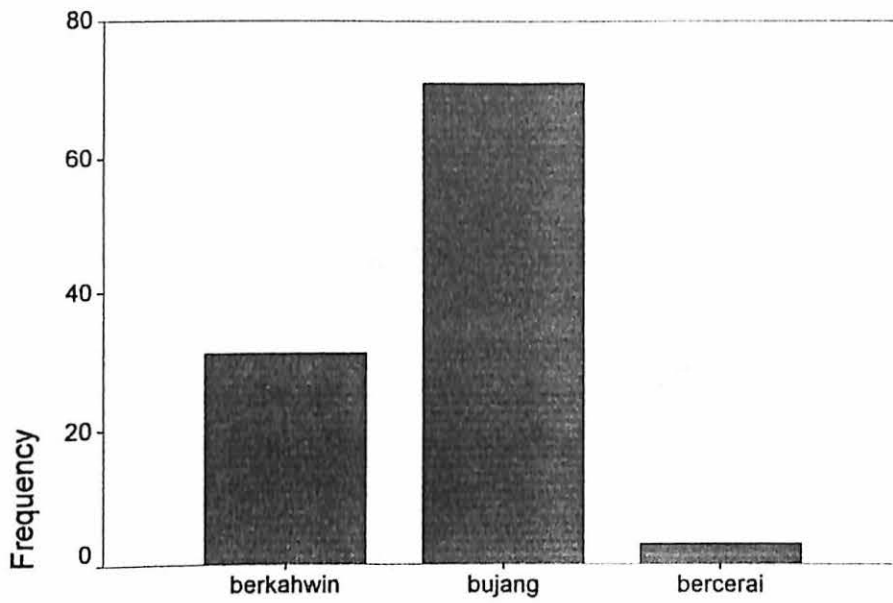
Bar Chart





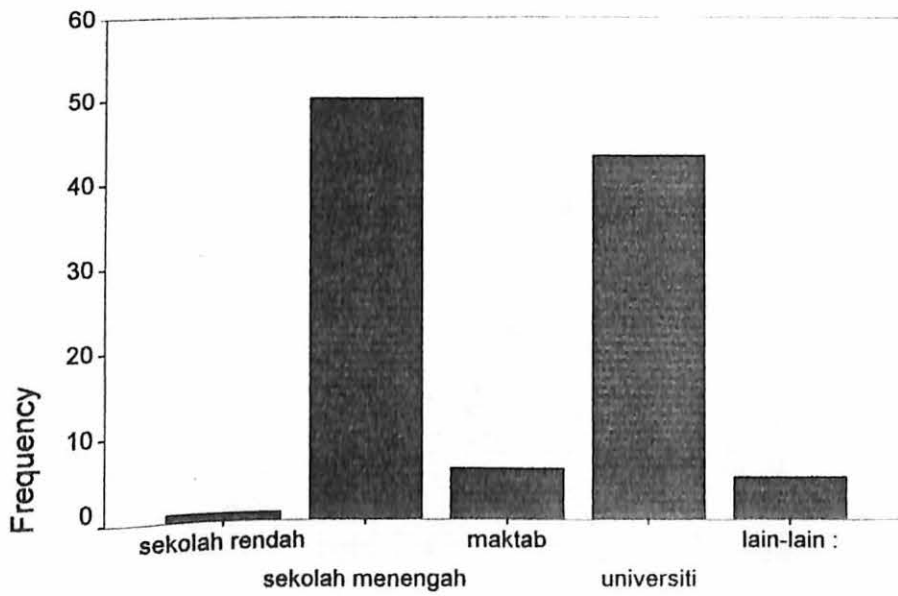
bangsa

taraf perkahwinan



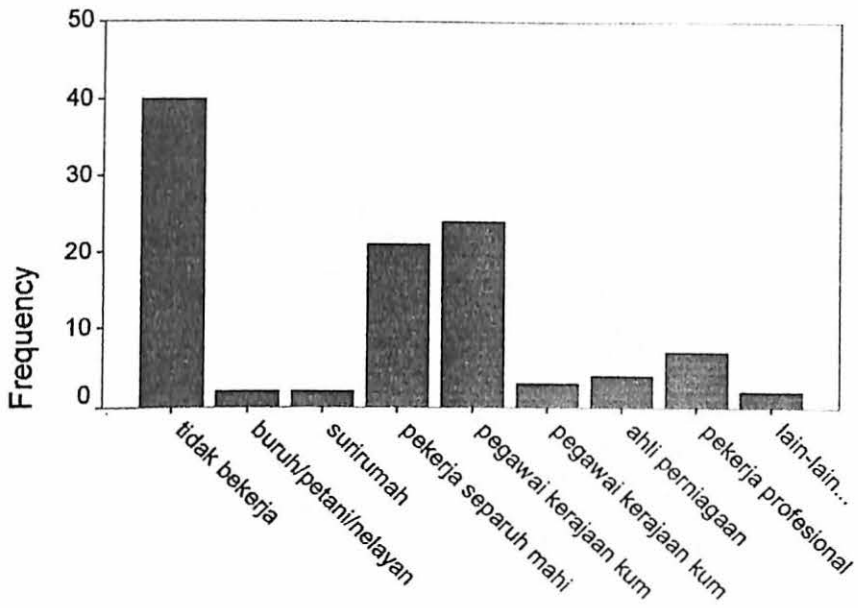
taraf perkahwinan

taraf pelajaran



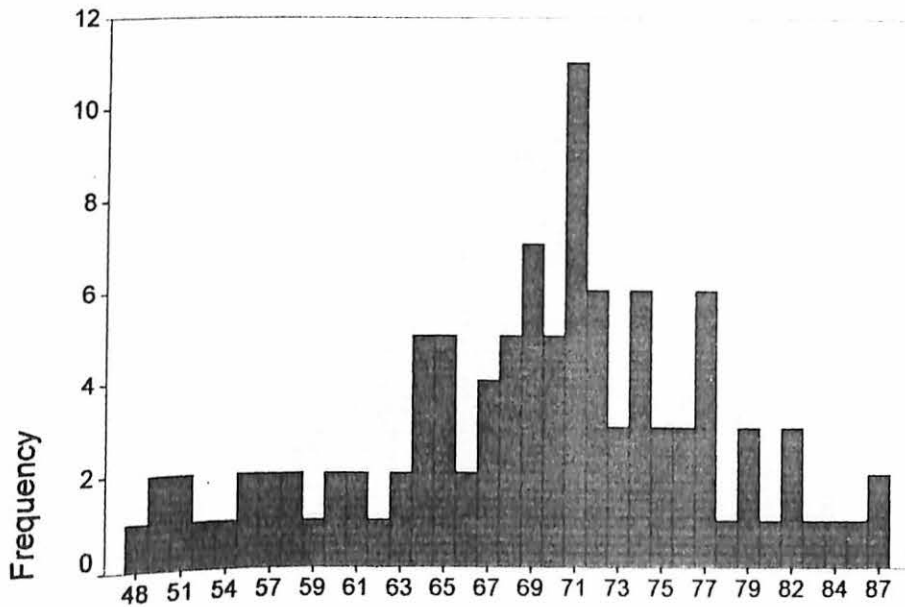
taraf pelajaran

pekerjaan



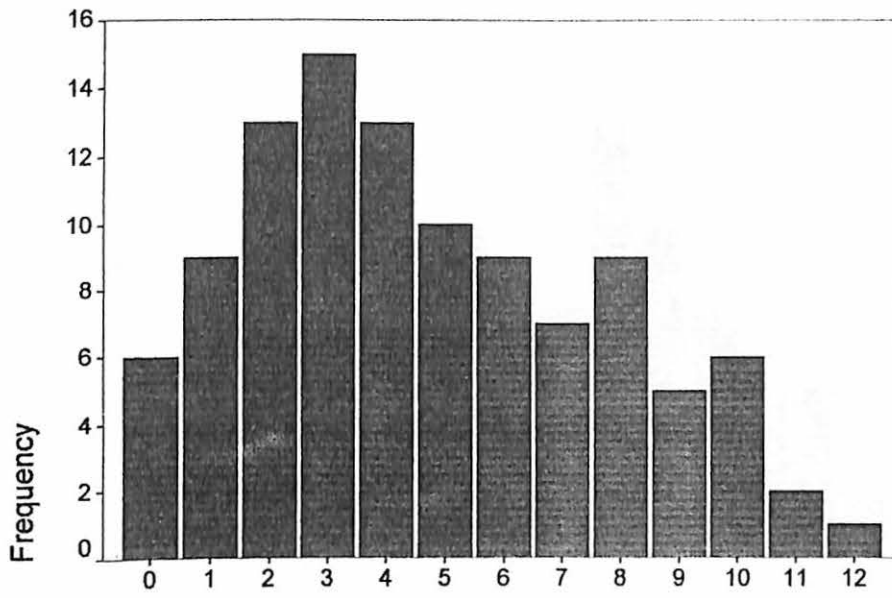
pekerjaan

Jumlah skor TAS



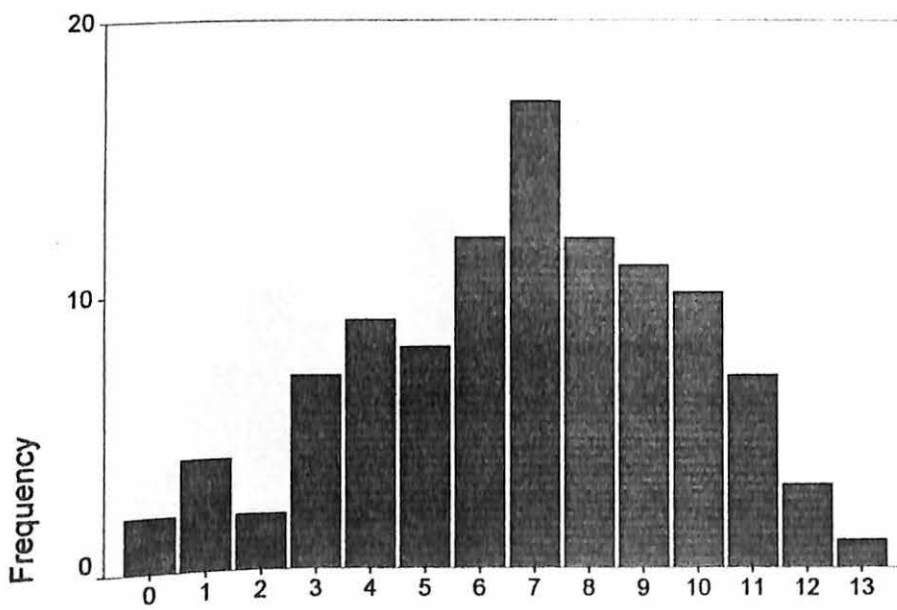
Jumlah skor TAS

analisis MHQ (FFA)



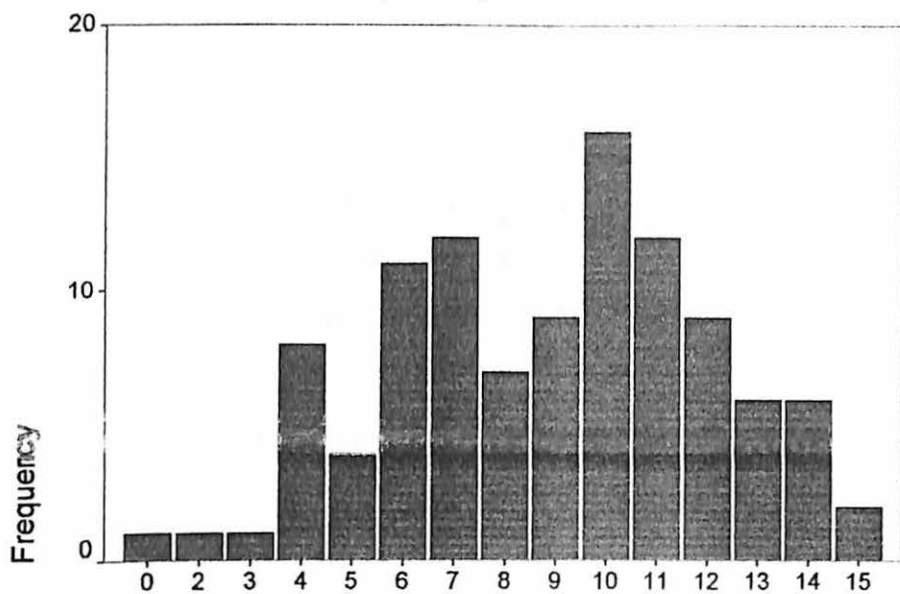
analisis MHQ (FFA)

analisis MHQ(PHO)



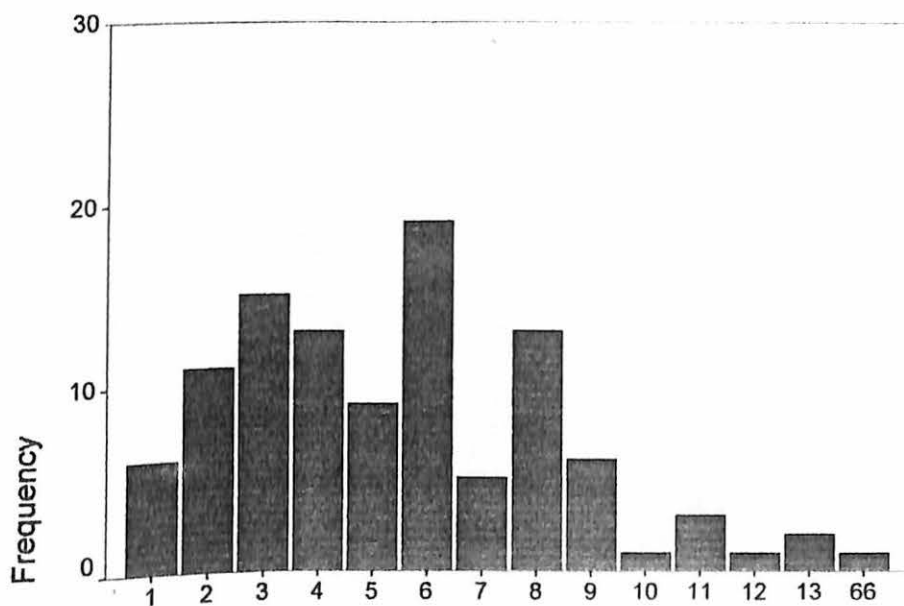
analisis MHQ(PHO)

analysis MHQ (OBS)



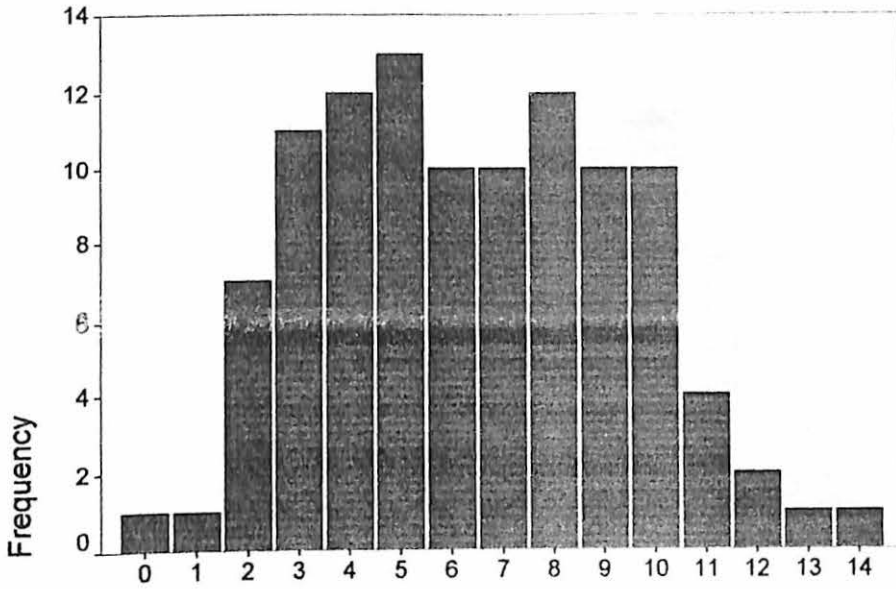
analysis MHQ (OBS)

analysis MHQ (SOM)



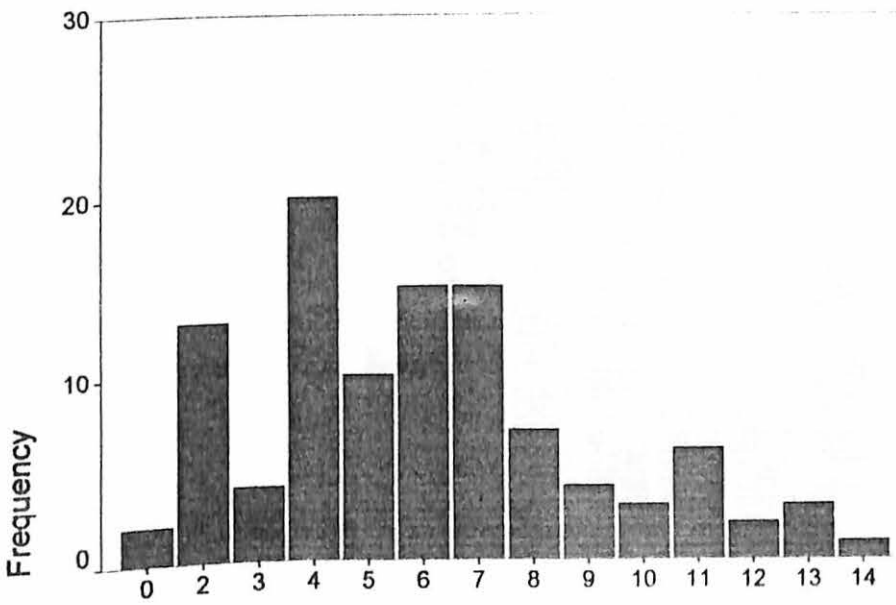
analysis MHQ (SOM)

analysis MHQ (DEP)



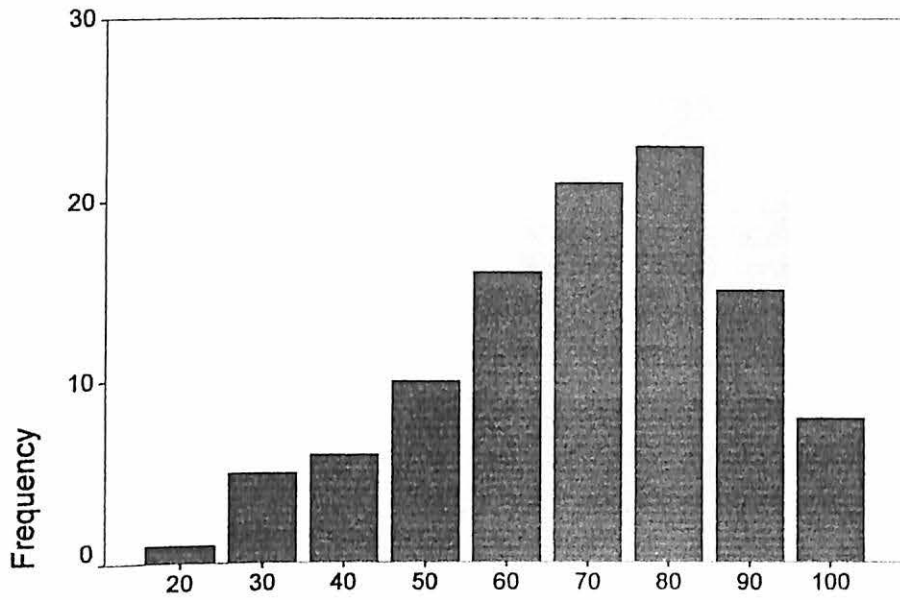
analysis MHQ (DEP)

analysis MHQ(HYS)



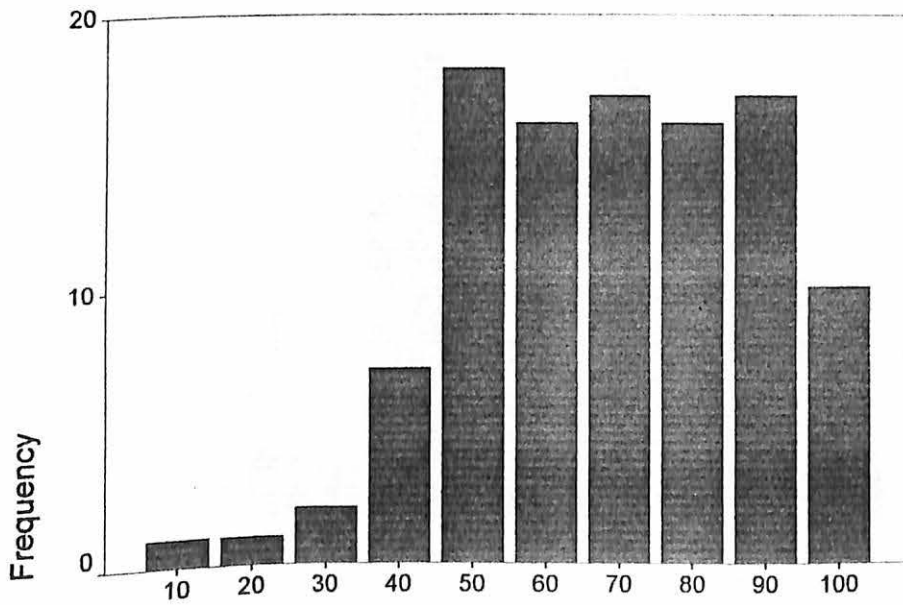
analysis MHQ(HYS)

physical health score (DUKE)



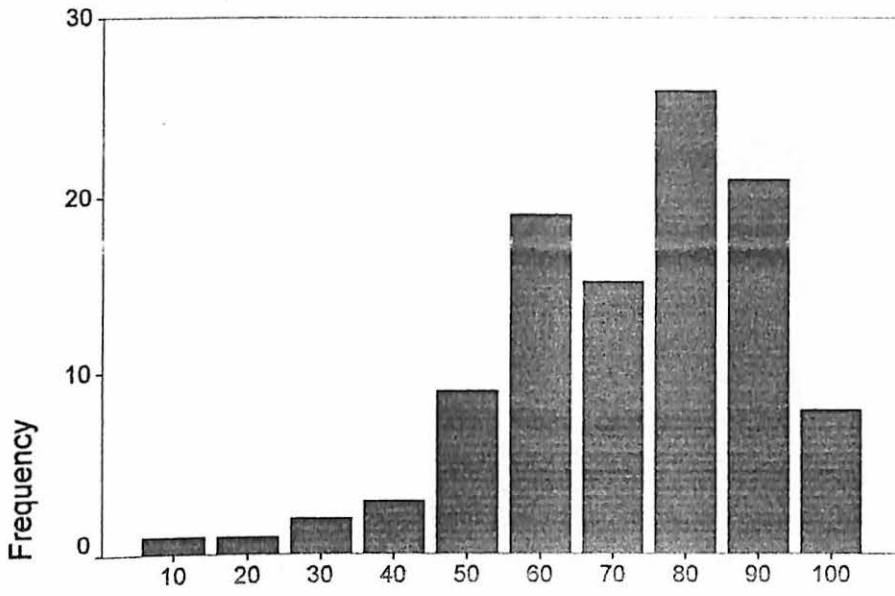
physical health score (DUKE)

mental health score(DUKE)



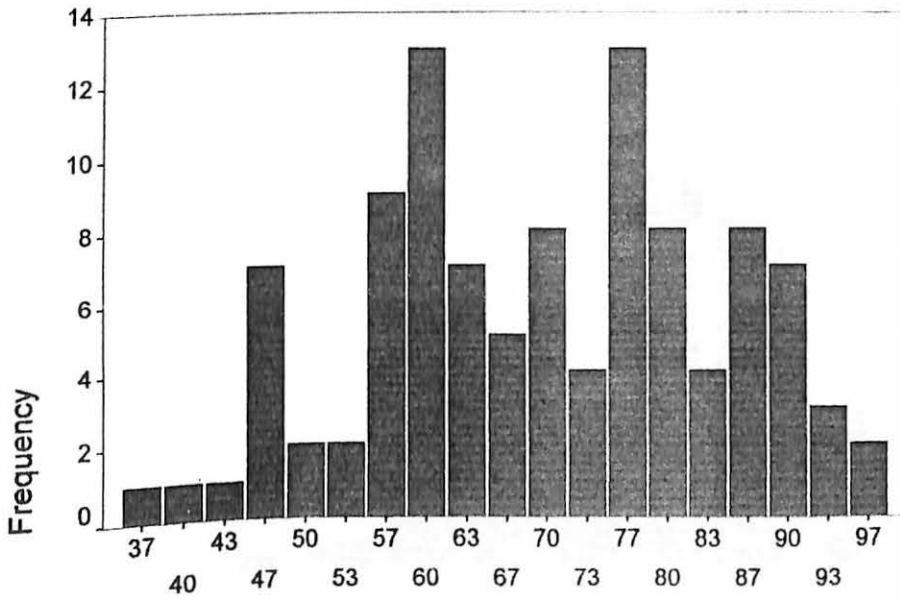
mental health score(DUKE)

social health score (DUKE)



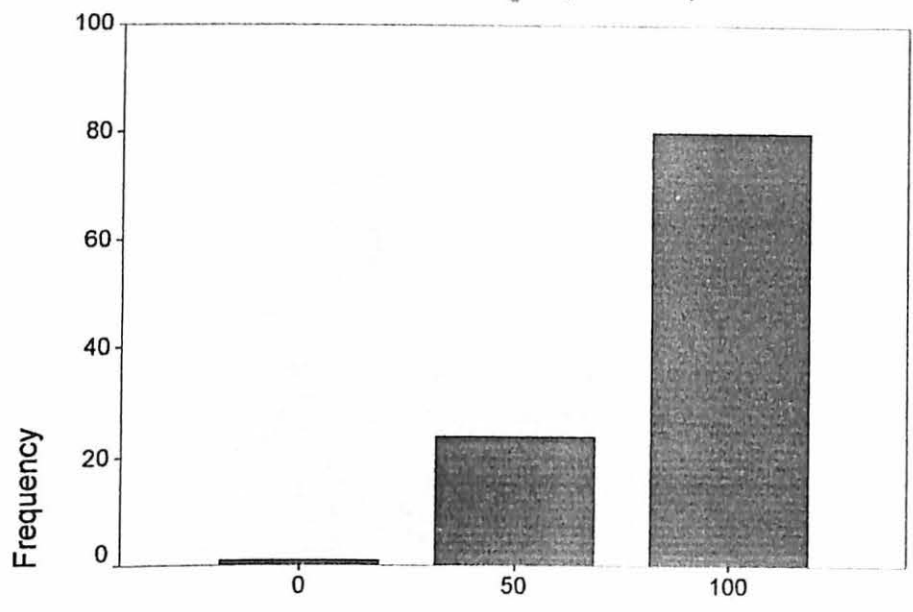
social health score (DUKE)

general health score(DUKE)



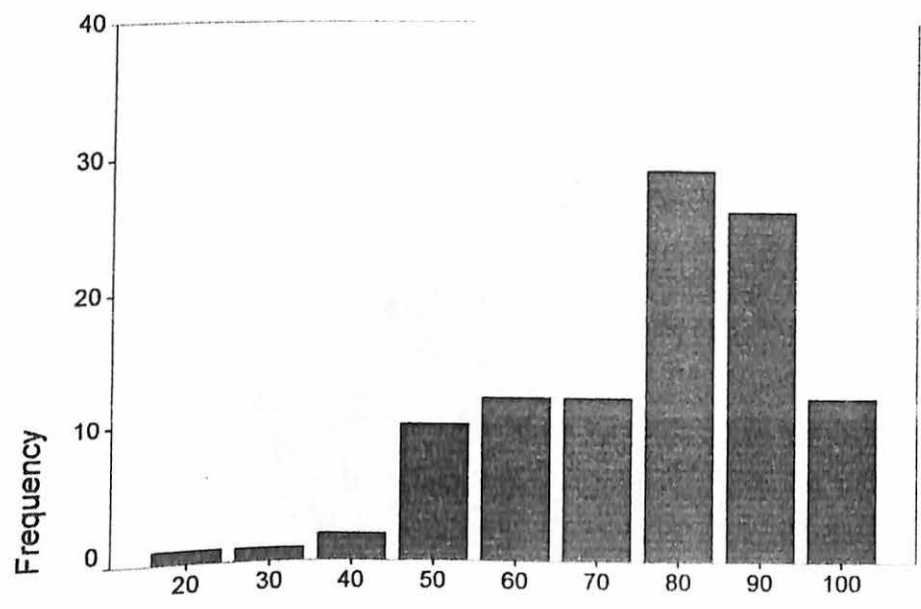
general health score(DUKE)

perceived health score(DUKE)



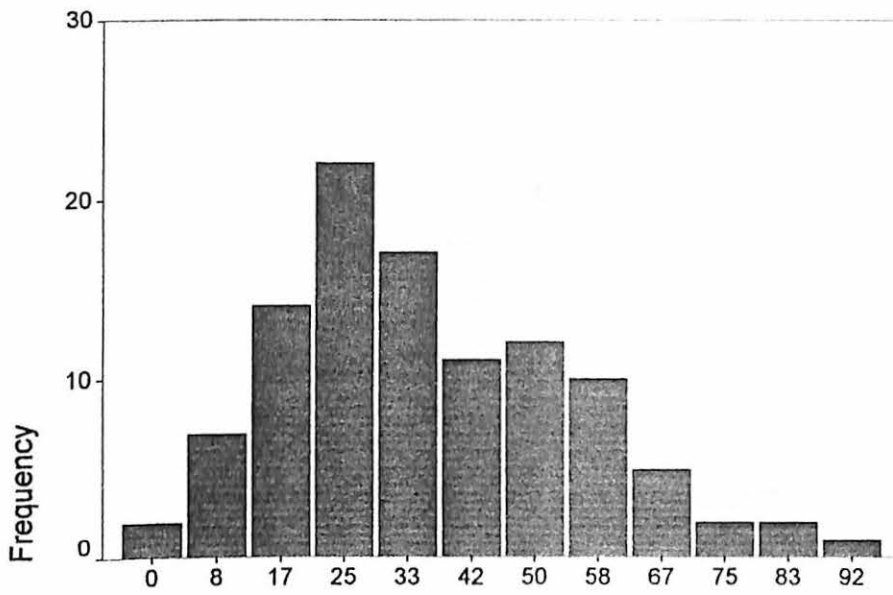
perceived health score(DUKE)

self_esteem score (DUKE)



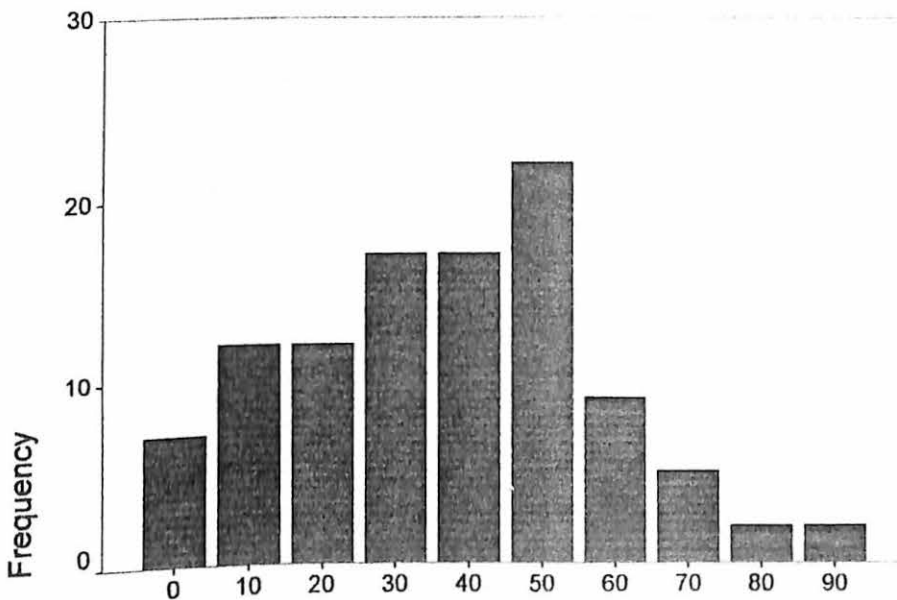
self_esteem score (DUKE)

anxiety score (DUKE)



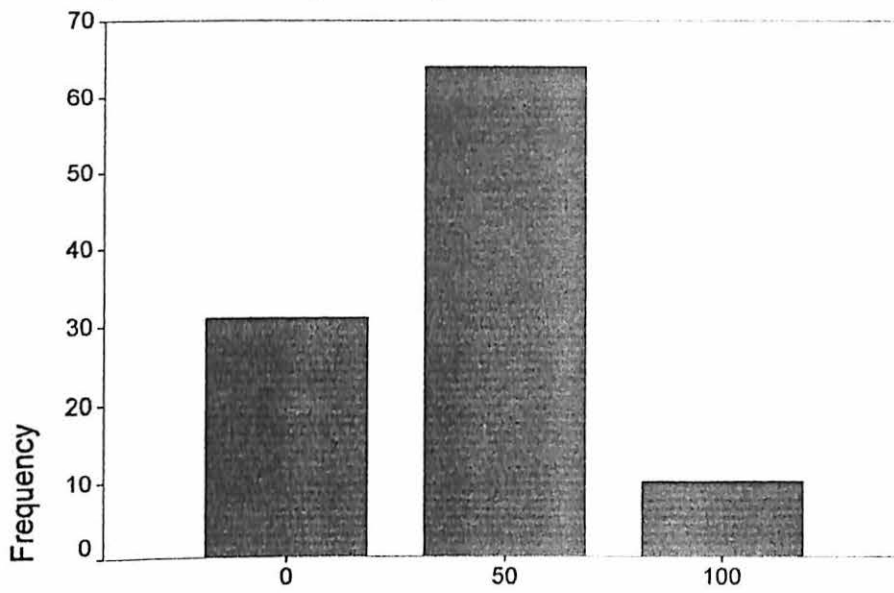
anxiety score (DUKE)

depression score (DUKE)



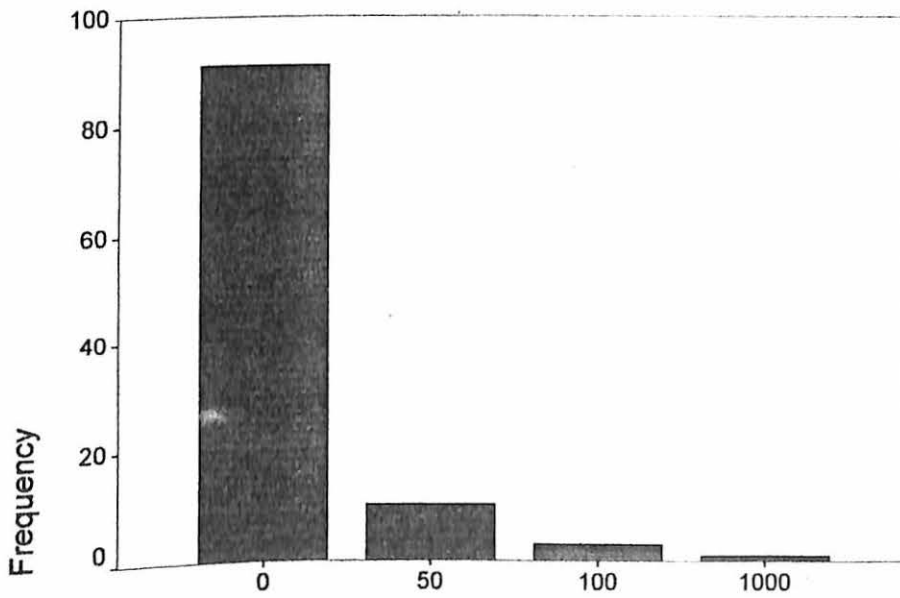
depression score (DUKE)

pain score(DUKE)



pain score(DUKE)

disability score(DUKE)



disability score(DUKE)

APPENDIX IV: RESEARCH TOOLS

1. TORONTO ALEXITHYMIA SCALE (TAS)
2. MIDDLESEX HOSPITAL QUESTIONNAIRES (MHQ)
3. DUKE HEALTH PROFILE (DUKE)
4. HAMILTON ANXIETY RATING SCALE (HAS)
5. HAMILTON DEPRESSION RATING SCALE (HDS)

SKALA ALEXITHYMIA TORONTO

Nama: R/N:

Arahan: Jawap semua soalan. Pilih jawapan yang sesuai dengan diri anda

	Tersangat Salah	Salah	Hampir betul	Betul	Betul Sepenuhnya
	1	2	3	4	5
1. Apabila saya menangis saya sentiasa mengetahui sebabnya					
2. Berkhayal adalah merugikan masa					
3. Saya inginkan supaya saya tidak begitu pemalu					
4. saya selalu keliru tentang keadaan emosi saya					
5. Saya selalu berkhayal tentang masa depan saya					
6. Saya nampaknya senang berkawan seperti orang lain juga					
7. Mengetahui jawapan kepada sesuatu soalan adalah lebih mustahak dari mengetahui sebab kepada jawapan tersebut					
8. Adalah sukar bagi saya mencari perkataan yang sesuai untuk menerangkan perasaan saya					
9. Saya suka orang mengetahui tentang pendirian saya dalam sesuatu perkara					
10. Saya mengalami sensasi fizikal (kesakitan) yang doktor pun tidak memahaminya					
11. Saya tidak berpuas hati dengan hanya mengetahui terlaksananya sesuatu tugas atau kerja; saya ingin mengetahuinya mengapa dan bagaimana ianya terlaksana					

	Tersangat Salah	Salah	Hampir betul	Betul	Betul sepenuhnya
	1	2	3	4	5
12. Saya dapat menerangkan perasaan saya dengan mudah					
13. Saya lebih suka menganalisa sesuatu masalah daripada menerangkannya sahaja					
14. Apabila saya merasa kecewa, saya tidak tahu bahawa adakah saya dalam kesedihan, ketakutan atau marah					
15. Saya terlampau banyak berkhayal					
16. Saya menghabiskan masa dengan berangan-angan jika tiada kerja yang hendak dibuat					
17. Saya hairan tentang kesakitan dalam tubuh saya yang tidak tahu puncanya					
18. Saya jarang-jarang berkhayal					
19. Saya lebih berminat kepada berlakunya sesuatu perkara daripada mengetahui mengapa ianya berlaku demikian					
20. Saya mempunyai perasaan yang saya sendiri tidak dapat memahaminya					
21. Memahami perasaan (emosi) diri adalah perlu					
22. Saya dapati sukar untuk menerangkan bagaimana perasaan saya kepada orang lain					
23. Orang selalu memberitahu saya supaya menyatakan perasaan saya dengan lebih jelas					
24. Sesaorang itu perlu mendapatkan penerangan yang jelas					
25. Saya tidak tahu apa yang sedang berlaku di dalam diri saya					
26. Saya selalunya tidak sedar apabila saya marah					

SOALAN HOSPITAL MILDLESEX (MHQ)

Nama:.....

No. Pendaftaran:.....

Arahan: Soalan-soalan berikut adalah berkenaan dengan perasaan dan cara anda bertindak. Sila pilih (membulatkan) jawapan yang berhubung dengan diri anda. Jangan mengambil masa yang lama bagi setiap soalan.

1. Adakah anda merasa kecewa tanpa sebab? Ya/Tidak
2. Adakah anda merasa amat takut apabila berada di tempat tertutup seperti di dalam kedai, lif dsb? Tidak pernah / kadang-Kadang / selalu
3. Adakah orang selalu menyatakan yang anda terlalu jujur? Tidak / Ya
4. Adakah anda pernah mengalami sesak nafas atau pening? Tidak pernah / kadang-Kadang / selalu
5. Adakah anda dapat berfikir secara cepat seperti dahulu? Ya / Tidak
6. Adakah pendapat anda sering berubah? Ya / Tidak
7. Adakah anda merasakan seperti akan pengsan (pitam)? Selalu /kadang-kadang / Tidak pernah
8. Adakah anda pernah memikirkan yang anda mengidap sesuatu penyakit yang tidak boleh diubati? Tidak pernah / kadang-kadang / selalu
9. Adakah anda berpendapat yang menjaga kebersihan adalah sangat penting, iaitu hampir-hampir sama dengan beribadat? Ya / Tidak
10. Adakah anda selalu rasa sakit atau mengalami masalah makanan tidak hadham? Ya / Tidak
11. Adakah anda merasakan yang hidup ini perlu banyak berusaha? Kadang-kadang / Selalu / Tidak pernah
12. Adakah, pernah anda merasakan yang berlakun itu menggembirakan? Ya / Tidak
13. Adakah anda merasa tidak tenteram dan gelisah? Selalu / kadang-kadang / Tidak pernah

14. Adakah anda merasa lebih selesa apabila berada di dalam rumah? Betul/Kadang-kadang/Tidak
15. Adakah anda mendapati pemikiran yang tidak diingini datang secara berulang-ulang / tidak boleh dikawal? Selalu / kadang-kadang / Tidak pernah
16. Adakah kadang-kadang anda merasa seperti ditusuk benda tajam pada badan, tangan atau kaki? Jarang-jarang / selalu / Tidak pernah
17. Adakah anda sangat menyesal dengan tingkah-laku anda yang telah lepas? Ya / Tidak
18. Adakah anda seorang yang normal atau terlalu emosi? Ya / Tidak
19. Adakah anda kadang-kadang terasa terlalu panik? Ya / Tidak
20. Adakah anda merasa takut menaiki bas atau LRT walaupun penumpang tidak penuh sesak? Betul-betul takut / Takut / Tidak takut langsung
21. Adakah anda bertambah gembira apabila melakukan sesuatu kerja? Ya / Tidak
22. Adakah selera makan anda berkurang di akhir-akhir ini? Tidak / Ya
23. Adakah anda bangun tidur terlalu awal? Ya / Tidak
24. Adakah anda gembira apabila anda diberi perhatian? Ya / Tidak
25. Adakah anda merasakan yang anda seorang yang mudah rungsing? Ya / Tidak
26. Adakah anda tidak suka keluar berseorangan? Ya / Tidak
27. Adakah anda seorang yang mementingkan kepada kesempurnaan (perfectionist)? Tidak / Ya
28. Adakah anda merasa terlalu letih dan tidak bermaya? Selalu / kadang-kadang
29. Adakah anda pernah mengalami kesedihan yang berpanjangan? Tidak pernah / selalu / kadang-kadang
30. Adakah anda pernah mengambil kesempatan dari sesuatu keadaan atau kejadian untuk kepentingan diri anda? Tidak pernah / kadang-kadang / selalu
31. Adakah anda selalu merasa tidak selesa (tegang) di tubuh anda? Ya / Tidak
32. Adakah anda terlalu risau apabila keluarga anda lewat pulang ke rumah? Tidak / Ya

33. Adakah anda pernah menyemak berulang-ulang kali sesuatu kerja yang telah dilakukan? Tidak / Ya
34. Adakah anda dapat tidur (terlena) dengan cepat? Tidak / Ya
35. Adakah anda memerlukan usaha yang lebih bagi menghadapi sesuatu krisis atau masalah? Ya / Kadang-kadang / Seperti orang lain
36. Adakah anda selalu menghabiskan wang yang banyak membeli pakaian? Ya / Tidak
37. Adakah anda pernah terfikir disuatu hari nanti bahawa tubuh anda akan hancur-berderai? Kerap kali / sekali-sekala / tidak langsung
38. Adakah anda takut dengan ketinggian (berada ditempat tinggi)? Ya / ada sedikit / tidak takut langsung
39. Adakah anda merasa tidak selesa jika tugas rutin (kerja yang selalu dilakukan) terganggu? Teramat sangat / sedikit / tidak langsung
40. Adakah anda selalu berpeluh dengan banyaknya? Ya / Tidak
41. Adakah anda rasa hendak menangis dengan sendirinya? Kerap kali / kadang-kadang / Tidak pernah
42. Adakah anda bergembira dengan situasi yang dramatik? Tidak / Ya
43. Adakah anda pernah mendapat mimpi buruk yang sungguh menyedihkan? Tidak pernah / kadang-kadang / selalu
44. Adakah anda merasa panik apabila berada di tempat orang ramai? Selalu / kadang-kadang / tidak pernah
45. Anda anda menjadi terlalu risau disebabkan oleh perkara-perkara yang remeh-temeh (kecil)? Tidak pernah / selalu / kadang-kadang
46. Adakah nafsu seks anda berubah-ubah? Tidak pernah / selalu / kadang-kadang
47. Adakah anda hilang perasaan simpati kepada orang lain? Ya / Tidak
48. Adakah anda kadang-kadang merasakan yang anda berpura-pura atau mengada-ngada? Ya / Tidak

Duke Health Profile (The DUKE)

Nama:.....

No. Pendaftaran:.....

Arahan

Di bawah ini adalah beberapa soalan tentang kesihatan dan perasaan anda. Sila bacakan setiap soalan dengan teliti dan tandakan (√) pada jawapan yang terbaik. Anda hendaklah menjawab soalan-soalan tersebut dengan cara tersendiri. Tidak ada jawapan yang betul atau salah. (Sila abaikan nombor yang terdapat di setiap penjuru petak).

	Ya, menerangkan diri saya dengan tepat	Sedikit sebanyak menerangkan diri saya	Tidak menerangkan diri saya langsung
1. Saya menyukai diri saya	_____ 12	_____ 11	_____ 10
2. Saya bukannya senang untuk berdamping dengan orang lain	_____ 20	_____ 21	_____ 22
3. Pada asasnya saya adalah seorang yang sihat	_____ 32	_____ 31	_____ 36
4. Saya mudah kecewa	_____ 40	_____ 41	_____ 42
5. Saya menghadapi kesukaran untuk memberikan tumpuan	_____ 50	_____ 51	_____ 52
6. Saya bergembira dengan hubungan keluarga saya	_____ 62	_____ 61	_____ 60
7. Saya merasa senang apabila ada orang lain bersama	_____ 72	_____ 71	_____ 70

HARI INI :

Adakah anda mengalami masalah atau gangguan fizikal apabila :-

	Tiada langsung	Sedikit	Banyak
8. Berjalan menaiki tangga	_____ 82	_____ 81	_____ 80
9. Berlari merentasi padang bola sepak	_____ 92	_____ 91	_____ 90

SEPANJANG MINGGU LEPAS:

Sejauh manakah anda

menghadapi masalah berikut:-

10. Tidur	_____ 102	_____ 101	_____ 100
11. Kesakitan di mana-mana bahagian tubuh	_____ 112	_____ 101	_____ 100
12. Senang mendapat letih	_____ 122	_____ 111	_____ 110
13. Rasa sedih atau susah hati	_____ 132	_____ 121	_____ 120
14. Gemuruh (senang terkejut)	_____ 142	_____ 141	_____ 130

**SEPANJANG MINGGU
LEPAS:**

Berapa kerapkah anda :-

15. Bergaul dengan orang lain (berbual, melawat kawan- kawan atau saudara-mara)	_____ 150	_____ 151	_____ 152
16. Mengambil bahagian dalam kegiatan sosial, riadah atau keugamaan (majlis perjumpaan, jamuan, ke masjid, bersukan)	_____ 160	_____ 161	_____ 162

**SEPANJANG MINGGU
LEPAS**

Berapa kerapkah anda :-

17. Tinggal di rumah, hospital atau lain-lain tempat perawatan kerana masalah kesihatan	_____ 172	_____ 171	_____ 170
---	-----------	-----------	-----------

Tiada langsung

Sedikit

Banyak

Tiada langsung

1-4 hari

5-7 hari

Major depression (DSM-III) defined by
 Hamilton Depression Scale and the Melancholia Scale

The DSM-III criteria for major depression are:

- A Dysphoric mood
- B(1) Poor appetite or significant weight loss
- B(2) Insomnia
- B(3) Psychomotor agitation or retardation
- B(4) Loss of interest or pleasure
- B(5) Loss of energy, fatigue
- B(6) Self-reproach or guilt
- B(7) Diminished ability to think or concentrate
- B(8) Suicidal impulses

Major depression (DSM-III) assessed by HDS/MES is defined by a score of 1 or more on A on at least four B-items.

DSM-III	No.	Item	1st day	3/12	1 yr.
A	1.	Depressed mood (0-4)			
B(6)	2.	Guilt (0-4)			
B(5)	3.	Suicide (0-4)			
B(2)	4.	Insomnia, initial (0-2)			
B(2)	5.	Insomnia, middle (0-2)			
B(2)	6.	Insomnia, late (0-2)			
B(4)	7.	Work and interest (0-4)			
B(3)	8.	Retardation, general (0-4)			
B(3)	9.	Agitation (0-4)			
	10.	Anxiety, psychic (0-4)			
	11.	Anxiety, somatic (0-4)			
B(1)	12.	Somatic, gastrointestinal (0-2)			
B(5)	13.	Somatic, general (0-2)			
	14.	Sexual interest (0-2)			
	15.	Hypochondriasis (0-4)			
	16.	Loss of insight (0-2)			
B(1)	17.	Loss of weight (0-2)			
B(2)	18.	Insomnia, general (0-4)			
	19.	Retardation, motor (0-4)			
	20.	Retardation, verbal (0-4)			
B(7)	21.	Retardation, intellectual (0-4)			
	22.	Retardation emotional (0-4)			
B(5)	23.	Tiredness and pains (0-4)			

Are DSM-III major depression criteria fulfilled? () yes = 1
 no = 0 HDS(a-f) MES
 () () () ()
 HDS(1-17)
 () ()

Generalized Anxiety (DSM-III) defined by
Hamilton Anxiety Scale

Generalised anxiety consists of four categories (A to D) of which three should be present for fulfilling DSM-III. The four categories are:

- A Motor tension
- B Autonomic hyperactivity
- C Apprehensiveness
- D Vigilance

The HAS can be used for assessing the four categories. As indicated, category A includes item 2, 7 and 14. Category B includes item 9, 10, 12 and 13. Category C includes item 1 and 3. Category D includes item 4 and 5.

When using HAS-G for assessing DSM-III generalised anxiety the following should be considered. Category A, C and D are fulfilled when one of the corresponding items is present of which one must have a score of 2 or more.

DSM-III	No.	Item	1st day	3/12	1 yr.
C	1.	Anxious mood			
A	2.	Tension			
C	3.	Fears			
D	4.	Insomnia			
D	5.	Difficulties in concentration and memory			
	6.	Depressed mood			
A	7.	General somatic symptoms (muscular)			
B	8.	General symptoms (sensory)			
B	9.	Cardiovascular symptoms			
B	10.	Respiratory symptoms			
B	11.	Gastrointestinal symptoms			
B	12.	Genito-urinary symptoms			
B	13.	Autonomic symptoms			
A	14.	Behaviour at interview			
		Total score			

Are DSM-III generalized anxiety criteria fulfilled? ()yes=1

no=0

ADDITIONAL APPENDIX

APPENDIX V :

THE DATA IN DETAIL

PSYCHIATRIC PATIENTS

Frequencies

Statistics

		Kategori sampel	Umur	jantina	Bangsa	Taraf perkahwinan	Taraf pelajaran
N	Valid	105	105	105	105	105	105
	Missing	0	0	0	0	0	0
Mean				1.47	1.07	1.31	3.13
Median				1.00	1.00	1.00	3.00
Std. Deviation				.50	.35	.56	1.06
Minimum				1	1	1	1
Maximum				2	4	3	6

Statistics

		pekerjaan	lain-lain kerja	diagnosis1	tempoh penyakit	nyatakan jumlah tahun	status rawatan
N	Valid	105	105	105	105	105	105
	Missing	0	0	0	0	0	0
Mean		4.48		1.50	3.38		1.87
Median		3.00		1.00	4.00		2.00
Std. Deviation		3.04		.84	1.36		.37
Minimum		1		1	1		1
Maximum		9		5	5		3

Statistics

		Jumlah skor TAS	HAS score	HDS score	AnalisisM HQ(FFA)	AnalisisM HQ(PHO)	AnalisisM HQ(OBS)
N	Valid	105	105	105	105	105	105
	Missing	0	0	0	0	0	0
Mean		75.60			8.09	8.56	10.13
Median		75.00			8.00	8.00	11.00
Std. Deviation		8.32			2.85	2.96	2.99
Minimum		61			2	2	0
Maximum		95			16	14	16

Statistics

		AnalysisM HQ(SOM)	AnalysisM HQ(DEP)	AnalysisM HQ(HYS)	physical health score (DUKE)	mental health score	social health score
N	Valid	105	105	105	105	105	105
	Missing	0	0	0	0	0	0
Mean		8.22	8.61	7.11			
Median		8.00	8.00	7.00			
Std. Deviation		3.03	2.83	2.50			
Minimum		1	1	2			
Maximum		16	15	13			

Statistics

		general health score	perceived health score	self esteem score	anxiety score	depressio n score
N	Valid	105	105	105	105	105
	Missing	0	0	0	0	0
Mean						
Median						
Std. Deviation						
Minimum						
Maximum						

Statistics

		pain score	disability score
N	Valid	105	105
	Missing	0	0
Mean			
Median			
Std. Deviation			
Minimum			
Maximum			

Frequency Table

Kategori sampel

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid psy	104	99.0	99.0	99.0
psy	1	1.0	1.0	100.0
Total	105	100.0	100.0	

Umur

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 16	2	1.9	1.9	1.9
17	2	1.9	1.9	3.8
19	2	1.9	1.9	5.7
20	3	2.9	2.9	8.6
22	3	2.9	2.9	11.4
23	2	1.9	1.9	13.3
24	4	3.8	3.8	17.1
25	2	1.9	1.9	19.0
26	1	1.0	1.0	20.0
29	2	1.9	1.9	21.9
30	4	3.8	3.8	25.7
31	3	2.9	2.9	28.6
32	1	1.0	1.0	29.5
33	2	1.9	1.9	31.4
34	5	4.8	4.8	36.2
35	5	4.8	4.8	41.0
37	2	1.9	1.9	42.9
38	6	5.7	5.7	48.6
39	6	5.7	5.7	54.3
40	5	4.8	4.8	59.0
41	3	2.9	2.9	61.9
42	3	2.9	2.9	64.8
43	3	2.9	2.9	67.6
44	4	3.8	3.8	71.4
45	4	3.8	3.8	75.2
46	4	3.8	3.8	79.0
47	3	2.9	2.9	81.9
48	4	3.8	3.8	85.7
49	1	1.0	1.0	86.7
50	1	1.0	1.0	87.6
52	2	1.9	1.9	89.5
53	1	1.0	1.0	90.5
54	2	1.9	1.9	92.4
55	1	1.0	1.0	93.3
56	3	2.9	2.9	96.2
57	1	1.0	1.0	97.1
59	2	1.9	1.9	99.0
63	1	1.0	1.0	100.0
Total	105	100.0	100.0	

Jantina

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	lelaki	56	53.3	53.3	53.3
	perempuan	49	46.7	46.7	100.0
	Total	105	100.0	100.0	

Bangsa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Melayu	100	95.2	95.2	95.2
	China	4	3.8	3.8	99.0
	lain-lain	1	1.0	1.0	100.0
	Total	105	100.0	100.0	

Taraf perkahwinan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Berkahwin	77	73.3	73.3	73.3
	Bujang	23	21.9	21.9	95.2
	Bercerai	5	4.8	4.8	100.0
	Total	105	100.0	100.0	

Taraf pelajaran

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Tidak bersekolah	6	5.7	5.7	5.7
	Sekolah rendah	14	13.3	13.3	19.0
	Sekolah menengah	62	59.0	59.0	78.1
	Maktab	9	8.6	8.6	86.7
	Universiti	11	10.5	10.5	97.1
	Lain-lain	3	2.9	2.9	100.0
	Total	105	100.0	100.0	

pekerjaan

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Tidak bekerja	25	23.8	23.8	23.8
Buruh/Petani/Nelayan	8	7.6	7.6	31.4
Surirumah	23	21.9	21.9	53.3
Pekerja separuh mahir	3	2.9	2.9	56.2
Pegawai kerajaan kumpulan sokongan	10	9.5	9.5	65.7
Pegawai kerajaan kumpulan A	2	1.9	1.9	67.6
Ahli perniagaan	7	6.7	6.7	74.3
Pekerja professional	6	5.7	5.7	80.0
Lain-lain	21	20.0	20.0	100.0
Total	105	100.0	100.0	

lain-lain kerja

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	86	81.9	81.9	81.9
bekas polis	1	1.0	1.0	82.9
bemiaga	2	1.9	1.9	84.8
bersara	2	1.9	1.9	86.7
c.c pencen	1	1.0	1.0	87.6
guru	5	4.8	4.8	92.4
jurutekn	1	1.0	1.0	93.3
kerani sekolah	1	1.0	1.0	94.3
operator	1	1.0	1.0	95.2
pekerja hotel	1	1.0	1.0	96.2
pengawal	1	1.0	1.0	97.1
SKMK	1	1.0	1.0	98.1
tentera	1	1.0	1.0	99.0
tukang kebun	1	1.0	1.0	100.0
Total	105	100.0	100.0	

diagnosis1

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid major depression	70	66.7	66.7	66.7
GAD	23	21.9	21.9	88.6
panic disorder	9	8.6	8.6	97.1
somatoform dis	1	1.0	1.0	98.1
fobia	2	1.9	1.9	100.0
Total	105	100.0	100.0	

tempoh penyakit

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid <1 bulan	9	8.6	8.6	8.6
1/12 - 6/12	27	25.7	25.7	34.3
6/12 - 2 tahun	14	13.3	13.3	47.6
2-5 tahun	25	23.8	23.8	71.4
> 5 tahun,nyatakan	30	28.6	28.6	100.0
Total	105	100.0	100.0	

nyatakan jumlah tahun

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	74	70.5	70.5	70.5
10	5	4.8	4.8	75.2
11	1	1.0	1.0	76.2
12	1	1.0	1.0	77.1
14	3	2.9	2.9	80.0
15	3	2.9	2.9	82.9
17	1	1.0	1.0	83.8
18	1	1.0	1.0	84.8
2	1	1.0	1.0	85.7
25	1	1.0	1.0	86.7
6	3	2.9	2.9	89.5
7	8	7.6	7.6	97.1
8	2	1.9	1.9	99.0
9	1	1.0	1.0	100.0
Total	105	100.0	100.0	

status rawatan

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid pesakit baru	15	14.3	14.3	14.3
dalam rawatan	89	84.8	84.8	99.0
tidak mengambil ubat/rawatan ulangan tidak teratur	1	1.0	1.0	100.0
Total	105	100.0	100.0	

Jumlah skor TAS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	61	1	1.0	1.0	1.0
	62	6	5.7	5.7	6.7
	63	1	1.0	1.0	7.6
	65	8	7.6	7.6	15.2
	66	3	2.9	2.9	18.1
	67	3	2.9	2.9	21.0
	68	2	1.9	1.9	22.9
	69	8	7.6	7.6	30.5
	70	1	1.0	1.0	31.4
	71	1	1.0	1.0	32.4
	72	4	3.8	3.8	36.2
	73	6	5.7	5.7	41.9
	74	5	4.8	4.8	46.7
	75	4	3.8	3.8	50.5
	76	1	1.0	1.0	51.4
	77	3	2.9	2.9	54.3
	78	7	6.7	6.7	61.0
	79	4	3.8	3.8	64.8
	80	2	1.9	1.9	66.7
	81	10	9.5	9.5	76.2
	82	2	1.9	1.9	78.1
	83	7	6.7	6.7	84.8
	84	1	1.0	1.0	85.7
	85	3	2.9	2.9	88.6
	86	2	1.9	1.9	90.5
	87	2	1.9	1.9	92.4
	89	5	4.8	4.8	97.1
	94	1	1.0	1.0	98.1
	95	2	1.9	1.9	100.0
	Total	105	100.0	100.0	

HAS score

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	6	5.7	5.7	5.7
1	2	1.9	1.9	7.6
10	9	8.6	8.6	16.2
11	3	2.9	2.9	19.0
12	3	2.9	2.9	21.9
13	3	2.9	2.9	24.8
14	2	1.9	1.9	26.7
15	2	1.9	1.9	28.6
16	5	4.8	4.8	33.3
17	1	1.0	1.0	34.3
18	2	1.9	1.9	36.2
19	4	3.8	3.8	40.0
2	4	3.8	3.8	43.8
20	1	1.0	1.0	44.8
22	2	1.9	1.9	46.7
23	1	1.0	1.0	47.6
24	1	1.0	1.0	48.6
28	1	1.0	1.0	49.5
3	11	10.5	10.5	60.0
30	1	1.0	1.0	61.0
32	1	1.0	1.0	61.9
4	4	3.8	3.8	65.7
5	3	2.9	2.9	68.6
6	9	8.6	8.6	77.1
7	7	6.7	6.7	83.8
8	8	7.6	7.6	91.4
9	9	8.6	8.6	100.0
Total	105	100.0	100.0	

HDS score

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	2.9	2.9	2.9
	1	5	4.8	4.8	7.6
	10	8	7.6	7.6	15.2
	11	7	6.7	6.7	21.9
	12	4	3.8	3.8	25.7
	13	2	1.9	1.9	27.6
	14	6	5.7	5.7	33.3
	15	2	1.9	1.9	35.2
	16	2	1.9	1.9	37.1
	17	3	2.9	2.9	40.0
	18	2	1.9	1.9	41.9
	19	2	1.9	1.9	43.8
	2	7	6.7	6.7	50.5
	20	1	1.0	1.0	51.4
	21	2	1.9	1.9	53.3
	22	1	1.0	1.0	54.3
	24	1	1.0	1.0	55.2
	25	1	1.0	1.0	56.2
	3	7	6.7	6.7	62.9
	33	1	1.0	1.0	63.8
	4	6	5.7	5.7	69.5
	5	6	5.7	5.7	75.2
	6	5	4.8	4.8	80.0
	7	7	6.7	6.7	86.7
	8	7	6.7	6.7	93.3
	9	7	6.7	6.7	100.0
	Total	105	100.0	100.0	

AnalysisMHQ(FFA)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	2	1.9	1.9	1.9
	3	2	1.9	1.9	3.8
	4	5	4.8	4.8	8.6
	5	9	8.6	8.6	17.1
	6	12	11.4	11.4	28.6
	7	13	12.4	12.4	41.0
	8	24	22.9	22.9	63.8
	9	13	12.4	12.4	76.2
	10	6	5.7	5.7	81.9
	11	6	5.7	5.7	87.6
	12	1	1.0	1.0	88.6
	13	6	5.7	5.7	94.3
	14	5	4.8	4.8	99.0
	16	1	1.0	1.0	100.0
	Total	105	100.0	100.0	

AnalisisMHQ(PHO)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	2	1.9	1.9	1.9
	3	3	2.9	2.9	4.8
	4	3	2.9	2.9	7.6
	5	7	6.7	6.7	14.3
	6	14	13.3	13.3	27.6
	7	15	14.3	14.3	41.9
	8	9	8.6	8.6	50.5
	9	8	7.6	7.6	58.1
	10	13	12.4	12.4	70.5
	11	10	9.5	9.5	80.0
	12	10	9.5	9.5	89.5
	13	8	7.6	7.6	97.1
	14	3	2.9	2.9	100.0
	Total	105	100.0	100.0	

AnalisisMHQ(OBS)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	1.0	1.0	1.0
	2	1	1.0	1.0	1.9
	4	1	1.0	1.0	2.9
	5	4	3.8	3.8	6.7
	6	4	3.8	3.8	10.5
	7	6	5.7	5.7	16.2
	8	12	11.4	11.4	27.6
	9	15	14.3	14.3	41.9
	10	8	7.6	7.6	49.5
	11	17	16.2	16.2	65.7
	12	18	17.1	17.1	82.9
	13	7	6.7	6.7	89.5
	14	2	1.9	1.9	91.4
	15	5	4.8	4.8	96.2
	16	4	3.8	3.8	100.0
	Total	105	100.0	100.0	

AnalysisMHQ(SOM)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	1.9	1.9	1.9
	3	3	2.9	2.9	4.8
	4	6	5.7	5.7	10.5
	5	5	4.8	4.8	15.2
	6	15	14.3	14.3	29.5
	7	15	14.3	14.3	43.8
	8	8	7.6	7.6	51.4
	9	18	17.1	17.1	68.6
	10	16	15.2	15.2	83.8
	11	5	4.8	4.8	88.6
	12	4	3.8	3.8	92.4
	14	3	2.9	2.9	95.2
	15	3	2.9	2.9	98.1
	16	2	1.9	1.9	100.0
	Total	105	100.0	100.0	

AnalysisMHQ(DEP)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.0	1.0	1.0
	3	3	2.9	2.9	3.8
	4	2	1.9	1.9	5.7
	5	9	8.6	8.6	14.3
	6	7	6.7	6.7	21.0
	7	13	12.4	12.4	33.3
	8	19	18.1	18.1	51.4
	9	15	14.3	14.3	65.7
	10	12	11.4	11.4	77.1
	11	6	5.7	5.7	82.9
	12	7	6.7	6.7	89.5
	13	4	3.8	3.8	93.3
	14	6	5.7	5.7	99.0
	15	1	1.0	1.0	100.0
	Total	105	100.0	100.0	

AnalysisMHQ(HYS)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	3	2.9	2.9	2.9
	3	1	1.0	1.0	3.8
	4	14	13.3	13.3	17.1
	5	10	9.5	9.5	26.7
	6	22	21.0	21.0	47.6
	7	9	8.6	8.6	56.2
	8	13	12.4	12.4	68.6
	9	12	11.4	11.4	80.0
	10	12	11.4	11.4	91.4
	11	5	4.8	4.8	96.2
	12	2	1.9	1.9	98.1
	13	2	1.9	1.9	100.0
	Total	105	100.0	100.0	

physical health score (DUKE)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	60	1	1.0	1.0	1.0
	0	4	3.8	3.8	4.8
	10	3	2.9	2.9	7.6
	100	3	2.9	2.9	10.5
	20	19	18.1	18.1	28.6
	30	6	5.7	5.7	34.3
	40	13	12.4	12.4	46.7
	50	22	21.0	21.0	67.6
	60	15	14.3	14.3	81.9
	70	11	10.5	10.5	92.4
	80	8	7.6	7.6	100.0
	Total	105	100.0	100.0	

mental health score

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20	1	1.0	1.0	1.0
	0	4	3.8	3.8	4.8
	10	6	5.7	5.7	10.5
	20	9	8.6	8.6	19.0
	30	13	12.4	12.4	31.4
	40	15	14.3	14.3	45.7
	50	15	14.3	14.3	60.0
	60	18	17.1	17.1	77.1
	70	16	15.2	15.2	92.4
	80	2	1.9	1.9	94.3
	90	6	5.7	5.7	100.0
	Total	105	100.0	100.0	

social health score

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	4	3.8	3.8	3.8
100	6	5.7	5.7	9.5
20	7	6.7	6.7	16.2
30	5	4.8	4.8	21.0
40	9	8.6	8.6	29.5
50	13	12.4	12.4	41.9
60	19	18.1	18.1	60.0
70	22	21.0	21.0	81.0
80	15	14.3	14.3	95.2
90	5	4.8	4.8	100.0
Total	105	100.0	100.0	

general health score

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 17	5	4.8	4.8	4.8
20	4	3.8	3.8	8.6
23	6	5.7	5.7	14.3
27	4	3.8	3.8	18.1
30	1	1.0	1.0	19.0
33	4	3.8	3.8	22.9
37	3	2.9	2.9	25.7
40	4	3.8	3.8	29.5
43	5	4.8	4.8	34.3
47	8	7.6	7.6	41.9
50	5	4.8	4.8	46.7
52	1	1.0	1.0	47.6
53	2	1.9	1.9	49.5
57	9	8.6	8.6	58.1
60	7	6.7	6.7	64.8
63	14	13.3	13.3	78.1
67	4	3.8	3.8	81.9
68	1	1.0	1.0	82.9
70	6	5.7	5.7	88.6
73	5	4.8	4.8	93.3
77	5	4.8	4.8	98.1
80	1	1.0	1.0	99.0
83	1	1.0	1.0	100.0
Total	105	100.0	100.0	

perceived health score

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	2.9	2.9	2.9
	100	57	54.3	54.3	57.1
	50	44	41.9	41.9	99.0
	80	1	1.0	1.0	100.0
	Total	105	100.0	100.0	

self esteem score

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	1.0	1.0	1.0
	10	1	1.0	1.0	1.9
	20	3	2.9	2.9	4.8
	30	8	7.6	7.6	12.4
	40	4	3.8	3.8	16.2
	50	23	21.9	21.9	38.1
	60	11	10.5	10.5	48.6
	70	21	20.0	20.0	68.6
	80	26	24.8	24.8	93.3
	90	7	6.7	6.7	100.0
	Total	105	100.0	100.0	

anxiety score

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	1.0	1.0	1.0
	0	2	1.9	1.9	2.9
	16	1	1.0	1.0	3.8
	17	5	4.8	4.8	8.6
	25	10	9.5	9.5	18.1
	30	2	1.9	1.9	20.0
	33	10	9.5	9.5	29.5
	41	3	2.9	2.9	32.4
	42	13	12.4	12.4	44.8
	50	18	17.1	17.1	61.9
	58	6	5.7	5.7	67.6
	66	3	2.9	2.9	70.5
	67	14	13.3	13.3	83.8
	70	2	1.9	1.9	85.7
	75	5	4.8	4.8	90.5
	83	8	7.6	7.6	98.1
	92	2	1.9	1.9	100.0
	Total	105	100.0	100.0	

depression score

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	1	1.0	1.0	1.0
100	1	1.0	1.0	1.9
10	1	1.0	1.0	2.9
100	9	8.6	8.6	11.4
20	5	4.8	4.8	16.2
30	2	1.9	1.9	18.1
40	25	23.8	23.8	41.9
50	15	14.3	14.3	56.2
60	7	6.7	6.7	62.9
70	13	12.4	12.4	75.2
80	18	17.1	17.1	92.4
90	8	7.6	7.6	100.0
Total	105	100.0	100.0	

pain score

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	25	23.8	23.8	23.8
100	21	20.0	20.0	43.8
50	59	56.2	56.2	100.0
Total	105	100.0	100.0	

disability score

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	74	70.5	70.5	70.5
100	10	9.5	9.5	80.0
50	21	20.0	20.0	100.0
Total	105	100.0	100.0	

Frequencies

MEDICAL PATIENTS

Frequencies

Statistics

		kategori sampel	umur	jantina	bangsa	taraf perkahwinan	taraf pelajaran
N	Valid	105	105	105	105	105	105
	Missing	0	0	0	0	0	0
Mean		2.00	39.92	1.55	1.10	1.14	
Median		2.00	42.00	2.00	1.00	1.00	
Std. Deviation		.00	11.38	.50	.38	.35	
Minimum		2	17	1	1	1	
Maximum		2	58	2	4	2	

Statistics

		pekerjaan	diagnosis1	tempoh penyakit	nyatakan jumlah tahun	status rawatan	Jumlah skor TAS
N	Valid	105	105	105	30	105	105
	Missing	0	0	0	75	0	0
Mean		4.29		3.87	10.63	1.89	75.72
Median		4.00		4.00	8.00	2.00	76.00
Std. Deviation		2.52		1.05	6.53	.32	7.07
Minimum		1		1	6	1	55
Maximum		9		5	29	2	89

Statistics

		analisis MHQ (FFA)	analisis MHQ(PHO)	analisis MHQ (OBS)	analisis MHQ (SOM)	analisis MHQ (DEP)	analisis MHQ(HYS)
N	Valid	105	105	105	105	105	105
	Missing	0	0	0	0	0	0
Mean		7.37	8.44	10.44	7.68	8.23	7.10
Median		7.00	8.00	10.00	8.00	9.00	6.00
Std. Deviation		3.29	2.32	2.15	3.50	3.23	3.24
Minimum		0	2	5	1	2	0
Maximum		14	14	16	13	13	15

11

Statistics

		physical health score (DUKE)	mental health score(DUKE)	social health score (DUKE)	general health score(DUKE)	perceived health score(DUKE)	self_esteem score (DUKE)
N	Valid	105	105	105	105	105	105
	Missing	0	0	0	0	0	0
Mean		43.52	53.52	66.86	54.44	66.67	67.90
Median		40.00	60.00	70.00	57.00	50.00	70.00
Std. Deviation		22.66	18.66	20.63	13.56	35.13	16.57
Minimum		0	20	0	20	0	10
Maximum		100	100	100	93	100	100

Statistics

		anxiety score (DUKE)	depression score (DUKE)	pain score(DUKE)	disability score(DUKE)
N	Valid	105	105	105	105
	Missing	0	0	0	0
Mean		47.80	52.10	60.48	27.62
Median		42.00	50.00	50.00	.00
Std. Deviation		17.54	20.41	29.98	37.33
Minimum		0	0	0	0
Maximum		92	100	100	100

Frequency Table

kategori sampel

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid med	105	100.0	100.0	100.0

umur

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 17	4	3.8	3.8	3.8
19	5	4.8	4.8	8.6
21	3	2.9	2.9	11.4
22	1	1.0	1.0	12.4
24	1	1.0	1.0	13.3
25	2	1.9	1.9	15.2
26	1	1.0	1.0	16.2
28	2	1.9	1.9	18.1
29	2	1.9	1.9	20.0
30	2	1.9	1.9	21.9
31	3	2.9	2.9	24.8
33	3	2.9	2.9	27.6
34	5	4.8	4.8	32.4
36	1	1.0	1.0	33.3
37	2	1.9	1.9	35.2
38	6	5.7	5.7	41.0
39	2	1.9	1.9	42.9
40	3	2.9	2.9	45.7
41	2	1.9	1.9	47.6
42	4	3.8	3.8	51.4
43	5	4.8	4.8	56.2
44	2	1.9	1.9	58.1
45	3	2.9	2.9	61.0
46	6	5.7	5.7	66.7
47	2	1.9	1.9	68.6
48	7	6.7	6.7	75.2
49	3	2.9	2.9	78.1
50	3	2.9	2.9	81.0
51	1	1.0	1.0	81.9
52	3	2.9	2.9	84.8
53	4	3.8	3.8	88.6
54	4	3.8	3.8	92.4
55	5	4.8	4.8	97.1
56	1	1.0	1.0	98.1
57	1	1.0	1.0	99.0
58	1	1.0	1.0	100.0
Total	105	100.0	100.0	

jantina

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid lelaki	47	44.8	44.8	44.8
perempuan	58	55.2	55.2	100.0
Total	105	100.0	100.0	

bangsa

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid melayu	97	92.4	92.4	92.4
china	7	6.7	6.7	99.0
lain-lain..	1	1.0	1.0	100.0
Total	105	100.0	100.0	

taraf perkahwinan

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid berkahwin	90	85.7	85.7	85.7
bujang	15	14.3	14.3	100.0
Total	105	100.0	100.0	

taraf pelajaran

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Tidak bersekolah	5	4.8	4.8	4.8
Sekolah rendah	19	18.1	18.1	22.9
Sekolah menengah	62	59.0	59.0	81.9
Maktab	7	6.7	6.7	88.6
Universiti	12	11.4	11.4	100.0
Total	105	100.0	100.0	

pekerjaan

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid tidak bekerja	20	19.0	19.0	19.0
surirumah	32	30.5	30.5	49.5
pekerja separuh mahir	11	10.5	10.5	60.0
pegawai kerajaan kumpulan sokongan	14	13.3	13.3	73.3
pegawai kerajaan kumpulan A	3	2.9	2.9	76.2
ahli pemiagaan	6	5.7	5.7	81.9
pekerja profesional	11	10.5	10.5	92.4
lain-lain...	8	7.6	7.6	100.0
Total	105	100.0	100.0	

diagnosis1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	cardio	38	36.2	36.2	36.2
	diabetic	21	20.0	20.0	56.2
	endokrin	5	4.8	4.8	61.0
	epilepsi	1	1.0	1.0	61.9
	gastro	9	8.6	8.6	70.5
	haemato	5	4.8	4.8	75.2
	hypertension	5	4.8	4.8	80.0
	migrane	1	1.0	1.0	81.0
	obesiti	1	1.0	1.0	81.9
	parkinson	1	1.0	1.0	82.9
	rheumato	12	11.4	11.4	94.3
	seloderma	1	1.0	1.0	95.2
	tiroid	5	4.8	4.8	100.0
	Total	105	100.0	100.0	

tempoh penyakit

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<1 bulan	2	1.9	1.9	1.9
	1/12 - 6/12	11	10.5	10.5	12.4
	6/12 - 2 tahun	20	19.0	19.0	31.4
	2 - 5 tahun	38	36.2	36.2	67.6
	> 5 tahun, nyatakan...	34	32.4	32.4	100.0
	Total	105	100.0	100.0	

nyatakan jumlah tahun

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	6	10	9.5	33.3	33.3
	7	4	3.8	13.3	46.7
	8	3	2.9	10.0	56.7
	10	5	4.8	16.7	73.3
	12	1	1.0	3.3	76.7
	13	1	1.0	3.3	80.0
	15	1	1.0	3.3	83.3
	17	1	1.0	3.3	86.7
	20	1	1.0	3.3	90.0
	23	1	1.0	3.3	93.3
	28	1	1.0	3.3	96.7
	29	1	1.0	3.3	100.0
	Total	30	28.6	100.0	
Missing	System	75	71.4		
Total		105	100.0		

status rawatan

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid pesakit baru dalam rawatan	12	11.4	11.4	11.4
Total	93	88.6	88.6	100.0
	105	100.0	100.0	

Jumlah skor TAS

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 55	1	1.0	1.0	1.0
61	1	1.0	1.0	1.9
62	1	1.0	1.0	2.9
66	6	5.7	5.7	8.6
67	6	5.7	5.7	14.3
68	4	3.8	3.8	18.1
69	7	6.7	6.7	24.8
70	2	1.9	1.9	26.7
71	2	1.9	1.9	28.6
72	4	3.8	3.8	32.4
73	9	8.6	8.6	41.0
74	3	2.9	2.9	43.8
75	5	4.8	4.8	48.6
76	4	3.8	3.8	52.4
77	5	4.8	4.8	57.1
78	7	6.7	6.7	63.8
79	6	5.7	5.7	69.5
80	3	2.9	2.9	72.4
81	6	5.7	5.7	78.1
82	3	2.9	2.9	81.0
83	3	2.9	2.9	83.8
84	6	5.7	5.7	89.5
86	1	1.0	1.0	90.5
87	6	5.7	5.7	96.2
88	2	1.9	1.9	98.1
89	2	1.9	1.9	100.0
Total	105	100.0	100.0	

analisis MHQ (FFA)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	2	1.9	1.9	1.9
	2	5	4.8	4.8	6.7
	3	6	5.7	5.7	12.4
	5	24	22.9	22.9	35.2
	6	9	8.6	8.6	43.8
	7	11	10.5	10.5	54.3
	8	13	12.4	12.4	66.7
	9	7	6.7	6.7	73.3
	10	7	6.7	6.7	80.0
	11	6	5.7	5.7	85.7
	12	6	5.7	5.7	91.4
	13	6	5.7	5.7	97.1
	14	3	2.9	2.9	100.0
	Total	105	100.0	100.0	

analisis MHQ(PHO)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	1.0	1.0	1.0
	3	1	1.0	1.0	1.9
	5	4	3.8	3.8	5.7
	6	19	18.1	18.1	23.8
	7	12	11.4	11.4	35.2
	8	19	18.1	18.1	53.3
	9	18	17.1	17.1	70.5
	10	12	11.4	11.4	81.9
	11	6	5.7	5.7	87.6
	12	8	7.6	7.6	95.2
	13	3	2.9	2.9	98.1
	14	2	1.9	1.9	100.0
	Total	105	100.0	100.0	

analysis MHQ (OBS)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5	3	2.9	2.9	2.9
	6	1	1.0	1.0	3.8
	7	6	5.7	5.7	9.5
	8	8	7.6	7.6	17.1
	9	6	5.7	5.7	22.9
	10	33	31.4	31.4	54.3
	11	21	20.0	20.0	74.3
	12	11	10.5	10.5	84.8
	13	6	5.7	5.7	90.5
	14	7	6.7	6.7	97.1
	15	2	1.9	1.9	99.0
	16	1	1.0	1.0	100.0
	Total	105	100.0	100.0	

analysis MHQ (SOM)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.0	1.0	1.0
	2	13	12.4	12.4	13.3
	3	7	6.7	6.7	20.0
	4	4	3.8	3.8	23.8
	5	2	1.9	1.9	25.7
	6	11	10.5	10.5	36.2
	7	5	4.8	4.8	41.0
	8	12	11.4	11.4	52.4
	9	9	8.6	8.6	61.0
	10	20	19.0	19.0	80.0
	11	8	7.6	7.6	87.6
	12	3	2.9	2.9	90.5
	13	10	9.5	9.5	100.0
	Total	105	100.0	100.0	

analysis MHQ (DEP)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	11	10.5	10.5	10.5
	3	3	2.9	2.9	13.3
	4	1	1.0	1.0	14.3
	5	12	11.4	11.4	25.7
	6	5	4.8	4.8	30.5
	7	2	1.9	1.9	32.4
	8	12	11.4	11.4	43.8
	9	7	6.7	6.7	50.5
	10	20	19.0	19.0	69.5
	11	19	18.1	18.1	87.6
	12	12	11.4	11.4	99.0
	13	1	1.0	1.0	100.0
	Total	105	100.0	100.0	

analysis MHQ(HYS)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	1.0	1.0	1.0
	2	6	5.7	5.7	6.7
	3	4	3.8	3.8	10.5
	4	17	16.2	16.2	26.7
	5	6	5.7	5.7	32.4
	6	21	20.0	20.0	52.4
	7	6	5.7	5.7	58.1
	8	7	6.7	6.7	64.8
	9	6	5.7	5.7	70.5
	10	17	16.2	16.2	86.7
	11	4	3.8	3.8	90.5
	12	5	4.8	4.8	95.2
	14	4	3.8	3.8	99.0
	15	1	1.0	1.0	100.0
	Total	105	100.0	100.0	

physical health score (DUKE)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	3.8	3.8	3.8
	10	11	10.5	10.5	14.3
	20	6	5.7	5.7	20.0
	30	17	16.2	16.2	36.2
	40	17	16.2	16.2	52.4
	50	14	13.3	13.3	65.7
	60	21	20.0	20.0	85.7
	70	6	5.7	5.7	91.4
	80	5	4.8	4.8	96.2
	90	3	2.9	2.9	99.0
	100	1	1.0	1.0	100.0
	Total	105	100.0	100.0	

mental health score(DUKE)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20	10	9.5	9.5	9.5
	30	7	6.7	6.7	16.2
	40	16	15.2	15.2	31.4
	50	19	18.1	18.1	49.5
	60	28	26.7	26.7	76.2
	70	13	12.4	12.4	88.6
	80	7	6.7	6.7	95.2
	90	3	2.9	2.9	98.1
	100	2	1.9	1.9	100.0
	Total	105	100.0	100.0	

social health score (DUKE)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	2.9	2.9	2.9
	20	1	1.0	1.0	3.8
	30	3	2.9	2.9	6.7
	40	7	6.7	6.7	13.3
	50	5	4.8	4.8	18.1
	60	22	21.0	21.0	39.0
	70	31	29.5	29.5	68.6
	80	18	17.1	17.1	85.7
	90	5	4.8	4.8	90.5
	100	10	9.5	9.5	100.0
	Total	105	100.0	100.0	

general health score(DUKE)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20	3	2.9	2.9	2.9
	27	2	1.9	1.9	4.8
	33	1	1.0	1.0	5.7
	37	1	1.0	1.0	6.7
	40	9	8.6	8.6	15.2
	43	12	11.4	11.4	26.7
	47	7	6.7	6.7	33.3
	50	7	6.7	6.7	40.0
	53	9	8.6	8.6	48.6
	57	13	12.4	12.4	61.0
	60	7	6.7	6.7	67.6
	63	15	14.3	14.3	81.9
	67	5	4.8	4.8	86.7
	70	8	7.6	7.6	94.3
	73	1	1.0	1.0	95.2
	80	1	1.0	1.0	96.2
	83	2	1.9	1.9	98.1
	87	1	1.0	1.0	99.0
	93	1	1.0	1.0	100.0
Total		105	100.0	100.0	

perceived health score(DUKE)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	14	13.3	13.3	13.3
	50	42	40.0	40.0	53.3
	100	49	46.7	46.7	100.0
Total		105	100.0	100.0	

self_esteem score (DUKE)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10	1	1.0	1.0	1.0
	20	2	1.9	1.9	2.9
	30	1	1.0	1.0	3.8
	40	1	1.0	1.0	4.8
	50	14	13.3	13.3	18.1
	60	19	18.1	18.1	36.2
	70	39	37.1	37.1	73.3
	80	16	15.2	15.2	88.6
	90	4	3.8	3.8	92.4
	100	8	7.6	7.6	100.0
Total		105	100.0	100.0	

anxiety score (DUKE)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	1	1.0	1.0	1.0
8	1	1.0	1.0	1.9
17	5	4.8	4.8	6.7
25	4	3.8	3.8	10.5
33	12	11.4	11.4	21.9
42	34	32.4	32.4	54.3
50	15	14.3	14.3	68.6
58	11	10.5	10.5	79.0
67	13	12.4	12.4	91.4
75	5	4.8	4.8	96.2
92	4	3.8	3.8	100.0
Total	105	100.0	100.0	

depression score (DUKE)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	1	1.0	1.0	1.0
10	2	1.9	1.9	2.9
20	6	5.7	5.7	8.6
30	8	7.6	7.6	16.2
40	25	23.8	23.8	40.0
50	18	17.1	17.1	57.1
60	20	19.0	19.0	76.2
70	12	11.4	11.4	87.6
80	6	5.7	5.7	93.3
90	3	2.9	2.9	96.2
100	4	3.8	3.8	100.0
Total	105	100.0	100.0	

pain score(DUKE)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	10	9.5	9.5	9.5
50	63	60.0	60.0	69.5
100	32	30.5	30.5	100.0
Total	105	100.0	100.0	

disability score(DUKE)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	63	60.0	60.0	60.0
50	26	24.8	24.8	84.8
100	16	15.2	15.2	100.0
Total	105	100.0	100.0	

HEALTHY VOLUNTEERS

Frequencies

Statistics

		kategori sampel	umur	jantina	bangsa	taraf perkahwinan	taraf pelajaran
N	Valid	105	105	105	105	105	105
	Missing	0	0	0	0	0	0
Mean		3.00	25.45	1.49	1.18	1.73	
Median		3.00	23.00	1.00	1.00	2.00	
Std. Deviation		.00	7.36	.50	.60	.51	
Minimum		3	15	1	1	1	
Maximum		3	52	2	4	3	

Statistics

		pekerjaan	Jumlah skor TAS	analisis MHQ (FFA)	analisis MHQ(PHO)	analisis MHQ (OBS)	analisis MHQ (SOM)
N	Valid	105	105	105	105	105	105
	Missing	0	0	0	0	0	0
Mean		3.56	69.19	4.72	6.83	8.91	5.94
Median		4.00	70.00	4.00	7.00	9.00	5.00
Std. Deviation		2.37	8.33	3.01	2.93	3.17	6.55
Minimum		1	48	0	0	0	1
Maximum		9	87	12	13	15	66

Statistics

		analisis MHQ (DEP)	analisis MHQ(HYS)	physical health score (DUKE)	mental health score(DUKE)	social health score (DUKE)	general health score(DUKE)
N	Valid	105	105	105	105	105	105
	Missing	0	0	0	0	0	0
Mean		6.40	5.98	69.81	68.86	72.57	69.98
Median		6.00	6.00	70.00	70.00	80.00	70.00
Std. Deviation		2.96	3.05	18.86	20.02	18.35	14.32
Minimum		0	0	20	10	10	37
Maximum		14	14	100	100	100	97

Statistics

		perceived health score(DUKE)	self_esteem score (DUKE)	anxiety score (DUKE)	depression score (DUKE)	pain score(DUKE)	disability score(DUKE)
N	Valid	105	105	105	105	105	105
	Missing	0	0	0	0	0	0
Mean		87.62	76.67	36.10	36.95	40.00	17.14
Median		100.00	80.00	33.00	40.00	50.00	.00
Std. Deviation		22.77	17.13	19.35	21.04	29.74	99.23
Minimum		0	20	0	0	0	0
Maximum		100	100	92	90	100	1000

Frequency Table

kategori sampel

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid control group	105	100.0	100.0	100.0

umur

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15	1	1.0	1.0	1.0
	18	1	1.0	1.0	1.9
	19	5	4.8	4.8	6.7
	20	22	21.0	21.0	27.6
	21	9	8.6	8.6	36.2
	22	5	4.8	4.8	41.0
	23	12	11.4	11.4	52.4
	24	10	9.5	9.5	61.9
	25	4	3.8	3.8	65.7
	26	8	7.6	7.6	73.3
	27	5	4.8	4.8	78.1
	28	3	2.9	2.9	81.0
	29	1	1.0	1.0	81.9
	30	3	2.9	2.9	84.8
	31	3	2.9	2.9	87.6
	36	1	1.0	1.0	88.6
	37	1	1.0	1.0	89.5
	38	3	2.9	2.9	92.4
	39	1	1.0	1.0	93.3
	40	1	1.0	1.0	94.3
	42	1	1.0	1.0	95.2
	44	1	1.0	1.0	96.2
	45	1	1.0	1.0	97.1
	50	1	1.0	1.0	98.1
	51	1	1.0	1.0	99.0
	52	1	1.0	1.0	100.0
	Total	105	100.0	100.0	

jantina

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	lelaki	54	51.4	51.4	51.4
	perempuan	51	48.6	48.6	100.0
	Total	105	100.0	100.0	

bangsa

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	melayu	95	90.5	90.5	90.5
	china	3	2.9	2.9	93.3
	india	5	4.8	4.8	98.1
	lain-lain..	2	1.9	1.9	100.0
	Total	105	100.0	100.0	

taraf perkahwinan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	berkahwin	31	29.5	29.5	29.5
	bujang	71	67.6	67.6	97.1
	bercerai	3	2.9	2.9	100.0
	Total	105	100.0	100.0	

taraf pelajaran

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	sekolah rendah	1	1.0	1.0	1.0
	sekolah menengah	50	47.6	47.6	48.6
	maktab	6	5.7	5.7	54.3
	universiti	43	41.0	41.0	95.2
	lain-lain :	5	4.8	4.8	100.0
	Total	105	100.0	100.0	

pekerjaan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	tidak bekerja	40	38.1	38.1	38.1
	buruh/petani/nelayan	2	1.9	1.9	40.0
	sunirumah	2	1.9	1.9	41.9
	pekerja separuh mahir	21	20.0	20.0	61.9
	pegawai kerajaan kumpulan sokongan	24	22.9	22.9	84.8
	pegawai kerajaan kumpulan A	3	2.9	2.9	87.6
	ahli perniagaan	4	3.8	3.8	91.4
	pekerja profesional	7	6.7	6.7	98.1
	lain-lain...	2	1.9	1.9	100.0
	Total	105	100.0	100.0	

Jumlah skor TAS

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 48	1	1.0	1.0	1.0
50	2	1.9	1.9	2.9
51	2	1.9	1.9	4.8
53	1	1.0	1.0	5.7
54	1	1.0	1.0	6.7
56	2	1.9	1.9	8.6
57	2	1.9	1.9	10.5
58	2	1.9	1.9	12.4
59	1	1.0	1.0	13.3
60	2	1.9	1.9	15.2
61	2	1.9	1.9	17.1
62	1	1.0	1.0	18.1
63	2	1.9	1.9	20.0
64	5	4.8	4.8	24.8
65	5	4.8	4.8	29.5
66	2	1.9	1.9	31.4
67	4	3.8	3.8	35.2
68	5	4.8	4.8	40.0
69	7	6.7	6.7	46.7
70	5	4.8	4.8	51.4
71	11	10.5	10.5	61.9
72	6	5.7	5.7	67.6
73	3	2.9	2.9	70.5
74	6	5.7	5.7	76.2
75	3	2.9	2.9	79.0
76	3	2.9	2.9	81.9
77	6	5.7	5.7	87.6
78	1	1.0	1.0	88.6
79	3	2.9	2.9	91.4
80	1	1.0	1.0	92.4
82	3	2.9	2.9	95.2
83	1	1.0	1.0	96.2
84	1	1.0	1.0	97.1
86	1	1.0	1.0	98.1
87	2	1.9	1.9	100.0
Total	105	100.0	100.0	

analysis MHQ (FFA)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	6	5.7	5.7	5.7
1	9	8.6	8.6	14.3
2	13	12.4	12.4	26.7
3	15	14.3	14.3	41.0
4	13	12.4	12.4	53.3
5	10	9.5	9.5	62.9
6	9	8.6	8.6	71.4
7	7	6.7	6.7	78.1
8	9	8.6	8.6	86.7
9	5	4.8	4.8	91.4
10	6	5.7	5.7	97.1
11	2	1.9	1.9	99.0
12	1	1.0	1.0	100.0
Total	105	100.0	100.0	

analysis MHQ(PHO)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	2	1.9	1.9	1.9
1	4	3.8	3.8	5.7
2	2	1.9	1.9	7.6
3	7	6.7	6.7	14.3
4	9	8.6	8.6	22.9
5	8	7.6	7.6	30.5
6	12	11.4	11.4	41.9
7	17	16.2	16.2	58.1
8	12	11.4	11.4	69.5
9	11	10.5	10.5	80.0
10	10	9.5	9.5	89.5
11	7	6.7	6.7	96.2
12	3	2.9	2.9	99.0
13	1	1.0	1.0	100.0
Total	105	100.0	100.0	

analisis MHQ (OBS)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	1.0	1.0	1.0
	2	1	1.0	1.0	1.9
	3	1	1.0	1.0	2.9
	4	8	7.6	7.6	10.5
	5	4	3.8	3.8	14.3
	6	11	10.5	10.5	24.8
	7	12	11.4	11.4	36.2
	8	7	6.7	6.7	42.9
	9	9	8.6	8.6	51.4
	10	16	15.2	15.2	66.7
	11	12	11.4	11.4	78.1
	12	9	8.6	8.6	86.7
	13	6	5.7	5.7	92.4
	14	6	5.7	5.7	98.1
	15	2	1.9	1.9	100.0
	Total	105	100.0	100.0	

analisis MHQ (SOM)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	6	5.7	5.7	5.7
	2	11	10.5	10.5	16.2
	3	15	14.3	14.3	30.5
	4	13	12.4	12.4	42.9
	5	9	8.6	8.6	51.4
	6	19	18.1	18.1	69.5
	7	5	4.8	4.8	74.3
	8	13	12.4	12.4	86.7
	9	6	5.7	5.7	92.4
	10	1	1.0	1.0	93.3
	11	3	2.9	2.9	96.2
	12	1	1.0	1.0	97.1
	13	2	1.9	1.9	99.0
	66	1	1.0	1.0	100.0
	Total	105	100.0	100.0	

analysis MHQ (DEP)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	1.0	1.0	1.0
	1	1	1.0	1.0	1.9
	2	7	6.7	6.7	8.6
	3	11	10.5	10.5	19.0
	4	12	11.4	11.4	30.5
	5	13	12.4	12.4	42.9
	6	10	9.5	9.5	52.4
	7	10	9.5	9.5	61.9
	8	12	11.4	11.4	73.3
	9	10	9.5	9.5	82.9
	10	10	9.5	9.5	92.4
	11	4	3.8	3.8	96.2
	12	2	1.9	1.9	98.1
	13	1	1.0	1.0	99.0
	14	1	1.0	1.0	100.0
	Total	105	100.0	100.0	

analysis MHQ(HYS)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	2	1.9	1.9	1.9
	2	13	12.4	12.4	14.3
	3	4	3.8	3.8	18.1
	4	20	19.0	19.0	37.1
	5	10	9.5	9.5	46.7
	6	15	14.3	14.3	61.0
	7	15	14.3	14.3	75.2
	8	7	6.7	6.7	81.9
	9	4	3.8	3.8	85.7
	10	3	2.9	2.9	88.6
	11	6	5.7	5.7	94.3
	12	2	1.9	1.9	96.2
	13	3	2.9	2.9	99.0
	14	1	1.0	1.0	100.0
	Total	105	100.0	100.0	

physical health score (DUKE)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20	1	1.0	1.0	1.0
	30	5	4.8	4.8	5.7
	40	6	5.7	5.7	11.4
	50	10	9.5	9.5	21.0
	60	16	15.2	15.2	36.2
	70	21	20.0	20.0	56.2
	80	23	21.9	21.9	78.1
	90	15	14.3	14.3	92.4
	100	8	7.6	7.6	100.0
	Total	105	100.0	100.0	

mental health score(DUKE)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10	1	1.0	1.0	1.0
	20	1	1.0	1.0	1.9
	30	2	1.9	1.9	3.8
	40	7	6.7	6.7	10.5
	50	18	17.1	17.1	27.6
	60	16	15.2	15.2	42.9
	70	17	16.2	16.2	59.0
	80	16	15.2	15.2	74.3
	90	17	16.2	16.2	90.5
	100	10	9.5	9.5	100.0
	Total	105	100.0	100.0	

social health score (DUKE)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10	1	1.0	1.0	1.0
	20	1	1.0	1.0	1.9
	30	2	1.9	1.9	3.8
	40	3	2.9	2.9	6.7
	50	9	8.6	8.6	15.2
	60	19	18.1	18.1	33.3
	70	15	14.3	14.3	47.6
	80	26	24.8	24.8	72.4
	90	21	20.0	20.0	92.4
	100	8	7.6	7.6	100.0
	Total	105	100.0	100.0	

general health score(DUKE)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	37	1	1.0	1.0	1.0
	40	1	1.0	1.0	1.9
	43	1	1.0	1.0	2.9
	47	7	6.7	6.7	9.5
	50	2	1.9	1.9	11.4
	53	2	1.9	1.9	13.3
	57	9	8.6	8.6	21.9
	60	13	12.4	12.4	34.3
	63	7	6.7	6.7	41.0
	67	5	4.8	4.8	45.7
	70	8	7.6	7.6	53.3
	73	4	3.8	3.8	57.1
	77	13	12.4	12.4	69.5
	80	8	7.6	7.6	77.1
	83	4	3.8	3.8	81.0
	87	8	7.6	7.6	88.6
	90	7	6.7	6.7	95.2
	93	3	2.9	2.9	98.1
	97	2	1.9	1.9	100.0
	Total	105	100.0	100.0	

perceived health score(DUKE)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	1.0	1.0	1.0
	50	24	22.9	22.9	23.8
	100	80	76.2	76.2	100.0
	Total	105	100.0	100.0	

self_esteem score (DUKE)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20	1	1.0	1.0	1.0
	30	1	1.0	1.0	1.9
	40	2	1.9	1.9	3.8
	50	10	9.5	9.5	13.3
	60	12	11.4	11.4	24.8
	70	12	11.4	11.4	36.2
	80	29	27.6	27.6	63.8
	90	26	24.8	24.8	88.6
	100	12	11.4	11.4	100.0
	Total	105	100.0	100.0	

anxiety score (DUKE)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	2	1.9	1.9	1.9
	8	7	6.7	6.7	8.6
	17	14	13.3	13.3	21.9
	25	22	21.0	21.0	42.9
	33	17	16.2	16.2	59.0
	42	11	10.5	10.5	69.5
	50	12	11.4	11.4	81.0
	58	10	9.5	9.5	90.5
	67	5	4.8	4.8	95.2
	75	2	1.9	1.9	97.1
	83	2	1.9	1.9	99.0
	92	1	1.0	1.0	100.0
	Total	105	100.0	100.0	

depression score (DUKE)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	7	6.7	6.7	6.7
	10	12	11.4	11.4	18.1
	20	12	11.4	11.4	29.5
	30	17	16.2	16.2	45.7
	40	17	16.2	16.2	61.9
	50	22	21.0	21.0	82.9
	60	9	8.6	8.6	91.4
	70	5	4.8	4.8	96.2
	80	2	1.9	1.9	98.1
	90	2	1.9	1.9	100.0
	Total	105	100.0	100.0	

pain score(DUKE)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	31	29.5	29.5	29.5
	50	64	61.0	61.0	90.5
	100	10	9.5	9.5	100.0
	Total	105	100.0	100.0	

disability score(DUKE)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	91	86.7	86.7	86.7
	50	10	9.5	9.5	96.2
	100	3	2.9	2.9	99.0
	1000	1	1.0	1.0	100.0
	Total	105	100.0	100.0	