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**Sleep Quality, Daytime Functioning and Psychological Adjustment in
Chronic Fatigue Syndrome: A Comparative Analysis**

Myrtis-Eirene Fossey

A Thesis

in

The Department

of

Psychology

**Presented in Partial Fulfillment of the Requirements
for the Degree of Master of Psychology at
Concordia University
Montreal, Quebec, Canada**

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ABSTRACT

Sleep Quality, Daytime Functioning and Psychological Adjustment in Chronic Fatigue Syndrome: A Comparative Analysis

Myrtis-Eirene Fossey

Chronic Fatigue Syndrome (CFS) has been a contentious diagnosis for many years. Without definitive laboratory tests, specific etiology, or effective treatment, it has long been characterized as a functional disorder with a substantial psychological component. Despite the almost universal complaint that they awaken unrefreshed and experience debilitating daytime fatigue, little is known about the sleep characteristics of individuals with CFS. Although psychological maladjustment has generally been assumed in CFS, reports as to its nature and role in the illness have been inconsistent.

The present study compares sleep characteristics, daytime functioning, general health and psychological adjustment in three samples: individuals with CFS, individuals with Narcolepsy and healthy Controls. Prevalence of physiologically based sleep disorder such as Sleep Apnea and Periodic Limb Movement Disorder was assessed by polysomnography. Sleep quality, daytime functioning, general health and psychological adjustment were evaluated by self-report measures.

Results indicate that 58% of the CFS sample was diagnosed with a primary sleep disorder as compared with 48% of those with Narcolepsy and 13% in Controls. Insomnia problems were reported by 86% of the CFS sample, 55% of the Narcolepsy sample, and 8% of the Control sample. Individuals with CFS manifested some psychological distress relative to Controls. Individuals with Narcolepsy were generally similar to those with CFS in this respect. This pattern of findings raises some important questions regarding the role of sleep disorder and insomnia in CFS symptomatology and the assumed etiological role of psychological maladjustment in this condition. Implications of these findings to future research are discussed.

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TABLE OF CONTENTS

	Page
TABLE OF CONTENTS.....	vi
LIST OF TABLES.....	vii
INTRODUCTION.....	1
METHOD.....	11
RESULTS.....	31
DISCUSSION.....	52
CONCLUSION.....	60
REFERENCES	
APPENDICES	
A. Telephone Protocol	
B. English Consent Form	
C. French Consent Form	
D. Interview Protocol	
E. English Measures Used in this Study	
F. French Measures Used in this Study	

LIST OF TABLES

Table	Page
1. Age.....	13
2. Education.....	14
3. Gender.....	15
4. Number of Participants in Each Phase of the Study.....	30
5. Prevalence of Diagnosed Sleep Disorder Following PSG.....	33
6. Insomnia, Sleep and Daytime Functioning: Sleep Questionnaire Scores.....	36
7. Daytime Fatigue and Sleepiness: Structured Sleep and Medical History Items and Ongoing Sleepiness and Fatigue Measures (ESS, FSS, CFQ and SSS).....	39
8. Sleep Parameters and Practices: Daily Sleep Diary.....	41
9. Medical History: Structured Sleep and Medical History Interview.....	43
10. Perceived Health Functioning: Mean SF-36 Health Survey Scores.....	45
11. Perceived Health Functioning: SF-36 Health Survey: Comparisons with Normative Data.....	47
12. Psychological Adjustment: Mean Scores.....	49
13. Psychological Adjustment: Comparisons with Normative Data.....	51

INTRODUCTION

Current Conceptualization of Chronic Fatigue Syndrome (CFS)

Criteria

The current criteria for CFS established in 1988 (Holmes, et al., 1988) and refined in 1994 (Fukuda, et al., 1994) consist of (a) unexplained, persistent or relapsing fatigue; this fatigue is not substantially alleviated by rest and results in a substantial reduction in previous levels of occupational, educational and social or personal activities. (b) Four or more of the following concurrent and persistent symptoms:

- Impaired short-term memory or concentration
- Sore throat
- Tender cervical or auxiliary lymph nodes
- Muscle pain
- Joint pain without swelling
- New headaches
- Unrefreshing sleep
- Postexertional malaise lasting more than 24 hours

Prevalence

Prevalence estimates for CFS vary widely depending on measurement and sampling techniques (Jason, et al., 1997), but for the United States are currently accepted to be between 76 and 233 per 100 000 (Centers for Disease Control and Prevention, 1994).

Etiology

The pathophysiology and etiology of CFS is poorly understood and no single diagnostic test can confirm its presence (Komaroff & Fagioli, 1996). It seems increasingly unlikely that CFS is caused by a single, as yet unidentified, disease process. There are probably many etiological paths to disabling fatigue (e.g., viral infection, traumatic stress, thyroid dysfunction). Since the symptoms of CFS typically persist for years, the original etiological factors may have either resolved or become irrelevant. The fatigue symptoms appear to have become autonomous in a way similar to chronic pain syndromes resulting in fatigue perseveration in which factors other than the original etiological ones operate to maintain a fatigue cycle.

Personal Experience and Public Opinion

Patients commonly report that prior to their illness, they were unusually physically vigorous (Komaroff & Fagioli, 1996). Although there continues to be some dispute over the existence of CFS as a valid diagnosis, what remains indisputable is that many young and previously productive individuals are disabled by a condition which causes them to be lost from the workforce (Schondorf & Freeman, 1999) and to be a burden on the healthcare system (Komaroff, 1990; Wessely, 1995). CFS support groups lobby for disability coverage for individuals with CFS, insurance companies fight the claims and neither the public nor the medical communities agree on CFS as a real clinical entity (Caplan, 1998).

Contribution of the Study

Identifying Symptom Clusters vs. Labeling Disease

Currently, the procedure for diagnosing CFS is one of elimination, but Polysomnographic investigations for sleep disorder are not routinely carried out. In fact, perhaps due to the scarcity or expense of medical resources, rather than being prescribed a wide-ranging variety of expensive and time-consuming medical tests to evaluate all

physiologically based disorders; persons with CFS are often told that their problems are simply psychosomatic.

Rather than attempting to identify structural and biological characteristics common to all people diagnosed with CFS, an effective alternative might be to characterize it as a functional disorder and to develop criteria that differentiate major subgroups based on symptom clusters. Such an approach would have the advantage of targeting the disabling symptoms for intervention rather than trying to find an effective treatment for CFS as a single disease entity. This latter approach has been the traditional one, and has been largely ineffective.

Some relatively recent work has already been done to identify major symptom clusters. For example, orthostatic intolerance has recently been identified in 40% of individuals with CFS (Schondorf, & Freeman, 1999; Schondorf, Benoit, Wein & Phaneuf, 1999). To our knowledge there has been no systematic study of the impact of regulating orthostatic disorder on the chronic fatigue symptoms.

In addition, a small pilot study carried out in our own laboratory (Bailes et al., 2001) corroborates the older literature (Moldofsky, 1986; Moldofsky & Scarisbrick, 1976) indicating that there appears to be a relatively high prevalence of sleep disruption in CFS. It is notable that some of the major presenting complaints of persons with CFS are related to sleep disruption and problems with daytime functioning that are common to

individuals with recognized sleep disorders such as Sleep Apnea/Hypopnea, Periodic Limb Movements Disorder (PLMD) and Restless Legs Syndrome (RLS).

Therefore, in order to (a) contribute to a greater understanding about CFS, which will (b) lead to more effective treatment strategies, it is both logical and important to document the presence of sleep disorder in the CFS population. If significant sleep problems can be identified and characterized, this would automatically lead to implementation of known effective treatment. For example, there are widely used treatments for physiologically based sleep disorder such as Sleep Apnea, Restless Leg Syndrome (RLS), and Periodic Limb Movement Disorder (PLMD) whose efficacy are well established. In addition, primary insomnia is known to respond well to cognitive-behavioral therapy (Fichten, Libman, Bailes, & Alapin, 2000) and therefore its presence and effect upon CFS symptomatology should also be studied.

Purpose of the Study

The goal of the present investigation is to assess the nature and prevalence of sleep disturbance and psychological maladjustment in Chronic Fatigue Syndrome. To address this goal, two clinical samples (individuals with CFS and individuals with Narcolepsy) and a healthy Control sample are compared. Narcolepsy was selected for comparison because this is a well-documented medical disorder characterized by

excessive daytime sleepiness. Thus it has an important presenting complaint in common with CFS. Importantly, it is also a clinical entity which has no history of being attributed to psychological factors.

Definition of Sleep Disorders and Sleep Problems Investigated in this Study

Narcolepsy

Narcolepsy is a sleep disorder that is characterized by excessive daytime sleepiness (irresistible urge to fall asleep, known as a sleep attack) and is typically associated with cataplexy (sudden loss of muscle tone brought on by extreme emotion such as anger or laughter). Sleep-related aspects include early onset of the rapid eye movement (REM) phase, sleep paralysis (paralysis occurring during the period between sleep and wakefulness at sleep onset or upon awakening), and hypnagogic hallucinations (hallucinations occurring during the period between sleep and wakefulness at sleep onset or upon awakening) (Diagnostic Classification Steering Committee, 1990). Although the specific etiology of Narcolepsy is unknown, there is mounting evidence for a neurological basis to this disorder (Gerashchenko, et al., 2001; Salin-Pascual, et al., 2001; Mignot, 2001).

Breathing Disorders

Sleep Apnea/Hypopnea Syndrome. This syndrome is a sleep disorder that is characterized by repetitive episodes of upper airway obstruction (usually associated with a reduction in blood oxygen saturation) or by a cessation/decrease of ventilatory effort (usually associated with oxygen desaturation) occurring during sleep. This results in disruption of sleep (arousals or awakenings during sleep due to irregular, obstructed, shallow, or absent breathing). Although persons with this syndrome often complain of daytime sleepiness, they are not usually aware of their characteristic symptoms such as loud snoring, gasps, grunts or choking during sleep (Diagnostic Classification Steering Committee, 1990).

Movement Disorders

Periodic Limb Movement Disorder. This disorder is characterized by periodic episodes of repetitive and highly stereotyped limb movements that occur during sleep. Arousals or awakenings may be associated with the movements. Persons with this disorder often complain of excessive sleepiness or insomnia, although occasionally patients are asymptomatic and the movements are noticed only by an observer (Diagnostic Classification Steering Committee, 1990).

Restless Legs Syndrome. This syndrome is characterized by disagreeable leg sensations (a “creepy-crawly” feeling) that typically occur prior to falling asleep and cause an almost irresistible urge to move the legs (“shake it off”). Persons with this disorder complain of an unpleasant sensation in the legs at night or difficulty in initiating sleep. Severe cases may also have severe disruption of nighttime sleep and marked daytime symptoms (Diagnostic Classification Steering Committee, 1990).

Insomnia

In Primary Insomnia, the predominant complaint is difficulty initiating or maintaining sleep, or nonrestorative sleep. The sleep disturbance is associated with a reported decrease in functioning during wakefulness that is distressing (social, occupational, or other important areas of functioning) (American Psychiatric Association, 1994). Individuals with insomnia experience increased sleep latencies, reduced sleep efficiency, and an increased number and duration of awakenings (Diagnostic Classification Steering Committee, 1990).

The Present Investigation

The main goals of this study are:

1. To (a) document the proportion of individuals with CFS who manifest a primary sleep disorder (i.e., Sleep Apnea/Hypopnea, Restless Legs Syndrome (RLS)/Periodic Limb Movement Disorder (PLMD)), insomnia, or both, and (b) compare a sample of individuals with CFS to a sample of individuals diagnosed with Narcolepsy and to a sample of normally functioning Control participants on sleep quality, daytime functioning and physical health variables, to investigate the possible etiological role of these variables.
2. To (a) explore the veracity of common assumptions about psychological maladjustment in individuals with CFS, and (b) compare personality and psychological adjustment in individuals with CFS to the Narcolepsy and healthy Controls.

Research Questions

The specific research questions to be addressed are as follows:

1. What is the prevalence of diagnosed sleep disorders in a CFS sample? Whatever the prevalence, we expected the CFS sample to have a significantly higher incidence of diagnosed sleep disorders than the Control sample. We had no hypotheses for the prevalence of sleep disorders in the Narcolepsy sample.
2. We expected the daytime functioning (sleepiness and fatigue) and self-reported sleep disruption (insomnia symptoms and complaints) of the CFS sample to be significantly worse than that of the Control sample. We had no hypotheses about whether the CFS sample would differ from the Narcolepsy sample in this respect.
3. Will the sleep lifestyle (behavioral aspects of sleep) of a CFS sample be more problematic than that of either a Control or Narcolepsy sample?
4. Will the medical history and health functioning of a CFS sample be indicative of a poorer overall style of life than that of a Control or Narcolepsy sample?
5. Based on the literature, it was expected that psychological assessment of the CFS sample would demonstrate psychological maladjustment when compared to norms on measures of anxiety, depression, somatization, and neuroticism, as well as when compared to the Control sample. But would the psychological profile of the CFS sample on these measures differ significantly from that of the Narcolepsy sample?

METHOD

Overview

The present investigation is part of a larger study of daytime functioning complaints (i.e., sleepiness and fatigue). In the present study three samples (CFS, Narcolepsy and Control) are compared on sleep quality, daytime functioning, general physical health, and psychological adjustment. Physiological (polysomnography (PSG), medical evaluation), structured interview and self-report assessments were conducted.

Participants

Thirty-seven volunteers with CFS were recruited from physician referrals and CFS support groups (31 females, 6 males). For each participant, two independent assessments of CFS were made. The referring physician conducted the original assessment. The research team physician confirmed the original CFS diagnosis by using a standardized diagnostic instrument based on the Fukuda et al.'s (1994) diagnostic criteria. Twenty individuals with Narcolepsy were recruited from physician referrals (15 females, 5 males). Twenty-four Normal Controls from the general community were recruited through posters, announcements, and personal contacts (17 females, 7 males). All potential participants were screened for co-morbid diagnoses and excluded if: 1) they

suffered from a current major psychiatric illness, 2) they had another medical condition related to fatigue, other than Fibromyalgia, that is sleepiness, arthralgia, or insomnia, 3) they were taking medication that interferes with sleep or causes fatigue/sleepiness, and 4) they were working rotating/split shifts or recently traveled across time zones. To the extent possible, Control group participants were selected from the same age group as those in the two clinical samples. Those participants retained for study were encouraged to use the language of their choice because all assessment strategies were available in both French and English.

Table 1 presents the average age of participants in each group. Although participants in each group were not matched for age, a one-way analysis of variance (ANOVA) comparison shows that they are not significantly different in this respect, $F(2, 79) = 2.377$, not significant. Table 2 presents the average number of years of education of participants in each group (range: 15-16 years). There was no significant difference between the three groups in the amount of education attained, $F(2, 76) = 0.841$, not significant. Table 3 presents the number of males and females in each group. The Chi-Square test shows that the groups were not significantly different in terms of gender ratio, $X^2(2) = 5.34$, not significant.

Table 1

Age (years)

Group	Mean	Range	Standard deviation
Narcolepsy	37.47	18-60	14.98
CFS	43.68	26-63	9.20
Control	39.50	18-59	9.40

Table 2***Education (years)***

Group	Mean	Range	Standard deviation
Narcolepsy	14.50	5-25	3.90
CFS	15.80	8-27	4.10
Control	15.90	7-25	4.20

Table 3

Gender

Group	Male	Female	N
Narcolepsy	6	14	20
CFS	5	32	37
Control	10	16	26

Note. At initial interview.

Measures

Demographic

Background Information Form. This brief questionnaire provides socio-economic, personal and demographic descriptors (e.g., age, sex, education).

Sleep/Wake: Physiological

Polysomnographic (PSG) assessment. PSG was used by the team's respirologist to diagnose the presence or absence of a sleep disorder. To do this, participants were monitored in a supervised sleep laboratory from 10:00 PM to 7:00 AM. Monitoring included three leads EEG, EOG, bilateral anterior tibialis and chin EMG, ECG, pulse oxymetry, nasal and oral airflow with thermistor and nasal pressure cannulae, and respiration bands for measurement of respiratory effort. Leg movements, apnea events and associated arousals were scored manually according to the scoring rules established by the Atlas Task Force of the American Sleep Disorders Association (1993) and the American Academy of Sleep Medicine Task Force (1999). Diagnoses of sleep disorder were made by a certified respirologist according to the International Classification of Sleep Disorders of the American Sleep Disorders Association (Diagnostic Classification Steering Committee, 1990). Apnea was defined as cessation of breathing lasting 10 or

more seconds with a frequency of more than five times per hour. Hypopneas were scored when there was 40% or more decrease in airflow with 2% or more oxygen desaturation. Periodic Limb Movement Disorder (PLMD)/Restless Legs Syndrome (RLS) was scored in cases of repetitive episodes of muscle contraction (0.5 to 5 seconds duration) or when awakenings were associated with the movements.

Sleep/Wake: Self-Report

Sleep Questionnaire. This consisted of a modified and abbreviated version of the retrospective questionnaire used in previous investigations (Fichten et al., 1995, 1998). It asks participants to self define as having an insomnia problem and inquires about both affective and behavioral aspects of typical sleep experiences using 10-point Likert-type scales. In the present investigation, sleep quality, sleep satisfaction, duration and distress related to an insomnia problem are evaluated, as are daytime variables such as: frequency of naps; feeling tired, sleepy and refreshed; difficulty concentrating. Scores are based on item-by-item evaluations.

Structured Sleep and Medical History. A modified version of the clinical instrument developed by Lacks (1987) provides information on inclusion and exclusion criteria, parasomnias, physical disorders, sleep phase disorder, medication use, as well as use of hypnotics and sedatives. Most questions require a yes/no answer with prompts in cases of suspected difficulty. This measure has been successfully used in studies of sleep

and aging (Fichten et al., 1995; Libman, Creti, Amsel, et al., 1997; Libman, Creti, Levy, et al., 1997). In the present investigation, exhaustion and sleepiness during the day are evaluated as are variables relating to recent illness, pain, hospitalization and physician consultations.

Daily Sleep Diary. This is a 15-item revision of Lacks' (1987) measure, which allows participants to monitor their sleep experience on a daily basis. Scores based on this measure have acceptable psychometric properties for research use; test-retest correlations indicate reasonable temporal stability (r values range from .58 to .92) and the pattern of correlations among variables shows logical, highly significant relationships (Fichten et al., 1995, 1998; Libman, Creti, Levy et al., 1997). Convergent validity data indicate significant and high correlations between corresponding scores on the Sleep Questionnaire and on 7 days of self-monitoring on the Daily Sleep Dairy (e.g., total sleep time, $r(154) = .82, p < .001$; total wake time, $r(146) = .72, p < .001$; sleep efficiency, $r(152) = .77, p < .001$) (Libman, Fichten, Bailes, & Amsel, 2000). Variables of interest to the present investigation are: time spent in bed, hours slept per night, duration and frequency of nocturnal arousals, sleep medication use, bed time and arising time, sleep efficiency and desired amount of sleep.

Daytime Sleepiness/Fatigue: Self-Report Measures

Stanford Sleepiness Scale (SSS). (Hoddes, Zarcone, Smythe, Phillips, & Dement, 1973). This frequently used ongoing measure of daytime sleepiness provides a measure of affective evaluation. It consists of a 7-point Guttman-scaled item ranging from 1 (feeling active and vital; alert; wide awake) to 7 (lost struggle to remain awake). Respondents select the one option which best describes how sleepy they feel at the moment they are completing the measure. The scale's authors indicate that alternate forms reliability yielded an agreement of 88%. Concurrent validity data show that scores on the measure are reasonably highly correlated with vigilance ($r = .68$) and memory test ($r = .47$) scores.

Epworth Sleepiness Scale (ESS). This brief self-administered retrospective questionnaire of the behavioral aspects of sleepiness was constructed by Johns (1991) to evaluate self-reports of sleep tendency. Participants are asked to rate on a 4-point scale (0 = never doze off, 3 = high chance of dozing) how likely they are to doze off or fall asleep in eight different situations commonly encountered in daily life. Scores are summed and vary from 0 to 24. Scores of 11 or greater are considered indicative of excessive daytime sleepiness. This measure has high 5 month test-retest reliability in "normals", $r = .82$, as well as high internal consistency (Cronbach's alpha = .88) (Johns, 1992). Scores on this measure are not related to Stanford Sleepiness Scale scores (Alapin, 1996). The measure was adapted to allow for ongoing evaluation by modifying the instructions to allow

respondents to answer based on how they were feeling at the moment they were completing the measure.

Fatigue Severity Scale (FSS). Developed by Krupp, LaRocca, Muir-Nash and Sternberg (1989), this 9-item scale assesses “disabling fatigue”. The scale’s authors report psychometric information which shows that the measure is internally consistent, that the single score correlates well with analogue measures, that it differentiated controls (mean = 2.3, SD = 0.7) from lupus (mean = 4.7, SD = 1.5) and multiple sclerosis patients (mean = 4.8, SD = 1.3), and that it could predict clinically anticipated changes in fatigue over time. The measure was also shown to be largely independent of depressive symptoms. In addition, it has also been successfully used in insomnia research (Lichstein, Wilson, Noe, Aguillard, & Bellur, 1994). For the present investigation, the measure was adapted for use in an ongoing format by allowing respondents to answer questions based on how they were feeling at the moment they were completing the measure.

Chalder Fatigue Questionnaire (CFQ). (Chalder et al., 1993). This is a 14-item self-rating scale developed to measure severity of experienced fatigue. The original version provided four response options; 1 “not at all”, 2 “no more than usual”, 3 “more than usual”, 4 “much more than usual”. This was revised to use a 6-point Likert scale (1 = strongly disagree and 6 = strongly agree) and was adapted to be used in an ongoing assessment by allowing respondents to answer based on how they were feeling at the moment they were answering the questions. The measure has two subscales to evaluate

two kinds of fatigue; Physical and Mental. A total fatigue score is obtained by summing all items. In its original format the test has been shown to have good reliability ($r = .86$ for Physical fatigue, and $r = .85$ for Mental fatigue) and high internal consistency (Cronbach's alpha = .89).

Health Related: Questionnaire Measure

SF-36 Health Survey. (McHorney, Ware & Raczek, 1993; Ware & Shelbourne, 1992). This frequently used scale consists of 36 items divided into 8 subscales assessing the following domains: (1) Physical Functioning, the extent to which physical activity is compromised or limited; (2) Role-Functioning - Physical, the extent to which work or other daily activities are compromised or limited; (3) Bodily Pain, the extent to which pain is severe and extremely limiting; (4) General Health, the extent to which respondents rate their health as poor and likely to get worse; (5) Vitality, the extent to which the respondent feels worn out or tired all the time; (6) Social Functioning, the extent to which normal social activities are limited due to physical or emotional problems; (7) Role-Functioning - Emotional, the extent to which the respondent experiences difficulties with work or other daily activities as a result of emotional problems; and (8) Mental Health, the extent to which the respondent feels nervous or depressed all the time. Low scores on all subscales indicate disability due to illness, while high scores indicate better functioning due to relatively good health. The scales are scored according to procedures developed for the Medical Outcomes Study (Ware, Snow, & Kosinski, 2000). Reliability

and validity data were shown by the scale's authors to be acceptable for research use. In the present investigation, individual subscale scores were used to describe and compare the relative health functioning of participants in the three samples.

Psychological Adjustment: Questionnaire Measures

Beck Depression Inventory II (BDI-II). The 21-item BDI (Beck, Steer, & Brown, 1996) is one of the most frequently used measures of depression. Items are scored on a 4-point scale (0-3); scores are then summed to produce a range from 0 to 63. Higher scores indicate greater depression. A score over 17 is usually considered indicative of clinical depression, while scores of 16 or less are generally considered non-depressed (Burns, 1980). The scale has excellent psychometric properties (internal consistency: $r = .92$; test-retest reliability: $r = .93$). In the present investigation, total scale scores were used to compare samples on the variable "depression".

Spielberger State-Trait Anxiety Inventory - Form Y2 (STAI). (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). This frequently used measure consists of two separate 20-item self-report scales for measuring trait and state anxiety. In the present investigation, only trait anxiety was evaluated. The trait measure asks people to describe how they generally feel on 4-point Likert-type scales (1 = almost never, 4 = almost always). Scores range from 20 to 80. The authors report the following means and standard deviations for the normative sample of middle-aged adults: males $M = 35.06$,

SD = 8.88, females M = 35.03, SD = 9.31. Higher scores indicate greater anxiety. Psychometric properties of this well-known scale, including reliability and validity, have been shown to be excellent. In the present investigation, scale scores for trait anxiety were used to compare samples on the variable “anxiety”.

Eysenck Personality Questionnaire – Revised – Short (EPQ-R). (Eysenck & Eysenck, 1991). This is a 48-item revision of Eysenck and Eysenck’s (1968) well-known Eysenck Personality Inventory (EPI). This reliable, valid, and empirically based questionnaire is among the most frequently used measures of personality (Digman, 1990). It evaluates the dimensions of Neuroticism, Extraversion-Introversion, and Psychoticism and incorporates a Lie scale, which evaluates the tendency to respond in a socially desirable direction. Higher scores indicate greater Neuroticism, Extraversion, Psychoticism and Lying. The authors report the following means and standard deviations for the Neuroticism subscale in the normative sample of middle-aged adults: men M = 5.50, SD = 3.46, women M = 5.28, SD = 3.37. For the purposes of the present investigation, only the Neuroticism scores are of interest.

Brief Symptom Inventory (BSI). (Derogatis, Rickels, & Rock, 1976). A 53-item self-report psychological symptom inventory, the BSI has subscales for 9 symptom dimensions (e.g., Depression, Anxiety, Somatization) and 3 global indices. It is a brief version of the SCL-90 (Derogatis, 1977) – a frequently used instrument with acceptable reliability and validity. Validation data indicate correlations from .92 to .98 between the

symptom dimensions and global indices of the BSI and the SCL-90 (Derogatis & Spencer, 1982). Lower scores indicate better adjustment. In the present study, only the Somatization subscale and the Global Severity Index are of interest.

Procedure

Outline

Participants were first screened for eligibility on the telephone. Potential participants were seen at the Jewish General Hospital for a 2-hour interview and questionnaire session. At this time, they were given consent forms detailing the steps involved in participation in the study and their right to withdraw at any time. Ethical considerations were as follows: the participants were fully informed of the purpose of the project, the risks and benefits envisaged, the task requirements, the right to withdraw at any time without penalty and the measures taken to ensure confidentiality. The consent form for CFS and Narcolepsy participants indicated that they would receive a 40\$ honorarium for their participation. For Control group participants, this was 100\$. The travel/parking expenses of all participants were reimbursed. In cases where individuals were not appropriate for the study, referrals were made when necessary.

Step 1: Telephone Contact

Research participants were informed about the nature of the study and screened through an initial telephone contact by qualified members of the research team (see Appendix A for the telephone protocol that was used).

Step2: Structured Interview and Questionnaires

Eligible participants underwent an interview and questionnaire session at the Jewish General Hospital, Department of Psychiatry. This took approximately 2 hours to complete. Potential participants were given an informed consent form and any questions they had about the procedure or goals of the research were answered at this time. The measures administered at this time were ordered as follows (see Appendices B through F for consent forms, interview protocol and measures used):

- Background Information Form
- Structured Sleep and Medical History
- Sleep Questionnaire
- Daily Sleep Diary (based on the previous night)
- Epworth Sleepiness Scale (ESS) (based on how they were feeling when answering the questions)
- Fatigue Severity Scale (FSS) (based on how they were feeling when answering the questions)
- Stanford Sleepiness Scale (SSS) (based on how they were feeling when answering the questions)
- Chalder Fatigue Questionnaire (CFQ) (based on how they were feeling when answering the questions)
- Spielberger State-Trait Anxiety Inventory (STAI)
- Beck Depression Inventory (BDI-II)
- Brief Symptom Inventory (BSI)
- Eysenck Personality Questionnaire (EPQ-R)
- SF-36 Health Survey

Step 3: Daily Monitoring (sleep, daytime fatigue, and sleepiness evaluations)

At the end of the interview and questionnaire session, all participants were given 7 daily rating scale packages to take home with them and to complete first thing in the morning for 7 consecutive days. Participants were asked to try to fill out these questionnaires during what they would consider to be a “typical week” for them (e.g., not a week when friends are in from out of town, not a week when particularly ill) and to phone our answering machine to record their answers immediately after completing the measures (this last instruction was given to ensure compliance as well as to answer any questions that participants may have had). Measures that the participants completed on these seven consecutive days were:

- Daily Sleep Diary (based on previous night)
- Epworth Sleepiness Scale (ESS) (based on how they were feeling when answering the questions)
- Fatigue Severity Scale (FSS) (based on how they were feeling when answering the questions)
- Stanford Sleepiness Scale (SSS) (based on how they were feeling when answering the questions)
- Chalder Fatigue Questionnaire (CFQ) (based on how they were feeling when answering the questions)

Step 4: Sleep Laboratory Evaluation

Participants were sent to the sleep laboratory of the Mt. Sinai Hospital (Montreal) for one overnight session. This took place anywhere from one week to 6 months after the interview/evaluation session and was dependent on sleep lab and participant availability. Sleep was monitored overnight by polysomnography (PSG). During the following day, while still at Mt. Sinai, participants were asked to complete the following ongoing self-report measures four times: 8:00 AM, 10:00 AM, 12:00 noon, and 2:00 PM:

- Daily Sleep Diary (only once upon awakening, based on previous night)
- Epworth Sleepiness Scale (ESS) (based on how they were feeling when answering the questions)
- Fatigue Severity Scale (FSS) (based on how they were feeling when answering the questions)
- Stanford Sleepiness Scale (SSS) (based on how they were feeling when answering the questions)
- Chalder Fatigue Questionnaire (CFQ) (based on how they were feeling when answering the questions)

Step 5: Diagnosis and Feedback

After their consultation (and, where applicable, diagnosis) with the resident respirologist at Mt. Sinai Hospital, a senior member of the research team gave the participants detailed feedback about the results of the study. At this time, if any sleep disturbances were detected, appropriate referrals were made for either treatment or

further assessment. Participants were given either a 40\$ honorarium (CFS and Narcolepsy subjects) or 100\$ (Control subjects) for their participation. Any costs incurred through their participation in the study were also reimbursed at this time (i.e., parking, travel expenses).

Sampling Issues

Subject attrition. As this study is particularly demanding on participants, it is no surprise that a large number withdrew before completing all. As can be seen in Table 4, the attrition rate was 32%.

Number of Participants in Each Phase of the Study

Group	Initial Interview/ Questionnaires	Daily Monitoring	Sleep Laboratory
Narcolepsy	20	18	14
CFS	37	37	26
Control	24	17	15
Total N	81	72	55

RESULTS

Data Analyses

Interval data. To compare CFS, Narcolepsy and Control samples on related continuous variables of interest (such as scale scores and self-report ratings), a series of Multivariate Analyses of Variance comparisons (MANOVAs) were conducted. When significant differences were indicated by the MANOVA, a series of univariate analyses of variance comparisons (ANOVA) were performed to further clarify results. Whenever indicated, post-hoc tests were performed (Tukey hsd test). It should be noted that sample sizes vary slightly for the different analyses because of missing data. Dependent variables included scores on physiological measures, questionnaires and self-monitoring measures. It was expected that differences would emerge on sleep, health, daytime functioning, and psychological adjustment variables.

Covariates. In addition to the Multivariate Analyses of Variance (MANOVA), Multivariate Analyses of Covariance (MANCOVA) were performed to investigate the contribution made by the psychological adjustment variables of anxiety and depression to the dependent variables relating to sleep and health functioning.

Strength of effect. The amount of variance that the variable “group membership” (i.e., Narcolepsy, CFS, or Control) accounted for in a variety of dependent variables is presented as the Eta squared statistic (η^2) obtained following MANCOVAs.

Combination of scores on ongoing measures. Ongoing measures of sleep, sleepiness and fatigue were administered up to 12 times (Initial Interview (1); Daily Monitoring (7); Sleep Laboratory (4)). To ensure the most comprehensive data set, scores for all occasions where data were available were averaged to yield a single score for each participant.

Prevalence of Sleep Disorder

Diagnosis of Sleep Disorder

Following the PSG assessment, a large number of participants fulfilled diagnostic criteria for a sleep disorder (cf. International Classification of Sleep Disorders (Diagnostic Classification Steering Committee, 1990)). The proportion of participants in each group receiving a diagnosis for Sleep Apnea, Sleep Hypopnea, PLMD and RLS is presented in Table 5. In the case of the Narcolepsy group, 43% fulfilled criteria for at least one medically based sleep disorder. Fifty-eight percent (58%) of the CFS group fulfilled criteria for a sleep disorder, as did 13% of the Control group. Small cell sizes did

Table 5

Prevalence of Diagnosed Sleep Disorder Following PSG

Disorder	Group				Significance	
	Narcolepsy	CFS	Control	ANOVA	ANOVA	ANCOVA
Breathing Disorders						
Sleep Apnea	3/14	4/26	0/15	n/a	n/a	n/a
Sleep Hypopnea	2/14	7/26	2/15	n/a	n/a	n/a
Movement Disorders						
Periodic Leg Movement Disorder	1/14	3/26	0/15	n/a	n/a	n/a
Restless Legs Syndrome	0/14	1/26	0/15	n/a	n/a	n/a
Total prevalence of any diagnosed sleep disorder following PSG	6/14	15/26_c	2/15_c	4.233*	3.617*	

Note: Proportions in the same row that share subscripts differ at $p < .05$ using the Tukey honestly significant difference test.

n/a = F statistic inappropriate.

* $p < .05$, $F(2, 54)$

not allow for non-parametric tests to be carried out on individual variables. Therefore, to test the hypothesis that there would be a higher prevalence of primary sleep disorder in the CFS sample than in the Control group, the total prevalence of diagnosed sleep disorder was compared across groups. The result for this analysis of variance was significant, $F(2, 54) = 4.233, p < .05$. Post hoc tests indicate that the CFS group has a significantly higher prevalence of sleep disorder than the Control group. Scores in the Narcolepsy sample were not significantly different from either the CFS or Control groups.

When the effects of depression and anxiety on the presence of a diagnosed sleep disorder were statistically controlled for (i.e., entered as covariates in ANCOVA), the overall patterns of results remained the same, $F(2, 54) = 3.617, p < .05$, indicating that the difference in the prevalence of diagnosed sleep disorder between the Control and CFS samples was not due uniquely to psychological adjustment. In fact, group membership accounted for a larger proportion of the variance in the presence of diagnosed sleep disorder ($\eta^2 = 0.133$) than did either anxiety ($\eta^2 = 0.014$) or depression ($\eta^2 = 0.006$).

Incidence of Sleep Disruption: Self-Report Measures

Ratings of Insomnia, Sleep and Daytime Functioning

Table 6 presents self-report results for each group on nighttime variables (i.e., insomnia, sleep) and daytime variables (i.e., sleepiness, concentration).

Nighttime variables. Multivariate analysis of variance showed that there was a significant group main effect for participants' ratings on the three nighttime variables, $F(6, 148) = 12.547, p < .001$. Eighty-six percent of the CFS sample, 55% of the Narcolepsy sample, and 8% of the Control sample reported that they had insomnia. One-way Analysis of Variance shows that there was a significant difference on the nighttime variable "Have insomnia", $F(2, 78) = 30.777, p < .001$. Tukey post hoc analysis shows significant differences; both the CFS and Narcolepsy groups were more likely to have insomnia than the Control group. One-way ANOVAs also show significant differences on both Sleep Quality, $F(2, 78) = 22.895, p < .001$, and Sleep Satisfaction, $F(2, 78) = 30.524, p < .001$. Tukey post hoc tests show significantly worse ratings on these nighttime variables for both the CFS and Narcolepsy samples when compared to the Control sample. The CFS and Narcolepsy groups did not differ significantly.

When the effects of depression and anxiety on these nighttime variables were statistically controlled for (i.e., entered as covariates in multivariate and univariate

Table 6

Insomnia, Sleep and Daytime Functioning: Sleep Questionnaire Scores

Variable	Narcolepsy		CFS		Control		Significance	
	M	SD	M	SD	M	SD	ANOVA	ANCOVA
Nighttime Variables								
Insomnia								
Have insomnia ¹	1.39 _a	0.50	1.14 _c	0.35	1.92 _{ac}	0.28	30.777***	23.947***
Sleep								
Sleep quality (1-10)	4.89 _a	2.63	3.96 _c	2.51	8.08 _{ac}	1.44	22.895***	17.763***
Sleep satisfaction (1-10)	4.06 _a	2.65	3.22 _c	2.23	7.88 _{ac}	1.75	30.524***	23.708***
Daytime Variables								
Wake up feeling refreshed (1-10)	4.22 _a	2.82	2.86 _c	2.28	7.25 _{ac}	2.40	24.486***	13.973***
Tired during the day (1-10)	7.00 _{ab}	2.47	8.61 _{bc}	1.29	3.58 _{ac}	2.34	48.397***	29.420***
Sleepy during the day (1-10)	6.69 _a	2.72	6.42 _c	2.64	3.04 _{ac}	2.18	16.122***	10.501***
Difficulty concentrating (1-10)	6.72 _a	2.89	7.19 _c	2.30	2.79 _{ac}	2.06	27.926***	16.286***
Naps per week	4.28 _a	2.82	3.86 _c	2.48	2.19 _{ac}	2.04	5.292**	3.647*

Note: Means in the same row that share subscripts differ at $p < .05$ using the Tukey honestly significant difference test

n/a = F statistic inappropriate

¹ Lower scores indicate greater likelihood of insomnia

* $p < .05$, $F(2, 78)$

** $p < .01$, $F(2, 78)$

*** $p < .001$, $F(2, 78)$

analyses of covariance), the overall patterns of results did not change (MANCOVA for nighttime variables, $F(6, 136) = 10.719, p < .001$), indicating that the differences between the samples on these variables were not due uniquely to psychological adjustment. In fact, group membership accounted for a larger proportion of the variance on the nighttime variables ($\eta^2 = 0.321$) than did either anxiety ($\eta^2 = 0.052$) or depression ($\eta^2 = 0.100$).

Daytime variables. The MANOVA showed a significant group main effect for participants' ratings on the five daytime variables, $F(10, 146) = 9.390, p < .001$. ANOVAs and Tukey hsd tests showed significantly worse ratings on all the daytime variables for both the CFS and Narcolepsy samples when compared to the Control sample. The CFS group's ratings were significantly worse than the Narcolepsy sample's on only 1 of the 5 daytime variables: Tired During the Day.

When the effects of depression and anxiety on the daytime variables were statistically controlled for (i.e., entered as covariates in multivariate and univariate analyses of covariance), the overall patterns of results did not change (MANCOVA for daytime variables, $F(10, 134) = 6.714, p < .001$), indicating that the differences between the samples on these variables were not due uniquely to psychological adjustment. In fact, group membership accounted for a larger proportion of the variance on the daytime variables ($\eta^2 = 0.334$) than did either anxiety ($\eta^2 = 0.214$) or depression ($\eta^2 = 0.119$).

Daytime Functioning: Self-Report Measures

Daytime Fatigue and Sleepiness

Table 7 presents self-report data on daytime fatigue and sleepiness (variables “Exhausted during the day” and “Sleepy during the day”) from the Structured Sleep and Medical History administered at the initial interview. Table 7 also presents scores from the measures of daytime fatigue and sleepiness.

The MANOVA showed a significant group main effect for participants’ ratings on the six daytime sleepiness and fatigue measures, $F(12, 142) = 12.577, p < .001$. ANOVAs and Tukey hsd tests for all 6 variables show significantly worse ratings of daytime functioning for both CFS and Narcolepsy participants when compared to Controls, indicating that the Narcolepsy and CFS samples were both significantly more tired and sleepy than their Control counterparts. The two clinical groups however, only differed from each other in three instances; the CFS group’s ratings were significantly worse than the Narcolepsy sample’s on the FSS and CFQ measures while the reverse was true for the ESS measure.

When the effects of depression and anxiety on the daytime functioning variables were statistically controlled for (i.e., entered as covariates in multivariate and univariate analyses of covariance), the overall patterns of results did not change (MANCOVA for

Table 7

Daytime Fatigue and Sleepiness: Structured Sleep and Medical History Items, and Ongoing Sleepiness and Fatigue Measures (ESS, FSS, CFQ and SSS)

Variable	Narcolepsy		CFS		Control		Significance	
	M	SD	M	SD	M	SD	ANOVA	ANCOVA
Exhausted during the day	1.05 _a	0.22	1.06 _c	0.24	1.58 _{ac}	0.50	20.482***	11.412***
Sleepy during the day	1.05 _a	0.22	1.11 _c	0.32	1.63 _{ac}	0.49	18.098***	14.283***
Epworth Sleepiness Scale (ESS)	14.42 _{ab}	5.07	9.84 _{bc}	6.08	6.42 _{ac}	4.17	12.385***	13.106***
Fatigue Severity Scale (FSS)	36.69 _{ab}	13.59	49.45 _{bc}	10.35	18.50 _{ac}	7.44	61.567***	41.896***
Chalder Fatigue Questionnaire (CFQ)	49.81 _{ab}	17.22	59.40 _{bc}	13.53	26.73 _{ac}	9.64	41.823***	27.163***
Stanford Sleepiness Scale (SSS)	3.88 _a	1.45	4.48 _c	0.88	1.87 _{ac}	0.70	48.881***	31.572***

Note: Means in the same row that share subscripts differ at $p < .05$ using the Tukey honestly significant difference test.

*** $p < .001$, $F(2, 78)$

daytime functioning variables, $F(12, 130) = 10.855, p < .001$), indicating that the differences between the samples on these variables were not due uniquely to psychological adjustment. In fact, group membership accounted for a larger proportion of the variance on the daytime functioning variables ($\eta^2 = 0.501$) than did either anxiety ($\eta^2 = 0.044$) or depression ($\eta^2 = 0.149$).

Sleep Lifestyle

Sleep Parameters and Practices: Daily Sleep Diaries

In Table 8, results of participants' sleep parameters and practices (based on the Daily Sleep Diaries) are presented. Multivariate analysis of variance on the 11 variables showed that there was a significant group main effect, $F(22, 124) = 3.364, p < .001$. ANOVAs and the Tukey hsd test demonstrate significant differences between the CFS and Control samples on 6 of the 11 variables, indicating that participants in the CFS group take longer to fall asleep, wake up more frequently during the night, spend more time in bed awake, feel that they need more sleep, go to bed earlier, and have lower sleep efficiency scores than do the participants in the Control group. The Narcolepsy group differed significantly from the Control group on only 2 of these variables: "Frequency of Nocturnal Arousals" and "Total Wake Time". Also, the CFS sample takes significantly longer to fall asleep than the Narcolepsy group.

Table 8

Sleep Parameters and Practices: Daily Sleep Diary

Variable	Narcolepsy		CFS		Control		Significance	
	M	SD	M	SD	M	SD	ANOVA	ANCOVA
Sleep Onset Latency (hrs)	0.43 _b	0.55	1.31 _{bc}	0.99	0.45 _c	0.58	11.319***	7.756***
Frequency of Nocturnal Arousals	2.50 _a	1.90	2.17 _c	1.27	0.99 _{bc}	0.85	7.754***	8.310***
Total Wake Time (hrs)	0.91 _a	0.97	0.81 _c	0.50	0.25 _{bc}	0.21	8.283***	5.104**
Sleep needed (hrs)	8.67	1.08	9.42 _c	1.55	8.20 _c	0.93	6.530**	2.368
Total Sleep Time (hrs)	7.48	1.56	7.22	1.63	7.68	1.03	0.684	1.252
Time when go to bed	11:13 PM	51 min.	10:30 PM _c	63 min.	11:09 PM _c	53 min.	4.290*	3.319*
Time when fall asleep	11:36 PM	67 min.	11:59 PM	81 min.	11:36 PM	60 min.	0.318	0.303
Time wake up	7:10 AM	89 min	7:05 AM	83 min.	6:48 AM	62 min.	0.152	0.589
Time get out of bed	7:14 AM	99 min.	7:51 AM	90 min.	7:02 AM	61 min.	0.785	0.243
Sleep medication taken (days/week)	1.83	0.50	1.72	0.23	1.59	0.35	2.457	2.175
Sleep Efficiency (time asleep/time in bed)	0.79	0.19	0.69 _c	0.15	0.88 _c	0.00	12.516***	8.586***

Note: Means in the same row that share subscripts differ at $p < .05$ using the Tukey honestly significant difference test

* $p < .05$, $F(2, 72)$

** $p < .01$, $F(2, 72)$

*** $p < .001$, $F(2, 72)$

With the exception of the variable “sleep needed”, when the effects of depression and anxiety on the sleep parameters and practices variables were statistically controlled for (i.e., entered as covariates in multivariate and univariate analyses of covariance), the overall patterns of results did not change (MANCOVA for sleep parameters and practices variables, $F(22, 112) = 2.425, p < .001$), indicating that apart from the perception of how much sleep one needs, the differences between the samples on these variables were not due uniquely to psychological adjustment. In fact, group membership accounted for a larger proportion of the variance on the sleep parameters and practices variables ($\eta^2 = 0.323$) than did either anxiety ($\eta^2 = 0.137$) or depression ($\eta^2 = 0.170$).

General Health: Self-Report Measures

Medical History

In Table 9, results are presented from participants’ self-reported medical health history as obtained at initial interview from the Structured Sleep and Medical History Interview. Multivariate analysis of variance showed that there was a significant group main effect for these five variables, $F(10, 102) = 2.464, p < .05$. ANOVAs and the Tukey hsd test demonstrated significant differences between the CFS and Control samples on 3 of the 5 variables, indicating that participants in the CFS group are more likely to have an illness other than CFS, have a larger number of these illnesses, and are more likely to

Table 9

Medical History: Structured Sleep and Medical History Interview

Variable	Narcolepsy		CFS		Control		Significance	
	M	SD	M	SD	M	SD	ANOVA	ANCOVA
Have illness ¹	1.06	0.25	1.00 _c	0.00	1.20 _c	0.42	3.331*	3.246*
Total number of illnesses	1.56	1.21	2.19 _c	1.23	1.00 _c	0.82	4.448*	4.577*
Number of physician consultations in past 6 months	6.30	10.55	8.92	11.10	10.20	25.29	0.261	0.350
Hospitalization past 2 years ²	1.50	0.52	1.72	0.46	1.80	0.42	1.611	1.385
Trouble sleeping due to pain ³	1.75 _b	0.45	1.41 _{b,c}	0.50	1.90 _c	0.32	5.799**	5.145**

Note. Percentages in the same row that share subscripts differ at $p < .05$ using the Tukey honestly significant difference test

¹ Lower scores indicate greater likelihood of illness

² Lower scores indicate greater likelihood of hospitalization

³ Lower scores indicate greater likelihood of trouble sleeping due to pain

* $p < .05$, $F(2, 58)$

** $p < .01$, $F(2, 58)$

have trouble sleeping due to pain than the participants in the Control group. Additionally, the CFS participants were more likely to have trouble sleeping due to pain than their Narcolepsy counterparts, although the Narcolepsy and Control participants did not differ significantly on any other variables.

When the effects of depression and anxiety on the medical history variables were statistically controlled for (i.e., entered as covariates in multivariate and univariate analyses of covariance), the overall patterns of results did not change (MANCOVA for medical history variables, $F(10, 92) = 2.141, p < .05$), indicating that the differences between the samples on these variables were not due uniquely to psychological adjustment. In fact, group membership accounted for a larger proportion of the variance on the medical history variables ($\eta^2 = 0.189$) than did either anxiety ($\eta^2 = 0.164$) or depression ($\eta^2 = 0.093$).

Perceived Health Functioning: Comparative Analysis of SF-36 Group Means

In Table 10, results are presented for participants' perceived health functioning as measured with the SF-36 Health Survey subscales. Multivariate analysis of variance showed that there was a significant group main effect on the eight variables, $F(16, 136) = 7.147, p < .001$. Further analyses of this group effect yielded significant one-way ANOVAs on 6 of the 8 subscales (all except "Role Emotional" and "Mental Health"). The CFS sample's scores were significantly worse than those of the Control group on all

Table 10

Perceived Health Functioning: Mean SF-36 Health Survey Scores

Subscale	Narcolepsy			CFS			Control			Significance	
	M	SD		M	SD		M	SD		ANOVA	ANCOVA
Physical Functioning	71.25 ^{ab}	28.88		44.26 ^{bc}	22.26		89.38 ^{ac}	20.34		26.661***	17.594***
Role Physical	38.75 ^{ab}	42.52		7.35 ^{bc}	17.97		83.33 ^{ac}	31.85		44.569***	25.892***
Bodily Pain	68.05 ^b	29.26		40.47 ^{bc}	24.09		84.33 ^c	20.24		23.744***	14.627***
General Health	56.25 ^{ab}	30.20		28.74 ^{bc}	16.36		75.50 ^{ac}	19.38		34.227***	23.212***
Vitality	38.75 ^{ab}	20.19		20.07 ^{bc}	17.08		63.54 ^{ac}	26.88		29.328***	16.759***
Social Functioning	58.75 ^{ab}	30.10		30.15 ^{bc}	23.86		88.54 ^{ac}	18.40		41.332***	24.475***
Role Emotional	48.33	45.21		58.82	44.24		76.39	37.40		2.498	1.025
Mental Health	65.15	16.98		62.00	17.98		73.67	22.28		2.662	0.069

Note. Higher scores indicate better functioning due to good health. Means in the same row that share subscripts differ at $p < .05$ using the Tukey honestly significant difference test. *** $p < .001$, $F(2, 78)$

these. The Narcolepsy sample was worse than the Control sample on 5 of these 6 variables. The CFS sample's however, was significantly worse than the Narcolepsy sample on all 6 variables.

When the effects of depression and anxiety on the SF-36 health functioning variables were statistically controlled for (i.e., entered as covariates in multivariate and univariate analyses of covariance), the overall patterns of results did not change (MANCOVA for health functioning variables, $F(16, 126) = 5.308, p < .001$), indicating that the differences between the samples on these variables were not due uniquely to psychological adjustment. In fact, group membership accounted for a larger proportion of the variance on the SF-36 health functioning variables ($\eta^2 = 0.403$) than did either anxiety ($\eta^2 = 0.192$) or depression ($\eta^2 = 0.198$).

Perceived Health Functioning: Normative Data for the SF-36

In Table 11, results for each group on measures of perceived health functioning (SF-36 subscales) are compared to available normative data. The Control sample scores fall within the normative range (i.e., one standard deviation) on all subscales. The Narcolepsy sample scores one standard deviation below the normative mean on three of the eight subscales (“Role Physical”, “Vitality” and “Social Functioning”), indicating poorer health functioning with respect to physical and social aspects. With the exception

Table 11

Perceived Health Functioning: SF-36 Health Survey: Comparisons with Normative Data

Subscale	Narcolepsy		CFS		Control		Normative Sample ¹	
	M	SD	M	SD	M	SD	M	SD
Physical Functioning	71.25	28.88	44.26*	22.26	89.38	20.34	84.50	23.30
Role Physical	38.75*	42.52	7.35**	17.97	83.33	31.85	80.96	34.00
Bodily Pain	68.05	29.26	40.47*	24.09	84.33	20.24	75.15	23.70
General Health	56.25	30.20	28.74**	16.36	75.50	19.38	71.95	20.30
Vitality	38.75*	20.19	20.19*	17.08	63.54	26.88	60.86	20.95
Social Functioning	58.75*	30.10	30.15**	23.86	88.54	18.40	83.28	22.69
Role Emotional	48.33	45.21	58.82	44.24	76.39	37.40	81.26	33.04
Mental Health	65.15	16.98	62.00	17.98	73.67	22.28	74.74	18.08

Note: Lower subscale scores indicate poorer functioning while higher scores indicate better functioning due to good health

¹ N = 2474. Derived from Ware, Snow, & Kosinski, 2000.

* Mean is one standard deviation below the normative sample mean

** Mean is two standard deviations below the normative sample mean

of emotional and mental aspects of health functioning, scores of the CFS sample are outside the normative range on six subscales of the SF-36. Most notably, the CFS sample scores two standard deviations below the normative mean on three of the subscales: “Role Physical”, “General Health” and “Social Functioning”. These indicate substantially poorer health functioning with respect to physical and social aspects.

Psychological Adjustment: Self-Report Measures

Comparative Analysis of Group Means

Table 12 presents results from the measures of psychological adjustment. Multivariate analysis of variance showed that there was a significant group main effect for participants’ self-ratings on the five psychological adjustment variables, $F(10, 132) = 4.049, p < .001$. The ANOVAs were significant for all 5 variables. Tukey hsd test results show that the Narcolepsy and CFS groups did not differ significantly on any of the psychological adjustment variables, although the CFS sample scored significantly worse than the Control group on all five variables while the Narcolepsy group scored worse on two.

Table 12

Psychological Adjustment: Mean Scores

Variable	Narcolepsy		CFS		Control		Significance (ANOVA)
	M	SD	M	SD	M	SD	
Anxiety (STAI)	41.08	9.47	44.77 _c	10.10	35.42 _c	11.13	5.510**
Beck Depression Inventory (BDI)	12.63	9.58	16.10 _c	8.69	6.75 _c	7.50	7.992***
Brief Symptom Inventory (BSI)							
Somatization	1.14 _a	0.97	1.54 _c	0.75	0.35 _{ac}	0.40	18.260***
Global Severity Index	0.89 _a	0.50	1.07 _c	0.60	0.47 _{ac}	0.37	9.171***
Eysenck Personality Questionnaire (EPQ)							
Neuroticism	6.11	2.77	6.80 _c	3.67	3.79 _c	3.15	5.851**

Note. Means in the same row that share subscripts differ at $p < .05$ using the Tukey honestly significant difference test.

** $p < .01$, $F(2, 73)$

*** $p < .001$, $F(2, 73)$

Normative Data

In Table 13, results for each group on measures of psychological adjustment are compared to available normative data. Sometimes normative data were available only separately for males and females.

It can be seen in Table 13 that the Control sample consistently scored within one standard deviation of the normative group mean. The Narcolepsy and CFS samples, however, generally scored one standard deviation above the normative mean for the STAI, indicating higher anxiety for both these groups. In addition, both the Narcolepsy and CFS groups scored two standard deviations above the normative mean on both BSI measures, indicating higher somatization and poorer overall psychological adjustment for both groups. Finally, it is worth noting that none of the groups scored outside the normative range on measures of depression or neuroticism.

Psychological Adjustment: Comparisons with Normative Data

Variable	Narcolepsy		CFS		Control		Normative Sample ¹	
	M	SD	M	SD	M	SD	M	SD
Anxiety (STAD)²								
Total								
Men	47.75*	8.69	44.60*	11.15	30.00	6.62	34.89	9.19
Women	39.57	9.98	44.29*	9.84	39.29	12.26	34.79	9.22
Beck Depression Inventory (BDI)³								
Total	12.63	9.58	16.10	8.69	6.75	7.50	17 to 63 = Clinical Depression	
Men								
Women								
Brief Symptom Inventory (BSI)⁴								
Somatization								
Total	1.14**	0.97	1.54**	0.75	0.35	0.40	0.29	0.40
Men								
Women								
Global Severity Index								
Total	0.89**	0.50	1.07**	0.60	0.47	0.37	0.30	0.31
Men								
Women								
Eysenck Personality Questionnaire (EPQ)⁵								
Neuroticism								
Total								
Men	7.50	1.87	6.00	4.64	2.20	1.99	5.50	3.46
Women	5.71	2.97	6.77	3.60	4.93	3.38	5.28	3.37

¹ STAI: Men N=1387, Women N=451; BDI: Cut-off scores from Burns, 1980; BSI: N=719; EPQ: Men N=224, Women N=244.

² Normative data derived from Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983.

³ Normative data derived from Burns, 1980.

⁴ Normative data derived from Derogatis & Spencer, 1982.

⁵ Normative data derived from Eysenck & Eysenck, 1991.

* mean is one standard deviation above the normative sample mean

** mean is two standard deviations above the normative sample mean

DISCUSSION

Limitations

An obvious limitation of the present study is the lack of power due to small sample sizes as relating to the sizes necessary ($n = 50$) for even moderate group differences to emerge (Cohen, 1988). However, the well-documented expense related to laboratory sleep research (Komaroff & Fagioli, 1996), as well as the difficulties regularly encountered with subject attrition in such large-scale, demanding and lengthy investigations make small sample size an unfortunate, but common consequence. Nevertheless, although some differences between the samples may not have been revealed, the comprehensive descriptive data collected make an important contribution to CFS research and form the basis for future investigations particularly in the area of intervention. Furthermore, the unique comparison of a CFS sample to a Control group sampled from the general population as well as to a well-documented clinical sleep disordered sample (Narcolepsy) adds a new conceptual dimension to issues of etiology, maintenance and consequence in CFS research.

Another potential limitation to this research is the higher presence of lifetime co-morbid conditions in the CFS sample that were not controlled for. Indeed, though we did exclude participants based on current co-morbid conditions known to affect sleep and/or

daytime functioning, our inability to control for the presence of other illnesses over the lifetime of CFS participants may limit the extent to which conclusions can be inferred in a correlational research design such as ours. Although it would be desirable to sample from a pure CFS population in terms of internal validity, external validity would undoubtedly be compromised as co-morbid conditions are a well known confound in the presentation and diagnosis of CFS.

Finally, the differential remuneration of Control participants as compared to the clinical samples may be said to both affect their motivation as well as raise ethical issues about the value of participants' time. The ethical issues cannot be dealt with here, but, in terms of motivation, a couple of key points should be noted in this case. First, Control participants often are motivated only by the monetary remuneration they receive, whereas clinical samples are often intrinsically motivated to participate in research investigating their particular condition. Second, although the monetary gain to be made by our clinical sample was lower than the Control sample's, there existed medical gains to be obtained by the clinical sample that were irrelevant to the healthy Controls. For instance, the clinical sample had the additional benefit of receiving medical consultation, diagnosis, and referral for their condition, as well as expensive medical tests given free of charge within a substantially shorter waiting period than they would if they were not participants in our investigation. For the healthy Controls however, there was no reason to believe that undergoing these tests and consultations would benefit them in any way personally, thus, the reward for participation in this sample were probably purely financial.

Nature and Incidence of Sleep Disruption in CFS

The CFS sample studied here had, as predicted, a high incidence of both diagnosed sleep disorder and insomnia and therefore it is hardly surprising that 89% of the CFS sample also endorsed items pertaining to waking up feeling unrefreshed. In fact, 86% reported having insomnia on self-report measures. They report suffering from their insomnia problem for a mean of 8.06 years and on a scale of 1 to 10 rated the distress they felt as a result of their insomnia at 6.34. These rates of insomnia, distress and unrefreshing sleep are consistent with findings in the literature and attest to the debilitating nature of the sleep disruption experienced in this population (Yehuda and Mostofsky, 1997; Hardt, Buchwald, Wilks, Sharpe, Nix, & Egle, 2001).

In terms of primary sleep disorders, prevalence of these in CFS is surprising. Fifteen percent (15%) have Sleep Apnea, 27% have Sleep Hypopnea, 12% have Periodic Limb Movement Disorder, and 4% have Restless Legs Syndrome. Once these diagnoses are added together only 42% of the CFS sample did **not** receive a diagnosis for some kind of significant sleep disorder. In essence, more than half this population appears to have a diagnosable physiologically based sleep disorder with significant sleep disturbance.

The incidence of sleep disorder in the CFS sample was substantially greater than that of the Control sample. Furthermore, in many sleep-related aspects, individuals with CFS were not different from individuals with the physiologically based sleep disorder of

Narcolepsy. In fact, in some aspects, it is the CFS sample that had a higher incidence of sleep disruption.

Considering the magnitude of the sleep-related problems, it is notable that prior to participating in this study, neither the CFS patients nor their physicians had been aware that they had these disorders.

Sleep Assessment

The CFS sample on the whole had a wide variety of sleep related complaints. Besides waking up feeling unrefreshed, and having significantly prolonged sleep onset latencies, the CFS sample wake up frequently during the night, and spend a large amount of time in bed at night not sleeping. This, despite the fact that the CFS sample went to bed and got out of bed at roughly the same time as both Narcolepsy and Control counterparts. In essence, the CFS sample displayed the characteristic signs of poor overall sleep efficiency seen in persons with insomnia. In addition, 60% of the CFS sample reported having trouble sleeping because of pain. On average, this pain woke them up or disrupted their sleep 3 nights per week. It appears that the fact that persons with CFS rated sleep quality as poor and were less satisfied with their sleep as compared to both the comparison groups suggests that primary sleep disorder, insomnia, and pain play an important role in the syndrome.

Daytime Functioning Assessment

Results show that individuals with CFS were significantly more fatigued during the day than persons with Narcolepsy, indicating that their daytime functioning in this case was not only worse than their healthy counterpart's but also worse than that of individuals with a diagnosed medical disorder.

The CFS sample report feeling exhausted during the day in 94% of cases and feeling sleepy during the day in 89% of cases. Additionally, their daytime sleepiness and fatigue scores (ESS, FSS, CFQ, and SSS) were all significantly elevated as compared to both the Control and Narcolepsy samples and as such can be taken together to mean that the daytime functioning of the CFS sample is seriously compromised.

General Health/Quality of Life Assessment

Although demographically similar to their Narcolepsy and Control counterparts, when asked about the presence of any other illnesses during the course of their lifetime, 91% of the CFS sample reported that they had had an illness other than CFS or Narcolepsy. Thus, over the lifespan, the CFS sample had, on average, 2.19 illnesses in addition to CFS; a significantly higher number of illnesses than reported by their Control counterparts. In addition, the CFS sample reported having consulted with a physician an average of 8.89 times during the past 6 months, and 29% of the sample had been

hospitalized during the last two years. These findings are in keeping with the notion that CFS sufferers like to “doctor-shop” and persist in seeking out medical assistance for their symptoms (Jason, et al., 1997).

In addition, the measure designed to assess overall health functioning (the SF-36 Health Survey) also evaluates quality of life and here again, not only were the CFS sample’s scores below the normative range on most subscales, but the CFS sample’s scores were significantly poorer than their Control counterparts’, and frequently even poorer relative to the medically identified Narcolepsy sample. It is of interest to note that although the Narcolepsy sample, a clearly identifiable clinical population, reports poor health functioning (as indicated by low scores on SF-36 subscales), the CFS sample, by consistently scoring lower than the Narcolepsy group on a variety of subscales, reports even poorer health functioning than do individuals with medically recognized Narcolepsy. Thus, it appears that symptoms of CFS significantly undermine many facets of these individuals’ lives and impair physical and social functioning as well as participation in daily activities.

Psychological Assessment

Overall, the psychological adjustment of the CFS sample was significantly poorer than the Control sample’s but was not significantly different from the clinical comparison group (Narcolepsy). Both when compared to the Control sample as well as when

compared to the normative data, the CFS sample scored in ways that were consistent with slightly elevated anxiety and somatization as well as generally poorer psychological adjustment. It is worthy of note however, that although the CFS sample scores were statistically different from those of healthy Controls on measures of depression and neuroticism, nevertheless, the scores for depression and neuroticism were well within the normative range for their age group, and in this sense, not clinically significant.

What about the popular stereotype of psychological maladjustment in CFS symptom sufferers? We would have expected the CFS sample to fare poorly in comparison to Controls with respect to anxiety, depression, somatization, and neuroticism, especially as this has typically been the accepted CFS psychological profile (Wessely, et al., 1995; Masuda, Nozoe, Matsuyama, & Tanaka, 1994; DiClementi, Schmalings, & Jones, 2001; Cordingley, Wearden, Appleby, & Fisher, 2001). Our findings in this area however, were mixed, both in terms of distinctive psychological adjustment characteristics and in terms of presumed etiological significance. On the one hand, it was indeed found that individuals with CFS are more anxious and present more somatic complaints than their healthy Control counterparts. On the other hand, despite their experience of debilitating fatigue and generally poorer quality of life, people with CFS, though they do score more poorly than healthy Controls, do not score within a clinically maladjusted range on measures of depression nor on neuroticism, which is believed to be a biologically based predisposition (cf. Eysenck, 1952).

With respect to the larger question of etiology, our findings about the role of psychological adjustment in CFS are not definitive. Although the lack of significant differences between persons with CFS and individuals with Narcolepsy is intriguing, it is possible that this reflects a lack of power (Type II error) rather than a real similarity between these groups. Nonetheless, results from other studies support our findings of psychological maladjustment in well-recognized physiological sleep disorders. For example, in an investigation of psychological functioning in persons with Narcolepsy, Mastin (1999) reported that in addition to experiencing excessive sleepiness, they also had significantly higher levels of depression, anxiety and overall affective disturbance. Additionally, in a pilot investigation of one of our team members (Bailes et al., 2001), individuals with diagnosed Sleep Apnea are also found to have distinctive psychological adjustment profiles. Despite these types of findings, unlike the experience of persons with CFS, individuals with Narcolepsy or Sleep Apnea are not typically told that their problem is “all in their head” or psychosomatic.

However tentative the conclusions, our findings still raise interesting questions. Are persons with CFS experiencing some psychological distress as a result of living with a chronic illness of unknown etiology, or is CFS the somatic expression of underlying psychological distress?

CONCLUSION

Sleep Disruption

There is ample evidence that primary sleep disorders are commonly overlooked or misdiagnosed in medical practice. Indeed, the high prevalence of sleep disorder in CFS was surprising to all concerned. The present findings highlight the significant amount of sleep disruption based on physiologically based sleep disorder and the very high rate of insomnia complaints in the CFS population. These findings raise important questions about cause and effect for CFS patients: To what extent does sleep disorder have an etiological significance? Is CFS primarily an overlooked sleep disorder? Even if the fatigue syndrome were not directly caused by primary sleep disorders, would treating physiologically based disorders such as Sleep Apnea and RLS/PLMD have beneficial effects? What role does reported insomnia play in either etiology or maintenance of CFS? How does it relate to experienced pain? What role does insomnia play in either etiology or maintenance of the fatigue syndrome, and might insomnia treatment bring any relief to their symptoms? This investigation constitutes the first step to being able to address important areas of intervention in a meaningful way.

Psychological Adjustment

The psychological disturbances seen in this investigation could be due to living with a chronic illness that is poorly recognized or understood (Nicassio, Schuman, Radojevic, & Weisman, 1999). The pattern of psychological functioning revealed in this study can be viewed as an indication of the degree of suffering and disruption that occurs in this population. Although prospective studies are needed to answer the question “Is CFS primarily a psychological disorder?”, the present findings suggest the same question may be asked about Narcolepsy.

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Appendix A: Telephone Protocol

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STUDY 1: Sleep and Aging Project - Telephone Interview Protocol

My name is _____. I am part of the research team for the Sleep and Aging Project and I am working with Dr. _____ (Referring Physician).

The purpose of this study is to investigate daytime fatigue or sleepiness and how these relate to nighttime sleep. The ultimate goal is to help physicians improve diagnosis and treatment of people complaining of the problems of daytime sleepiness and fatigue. Let me tell you what is involved.

First, you would complete a series of brief questionnaires which assess your daytime fatigue, sleepiness, and psychological adjustment. This will take approximately 1 to 1½ hours.

Then, you would be asked to take home and complete a series of questionnaires evaluating your sleep quality each day for a one-week period. This will take about five minutes a day.

The third step is that you would be sent to Mount Sinai Hospital to spend one night and the following day in the sleep laboratory.

THIS SECTION OPTIONAL - ONLY IF ASKED]

There, you would have your brain waves, breathing, and muscle activity monitored while you sleep. This procedure, called polysomnography, will be conducted by a qualified sleep lab technician. This involves having small, electronic sensors placed on the surface of your skin (scalp, chest, and legs) and near your nose. These sensors relay information about your sleep activity to a computer, which is used to store the information and to test for a possible sleep disorder.

During the next day, you will be asked to complete the same series of questionnaires as you did in the first two steps of the study. In addition, you will be asked to take a nap four times during the day: at 10:00 a.m., at 12:00 noon, at 2:00 p.m. and at 4:00 p.m. This procedure, called the Multiple Sleep Latency Test, will be conducted by a qualified sleep lab technician. During these nap times, your sleep/wake pattern will be monitored by small, electronic sensors placed on your scalp. These sensors relay information about your degree of sleepiness and fatigue to a computer, which is used to store and analyze the information. Your muscle strength will also be measured 4 times by squeezing a hand-grip dynamometer. These procedures will not harm you in any way.

So we do a very thorough examination of how you are functioning during the night and during the daytime.

You would receive \$40 for your participation and you will be reimbursed for any expenses such as parking and travel. Does this sound like something you would be willing to do?

[IF NO] Thank you for your time.

[IF YES] I would like to ask you a few questions just to make sure that your situation fits the needs of this particular study.

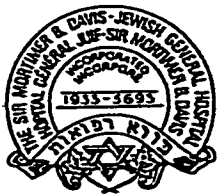
- 1) Since we are studying people between the ages of 20 and 45, are you between these ages?
- 2) Since all the questionnaire are in English, do you think you will have difficulty reading them?
- 3) Are you suffering from any serious medical or personal problems right now, apart from _____ (chronic fatigue syndrome or narcolepsy)?
How does it affect your life and sleep?
Are you currently seeking professional help for this?
- 4) Are you currently taking medication for your (chronic fatigue syndrome or narcolepsy)?
IF Yes: How much medication (dosage)?
How often did you take it (should be less than 3 times/wk)
For how long did you take it?

[IF QUALIFIED] Thank you, you are just the kind of person we are looking for. May we set up an appointment that is convenient for you to come to the hospital **[ASK THEM TO BRING ANY MEDICATION THEY ARE CURRENTLY TAKING]**?

[IF NOT QUALIFIED] For this part of the study we are looking for people who (1) between 20 and 45, (2) have no personal or medical problems right now, (3) who do not frequently use medication to help them stay awake, or (4) who have not taken medication in the last 6 months. We may be calling you at a later date. Thank you for your time. You have been very helpful.

If you have any questions about this study, I would be happy to try to answer them. If you are interested in the results of the study, you can give us a call at the following number: 340-8266.

Appendix B: English Consent Form



HÔPITAL GÉNÉRAL JUIF
SIR MORTIMER B. DAVIS
JEWISH GENERAL HOSPITAL



CENTRE HOSPITALIER MONT-SINAÏ
MOUNT SINAI HOSPITAL CENTER



UNIVERSITÉ
MCGILL
UNIVERSITY

**SLEEP AND AGING PROJECT
DAYTIME FUNCTIONING AND SLEEP DISORDERS
STUDY 1: INFORMATION AND CONSENT FORM**

The purpose of this study is to find a way to measure the concepts of "sleepiness" and "fatigue". This is part of a larger research programme in which the goal is to help physicians improve diagnosis and treatment of individuals complaining of the problems of daytime sleepiness and fatigue. I am being asked to take part in this study. If I agree, I understand that there are 3 parts to this study:

- 1) I will be expected to complete a series of brief questionnaires to assess how sleepy or fatigued I have been feeling. This will take approximately 1 to 1½ hours.
- 2) Next, I will be expected to take home and complete a similar series of questions each day for a 1 week period. This series requires about ½ hour per day.
- 3) Two or three weeks later, I will be sent to the Mount Sinai Hospital to spend one night and the following day in the sleep laboratory. During the night, I will have my brain waves, breathing and muscle activity monitored while I sleep. This procedure, called polysomnography, is necessary in the diagnosis of sleep disorders and will be conducted by a qualified sleep lab technician. This involves having small, electronic sensors placed on the surface of my skin (scalp, chest and legs) and near my nose. These sensors relay information about my sleep activity to a computer, which is used to store the information and to test for a possible sleep disorder. This procedure will not harm me in any way.

During the next day, I will be asked to complete the same series of questionnaires as I did in the first two steps of the study. In addition, I will be asked to take a nap four times during the day: at 10:00 a.m., at 12:00 noon, at 2:00 p.m. and at 4:00 p.m. This procedure, called the Multiple Sleep Latency Test, will be conducted by a qualified sleep lab technician. During these nap times, my sleep/wake pattern will be monitored by small, electronic sensors placed on my scalp. These sensors relay information about my degree of sleepiness and fatigue to a computer, which is used to store and analyze the information. My muscle strength will also be measured 4 times by squeezing a hand-grip dynamometer. These procedures will not harm me in any way.

I understand that I will receive \$40. for my participation and that I will be reimbursed for any expenses such as parking or travel.

I understand that if results of this study are published, my part in the study will be completely anonymous and my privacy will be completely protected.

I understand that there is no direct benefit to me.

I have the right to request an interview with a senior member of the team to discuss any sleep problem I may be experiencing, and to be referred appropriately, if necessary.

I have had the opportunity to ask questions and I understand that I may discuss any questions or concerns I have about this study with the Principal Investigator, Eva Libman, 340-8210, and the Jewish General Hospital's Patient Representative, Lianne Brown, 340-8222 (local 5833)

I have the right to withdraw from the study at this or any other point, without affecting my medical care.

On the basis of this information, of which I have been given a copy, I, _____
_____ willingly consent to participate in this study conducted at the Jewish
General Hospital.

Date: _____

Participant: _____

Project Coordinator: _____

Witness: _____

Appendix C: French Consent Form



HÔPITAL GÉNÉRAL JUIF
SIR MORTIMER B. DAVIS
JEWISH GENERAL HOSPITAL



CENTRE HOSPITALIER MONT-SINAÏ
MOUNT SINAI HOSPITAL CENTER



UNIVERSITÉ
McGILL
UNIVERSITY

PROJET DE RECHERCHE SUR LA QUALITÉ DU SOMMEIL ET LE VIEILLISSEMENT FONCTIONNEMENT DIURNE ET TROUBLES DU SOMMEIL

ÉTUDE 1: INFORMATIONS GÉNÉRALES ET FORMULAIRE DE CONSENTEMENT

L'objectif de la présente étude est de développer un moyen de mesurer les concepts de «somnolence» et de «fatigue». L'étude fait partie d'un projet de recherche d'une plus grande envergure qui vise à aider les médecins à diagnostiquer plus facilement les problèmes de somnolence et de fatigue pendant la journée et à soigner plus efficacement les individus qui s'en plaignent.

On sollicite ma participation à cette étude. Si j'accepte d'y participer, je comprends que l'étude se déroulera en trois étapes.

- 1) Tout d'abord, j'aurai à compléter un certain nombre de questionnaires pour permettre d'évaluer le niveau de la somnolence et de la fatigue que je ressens pendant la journée. Cette étape prendra environ deux heures
- 2) Ensuite, j'aurai à apporter chez moi une série de questionnaires semblables et à les compléter chaque jour pendant une semaine. Il me faudra environ 15 minutes par jour pour compléter ces questionnaires
- 3) Deux ou trois semaines plus tard, on m'enverra à l'Hôpital du Mont Sinaï où je passerai une nuit et une partie du lendemain dans un laboratoire de sommeil. Cette nuit-là, on surveillera mes ondes cérébrales, ma respiration et mon activité musculaire pendant mon sommeil. La procédure utilisée, appelée la polysomnographie, est essentielle pour le diagnostic des troubles du sommeil. Elle sera dirigée par un(e) technicien(ne) du laboratoire qualifié(e). La polysomnographie consiste à placer de petits détecteurs électroniques sur la peau (au crâne, à la poitrine et aux jambes) et près du nez. Ces détecteurs transmettent les informations sur le sommeil à un ordinateur qui sert à sauvegarder les données et à détecter la présence des troubles du sommeil. Cette procédure n'est pas douloureuse et ne me posera aucun danger.

Le lendemain, j'aurai à compléter les mêmes questionnaires que ceux que j'avais remplis lors des deux premières étapes de l'étude. De plus, j'aurai à faire la sieste quatre fois pendant la journée, soit à 10h00, à 12h00, à 14h00 et à 16h00. La procédure se nomme le Test des Latences du Sommeil Multiple. Elle sera dirigée par un(e) technicien(ne) qualifié(e) du laboratoire de sommeil. Pendant mes siestes, on surveillera mes habitudes de sommeil et d'éveil à l'aide des détecteurs électroniques qui

seront placés sur mon crâne. Ces détecteurs transmettront les informations sur le niveau de ma somnolence et de ma fatigue à un ordinateur qui sert à sauvegarder et analyser les données. On évaluera mes forces musculaires quatre fois à l'aide d'un dynamomètre manuel que j'aurai à presser. Ces procédures ne sont pas douloureuses et ne me présenteront aucun danger.

Je comprends que je recevrai 40,00\$ pour ma participation et que mes frais de déplacement ou de stationnement me seront remboursés.

Je comprends que si les résultats de cette étude sont publiés, ma participation restera complètement anonyme et que ma vie privée sera entièrement protégée.

Je comprends que je ne retirerai aucun bénéfice direct de cette étude.

J'ai le droit de demander une rencontre avec un(e) membre principal(e) de l'équipe de recherche pour discuter de tout problème lié à mon sommeil et, au besoin, pour me faire référer à un(e) spécialiste.

J'ai eu l'occasion de demander des explications et je comprends que je peux discuter de toutes autres questions ou préoccupations que j'aurais concernant ce projet avec la chercheuse principale, Dr. Eva Libman, 340-8210, ou avec Mme Lianne Browne, le porte-parole des bénéficiaires de l'Hôpital Général Juif au 340-8210 (poste 5833).

Je suis libre de me retirer de cette étude à tout moment sans que cela n'affecte les soins médicaux dont je bénéficie.

Compte tenu des informations dans ce document dont je détiens une copie, je, _____ consens de plein gré à participer à cette étude qui est menée à l'Hôpital Général Juif.

Date: _____

Participant(e): _____

Coodonatrice du projet: _____

Témoin: _____

Appendix D: Interview Protocol

STUDY 1: SUBJECT PROTOCOL- INTERVIEW AND QUESTIONNAIRE ADMINISTRATION

1. GENERAL INFORMATION ON THE PROJECT

“Thank you for coming to take part in this research project.”

“As you know from the phone interview, we are studying the psychological functioning and sleep patterns of people who experience sleepiness or fatigue during the daytime as well as problems with sleep at night. The goal is to improve ways for physicians to diagnose and treat these problems.”

“The study consists of four steps:

- **Step 1 is your visit today in which you will fill in questionnaires, and answer some interview questions;**
- **Step 2 involves keeping a daily diary of your sleep as well as your sleepiness and fatigue for one week;**
- **Step 3 is that you would be sent to Mount Sinai Hospital to spend one night and the following day in the sleep laboratory: There, you would have your brain waves, breathing, and muscle activity monitored while you sleep. This procedure, called polysomnography, will be conducted by a qualified sleep lab technician. This involves having small, electronic sensors placed on the surface of your skin (scalp, chest, and legs) and near your nose. These sensors relay information about your sleep activity to a computer, which is used to store the information and to test for a possible sleep disorder.**

During the next day, you will be asked to complete the same series of questionnaires as you did in the first two steps of the study. In addition, you will be asked to take a nap four times during the day: at 10:00 a.m., at 12:00 noon, at 2:00 p.m. and at 4:00 p.m. This procedure, called the Multiple Sleep Latency Test, will be conducted by a qualified sleep lab technician. During these nap times, your sleep/wake pattern will be monitored by small, electronic sensors placed on your scalp. These sensors relay information about your degree of sleepiness and fatigue to a computer, which is used to store and analyze the information. Your muscle strength will also be measured 4 times by squeezing a hand-grip dynamometer. These procedures will not harm you in any way.

So we do a very thorough examination of how you are functioning during the night and during the daytime.

- **Step 4 involves a return visit to this office so that we may give you some feedback from your testing.”**

“You will be paid 40.00 for your participation and reimbursed for any expenses you incur such as taxi fare to the sleep lab or parking. Please keep any receipts for these expenses so that we may reimburse you on your second visit to us.”

2. CONSENT FORM

a. Show participants consent form and say:

“Before we proceed, I would like you to read this consent form carefully and sign it if you agree to participate in the study. I will answer any questions you have.”

b. Give consent form and allow time to read and ask questions

3. QUESTIONNAIRE ADMINISTRATION

Prepared packages (administered in the following order):

Questionnaires: Background Information Form
 Structured Sleep History Interview
 Sleep Questionnaire
 Epworth Sleepiness Scale-Retrospective (ESS-R)
 Fatigue Severity Scale-Retrospective (FSS-R)
 Schondorf/Chalder's Fatigue Measure-Retrospective (SFM-R)
 Stanford Sleepiness Scale-Retrospective (SSS-R)
 Spielberger (STAI)- Trait
 Brief Symptom Inventory (BSI)
 Beck Depression Inventory-II
 EPQ-R Short Form
 SF-36 Health Survey

Diary Package: Daily Sleep Diary
 Epworth Sleepiness Scale-Yesterday (ESS-Y)
 Fatigue Severity Scale-Yesterday (ESS-Y)
 Schondorf/Chalder's Fatigue Measure-Yesterday (SFM-Y)
 Stanford Sleepiness Scale-Yesterday (SFM-Y)

Note that the diary package (5 questionnaires) is administered once at the interview meeting and the take home package contains enough for 7 days. If the subject is too tired to complete all of the questionnaires at the interview, they may take the Beck, the EPQ and the Health Survey to complete at home.

b. First, administer **Sleep History**. Say:

“We will begin with two interview questionnaires, one looks at your sleep and medical.

c. When interview questionnaire finished,

“Now, we have some questionnaires for you to fill in by yourself. It will take approximately 1h00. I am here in case you have any questions about the questionnaires.”

As questionnaires are being filled in:

- **Check in with subject every 10 minutes** to see if they have any questions and to take away the questionnaires they have already filled in
- **Check to see if there are any questions unanswered** and, if so, ask them to answer them at the next convenient moment.
- **Check also that the answers make sense**, particularly on the sleep questionnaire.

4. DIARY PACKAGE

a. Introduce the Diary Package:

“These questionnaires concern your sleep last night and your functioning yesterday. I would like you to fill these in right now”

b. Then, give them the Diary Home Package and say:

“This is for you to take home with you. I would like you to complete one of these every day for the next seven days. At 10:00 every morning, fill in your sleep diary for the previous night and the sleepiness and fatigue measures for the previous day. Then, we would like you to phone in your responses to our answering machine at this number: 340 8222, local 5961”. First, say your name and the date. Then say the name of the questionnaire, eg “Sleep Diary” or “SSS”. Then read the number of the question and then your answer.

Demonstrate.

- c. Indicate the phone number on the package envelope and instructions

“For the first two days, we will phone you back to let you know either that it worked or that there was a problem. After that, we will call you only if there is a problem or if we don’t hear from you. Please keep your completed diaries in the envelope to bring with you to the sleep lab”

5. SLEEP LABORATORY BOOKING

- a. If the appointment time is available, then give this to the subject on the appointment sticky and attach this to the questionnaire package. Draw their attention to the address and that they are due at 10:00 p.m.
- b. If the appointment time is not available, tell them that we will be calling them shortly to give them a time. Show them where they can fill in the appointment time themselves when we call them with the appointment.

Appendix E: English Measures Used in this Study

BACKGROUND INFORMATION FORM

1. Gender Male Female

2. Age _____ Years

3. Education (highest level completed; check all that apply)

- elementary
- high school
- CEGEP, technical institute, etc.
- university
- post-graduate

4. How many years of education have you completed? _____ (Count the number of years starting with Grade 1)

5. Current occupational status (Check all those that apply):

- student
- employed full-time
- employed part-time
- seeking employment
- unable to work at the moment (eg, maternity leave, disability leave, illness, etc.)
- homemaker
- retired
- volunteer
- Other (Specify) _____

6. Marital Status Please check all those that apply:

- Now married
- Now living with a partner to whom I am not married
- Separated
- Divorced
- Widowed
- Single

7. Current Living Arrangement

- Live alone
- Live with spouse/partner
- Other (Specify) _____

8. Combined family income for last year? (Check the category that applies best)

- | | |
|--|--|
| <input type="checkbox"/> 10,000 or less | <input type="checkbox"/> 40,000 – 50,000 |
| <input type="checkbox"/> 10,000 – 20,000 | <input type="checkbox"/> 50,000 – 60,000 |
| <input type="checkbox"/> 20,000 – 30,000 | <input type="checkbox"/> 70,000 – 80,000 |
| <input type="checkbox"/> 30,000 – 40,000 | <input type="checkbox"/> 80,000 or more |

9. Income satisfaction Put an X in the box that best describes how adequate you consider your income to be in meeting your needs.

Inadequate

--	--	--	--	--	--	--	--	--	--

 More than Adequate

Adequate

STRUCTURED SLEEP HISTORY INTERVIEW

(Note to Interviewer: Be sure that there is a numerical answer to all questions, even if the unit is not the one specified. For example, 1. a) (i) could be 1 day/month. Be careful to indicate what the unit is. Whenever possible, avoid verbal answers such as "it varies", "it depends", "all my life", etc.)

I AM GOING TO ASK YOU SOME QUESTIONS ABOUT YOUR SLEEP PATTERNS.

0. DAYTIME PROBLEMS

a) Do you feel exhausted during the day? yes no

If YES: (i) How often? days/week

(ii) How long have you had this problem? years months

b) Do you feel sleepy during the day? yes no

If YES: (i) How often? days/week

(ii) How long have you had this problem? years months

Comment:

1. APNEA

a) Do you snore? yes no

If YES: (i) How often? nights/week

(ii) How long have you had this problem? years months

b) Has a bedpartner complained of your snoring? yes no

c) Interviewer's judgement of degree of overweight: (circle appropriate number)

not overweight at all 1 2 3 4 5 very overweight

d) Do you wake up in the middle of the night and feel unable to breathe? yes no

If YES: (i) How often? nights/week

(ii) How long have you had this problem? years months

e) Has a bedpartner told you that you seem to stop breathing? yes no

f) Do you wake up with a headache? yes no

If YES: (i) How often? days/week

(ii) How long have you had this problem? years months

g) Do you wake up with a dry mouth? ____yes ____no

If YES: (i) How often? ____ days/week

(ii) How long have you had this problem? ____years ____months

Comment:

2. PERIODIC LIMB MOVEMENT DISORDER AND RESTLESS LEGS SYNDROME

a) Do your legs bother you after you go to bed at night
(e.g., cramps, jerking movements, crawling sensations)? ____yes ____no

If YES: (i) How often? ____ nights/week

(ii) How long have you had this problem? ____years ____months

b) At night, do you feel like something is crawling on your
legs and you have to shake it off or move your legs? ____yes ____no

If YES: (i) How often? ____ nights/week

(ii) How long have you had this problem? ____years ____months

c) Do you wake up because of a cramp in your leg? ____yes ____no

If YES: (i) How often? ____ nights/week

(ii) How long have you had this problem? ____years ____months

d) Have you noticed that parts of your body jerk at night? ____yes ____no

If YES: (i) How often? ____ nights/week

(ii) How long have you had this problem? ____years ____months

e) Has a bedpartner told you that parts of your body jerk at night? ____yes ____no

Comment:

3. PARASOMNIAS

a) Do you have nightmares? ____yes ____no

If YES: (i) How often? ____ nights/month

(ii) How long have you had this problem? ____years ____months

(iii) How often do they wake you up? ____nights/month

b) Do you wake up afraid with no dream recall,
or you only recall a single frightening image? ____yes ____no

If YES: (i) How often? ____ nights/month

(ii) How long have you had this problem? ____years ____months

(iii) Do you notice sweating, fast pulse? ____yes ____no

c) Do you sleepwalk? ____yes ____no

If YES: (i) How often? ____ nights/month

(ii) How long have you had this problem? ____years ____months

Comment:

4. EXCESSIVE DAYTIME SLEEPINESS

a) Do you have any problem waking up? ____yes ____no

If YES: (i) How often? ____ days/week

(ii) How long have you had this problem? ____years ____months

b) Do you have difficulty staying awake during the day when you really want to be awake? ____yes ____no

If YES: (i) How often? ____ days/week

(ii) How long have you had this problem? ____years ____months

c) Do you have difficulty staying awake at awkward times, e.g., while you are driving, at a table with friends, while at work. etc.? ____yes ____no

If YES: (i) How often? ____ days/week

(ii) How long have you had this problem? ____years ____months

(iii) When exactly does this happen? (specify example):

Comment:

5. SLEEP - WAKE SCHEDULE

a) Do you presently work the night shift or a rotating or split shift? ____yes ____no

If YES: (i) Describe your schedule _____

(ii) How long have you had this shift? _____

b) Do you travel across time zones? ____yes ____no

If YES: (i) When was the last time? _____

(ii) Did you get jet lag? ____yes ____no

IF YES, ASK PARTICIPANT TO RETURN IN ONE MONTH WITHOUT JET LAG.

Comment:

MEDICAL

6. a) Have you recently taken any prescription or over-the-counter medication for sleeping problems? ____yes ____no

b) Have you recently discontinued the use of these drugs? ____yes ____no

If YES to a) or b) , record the answers to the following in the table provided:

- (i) What medication were/are you taking?
- (ii) What amount were/are you taking?
- (iii) How many nights a week do/did you usually take this medication?
- (iv) How long have you been taking sleeping medication?
- (v) If discontinued use of drugs, when did you stop?

(i) MEDICATIONS	(ii) AMOUNT	(iii) NIGHTS/WEEK	(iv) DURATION	(v) WHEN STOPPED
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

EXCLUSION CRITERIA: If meds cause sleepiness, fatigue, insomnia (Refer to list or CPS)

Comment:

7. a) Are you currently taking any other medication? ____yes ____no

If YES:

(i)
What medication is it?

(ii)
What illness is it prescribed for?

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

b) Do you feel that any medications interfere with your sleep? ____yes ____no

If YES: (i) Which medications? _____

(ii) How do they interfere? _____

(iii) How often do you take them? _____

EXCLUSION CRITERIA: If meds cause sleepiness, fatigue, insomnia (Refer to list or CPS)

Comment:

8. a) How many times did you consult a physician or other medical practitioner during the past six months? _____ times

b) Do you have any illnesses? _____yes _____no

If YES: (i) What are they? _____

EXCLUSION CRITERIA: If illness causes sleepiness, fatigue, insomnia (Refer to list)

Comment:

9. a) During the past year, have you been severely depressed? _____yes _____no

If YES: (i) How long did it last? _____

(ii) Are you currently depressed? _____yes _____no

b) Are you currently taking medication for depression? _____yes _____no

If YES: (i) What is it? _____

EXCLUSION CRITERIA: If current depression, BDI > 20 or taking meds to treat depression

Comment:

10. a) Have you been hospitalized during the past two years? _____yes _____no

If YES: (i) What for? _____

11. a) Do you ever have trouble sleeping because of pain? _____yes _____no

If YES: (i) What is the cause of your pain? _____

(ii) How often does it disturb your sleep? _____

EXCLUSION CRITERIA: If pain other than related to RLS, frequency > 1/wk

Comment:

12. a) Generally, how many times per night do you wake up and use the bathroom? _____times/night

IF MORE THAN TWICE: (i) How long has this been happening? _____

(ii) Is it illness related? _____yes _____no

(iii) What is the problem?

Comment:

13. EXPECTATIONS/SLEEP HYGIENE

a) Relative to other people your age, do you think your sleep is:

- better
- worse
- the same

IF BETTER OR WORSE: (i) How does it differ? _____

Comment:

14. a) In the evening or at night, how often do you fall asleep in places other than your bedroom? _____ nights/week.

c) Where do you usually fall asleep? _____

d) What time do you usually fall asleep? _____ hr. _____ min.

Comment:

15. a) How much alcohol do you drink? _____ number of drinks per day or week (specify)

b) At what time of the day do you usually drink alcohol? _____

c) How much coffee, tea or coke do you drink? _____ number of drinks per day

d) At what time of the day do you usually drink caffeinated beverages such as coffee, tea or coke? _____ hr. _____ min.

Comment:

16. a) Have you previously received treatment for any sleep-related problems? _____ yes _____ no

IF YES: (i) What was the treatment? _____

(ii) When did you receive it? _____

Comment:

17. a) Have you tried self-help remedies for any sleep-related problems? _____ yes _____ no

IF YES: (i) What have you tried? _____

(ii) How effective was it? _____

Comment:

18. Is there anything else related to your sleep that you think I should know but have not asked you about?

SLEEP QUESTIONNAIRE

Please answer the following referring to the previous month.

1. In general, my sleep is (check one of the following):

- 1a. _____ Good
- 1b. _____ Poor, and I find it distressing
- 1c. _____ Poor, but I do not find it distressing
- 1d. _____ Neither good nor poor, but somewhere in between

2. Do you have insomnia? ___ yes ___ no

2a. If YES, how often to you have insomnia? _____ nights per week

2b. If YES, how long have your had this problem? _____ years _____ months

2c. If YES, how distressed are you by an insomnia problem? Circle the most appropriate number below:

not distressed at all 1 2 3 4 5 6 7 8 9 10 very distressed

3. Check all of the following statements that apply to you:

3a. _____ I have difficulty falling asleep at bedtime.

3b. _____ After falling asleep, I wake up during the night and have difficulty getting back to sleep.

3c. _____ I wake up too early in the morning and cannot get back to sleep.

3d. _____ I do not feel refreshed when I get up in the morning.

OR, if none of the above statements applies to you, check below:

3e. _____ None of the above.

4. At bedtime, how long does it usually take you to fall asleep? _____ hr. _____ min.

5. How many times do you usually wake up during the night? _____ times per night

5a. If you wake up during the night, what is the total amount of time you are usually awake? _____ hr. _____ min.

6. Generally, how many hours of sleep do you feel you need per night? _____ hr. _____ min.

7. How many hours do you usually sleep per night? _____ hr. _____ min.

8. What is the usual time you go to bed? _____ hr. _____ min.

9. What is the usual time you fall asleep? _____ hr. _____ min.

10. What is the usual time you wake up in the morning? _____ hr. _____ min.

11. What is the usual time you get out of bed? _____ hr. _____ min.

12. How often do you take medication to help you sleep? _____ days per week

13. Generally, what is the quality of your sleep? Circle the most appropriate number below:

very poor 1 2 3 4 5 6 7 8 9 10 very good

14. Generally, how satisfied are you with how you sleep? .

very dissatisfied 1 2 3 4 5 6 7 8 9 10 very satisfied

15. When you are lying in bed trying to fall asleep, on a scale of 0 to 100, how tense do you usually feel? Circle the most appropriate number below:

not tense at all 0 10 20 30 40 50 60 70 80 90 100 very tense

16. How refreshed do you usually feel in the morning? Circle the most appropriate number below:

not refreshed at all 1 2 3 4 5 6 7 8 9 10 very refreshed

17. Generally, how tired do you feel during the day? Circle the most appropriate number below:

not tired at all 1 2 3 4 5 6 7 8 9 10 very tired

18. Generally, how sleepy do you feel during the day? Circle the most appropriate number below:

not sleepy at all 1 2 3 4 5 6 7 8 9 10 very sleepy

19. Generally, how difficult is it to concentrate on what you have to do during the day? Circle the most appropriate number below:

not difficult at all 1 2 3 4 5 6 7 8 9 10 very difficult

20. How many days per week do you usually nap? _____ days per week

SLEEP DIARY

Today's Date: day ____ month ____ year ____ Day of the Week: _____

Please answer the following referring to last night.

1. Last night, my sleep was (check one of the following):

- 1a. ____ Good
- 1b. ____ Poor, and I find it distressing
- 1c. ____ Poor, but I do not find it distressing
- 1d. ____ Neither good nor poor, but somewhere in between

2. Did you have insomnia last night? ____ yes ____ no

2a. If yes, how distressed are you about an insomnia problem last night? Circle the most appropriate number below:

Not distressed at all 1 2 3 4 5 6 7 8 9 10 Very distressed

3. Check all of the following statements that applied to you:

- 3a. ____ I had difficulty falling asleep at bedtime.
- 3b. ____ After falling asleep, I woke up during the night and had difficulty getting back to sleep.
- 3c. ____ I woke up too early in the morning and could not get back to sleep.
- 3d. ____ I did not feel refreshed when I got up this morning.

OR, if none of the above statements applied to you, check below:

3e. ____ None of the above.

4. At bedtime, how long did it take you to fall asleep last night? ____ hr. ____ min.

5. How many times did you wake up during the night? ____ times.

5a. If you woke up during the night, what is the total amount of time you were awake? ____ hr. ____ min.

6. How many hours of sleep do you feel you needed last night? ____ hr. ____ min.

7. How many hours did you sleep last night? ____ hr. ____ min.

8. What time did you go to bed last night? ____ p.m.

9. What time did you fall asleep last night? ____ p.m.

10. What time did you wake up this morning? _____ a.m.
11. What time did you get out of bed this morning? _____ a.m.
12. Did you take any medication to help you sleep? ___ yes ___ no
13. What was the quality of your sleep last night? Circle the most appropriate number below:

Very poor 1 2 3 4 5 6 7 8 9 10 Very good

14. How satisfied are you with how you slept last night?

Very dissatisfied 1 2 3 4 5 6 7 8 9 10 Very satisfied

15. When you were lying in bed trying to fall asleep, on a scale of 0 to 100, how tense did you feel last night? Circle the most appropriate number below:

Not tense at all 0 10 20 30 40 50 60 70 80 90 100 Very tense

16. How refreshed did you feel this morning? Circle the most appropriate number below:

Not refreshed at all 1 2 3 4 5 6 7 8 9 10 Very refreshed

Please answer the following questions about YESTERDAY.

17. How tired did you feel during the day? Circle the most appropriate number below:

Not tired at all 1 2 3 4 5 6 7 8 9 10 Very tired

18. How sleepy did you feel during the day? Circle the most appropriate number below:

Not sleepy at all 1 2 3 4 5 6 7 8 9 10 Very sleepy

19. How difficult was it to concentrate on what you had to do during the day? Circle the most appropriate number below:

Not difficult at all 1 2 3 4 5 6 7 8 9 10 Very difficult

20. Did you nap yesterday? ___ yes ___ no

ESS - Yesterday

Instructions:

Referring to yesterday, how likely were you to doze off or fall asleep in the following situations, in contrast to just feeling tired? Even if you did not do some of these things yesterday, try to work out how they would have affected you. Use the following scale to choose the most appropriate number for each situation:

- 0 = did not doze / would not have dozed
- 1 = slight chance of dozing
- 2 = moderate chance of dozing
- 3 = high chance of dozing

Situation	Chance of Dozing <u>Yesterday</u>
1. Sitting and reading	_____
2. Watching TV	_____
3. Sitting, inactive in a public place (e.g., a theater, or a meeting)	_____
4. As a passenger in a car for an hour when circumstances permit	_____
5. Lying down to rest in the afternoon when circumstances permit	_____
6. Sitting and talking to someone	_____
7. Sitting quietly after lunch without alcohol	_____
8. In a car, while stopped for a few minutes in the traffic	_____

FSS- Yesterday

Instructions:

Below are a series of statements regarding fatigue. By fatigue we mean a sense of tiredness, lack of energy, or total body give-out. Please read each statement and circle a number from 1 to 7 that indicates your degree of agreement with each statement where 1 indicates you **strongly disagree** and 7 indicates you **strongly agree**.

Please answer these questions as they applied **yesterday**.

	STRONGLY DISAGREE				STRONGLY AGREE			
1. My motivation was low because I was fatigued...	1	2	3	4	5	6	7	
2. Exercise brought (would have brought) on my fatigue.....	1	2	3	4	5	6	7	
3. I was easily fatigued.....	1	2	3	4	5	6	7	
4. Fatigue interfered with my physical functioning...	1	2	3	4	5	6	7	
5. Fatigue caused problems for me.....	1	2	3	4	5	6	7	
6. My fatigue prevented sustained physical functioning.....	1	2	3	4	5	6	7	
7. Fatigue interfered with carrying out certain duties and responsibilities.....	1	2	3	4	5	6	7	
8. Fatigue was among my three most disabling symptoms.....	1	2	3	4	5	6	7	
9. Fatigue interfered with my work, family, or social life.....	1	2	3	4	5	6	7	

SSS- Yesterday

Instructions:

Indicate with an "X" which statement best describes how sleepy you were generally feeling yesterday.

1. ___ felt active and vital; alert; wide awake
2. ___ functioned at a high level, but not at peak; able to concentrate
3. ___ relaxed; awake; not at full alertness; responsive
4. ___ a little foggy; not at peak; let down
5. ___ fogginess; beginning to lose interest in remaining awake; slowed down
6. ___ sleepiness; preferred to be lying down; fighting sleep; woozy
7. ___ almost in reverie; sleep onset soon; lost struggle to remain awake

SFM-Yesterday

The following are statements about your experience of fatigue yesterday. Please indicate the degree to which you agree with these statements concerning yesterday by circling the appropriate number.

1. I had problems with tiredness.

Strongly disagree 1 2 3 4 5 6 **Strongly agree**

2. I needed to rest a lot.

Strongly disagree 1 2 3 4 5 6 **Strongly agree**

3. I felt sleepy or drowsy.

Strongly disagree 1 2 3 4 5 6 **Strongly agree**

4. I had problems starting things.

Strongly disagree 1 2 3 4 5 6 **Strongly agree**

5. I started things without difficulty but got weak as I went on.

Strongly disagree 1 2 3 4 5 6 **Strongly agree**

6. I was lacking in energy.

Strongly disagree 1 2 3 4 5 6 **Strongly agree**

7. I had little strength in my muscles.

Strongly disagree 1 2 3 4 5 6 **Strongly agree**

8. I felt weak.

Strongly disagree 1 2 3 4 5 6 **Strongly agree**

9. I had difficulty concentrating.

Strongly disagree 1 2 3 4 5 6 **Strongly agree**

10. I had problems thinking clearly.

Strongly disagree 1 2 3 4 5 6 **Strongly agree**

11. I made slips of the tongue when speaking.

Strongly disagree 1 2 3 4 5 6 **Strongly agree**

12. I had difficulty finding the correct word.

Strongly disagree 1 2 3 4 5 6 **Strongly agree**

13. I had trouble with my memory.

Strongly disagree 1 2 3 4 5 6 **Strongly agree**

14. I had little interest in the things I usually do.

Strongly disagree 1 2 3 4 5 6 **Strongly agree**

SELF-EVALUATION QUESTIONNAIRE-T

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then put an "x" on the appropriate number to the right of the statement to indicate how you *generally* feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you *generally* feel.

	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
1. I feel pleasant.....	1	2	3	4
2. I feel nervous and restless.....	1	2	3	4
3. I feel satisfied with myself.....	1	2	3	4
4. I wish I could be as happy as others seem to be.....	1	2	3	4
5. I feel like a failure.....	1	2	3	4
6. I feel rested.....	1	2	3	4
7. I am "calm, cool, and collected".....	1	2	3	4
8. I feel that difficulties are piling up so that I cannot overcome them	1	2	3	4
9. I worry too much about something that really doesn't matter.....	1	2	3	4
10. I am happy.....	1	2	3	4
11. I have disturbing thoughts.....	1	2	3	4
12. I lack self-confidence.....	1	2	3	4
13. I feel secure.....	1	2	3	4
14. I make decisions easily.....	1	2	3	4
15. I feel inadequate.....	1	2	3	4
16. I am content.....	1	2	3	4
17. Some unimportant thought runs through my mind and bothers me.....	1	2	3	4
18. I take disappointments so keenly that I can't put them out of my mind	1	2	3	4
19. I am a steady person.....	1	2	3	4
20. I get in a state of tension or turmoil as I think over my recent concerns and interests.....	1	2	3	4

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness

- 0 I do not feel sad.
- 1 I feel sad much of the time.
- 2 I am sad all the time.
- 3 I am so sad or unhappy that I can't stand it.

2. Pessimism

- 0 I am not discouraged about my future.
- 1 I feel more discouraged about my future than I used to be.
- 2 I do not expect things to work out for me.
- 3 I feel my future is hopeless and will only get worse.

3. Past Failure

- 0 I do not feel like a failure.
- 1 I have failed more than I should have.
- 2 As I look back, I see a lot of failures.
- 3 I feel I am a total failure as a person.

4. Loss of Pleasure

- 0 I get as much pleasure as I ever did from the things I enjoy.
- 1 I don't enjoy things as much as I used to.
- 2 I get very little pleasure from the things I used to enjoy.
- 3 I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings

- 0 I don't feel particularly guilty.
- 1 I feel guilty over many things I have done or should have done.
- 2 I feel quite guilty most of the time.
- 3 I feel guilty all of the time.

6. Punishment Feelings

- 0 I don't feel I am being punished.
- 1 I feel I may be punished.
- 2 I expect to be punished.
- 3 I feel I am being punished.

7. Self-Dislike

- 0 I feel the same about myself as ever.
- 1 I have lost confidence in myself.
- 2 I am disappointed in myself.
- 3 I dislike myself.

8. Self-Criticalness

- 0 I don't criticize or blame myself more than usual.
- 1 I am more critical of myself than I used to be.
- 2 I criticize myself for all of my faults.
- 3 I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes

- 0 I don't have any thoughts of killing myself.
- 1 I have thoughts of killing myself, but I would not carry them out.
- 2 I would like to kill myself.
- 3 I would kill myself if I had the chance.

10. Crying

- 0 I don't cry anymore than I used to.
- 1 I cry more than I used to.
- 2 I cry over every little thing.
- 3 I feel like crying, but I can't.

11. Agitation

- 0 I am no more restless or wound up than usual.
- 1 I feel more restless or wound up than usual.
- 2 I am so restless or agitated that it's hard to stay still.
- 3 I am so restless or agitated that I have to keep moving or doing something.

12. Loss of Interest

- 0 I have not lost interest in other people or activities.
- 1 I am less interested in other people or things than before.
- 2 I have lost most of my interest in other people or things.
- 3 It's hard to get interested in anything.

13. Indecisiveness

- 0 I make decisions about as well as ever.
- 1 I find it more difficult to make decisions than usual.
- 2 I have much greater difficulty in making decisions than I used to.
- 3 I have trouble making any decisions.

14. Worthlessness

- 0 I do not feel I am worthless.
- 1 I don't consider myself as worthwhile and useful as I used to.
- 2 I feel more worthless as compared to other people.
- 3 I feel utterly worthless.

15. Loss of Energy

- 0 I have as much energy as ever.
- 1 I have less energy than I used to have.
- 2 I don't have enough energy to do very much.
- 3 I don't have enough energy to do anything.

16. Changes in Sleeping Pattern

- 0 I have not experienced any change in my sleeping pattern.

- 1a I sleep somewhat more than usual.
- 1b I sleep somewhat less than usual.

- 2a I sleep a lot more than usual.
- 2b I sleep a lot less than usual.

- 3a I sleep most of the day.
- 3b I wake up 1-2 hours early and can't get back to sleep.

17. Irritability

- 0 I am no more irritable than usual.
- 1 I am more irritable than usual.
- 2 I am much more irritable than usual.
- 3 I am irritable all the time.

18. Changes in Appetite

- 0 I have not experienced any change in my appetite.

- 1a My appetite is somewhat less than usual.
- 1b My appetite is somewhat greater than usual.

- 2a My appetite is much less than before.
- 2b My appetite is much greater than usual.

- 3a I have no appetite at all.
- 3b I crave food all the time.

19. Concentration Difficulty

- 0 I can concentrate as well as ever.
- 1 I can't concentrate as well as usual.
- 2 It's hard to keep my mind on anything for very long.
- 3 I find I can't concentrate on anything.

20. Tiredness or Fatigue

- 0 I am no more tired or fatigued than usual.
- 1 I get more tired or fatigued more easily than usual.
- 2 I am too tired or fatigued to do a lot of the things I used to do.
- 3 I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex

- 0 I have not noticed any recent change in my interest in sex.
- 1 I am less interested in sex than I used to be.
- 2 I am much less interested in sex now.
- 3 I have lost interest in sex completely.

INSTRUCTIONS:

Below is a list of problems people sometimes have. Please read each one carefully, and circle the number to the right that best describes HOW MUCH THAT PROBLEM HAS DISTRESSED OR BOTHERED YOU DURING THE PAST 7 DAYS INCLUDING TODAY. Circle only one number for each problem and do not skip any items. If you change your mind, erase your first mark carefully. Read the example below before beginning, and if you have any questions please ask about them.

SEX

MALE

FEMALE

[Empty box for notes or additional information]

EXAMPLE	NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
HOW MUCH WERE YOU DISTRESSED BY:					
1. Bodyaches	0	1	2	3	4

HOW MUCH WERE YOU DISTRESSED BY:	NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
1. Nervousness or shakiness inside	0	1	2	3	4
2. Faintness or dizziness	0	1	2	3	4
3. The idea that someone else can control your thoughts	0	1	2	3	4
4. Feeling others are to blame for most of your troubles	0	1	2	3	4
5. Trouble remembering things	0	1	2	3	4
6. Feeling easily annoyed or irritated	0	1	2	3	4
7. Pains in heart or chest	0	1	2	3	4
8. Feeling afraid in open spaces or on the streets	0	1	2	3	4
9. Thoughts of ending your life	0	1	2	3	4
10. Feeling that most people cannot be trusted	0	1	2	3	4
11. Poor appetite	0	1	2	3	4
12. Suddenly scared for no reason	0	1	2	3	4
13. Temper outbursts that you could not control	0	1	2	3	4
14. Feeling lonely even when you are with people	0	1	2	3	4
15. Feeling blocked in getting things done	0	1	2	3	4
16. Feeling lonely	0	1	2	3	4
17. Feeling blue	0	1	2	3	4
18. Feeling no interest in things	0	1	2	3	4
19. Feeling fearful	0	1	2	3	4
20. Your feelings being easily hurt	0	1	2	3	4
21. Feeling that people are unfriendly or dislike you	0	1	2	3	4
22. Feeling inferior to others	0	1	2	3	4
23. Nausea or upset stomach	0	1	2	3	4
24. Feeling that you are watched or talked about by others	0	1	2	3	4
25. Trouble falling asleep	0	1	2	3	4
26. Having to check and double check what you do	0	1	2	3	4
27. Difficulty making decisions	0	1	2	3	4
28. Feeling afraid to travel on buses, subways, or trains	0	1	2	3	4
29. Trouble getting your breath	0	1	2	3	4
30. Hot or cold spells	0	1	2	3	4
31. Having to avoid certain things, places, or activities because they frighten you	0	1	2	3	4
32. Your mind going blank	0	1	2	3	4
33. Numbness or tingling in parts of your body	0	1	2	3	4
34. The idea that you should be punished for your sins	0	1	2	3	4

HOW MUCH WERE YOU DISTRESSED BY:

		NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
36. Trouble concentrating	36	0	1	2	3	4
37. Feeling weak in parts of your body	37	0	1	2	3	4
38. Feeling tense or keyed up	38	0	1	2	3	4
39. Thoughts of death or dying	39	0	1	2	3	4
40. Having urges to beat, injure, or harm someone	40	0	1	2	3	4
41. Having urges to break or smash things	41	0	1	2	3	4
42. Feeling very self-conscious with others	42	0	1	2	3	4
43. Feeling uneasy in crowds, such as shopping or at a movie	43	0	1	2	3	4
44. Never feeling close to another person	44	0	1	2	3	4
45. Spells of terror or panic	45	0	1	2	3	4
46. Getting into frequent arguments	46	0	1	2	3	4
47. Feeling nervous when you are left alone	47	0	1	2	3	4
48. Others not giving you proper credit for your achievements	48	0	1	2	3	4
49. Feeling so restless you couldn't sit still	49	0	1	2	3	4
50. Feelings of worthlessness	50	0	1	2	3	4
51. Feeling that people will take advantage of you if you let them	51	0	1	2	3	4
52. Feelings of guilt	52	0	1	2	3	4
53. The idea that something is wrong with your mind	53	0	1	2	3	4

EPQ-R Short

INSTRUCTIONS: Please answer each question by putting a circle around the 'YES' or 'NO' following the question. There are no right or wrong answers, and no trick questions. Work quickly and do not think too long about the exact meaning of the questions.

■ PLEASE REMEMBER TO ANSWER EACH QUESTION**PAGE 1**

1	Does your mood often go up and down?	YES	NO
2	Do you take much notice of what people think?	YES	NO
3	Are you a talkative person?	YES	NO
4	If you say you will do something, do you always keep your promise no matter how inconvenient it may be?	YES	NO
5	Do you ever feel 'just miserable' for no reason?	YES	NO
6	Would being in debt worry you?	YES	NO
7	Are you rather lively?	YES	NO
8	Were you ever greedy by helping yourself to more than your fair share of anything?	YES	NO
9	Are you an irritable person?	YES	NO
10	Would you take drugs which may have strange or dangerous effects?	YES	NO
11	Do you enjoy meeting new people?	YES	NO
12	Have you ever blamed someone for doing something you knew was really your fault?	YES	NO
13	Are your feelings easily hurt?	YES	NO
14	Do you prefer to go your own way rather than act by the rules?	YES	NO
15	Can you usually let yourself go and enjoy yourself at a lively party?	YES	NO
16	Are <i>all</i> your habits good and desirable ones?	YES	NO
17	Do you often feel 'fed-up'?	YES	NO
18	Do good manners and cleanliness matter much to you?	YES	NO
19	Do you usually take the initiative in making new friends?	YES	NO
20	Have you ever taken anything (even a pin or button) that belonged to someone else?	YES	NO
21	Would you call yourself a nervous person?	YES	NO
22	Do you think marriage is old-fashioned and should be done away with?	YES	NO
23	Can you easily get some life into a rather dull party?	YES	NO
24	Have you ever broken or lost something belonging to someone else?	YES	NO
25	Are you a worrier?	YES	NO

EPQ-R Short

PAGE 2

26	Do you enjoy cooperating with others?	YES	NO
27	Do you tend to keep in the background on social occasions?	YES	NO
28	Does it worry you if you know there are mistakes in your work?	YES	NO
29	Have you ever said anything bad or nasty about anyone?	YES	NO
30	Would you call yourself tense or 'highly-strung'?	YES	NO
31	Do you think people spend too much time safeguarding their future with savings and insurance?	YES	NO
32	Do you like mixing with people?	YES	NO
33	As a child were you ever cheeky to your parents?	YES	NO
34	Do you worry too long after an embarrassing experience?	YES	NO
35	Do you try not to be rude to people?	YES	NO
36	Do you like plenty of bustle and excitement around you?	YES	NO
37	Have you ever cheated at a game?	YES	NO
38	Do you suffer from 'nerves'?	YES	NO
39	Would you like other people to be afraid of you?	YES	NO
40	Have you ever taken advantage of someone?	YES	NO
41	Are you mostly quiet when you are with other people?	YES	NO
42	Do you often feel lonely?	YES	NO
43	Is it better to follow society's rules than go your own way?	YES	NO
44	Do other people think of you as being very lively?	YES	NO
45	Do you always practise what you preach?	YES	NO
46	Are you often troubled by feelings of guilt?	YES	NO
47	Do you sometimes put off until tomorrow what you ought to do today?	YES	NO
48	Can you get a party going?	YES	NO

■ PLEASE CHECK THAT YOU HAVE ANSWERED ALL THE QUESTIONS

The SF-36™ Health Survey

Instructions for Completing the Questionnaire

Please answer every question. Some questions may look like others, but each one is different. Please take the time to read and answer each question carefully by filling in the bubble that best represents your response.

EXAMPLE

This is for your review. Do not answer this question. The questionnaire begins with the section *Your Health in General* below.

For each question you will be asked to fill in a bubble in each line:

1. How strongly do you agree or disagree with each of the following statements?

	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
a) I enjoy listening to music.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I enjoy reading magazines.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please begin answering the questions now.

Your Health in General

1. In general, would you say your health is:

Excellent	Very good	Good	Fair	Poor
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Compared to one year ago, how would you rate your health in general now?

Much better now than one year ago	Somewhat better now than one year ago	About the same as one year ago	Somewhat worse now than one year ago	Much worse now than one year ago
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please turn the page and continue.

3. The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

	Yes, Limited a lot	Yes, limited a little	No, not limited at all
a) Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Lifting or carrying groceries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Climbing several flights of stairs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Climbing one flight of stairs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Bending, kneeling, or stooping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Walking more than a mile	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Walking several blocks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) Walking one block	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j) Bathing or dressing yourself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	Yes	No
a) Cut down on the amount of time you spent on work or other activities	<input type="radio"/>	<input type="radio"/>
b) Accomplished less than you would like	<input type="radio"/>	<input type="radio"/>
c) Were limited in the kind of work or other activities	<input type="radio"/>	<input type="radio"/>
d) Had difficulty performing the work or other activities (for example, it took extra time)	<input type="radio"/>	<input type="radio"/>

5. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

	Yes	No
a) Cut down on the amount of time you spent on work or other activities	<input type="radio"/>	<input type="radio"/>
b) Accomplished less than you would like	<input type="radio"/>	<input type="radio"/>
c) Didn't do work or other activities as carefully as usual	<input type="radio"/>	<input type="radio"/>

Please turn the page to continue.

6. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?

Not at all Slightly Moderately Quite a bit Extremely

7. How much bodily pain have you had during the past 4 weeks?

None Very mild Mild Moderate Severe Very severe

8. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

Not at all A little bit Moderately Quite a bit Extremely

9. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...

All of the time	Most of the time	A good bit of the time	Some of the time	A little of the time	None of the time
-----------------	------------------	------------------------	------------------	----------------------	------------------

- a) did you feel full of pep?
- b) have you been a very nervous person?
- c) have you felt so down in the dumps nothing could cheer you up?
- d) have you felt calm and peaceful?
- e) did you have a lot of energy?
- f) have you felt downhearted and blue?
- g) did you feel worn out?
- h) have you been a happy person?
- i) did you feel tired?

10. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?

All of the time Most of the time Some of the time A little of the time None of the time

11. How TRUE or FALSE is each of the following statements for you?

Definitely true	Mostly true	Don't know	Mostly false	Definitely false
-----------------	-------------	------------	--------------	------------------

- a) I seem to get sick a little easier than other people
- b) I am as healthy as anybody I know
- c) I expect my health to get worse
- d) My health is excellent

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!

Appendix F: French Measures Used in this Study

FORMULAIRE DE L'INFORMATION DÉMOGRAPHIQUE

1. Genre: Homme Femme

2. Âge: _____ ans

3. Éducation (le plus haut niveau atteint, cochez tout ce qui s'applique à votre cas):

- primaire
 secondaire
 CEGEP, institut technique, etc.
 université
 maîtrise, doctorat, études post-doctorales

4. Combien d'années de scolarité avez-vous complétées? _____ (Veuillez compter à partir de la première année du primaire)

5. Occupation (Cochez tout ce qui s'applique à votre cas):

- étudiant(e)
 employé(e) à temps plein
 employé(e) à temps partiel
 à la recherche d'un emploi
 incapable de travailler pour le moment (ex., congé de maternité, d'incapacité, de maladie, etc.)
 femme / homme au foyer
 à la retraite
 bénévole
 Autre (Précisez) _____

6. État civil (Cochez tout ce qui s'applique à votre cas):

- Marié(e) à présent
 Cohabite avec un (une) partenaire mais pas marié
 Séparé(e)
 Divorcé(e)
 Veuf(ve)
 Célibataire

7. Situation d'hébergement

- Je vis seul(e)
 Je vis avec mon époux(se) / un (une) partenaire
 Autre (Précisez) _____

8. Revenu familial pour l'année dernière. (Cochez la catégorie qui y correspond le mieux):

- | | |
|--|--|
| <input type="checkbox"/> 10,000 ou moins | <input type="checkbox"/> 50,000 – 60,000 |
| <input type="checkbox"/> 10,000 – 20,000 | <input type="checkbox"/> 60,000 – 70,000 |
| <input type="checkbox"/> 20,000 – 30,000 | <input type="checkbox"/> 70,000 – 80,000 |
| <input type="checkbox"/> 30,000 – 40,000 | <input type="checkbox"/> 80,000 ou plus |
| <input type="checkbox"/> 40,000 – 50,000 | |

9. Satisfaction avec le revenu: Cochez le carré qui décrit le mieux à quel point vous trouvez que votre revenu annuel vous est suffisant.

Pas suffisant

--	--	--	--	--	--	--	--	--	--

 Plus que suffisant

Suffisant

ENTREVUE STRUCTURÉE DE L'HISTORIQUE DU SOMMEIL

[Note à l'interviewer : Assurez-vous d'obtenir une réponse en nombre pour toutes les questions même si l'unité déclarée par le (la) participant(e) n'est pas celle qui est mentionnée dans la question. Par exemple, 1a) (i) peut être 1 jour/mois. N'oubliez pas d'indiquer la bonne unité. Si possible, évitez les réponses comme ça varie, ça dépend et toute ma vie.]

JE VAIS VOUS POSER QUELQUES QUESTIONS SUR VOS HABITUDES DE SOMMEIL.

0. DIFFICULTÉS PENDANT LA JOURNÉE

a) Est-ce que vous vous sentez épuisé(e) pendant la journée? Oui Non

Si OUI : (i) À quelle fréquence cela se produit-il? jours/semaine

(ii) Depuis quand avez-vous ce problème? ans mois

b) Est-ce que vous vous sentez somnolent(e) pendant la journée? Oui Non

Si OUI : (i) À quelle fréquence cela se produit-il? jours/semaine

(ii) Depuis quand avez-vous ce problème? ans mois

Commentaires:

1. APNÉE

a) Est-ce que vous ronflez? Oui Non

Si OUI : (i) À quelle fréquence cela se produit-il? jours/semaine

(ii) Depuis quand avez-vous ce problème? ans mois

b) Est-ce que quelqu'un s'est plaint du fait que vous ronflez? Oui Non

c) Opinion de l'interviewer sur le niveau de l'embonpoint du (de la) participant(e); encerclez le chiffre qui y correspond.

Pas du tout obèse 1 2 3 4 5 Obèse

d) Est-ce qu'il vous arrive de vous réveiller la nuit et de vous sentir incapable de respirer? Oui Non

Si OUI : (i) À quelle fréquence cela se produit-il? jours/semaine

(ii) Depuis quand avez-vous ce problème? ans mois

e) Est-ce que quelqu'un vous a dit que vous semblez arrêter de respirer la nuit ? Oui Non

f) Est-ce que vous vous réveillez avec un mal de tête? Oui Non

Si OUI : (i) À quelle fréquence cela se produit-il? jours/semaine

(ii) Depuis quand avez-vous ce problème? ans mois

g) Est-ce que vous vous réveillez le matin avec la bouche sèche? Oui Non

Si OUI : (i) À quelle fréquence cela se produit-il? _____ jours/semaine
(ii) Depuis quand avez-vous ce problème? _____ ans _____ mois

Commentaires:

2. SYNDROME IDIOPATHIQUE DES MOUVEMENTS PÉRIODIQUES DES MEMBRES ET DES «JAMBES SANS REPOS»

a) Est-ce que vos jambes vous dérangent la nuit après que vous vous mettez au lit (ex., avez-vous crampes, des mouvements brusques, une sensation de fourmillement)? _____ Oui _____ Non

Si OUI : (i) À quelle fréquence cela se produit-il? _____ jours/semaine
(ii) Depuis quand avez-vous ce problème? _____ ans _____ mois

b) Est-ce qu'il vous arrive la nuit d'avoir l'impression que quelque chose vous fourmille sur les jambes au point où vous devez les secouer ou les bouger brusquement pour vous en débarrasser?
_____ Oui _____ Non

Si OUI : (i) À quelle fréquence cela se produit-il? _____ jours/semaine
(ii) Depuis quand avez-vous ce problème? _____ ans _____ mois

c) Est-ce qu'il vous arrive de vous réveiller à cause d'une crampe aux jambes? _____ Oui _____ Non

Si OUI : (i) À quelle fréquence cela se produit-il? _____ jours/semaine
(ii) Depuis quand avez-vous ce problème? _____ ans _____ mois

d) Avez-vous remarqué que certaines parties de votre corps bougent brusquement pendant la nuit?
_____ Oui _____ Non

Si OUI : (i) À quelle fréquence cela se produit-il? _____ jours/semaine
(ii) Depuis quand avez-vous ce problème? _____ ans _____ mois

e) Est-ce que quelqu'un vous a dit que certaines parties de votre corps bougent brusquement pendant la nuit? _____ Oui _____ Non

Commentaires:

3. PARASOMNIES

a) Faites-vous des cauchemars? _____ Oui _____ Non

Si OUI : (i) À quelle fréquence cela se produit-il? _____ nuits/mois
(ii) Depuis quand avez-vous ce problème? _____ ans _____ mois
(iii) A quelle fréquence est-ce que ces cauchemars vous réveillent? _____ nuits/mois

b) Est-ce qu'il vous arrive de vous réveiller effrayé(e) sans vous souvenir du rêve, ou de ne vous souvenir que d'une seule image terrifiante? _____ Oui _____ Non

- Si OUI : (i) À quelle fréquence cela se produit-il? _____ jours/mois
(ii) Depuis quand avez-vous ce problème? _____ ans _____ mois
(iii) Est-ce que vous remarquez alors que vous transpirez, que votre cœur bat rapidement? _____ Oui _____ Non

c) Êtes-vous somnambule? _____ Oui _____ Non

- Si OUI : (i) À quelle fréquence cela se produit-il? _____ jours/mois
(ii) Depuis quand êtes-vous somnambule? _____ ans _____ mois

Commentaires:

4. SOMNOLENCE EXCESSIVE PENDANT LA JOURNÉE

a) Avez-vous du mal à vous réveiller? _____ Oui _____ Non

- Si OUI : (i) À quelle fréquence cela se produit-il? _____ jours/semaine
(ii) Depuis quand avez-vous ce problème? _____ ans _____ mois

b) Avez-vous du mal à rester éveillé(e) pendant la journée lorsque vous voulez vraiment rester éveillé(e)? _____ Oui _____ Non

- Si OUI : (i) À quelle fréquence cela se produit-il? _____ jours/semaine
(ii) Depuis quand avez-vous ce problème? _____ ans _____ mois

c) Avez-vous du mal à rester éveillé(e) à des moments inopportuns (ex., pendant que vous êtes au volant, à table avec des amis, au travail, etc.)?
_____ Oui _____ Non

- Si OUI : (i) À quelle fréquence cela se produit-il? _____ jours/semaine
(ii) Depuis quand avez-vous ce problème? _____ ans _____ mois
(iii) Précisez le(s) moment(s) où cela se produit en donnant un (des) exemples :

Commentaires:

5. HORAIRE DE SOMMEIL ET D'ÉVEIL

a) A présent, est-ce que vous travaillez la nuit ou à des heures qui varient d'une semaine à l'autre?
_____ Oui _____ Non

- Si OUI : (i) Décrivez votre horaire de travail _____
(ii) Depuis quand est-ce que vous travaillez à ces heures? _____

b) Est-ce qu'il vous arrive de traverser des fuseaux horaires? _____ Oui _____ Non

- Si OUI : (i) La dernière fois était _____
(ii) Est-ce que vous avez souffert du décalage horaire? _____ Oui _____ Non

SI OUI, DEMANDE AU (À LA) PARTICIPANT(E) DE REVENIR UN MOIS APRÈS L'EFFET DU DÉCALAGE HORAIRE.

Commentaires:

RENSEIGNEMENT MÉDICAUX

6. a) Prenez-vous un (des) médicament(s) prescrit(s) ou non-prescrit(s) pour des troubles du sommeil?
 Oui Non
- b) Avez-vous récemment cessé de prendre un (des) médicament(s) prescrit(s) ou non-prescrit(s) pour des troubles du sommeil? Oui Non

Si OUI à (a) ou à (b), écrivez la réponse aux questions suivantes au tableau ci-dessous:

- (i) Quel(s) médicament(s) prenez-vous (preniez-vous)?
- (ii) Quelle en est (était) la dose?
- (iii) Combien de jours par semaine le (les) prenez-vous (preniez -vous)?
- (iv) Depuis quand prenez-vous ce(s) médicament(s) pour vous endormir? (pendant combien de temps avez-vous pris) ce(s) médicament(s) pour vous endormir?
- (v) Si vous ne prenez plus ce(s) médicament(s), quand est-ce que vous avez cessé de le(s) prendre?

(i) MÉDICAMENT(S)	(ii) DOSE	(iii) NUITS/ SEMAINE	(iv) DURÉE	(v) DATE DE CESSATION
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

CRITÈRE D'EXCLUSION: Si les médicaments causent de la somnolence, de la fatigue, de l'insomnie, (Se référer à la liste ou au CPS)

Commentaires :

7. a) Prenez-vous un autre (d'autres) médicament(s) en ce moment? Oui Non

Si OUI :

(i) Quel(s) médicament(s)?	(ii) Pour quelle(s) Maladie(s)?	(iii) Dose
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

b) Croyez-vous que ce(s) médicament(s) affectent votre sommeil? ____ Oui ____ Non

Si OUI : (i) Lequel (Lesquels)? _____

(ii) De quelle façon? _____

CRITÈRE D'EXCLUSION : Si les médicaments causent de la somnolence, de la fatigue, de l'insomnie, (Se référer à la liste ou au CPS)

Commentaires:

8. a) Combien de fois avez-vous consulté le médecin pendant les six derniers mois? ____ fois

b) Souffrez-vous d'une maladie quelconque? ____ Oui ____ Non

Si OUI : (i) Laquelle (Lesquelles)? _____

CRITÈRE D'EXCLUSION : Si la maladie cause de la somnolence, de la fatigue, de l'insomnie, (Se référer à la liste)

Commentaires :

9. a) Avez-vous souffert d'une dépression sévère au courant de l'année dernière?
____ Oui ____ Non

Si OUI : (i) Combien de temps a-t-elle duré? _____

(ii) Faites-vous présentement une dépression? ____ Oui ____ Non

- b) Est-ce que vous prenez des médicaments pour la dépression en ce moment? ____ Oui ____ Non

Si OUI : (i) Lesquels? _____

CRITÈRE D'EXCLUSION : Si déprimé(e) à présent, BDI > 20 ou si le (la) participant(e) prend des médicaments pour la dépression.

Commentaires :

10. a) Avez-vous été hospitalisé(e) au courant des deux dernières années? ____ Oui ____ Non

Si OUI : (i) Pour quelle maladie? _____

11. a) Avez-vous parfois du mal à dormir à cause des douleurs? ____ Oui ____ Non

Si OUI : (i) Quelle est l'origine de vos douleurs? _____

(ii) À quelle fréquence est-ce que les douleurs dérangent votre sommeil? _____

CRITÈRE D'EXCLUSION : Si les douleurs sont liées à autre chose que RLS, fréquence > 1/semaine

Commentaires :

12. a) D'habitude, combien de fois est-ce que vous vous réveillez la nuit pour aller aux toilettes ?
____ fois/nuit

SI PLUS QUE DEUX FOIS : (i) Depuis quand cela vous arrive-t-il? _____

(ii) Est-ce dû à une maladie quelconque? ____ Oui ____ Non

(iii) Laquelle? _____

Commentaires :

13. ATTENTES/ HYGIÈNE DE SOMMEIL

- a) Comment évaluez-vous votre sommeil par rapport à celui des gens de votre âge?

____ Meilleur

____ Pareille

____ Pire

SI MEILLEUR OU PIRE : En quoi est-il différent? _____

Commentaires :

14. a) Pendant la soirée ou la nuit, combien de fois est-ce qu'il vous arrive de vous endormir ailleurs que dans votre lit? _____ nuits/semaine
- b) Où est-ce que vous vous endormez d'habitude? _____
- c) À quelle heure est-ce que vous vous endormez d'habitude? ____ H ____.

Commentaires :

15. a) Combien d'alcool est-ce que vous prenez? _____ boissons par jour ou semaine (précisez).
- b) À quelle heure prenez-vous habituellement de l'alcool? _____
- c) Combien de café, de thé, ou de Coca-Cola prenez-vous? _____ breuvages par jour.
- d) À quelle heure prenez-vous généralement ces breuvages)? ____ H. ____.

Commentaires :

16. a) Avez-vous déjà reçu du traitement pour des problèmes liés au sommeil?
____ Oui ____ Non

Si OUI : (i) Lequel? _____
(ii) Quand avez-vous été traité(e)? _____

Commentaires :

17. a) Avez-vous essayé des remèdes naturels pour les problèmes liés au sommeil?
____ Oui ____ Non

Si OUI : (i) Lequel (lesquels) avez-vous essayé(s)? _____
(ii) A quel point a-t-il (ont-ils) été efficace(s)? _____

Commentaires :

18. Est-ce qu'il y a d'autres informations sur votre sommeil que vous aimeriez ajouter?

QUESTIONNAIRE SUR LE SOMMEIL

Veillez répondre aux questions suivantes en vous référant au mois dernier.

1. En général, mon sommeil est (cochez une réponse seulement):

- 1a. _____ Bon
- 1b. _____ Mauvais et je trouve cela bouleversant
- 1c. _____ Mauvais mais ce n'est pas bouleversant
- 1d. _____ Ni bon ni mauvais; plutôt entre les deux

2. Avez-vous des insomnies? ___ Oui ___ Non

2a. Si OUI, à quelle fréquence avez-vous des insomnies? _____ nuits par semaine

2b. Si OUI, depuis quand en avez-vous? _____ ans _____ mois

2c. Si OUI, à quel point êtes-vous bouleversé(e) par le problème d'insomnie? Encerclez le chiffre qui y correspond le mieux.

Pas du tout bouleversé(e) 1 2 3 4 5 6 7 8 9 10 Très bouleversé(e)

3. Cochez celles des phrases suivantes qui s'appliquent à votre cas :

- 3a. _____ J'ai des difficultés à m'endormir à l'heure du coucher.
- 3b. _____ Après m'être endormi(e), je me réveille pendant la nuit et j'ai des difficultés à me rendormir.
- 3c. _____ Je me réveille trop tôt le matin et je ne peux pas me rendormir.
- 3d. _____ Je ne me sens pas reposé(e) quand je me lève le matin.

OU, si aucune de ces phrases ne s'applique à votre cas, cochez la réponse ci-dessous:

3e. _____ Aucune de ces phrases ne s'applique à mon cas.

4. À l'heure du coucher, combien de temps est-ce qu'il vous faut habituellement pour vous endormir? _____ heures _____ min.

5. D'habitude combien de fois est-ce que vous vous réveillez pendant la nuit? _____ fois

5a. Si vous vous réveillez pendant la nuit, d'habitude pendant combien d'heures au total est-ce que restez éveillé(e)? _____ heures _____ min.

6. A votre avis, combien d'heures de sommeil vous faut-il par nuit en général? ___ heures ___ min.

7. En moyenne, combien d'heures est-ce que vous dormez par nuit? _____ heures _____ min.

8. D'habitude, à quelle heure est-ce que vous vous mettez au lit? _____ heures _____ min.

9. D'habitude, à quelle heure est-ce que vous vous endormez d'habitude? _____ heures ____ min.
10. D 'habitude, à quelle heure est-ce que vous vous réveillez le matin _____ heures ____ min.
11. À quelle heure est-ce que vous vous levez d'habitude? _____ heures ____ min.
12. Combien de fois prenez-vous des médicaments pour dormir? ____ jours par semaine
13. En général, quelle est la qualité de votre sommeil? Encerclez le chiffre qui y correspond le mieux.
- Très mauvaise 1 2 3 4 5 6 7 8 9 10 Très bonne
14. En général, à quel point êtes-vous satisfait(e) de la qualité de votre sommeil? Encerclez le chiffre qui y correspond le mieux.
- Pas du tout satisfait(e) 1 2 3 4 5 6 7 8 9 10 Tout à fait satisfait(e)
15. Lorsque vous êtes au lit et que vous essayez de vous endormir, à quel point êtes-vous tendu(e) d'habitude? Sur une échelle de 0 à 100, encerclez le chiffre qui y correspond le mieux
- Pas du tout tendu(e) 1 2 3 4 5 6 7 8 9 10 Tout à fait tendu(e)
16. En général, à quel point est-ce que vous vous sentez reposé(e) le matin? Encerclez le chiffre qui y correspond le mieux.
- Pas du tout reposé(e) 1 2 3 4 5 6 7 8 9 10 Tout à fait reposé(e)
17. En général, à quel point est-ce que vous vous sentez fatigué(e) pendant la journée? Encerclez le chiffre qui y correspond le mieux.
- Pas du tout fatigué(e) 1 2 3 4 5 6 7 8 9 10 Très fatigué(e)
18. En général, à quel point êtes-vous somnolente pendant la journée? Encerclez le chiffre qui y correspond le mieux.
- Pas du tout somnolent(e) 1 2 3 4 5 6 7 8 9 10 Très somnolente
19. En général, jusqu'à quel point est-ce que vous trouvez cela difficile de vous concentrer sur ce que vous devez faire pendant la journée? Encerclez le chiffre qui y correspond le mieux.
- Pas du tout difficile 1 2 3 4 5 6 7 8 9 10 Très difficile
20. En moyenne, combien de jours par semaine est-ce que vous faites la sieste? ____ jours par semaine

JOURNAL DU SOMMEIL

Date : jour ____ mois ____ année ____

Jour de la semaine _____

Veillez répondre aux questions suivantes en vous rapportant à la nuit dernière.

1. La nuit dernière, mon sommeil était (cochez une réponse seulement) :

- 1a. ____ Bon
- 1b. ____ Mauvais et je trouve cela bouleversant
- 1c. ____ Mauvais mais ce n'est pas bouleversant
- 1d. ____ Ni bon ni mauvais; plutôt entre les deux

2. Avez-vous eu des insomnies la nuit dernière? ____ oui ____ non

2a. Si oui, à quel point êtes-vous bouleversé(e) par le problème d'insomnie? Encerclez le chiffre qui y correspond le mieux.

Pas du tout bouleversé(e) 1 2 3 4 5 6 7 8 9 10 Très bouleversé(e)

3. Cochez celles des phrases suivantes qui s'appliquent à votre cas :

- 3a. ____ J'ai eu des difficultés à m'endormir à l'heure du coucher.
- 3b. ____ Après m'être endormi(e), je me suis réveillé(e) pendant la nuit et j'ai eu des difficultés à me rendormir.
- 3c. ____ Je me suis réveillé(e) trop tôt le matin et je n'ai pas pu me rendormir.
- 3d. ____ Je ne me suis pas senti(e) reposé(e) quand je me suis levé(e) ce matin.

OU, si aucune de ces phrases ne s'applique à votre cas, cochez la réponse ci-dessous :

3e. ____ Aucune de ces phrases ne s'applique à mon cas.

4. À l'heure du coucher, combien de temps vous a-t-il fallu pour vous endormir? ____ heures ____ min.

5. Combien de fois vous êtes-vous réveillé(e) pendant la nuit? ____ fois

5a. Si vous vous êtes réveillé(e) pendant la nuit, combien d'heures au total êtes-vous resté(e) éveillé(e)? ____ heures ____ min.

6. A votre avis, de combien d'heures de sommeil vous fallait-il la nuit dernière? ____ heures ____ min.

7. Combien d'heures avez-vous dormi la nuit dernière? ____ heures ____ min.

8. À quelle heure vous êtes-vous mis(e) au lit la nuit dernière? ____ heures ____ min.

9. À quelle heure vous êtes-vous endormi(e) la nuit dernière? ____ heures ____ min.

10. À quelle heure vous êtes-vous réveillé(e) ce matin? _____ heures _____ min.
11. À quelle heure vous êtes-vous levé(e) ce matin? _____ heures _____ min.
12. Avez-vous pris des médicaments pour vous endormir hier soir? ____ Oui ____ Non
13. Quelle était la qualité de votre sommeil hier soir? Encerclez le chiffre qui y correspond le mieux.
Très mauvaise 1 2 3 4 5 6 7 8 9 10 Très bonne
14. À quel point êtes-vous satisfait(e) de la qualité de votre sommeil de la nuit dernière? Encerclez le chiffre qui y correspond le mieux.
Pas du tout satisfait(e) 1 2 3 4 5 6 7 8 9 10 Très satisfait(e)
15. Lorsque vous étiez au lit la nuit dernière et que vous essayiez de dormir, à quel point étiez-vous tendu(e)? Sur une échelle de 0 à 100, encerclez le chiffre qui y correspond le mieux
Pas du tout tendu(e) 10 20 30 40 50 60 70 80 90 100 Tout à fait tendu(e)
16. À quel point est-ce que vous vous êtes senti(e) reposé(e) ce matin? Encerclez le chiffre qui y correspond le mieux.
Pas du tout reposé(e) 1 2 3 4 5 6 7 8 9 10 Tout à fait reposé(e)

Veillez répondre aux questions suivantes qui portent sur la journée d'hier

17. À quel point est-ce que vous vous êtes senti(e) fatigué(e) pendant la journée? Encerclez le chiffre qui y correspond
Pas du tout fatigué(e) 1 2 3 4 5 6 7 8 9 10 Très fatigué(e)
18. À quel point étiez-vous somnolent(e) pendant la journée? Encerclez le chiffre qui y correspond le mieux.
Pas du tout somnolent(e) 1 2 3 4 5 6 7 8 9 10 Très somnolente
19. À quel point avez-vous trouvé cela difficile de vous concentrer sur ce que vous deviez faire pendant la journée? Encerclez le chiffre qui y correspond le mieux.
Pas du tout difficile 1 2 3 4 5 6 7 8 9 10 Très difficile
20. Avez-vous fait la sieste hier? ____ Oui ____ Non

ESS – Hier

Instructions:

En vous rapportant à la journée d'hier, quelle était la probabilité que vous vous assoupissiez plutôt que de vous sentir tout simplement fatigué(e) dans les situations décrites ci-dessous? Même si vous n'avez pas fait certaines de ces activités hier, essayez d'imaginer comment chacune d'elles vous aurait affecté(e). En vous basant sur l'échelle qui suit, choisissez le chiffre qui correspondrait le mieux à votre état dans chaque situation.

- 0 = ne me suis pas / ne me serais pas assoupi(e)
- 1 = de faibles chances de m'assoupir
- 2 = de bonnes chances de m'assoupir
- 3 = de fortes chances de m'assoupir

Situation	Chances de m'assoupir <u>hier</u>
1- Assis(e) en train de lire	_____
2- En train de regarder la télévision	_____
3- Assis(e) ; inactif(ve) ; dans un lieu public (ex. : au théâtre, dans une réunion)	_____
4- Passager(ère) dans une voiture pendant une heure quand les circonstances le permettent	_____
5- Allongé(e) l'après-midi pour me reposer quand les circonstances le permettent	_____
6- Assis(e) en train de parler à quelqu'un	_____
7- Assis(e) tranquillement après un déjeuner sans alcool	_____
8- Dans une voiture qui s'est arrêtée quelques minutes dans la circulation	_____

FSS- Hier

Instructions:

Voici une liste de phrases qui portent sur la fatigue. Par fatigue, nous voulons dire un sentiment de diminution des forces physiques, un manque d'énergie ou un épuisement physique total. Veuillez lire chaque phrase et encrer le chiffre (de 1 à 7) qui indique combien vous êtes d'accord avec la phrase : 1 signifie que vous n'êtes *pas du tout d'accord* avec la phrase, alors que 7 signifie que vous êtes *tout à fait d'accord*.

Veuillez répondre à ces questions en vous référant à votre état général pendant la journée d'hier.

	PAS DU TOUT D'ACCORD				TOUT À FAIT D'ACCORD		
1. J'étais peu motivé(e) car j'étais fatigué(e).....	1	2	3	4	5	6	7
2. L'exercice physique aurait provoqué ma fatigue...	1	2	3	4	5	6	7
3. Je me fatiguais très vite.....	1	2	3	4	5	6	7
4. La fatigue a interféré avec mon fonctionnement physique.....	1	2	3	4	5	6	7
5. La fatigue m'a crée des ennuis.....	1	2	3	4	5	6	7
6. La fatigue m'a empêché de maintenir un effort physique soutenu.....	1	2	3	4	5	6	7
7. La fatigue m'a empêché de m'acquitter des certaines tâches et responsabilités.....	1	2	3	4	5	6	7
8. La fatigue était un des mes trois symptômes les plus incapacitants.....	1	2	3	4	5	6	7
9. La fatigue a interféré sur mon travail, ma famille ou ma vie sociale.....	1	2	3	4	5	6	7

SSS- Hier

Instructions:

Cochez la phrase qui décrit le mieux le niveau de votre somnolence pendant la journée d'hier.

1. Actif(ve) et plein(e) de vitalité; alerte; tout éveillé(e)
2. Fonctionnais très bien; mais pas au maximum de mes capacités; étais en mesure de me concentrer
3. Détendu(e); éveillé(e); pas tout à fait alerte; réceptif(ve)
4. Un peu embrumé(e); pas au maximum de mes capacités; passif(ve)
5. Embrouillement; étais de moins en moins intéressé(e) à rester éveillé(e); fonctionnais au ralenti
6. Somnolence; préférais être couché(e); combattais le sommeil; étais dans les vapes
7. Étais presque dans les rêveries; pratiquement endormi(e); ne pouvais plus combattre le sommeil

SFM - Hier

Les questions suivantes portent sur votre niveau de fatigue d'hier. Veuillez indiquer votre niveau d'accord avec les affirmations suivantes, en choisissant le chiffre qui correspond le plus à votre état général pendant la journée d'hier.

1. J'ai eu un problème avec la fatigue.

fortement en désaccord 1 2 3 4 5 6 fortement en accord

2. J'ai eu besoin de me reposer.

fortement en désaccord 1 2 3 4 5 6 fortement en accord

3. Je me suis senti(e) endormi(e) ou somnolent(e).

fortement en désaccord 1 2 3 4 5 6 fortement en accord

4. J'ai eu du mal à entamer une tâche.

fortement en désaccord 1 2 3 4 5 6 fortement en accord

5. J'ai pu entamer des choses sans difficulté mais je m'affaiblissais par la suite.

fortement en désaccord 1 2 3 4 5 6 fortement en accord

6. Je manquais d'énergie.

fortement en désaccord 1 2 3 4 5 6 fortement en accord

7. J'avais peu de force dans mes muscles.

fortement en désaccord 1 2 3 4 5 6 fortement en accord

8. Je me suis senti(e) faible

fortement en désaccord 1 2 3 4 5 6 fortement en accord

9. J'ai eu du mal à me concentrer.

fortement en désaccord 1 2 3 4 5 6 fortement en accord

10. J'ai eu de la difficulté à penser clairement.

fortement en désaccord 1 2 3 4 5 6 fortement en accord

11. J'ai eu tendance à faire des lapsus en parlant (la langue me fourche).

fortement en désaccord 1 2 3 4 5 6 fortement en accord

12. J'avais du mal à trouver les mots appropriés lorsque je parlais.

fortement en désaccord 1 2 3 4 5 6 fortement en accord

13. J'ai eu des problèmes avec ma mémoire.

fortement en désaccord 1 2 3 4 5 6 fortement en accord

14. Je m'intéressais peu aux choses que je fais habituellement.

fortement en désaccord 1 2 3 4 5 6 fortement en accord

QUESTIONNAIRE D'AUTO-ÉVALUATION - T

INSTRUCTIONS : Voici un certain nombre de phrases que les gens utilisent habituellement pour se décrire. Lisez chaque phrase, puis parmi les chiffres à droite de la phrase, encerclez celui qui indique comment vous vous sentez en général. Il n'y a pas de bonnes ou de mauvaises réponses. Ne passez pas trop de temps sur chaque phrase; donnez simplement la réponse qui vous semble le mieux décrire la façon dont vous vous sentez en général.

PRESQUE JAMAIS
 QUELQUEFOIS
 SOUVENT
 PRESQUE TOUJOURS

1. Je me sens aimable.....	1	2	3	4
2. Je me sens nerveux(se) et agité(e).....	1	2	3	4
3. Je suis satisfait(e) de moi-même.....	1	2	3	4
4. Si je pouvais être aussi heureux(se) que les autres semblent l'être.....	1	2	3	4
5. J'ai l'impression que ma vie est un échec	1	2	3	4
6. Je me sens reposé(e)	1	2	3	4
7. Je suis calme, décontracté(e) et serein(e)	1	2	3	4
8. Je sens que les difficultés s'accumulent à tel point que je ne peux pas les surmonter	1	2	3	4
9. Je m'en fais trop pour quelque chose qui n'a vraiment pas d'importance.....	1	2	3	4
10. Je suis heureux(se).....	1	2	3	4
11. J'ai des pensées inquiétantes	1	2	3	4
12. Je manque de confiance en moi.....	1	2	3	4
13. Je me sens en sécurité.....	1	2	3	4
14. Je prends facilement des décisions	1	2	3	4
15. Je me sens incompetent(e)	1	2	3	4
16. Je suis content(e).....	1	2	3	4
17. Une idée sans importance me passe par la tête et me tracasse.....	1	2	3	4
18. Je prends les déceptions tellement à cœur que je n'arrive pas à me les sortir de la tête	1	2	3	4
19. Je suis une personne sérieuse	1	2	3	4
20. Je deviens tout(e) tendu(e) et agité (e) quand je songe à mes préoccupations et à mes intérêts actuels.....	1	2	3	4

Consigne: Ce questionnaire comporte 21 groupes d'énoncés. Veuillez lire avec soin chacun de ces groupes puis, dans chaque groupe, choisissez l'énoncé qui décrit le mieux comment vous vous êtes senti(e) au cours des deux dernières semaines, incluant aujourd'hui. Encerchez alors le chiffre placé devant l'énoncé que vous avez choisi. Si, dans un groupe d'énoncés, vous en trouvez plusieurs qui semblent décrire également bien ce que vous ressentez, choisissez celui qui a le chiffre le plus élevé et encerchez ce chiffre. Assurez-vous bien de ne choisir qu'un seul énoncé dans chaque groupe, y compris le groupe n° 16 (modifications dans les habitudes de sommeil) et le groupe n° 18 (modifications de l'appétit).

1 Tristesse

- 0 Je ne me sens pas triste.
- 1 Je me sens très souvent triste.
- 2 Je suis tout le temps triste.
- 3 Je suis si triste ou si malheureux(se), que ce n'est pas supportable.

2 Pessimisme

- 0 Je ne suis pas découragé(e) face à mon avenir.
- 1 Je me sens plus découragé(e) qu'avant face à mon avenir.
- 2 Je ne m'attends pas à ce que les choses s'arrangent pour moi.
- 3 J'ai le sentiment que mon avenir est sans espoir et qu'il ne peut qu'empirer.

3 Échecs dans le passé

- 0 Je n'ai pas le sentiment d'avoir échoué dans la vie, d'être un(e) raté(e).
- 1 J'ai échoué plus souvent que je n'aurais dû.
- 2 Quand je pense à mon passé, je constate un grand nombre d'échecs.
- 3 J'ai le sentiment d'avoir complètement raté ma vie.

4 Perte de plaisir

- 0 J'éprouve toujours autant de plaisir qu'avant aux choses qui me plaisent.
- 1 Je n'éprouve pas autant de plaisir aux choses qu'avant.
- 2 J'éprouve très peu de plaisir aux choses qui me plaisaient habituellement.
- 3 Je n'éprouve aucun plaisir aux choses qui me plaisaient habituellement.

5 Sentiments de culpabilité

- 0 Je ne me sens pas particulièrement coupable.
- 1 Je me sens coupable pour bien des choses que j'ai faites ou que j'aurais dû faire.
- 2 Je me sens coupable la plupart du temps.
- 3 Je me sens tout le temps coupable.

6 Sentiment d'être puni(e)

- 0 Je n'ai pas le sentiment d'être puni(e).
- 1 Je sens que je pourrais être puni(e).
- 2 Je m'attends à être puni(e).
- 3 J'ai le sentiment d'être puni(e).

7 Sentiments négatifs envers soi-même

- 0 Mes sentiments envers moi-même n'ont pas changé.
- 1 J'ai perdu confiance en moi.
- 2 Je suis déçu(e) par moi-même.
- 3 Je ne m'aime pas du tout.

8 Attitude critique envers soi

- 0 Je ne me blâme pas ou ne me critique pas plus que d'habitude.
- 1 Je suis plus critique envers moi-même que je ne l'étais.
- 2 Je me reproche tous mes défauts.
- 3 Je me reproche tous les malheurs qui arrivent.

9 Pensées ou désirs de suicide

- 0 Je ne pense pas du tout à me suicider.
- 1 Il m'arrive de penser à me suicider, mais je ne le ferais pas.
- 2 J'aimerais me suicider.
- 3 Je me suiciderais si l'occasion se présentait.

10 Pleurs

- 0 Je ne pleure pas plus qu'avant.
- 1 Je pleure plus qu'avant.
- 2 Je pleure pour la moindre petite chose.
- 3 Je voudrais pleurer mais je n'en suis pas capable.

11 Agitation

- 0 Je ne suis pas plus agité(e) ou plus tendu(e) que d'habitude.
- 1 Je me sens plus agité(e) ou plus tendu(e) que d'habitude.
- 2 Je suis si agité(e) ou tendu(e) que j'ai du mal à rester tranquille.
- 3 Je suis si agité(e) ou tendu(e) que je dois continuellement bouger ou faire quelque chose.

12 Perte d'intérêt

- 0 Je n'ai pas perdu d'intérêt pour les gens ou pour les activités.
- 1 Je m'intéresse moins qu'avant aux gens et aux choses.
- 2 Je ne m'intéresse presque plus aux gens et aux choses.
- 3 J'ai du mal à m'intéresser à quoi que ce soit.

13 Indécision

- 0 Je prends des décisions toujours aussi bien qu'avant.
- 1 Il m'est plus difficile que d'habitude de prendre des décisions.
- 2 J'ai beaucoup plus de mal qu'avant à prendre des décisions.
- 3 J'ai du mal à prendre n'importe quelle décision.

14 Dévalorisation

- 0 Je pense être quelqu'un de valable.
- 1 Je ne crois pas avoir autant de valeur ni être aussi utile qu'avant.
- 2 Je me sens moins valable que les autres.
- 3 Je sens que je ne vauds absolument rien.

15 Perte d'énergie

- 0 J'ai toujours autant d'énergie qu'avant.
- 1 J'ai moins d'énergie qu'avant.
- 2 Je n'ai pas assez d'énergie pour pouvoir faire grand-chose.
- 3 J'ai trop peu d'énergie pour faire quoi que ce soit.

16 Modifications dans les habitudes de sommeil

- 0 Mes habitudes de sommeil n'ont pas changé.

- 1a Je dors un peu plus que d'habitude.
- 1b Je dors un peu moins que d'habitude.

- 2a Je dors beaucoup plus que d'habitude.
- 2b Je dors beaucoup moins que d'habitude.

- 3a Je dors presque toute la journée.
- 3b Je me réveille une ou deux heures plus tôt et je suis incapable de me rendormir.

17 Irritabilité

- 0 Je ne suis pas plus irritable que d'habitude.
- 1 Je suis plus irritable que d'habitude.
- 2 Je suis beaucoup plus irritable que d'habitude.
- 3 Je suis constamment irritable.

18 Modifications de l'appétit

- 0 Mon appétit n'a pas changé.

- 1a J'ai un peu moins d'appétit que d'habitude.
- 1b J'ai un peu plus d'appétit que d'habitude.

- 2a J'ai beaucoup moins d'appétit que d'habitude.
- 2b J'ai beaucoup plus d'appétit que d'habitude.

- 3a Je n'ai pas d'appétit du tout.
- 3b J'ai constamment envie de manger.

19 Difficulté à se concentrer

- 0 Je parviens à me concentrer toujours aussi bien qu'avant.
- 1 Je ne parviens pas à me concentrer aussi bien que d'habitude.
- 2 J'ai du mal à me concentrer longtemps sur quoi que ce soit.
- 3 Je me trouve incapable de me concentrer sur quoi que ce soit.

20 Fatigue

- 0 Je ne suis pas plus fatigué(e) que d'habitude.
- 1 Je me fatigue plus facilement que d'habitude.
- 2 Je suis trop fatigué(e) pour faire un grand nombre de choses que je faisais avant.
- 3 Je suis trop fatigué(e) pour faire la plupart des choses que je faisais avant.

21 Perte d'intérêt pour le sexe

- 0 Je n'ai pas noté de changement récent dans mon intérêt pour le sexe.
- 1 Le sexe m'intéresse moins qu'avant.
- 2 Le sexe m'intéresse beaucoup moins maintenant.
- 3 J'ai perdu tout intérêt pour le sexe.

INSTRUCTIONS:

Voici une liste de problèmes dont se plaignent parfois les gens. Lisez attentivement chaque ligne et encerclez le numéro qui décrit le mieux. À QUEL POINT CE PROBLÈME VOUS A TROUBLÉ(E) AU COURS DES SEPT (7) DERNIERS JOURS, Y COMPRIS AUJOURD'HUI. Encerclez un seul numéro par problème et ne sautez aucun item. Si vous changez d'avis, effacez soigneusement votre première réponse. Lisez l'exemple ci-dessous et si vous avez des questions, posez-les avant de commencer.

EXEMPLE :

CE PROBLÈME VOUS A-T-IL TROUBLÉ(E)?	
1. Douleurs corporelles	1. 0 ① 2 3 4

0 = pas du tout
1 = un peu
2 = modérément
3 = beaucoup
4 = extrêmement

CE PROBLÈME VOUS A-T-IL TROUBLÉ(E)? :

- | | |
|---|---------------|
| 1. Nervosité ou impression de tremblements intérieurs | 1. 0 1 2 3 4 |
| 2. Faiblesses ou étourdissements | 2. 0 1 2 3 4 |
| 3. L'idée que quelqu'un d'autre puisse contrôler vos pensées | 3. 0 1 2 3 4 |
| 4. L'impression que ce sont les autres qui sont responsables de la plupart de vos problèmes | 4. 0 1 2 3 4 |
| 5. Troubles de mémoire | 5. 0 1 2 3 4 |
| 6. Tendance à vous sentir facilement agacé(e) ou contrarié(e) | 6. 0 1 2 3 4 |
| 7. Douleurs au coeur ou à la poitrine | 7. 0 1 2 3 4 |
| 8. Peur des grands espaces ou dans les rues | 8. 0 1 2 3 4 |
| 9. Idées d'en finir avec la vie | 9. 0 1 2 3 4 |
| 10. Sentiment que vous ne pouvez faire confiance à la plupart des gens | 10. 0 1 2 3 4 |
| 11. Manquer d'appétit | 11. 0 1 2 3 4 |
| 12. Tendance à vous effrayer sans raison | 12. 0 1 2 3 4 |
| 13. Crises de colère incontrôlables | 13. 0 1 2 3 4 |
| 14. Sentiment de solitude même en compagnie d'autres personnes | 14. 0 1 2 3 4 |
| 15. Sentiment d'être bloqué(e) pour compléter des tâches | 15. 0 1 2 3 4 |
| 16. Sentiment de solitude | 16. 0 1 2 3 4 |
| 17. Avoir le cafard | 17. 0 1 2 3 4 |
| 18. Manque d'intérêt pour tout | 18. 0 1 2 3 4 |
| 19. Attitude craintive | 19. 0 1 2 3 4 |
| 20. Tendance à vous sentir facilement blessé(e) | 20. 0 1 2 3 4 |
| 21. Sentiment que les gens ne sont pas amicaux ou qu'ils ne vous aiment pas | 21. 0 1 2 3 4 |
| 22. Sentiment d'infériorité vis-à-vis des autres | 22. 0 1 2 3 4 |
| 23. Nausées ou maux d'estomac | 23. 0 1 2 3 4 |
| 24. Sentiment qu'on vous observe ou qu'on parle de vous | 24. 0 1 2 3 4 |
| 25. Difficulté à vous endormir | 25. 0 1 2 3 4 |
| 26. Besoin de vérifier et de revérifier ce que vous faites | 26. 0 1 2 3 4 |
| 27. Difficulté à prendre des décisions | 27. 0 1 2 3 4 |
| 28. Craindre de voyager en autobus, en métro ou en train | 28. 0 1 2 3 4 |
| 29. Difficulté à reprendre votre souffle | 29. 0 1 2 3 4 |
| 30. Bouffées de chaleur ou frissons | 30. 0 1 2 3 4 |

31. Besoin d'éviter certains endroits, choses ou activités parce qu'ils vous font peur	31.	0	1	2	3	4
32. Trous de mémoire	32.	0	1	2	3	4
33. Engourdissements ou picotements dans certaines parties du corps	33.	0	1	2	3	4
34. L'idée que vous devriez être puni(e) pour vos péchés	34.	0	1	2	3	4
35. Vous sentir sans espoir face à l'avenir	35.	0	1	2	3	4
36. Difficulté à vous concentrer	36.	0	1	2	3	4
37. Sentiment de faiblesse dans certaines parties du corps	37.	0	1	2	3	4
38. Sentiment de tension ou de surexcitation	38.	0	1	2	3	4
39. Pensées sur la mort ou le fait de mourir	39.	0	1	2	3	4
40. Avoir envie de frapper, de blesser ou de faire du mal à quelqu'un	40.	0	1	2	3	4
41. Avoir envie de briser ou de fracasser des objets	41.	0	1	2	3	4
42. Fort sentiment d'embarras face aux autres	42.	0	1	2	3	4
43. Sentiment de malaise dans la foule: au centre commercial ou au cinéma, par exemple	43.	0	1	2	3	4
44. Ne jamais vous sentir proche de quelqu'un	44.	0	1	2	3	4
45. Accès de terreur ou de panique	45.	0	1	2	3	4
46. Vous laisser facilement entraîner dans des discussions	46.	0	1	2	3	4
47. Sentiment de nervosité quand on vous laisse seul(e)	47.	0	1	2	3	4
48. Ne pas être reconnu(e) à votre juste valeur	48.	0	1	2	3	4
49. Vous sentir tellement agité(e) que vous ne pouvez rester en place	49.	0	1	2	3	4
50. Sentiment que vous ne valez rien	50.	0	1	2	3	4
51. Sentiment que les gens vont profiter de vous si vous les laissez faire	51.	0	1	2	3	4
52. Sentiments de culpabilité	52.	0	1	2	3	4
53. L'idée que quelque chose ne va pas dans votre tête	53.	0	1	2	3	4

Questionnaire d'Eysenck sur la personnalité – Version Courte

INSTRUCTIONS: Veuillez répondre à chaque question en encerclant le «OUI» ou le «NON» qui la suit. Il n'y a ni de bonnes ni de mauvaises réponses. Il n'y a pas non plus de «questions piège». Répondez rapidement sans trop penser au sens exact des questions.

■ VEUILLEZ RÉPONDRE À TOUTES LES QUESTIONS

PAGE 1

- | | | | |
|-----|---|-----|-----|
| 1. | Avez-vous de fréquentes sautes d'humeur? | OUI | NON |
| 2. | Est-ce que vous faites beaucoup attention à ce que les gens pensent? | OUI | NON |
| 3. | Êtes-vous bavard(e)? | OUI | NON |
| 4. | Si vous vous engagez à faire quelque chose, tenez-vous toujours votre promesse même si cela ne vous convient pas du tout? | OUI | NON |
| 5. | Est-ce qu'il vous arrive parfois de ne pas avoir le moral sans raison? | OUI | NON |
| 6. | Est-ce que cela vous dérangerait d'avoir des dettes? | OUI | NON |
| 7. | Êtes-vous plutôt plein(e) d'entrain? | OUI | NON |
| 8. | Vous êtes-vous jamais montré(e) avide en vous accaparant d'une plus grande part que votre dû? | OUI | NON |
| 9. | Êtes-vous irritable? | OUI | NON |
| 10. | Prendriez-vous des médicaments qui peuvent avoir des effets bizarres ou dangereux? | OUI | NON |
| 11. | Est-ce que cela vous plaît de faire de nouvelles connaissances? | OUI | NON |
| 12. | Avez-vous jamais rejeté la responsabilité de quelque chose sur quelqu'un d'autre tout en sachant que c'était vraiment de votre faute? | OUI | NON |
| 13. | Est-ce que vous vous sentez facilement blessé(e)? | OUI | NON |
| 14. | Est-ce que vous aimeriez mieux faire à votre façon plutôt que de suivre les règles? | OUI | NON |
| 15. | D'habitude est-ce que vous pouvez vous laisser aller pour bien vous amuser dans une fête animée? | OUI | NON |
| 16. | Est-ce que <i>toutes</i> vos habitudes sont bonnes et attrayantes? | OUI | NON |
| 17. | Est-ce que vous êtes souvent «tanné(e)»? | OUI | NON |
| 18. | Est-ce que les bonnes manières et la propreté importent beaucoup pour vous? | OUI | NON |
| 19. | Prenez-vous d'habitude l'initiative de partir de nouvelles amitiés? | OUI | NON |
| 20. | Avez-vous jamais pris un objet quelconque qui appartenait à un autre (même s'il s'agissait d'une simple épingle ou d'un bouton)? | OUI | NON |
| 21. | Croyez-vous que vous êtes nerveux(se)? | OUI | NON |
| 22. | Pensez-vous que le mariage est démodé et qu'il devrait être aboli? | OUI | NON |
| 23. | Pouvez-vous animer sans difficulté une fête plutôt ennuyeuse? | OUI | NON |

- | | | | |
|-----|---|-----|-----|
| 24. | Avez-vous jamais brisé ou perdu quelque chose qui appartenait à quelqu'un d'autre? | OUI | NON |
| 25. | Êtes-vous un inquiet / une inquiète? | OUI | NON |
| 26. | Trouvez-vous du plaisir à collaborer avec les autres? | OUI | NON |
| 27. | Avez-vous tendance à vous effacer dans des événements sociaux? | OUI | NON |
| 28. | Cela vous dérange-t-il de savoir qu'il y a des erreurs dans votre travail? | OUI | NON |
| 29. | Vous est-il jamais arrivé de dire quelque chose de malveillant ou de méchant au sujet de quelqu'un d'autre? | OUI | NON |
| 30. | Diriez-vous que vous êtes tendu(e) ou très nerveux(se)? | OUI | NON |
| 31. | Croyez-vous que les gens se préoccupent trop de préparer un bel avenir en faisant des économies et en se payant des assurances? | OUI | NON |
| 32. | Est-ce que vous aimez vous associer avec les autres? | OUI | NON |
| 33. | Étiez-vous parfois insolent(e) envers vos parents lorsque vous étiez petit(e)? | OUI | NON |
| 34. | Est-ce qu'une expérience embarrassante vous tracasse trop longtemps après l'incident qui l'aurait provoquée? | OUI | NON |
| 35. | Est-ce que vous faites un effort pour ne pas être impoli(e) envers les gens? | OUI | NON |
| 36. | Aimez-vous avoir beaucoup d'animation et d'excitation autour de vous? | OUI | NON |
| 37. | Avez-vous jamais triché à un jeu? | OUI | NON |
| 38. | Avez-vous parfois le trac? | OUI | NON |
| 39. | Aimeriez-vous que les gens aient peur de vous? | OUI | NON |
| 40. | Avez-vous jamais profité de quelqu'un? | OUI | NON |
| 41. | Êtes-vous généralement tranquille lorsque vous êtes en compagnie d'autres personnes? | OUI | NON |
| 42. | Est-ce que vous vous sentez souvent seul(e)? | OUI | NON |
| 43. | Est-ce mieux de suivre les normes de la société plutôt que de faire à votre façon? | OUI | NON |
| 44. | Est-ce que les gens vous trouvent très animé(e)? | OUI | NON |
| 45. | Est-ce que vous prêchez toujours par exemple? | OUI | NON |
| 46. | Êtes-vous souvent troublé(e) par les sentiments de culpabilité? | OUI | NON |
| 47. | Est-ce qu'il vous arrive parfois de remettre à plus tard ce que vous devriez faire tout de suite? | OUI | NON |
| 48. | Pouvez-vous animer une fête? | OUI | NON |

■ VEUILLEZ VÉRIFIEZ POUR VOUS ASSURER D'AVOIR RÉPONDU À TOUTES LES QUESTIONS

QUESTIONNAIRE SUR L'ÉTAT DE SANTÉ SF-36

DIRECTIVES: Les questions qui suivent portent sur votre santé, telle que vous la percevez. Vos réponses permettront de suivre l'évolution de votre état de santé et de savoir dans quelle mesure vous pouvez accomplir vos activités courantes.

Répondez à toutes les questions en suivant les indications qui vous sont données. En cas de doute, répondez de votre mieux.

1. En général, diriez-vous que votre santé est:

(encerclez une seule réponse)

- Excellente 1
- Très bonne 2
- Bonne 3
- Passable 4
- Mauvaise 5

2. Par comparaison à l'an dernier, comment évaluez-vous, maintenant, votre santé générale?

(encerclez une seule réponse)

- Bien meilleure maintenant que l'an dernier 1
- Un peu meilleure maintenant que l'an dernier 2
- À peu près la même que l'an dernier 3
- Un peu moins bonne maintenant que l'an dernier 4
- Bien moins bonne maintenant que l'an dernier 5

3. Les questions suivantes portent sur les activités que vous pourriez avoir à faire au cours d'une journée normale. Votre état de santé actuel vous limite-t-il dans ces activités? Si oui, dans quelle mesure?

(encerclez un seul chiffre par ligne)

ACTIVITÉS	Mon état de santé me limite beaucoup	Mon état de santé me limite un peu	Mon état de santé ne me limite pas du tout
a. Dans les activités exigeant un effort physique important comme courir, soulever des objets lourds, pratiquer des sports violents	1	2	3
b. Dans les activités modérées comme déplacer une table, passer l'aspirateur, jouer aux quilles ou au golf	1	2	3
c. Pour soulever ou transporter des sacs d'épicerie	1	2	3
d. Pour monter plusieurs étages à pied	1	2	3
e. Pour monter un seul étage à pied	1	2	3
f. Pour me pencher, me mettre à genoux ou m'accroupir	1	2	3
g. Pour faire plus d'un kilomètre à pied	1	2	3
h. Pour faire plusieurs coins de rue à pied	1	2	3
i. Pour marcher d'un coin de rue à l'autre	1	2	3
j. Pour prendre un bain ou m'habiller	1	2	3

4. Au cours des quatre dernières semaines, avez-vous eu l'une ou l'autre des difficultés suivantes au travail ou dans vos autres activités quotidiennes à cause de votre état de santé physique?

(encerclez un seul chiffre par ligne)

	OUI	NON
a. Avez-vous dû consacrer moins de temps à votre travail ou à d'autres activités?	1	2
b. Avez-vous accompli moins de choses que vous l'auriez voulu?	1	2
c. Avez-vous été limité(e) dans la nature de vos tâches ou de vos autres activités?	1	2
d. Avez-vous eu de la difficulté à accomplir votre travail ou vos autres activités (par exemple vous a-t-il fallu fournir un effort supplémentaire)?	1	2

5. Au cours des quatre dernières semaines, avez-vous eu l'une ou l'autre des difficultés suivantes au travail ou dans vos autres activités quotidiennes à cause de l'état de votre moral (comme le fait de vous sentir déprimé(e) ou anxieux(se))?

(encerclez un seul chiffre par ligne)

	OUI	NON
a. Avez-vous dû consacrer moins de temps à votre travail ou à d'autres activités?	1	2
b. Avez-vous accompli moins de choses que vous l'auriez voulu?	1	2
c. Avez-vous fait votre travail ou vos autres activités avec moins de soin qu'à l'habitude?	1	2

6. Au cours des quatre dernières semaines, dans quelle mesure votre état physique ou moral a-t-il nuí à vos activités sociales habituelles (famille, amis, voisins ou autres groupes)?

(encerclez une seule réponse)

- Pas du tout 1
- Un peu 2
- Moyennement 3
- Beaucoup 4
- Enormément 5

7. Au cours des quatre dernières semaines, avez-vous éprouvé des douleurs physiques?

(encerclez une seule réponse)

- Aucune douleur 1
- Douleurs très légères 2
- Douleurs légères 3
- Douleurs moyennes 4
- Douleurs intenses 5
- Douleurs très intenses 6

8. Au cours des quatre dernières semaines, dans quelle mesure la douleur a-t-elle nuï à vos activités habituelles (au travail comme à la maison)?

(encerclez une seule réponse)

- Pas du tout 1
 Un peu 2
 Moyennement 3
 Beaucoup 4
 Enormément 5

9. Ces questions portent sur les quatre dernières semaines. Pour chacune des questions suivantes, donnez la réponse qui s'approche le plus de la façon dont vous vous êtes senti(e).

Au cours des quatre dernières semaines, combien de fois:

(encerclez un seul chiffre par ligne)

	Tout le temps	La plupart du temps	Souvent	Quel-quefois	Rarement	Jamais
a. Vous êtes-vous senti(e) plein(e) d'entrain (de pep)?	1	2	3	4	5	6
b. Avez-vous été très nerveux(se)?	1	2	3	4	5	6
c. Vous êtes-vous senti(e) si déprimé(e) que rien ne pouvait vous remonter le moral?	1	2	3	4	5	6
d. Vous êtes-vous senti(e) calme et serein(e)?	1	2	3	4	5	6
e. Avez-vous eu beaucoup d'énergie?	1	2	3	4	5	6
f. Vous êtes-vous senti(e) triste et abattu(e)?	1	2	3	4	5	6
g. Vous êtes-vous senti(e) épuisé(e) et vidé(e)?	1	2	3	4	5	6
h. Vous êtes-vous senti(e) heureux(se)?	1	2	3	4	5	6
i. Vous êtes-vous senti(e) fatigué(e)?	1	2	3	4	5	6

10. Au cours des quatre dernières semaines, combien de fois votre état physique ou moral a-t-il nuí à vos activités sociales (comme visiter des amis, des parents, etc.)?

(encerclez une seule réponse)

- Tout le temps 1
 La plupart du temps 2
 Parfois 3
 Rarement 4
 Jamais 5

11. Dans quelle mesure chacun des énoncés suivants est-il VRAI ou FAUX dans votre cas?

(encerclez un seul chiffre par ligne)

	Tout à fait vrai	Plutôt vrai	Ne sais pas	Plutôt faux	Tout à fait faux
a. Il me semble que je tombe malade un peu plus facilement que les autres	1	2	3	4	5
b. Je suis en aussi bonne santé que les gens que je connais	1	2	3	4	5
c. Je m'attends à ce que ma santé se détériore	1	2	3	4	5
d. Ma santé est excellente	1	2	3	4	5