

# **QUALITY OF LIFE of INTENSIVE CARE NURSES in BELGIUM**

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# Intro

- Internet-based survey
- Participation on voluntary basis
- Strict commitment for anonymity and confidentiality
- Two languages French and Dutch
- Survey from January 28th 2011 > March 24th 2011

# Results

- Responders : 525 ICU nurses
- 227 Dutch / 298 French speaking
- 513 Valid questionnaires
- 103 Hospitals
- 76 Head nurses (14.8 %)



## A. Demographic data (1)

**Age (y)** 34 median Interquartile range P25-P75 28-44  
Mean 36.1+/-9.6 ( min 21- max 60)

### Gender :

female/ male 69.2 %/ 30.8%

### Marital status :

-married/couple 70.9%  
-single 23.2%  
-divorced 5.1%  
-widow(er) 0.6%

### Number of children at home

0 42.5%  
1 15.8%  
2 28.1%  
3 11.5%  
>3 2.1%

## A. Demographic data (2)

### Profession partner:

-nurse 24.2%  
-other 75.8 %

### Your professional status:

-employee 81.1%  
-functionary 18.9%

### Professional Activity

-Full time 73.3%  
-Part-time 26.7%  
Average 71.8+/-11.9 % of full time

### Rank

Head nurse 15%  
Deputy head nurse 3.7%  
ICU Nurse 81.3%

## A. Demographic data (3)

### Basic training

-All nursing 95.5%

### Supplementary training :

-Professional title ICU nurse

72.9%

-BANABA

14.8%

-Master title

24.6%

-Other (wound care...)

2.5%

### Nursing career :

Nursing diploma since (years)

14.1 mean 9.6 SD

Professional experience as ICU nurse(years)

12.7 mean 9.2 SD

Expected future career as ICU nurse (years)

14.3 mean 9.8 SD

### Present professional activity

ICU only

94.5%

ICU+Emergency department

2.3% 52% ICU

ICU+ mobile squad

1.2%

46.7% ICU

ICU +other service

1.9%

59.5% ICU



## A. Demographic data (4)

**Type hospital**  
public 26.7%  
private 54.8%  
university 18.5%

**Type ICU**  
-medical/surgical 81.9%  
-medical 3.3%  
-surgical 6.0%  
-paediatric 2.1%  
-neuro 1.9%  
-cardiology 1.4%  
-other 4.1%

**Number of beds in "your" ICU** 12.6 mean 6.1 SD

**ICU Bed occupancy rate** 79.8%

**Shift system**  
-three 96.9%  
-two 3.1%

**Working hours:** -three shifts (m/a/e)\* 7.8/7.7/10.3 hrs  
-two shifts (m/e) 11/11.5 hrs 3.6 SD

**Night shifts/month** 3.8

\*m/a/e :morning /afternoon/evening shift

## A. Demographic data (5)

Patients per ICU nurse	max	3.6	1.4 SD
	min	1.6	0.8 SD
	today	2.5	1.0 SD

### Continuous education

Scheduled in working hours ? 81.3 % yes 18.7% no

Number of educational days/year 3.5 d

Subscribed to professional nursing journal 26.7% yes

Member ICU nurse society 25.9% yes

Member Intensive care medicine or nursing society 12.7% yes

Net salary/month (mean)

1986.6€

1408.3 € SD

## A. Demographic data (6)

### Extra legal salary

Cell phone	0.4%
Insurance for hospitalization	44.4%
Service cheque	39.7%
Corporate insurance system	11.8%
Lease car	0%
Other	6.4%



# Table 1: Work-life Balance questions

1. I would choose again for a professional career as ICU nurse
2. The job as ICU nurse gives me satisfaction
3. My choice for ICU nursing was on voluntary basis/on demand of the nursing director/an intermediate step to another nursing activity/by need of internal mutation within the hospital .
4. I will stay ICU nurse until the end of my career
5. I feel I am appreciated in my job as ICU nurse by the hospital management/colleagues ICU nurses /colleagues non- ICU nurses/ICU patients/medical ICU staff/medical non ICU staff .
6. My professional knowledge as ICU nurse is up to date
7. My salary is proportional to my engagement
8. If possible I would prefer less clinical workload
9. I have (had) enough time for my family
10. I have a valuable social/professional network
11. Intensive Care Nursing is well known by the general public/ by my family/partner/children
12. My job content is well known by
13. Since the beginning of my career I became more sarcastic/distant, stand-offish/less empathic
14. My present workload allows me to deliver patient care of high quality
15. I have chosen for the job as ICU nurse because of the technical aspect/the team aspect

# SURVEY

- A. Demographic data
- B. Statements : 15 statements on work- personal life balance
- C. Validated questionnaires
  - GENERAL HEALTH QUESTIONNAIRE** **SF 12**
  - 12 ITEMS**
  - SYMPTOM CHECKLIST OF DEPRESSION SUBSCALE CES D
  - 20 ITEMS
  - BURN OUT QUESTIONNAIRE MASLACH
  - ALCOHOL/SUBSTANCE ABUSE QUESTIONNAIRE AUDIT
  - ITEMS 22 ITEMS
  - SLEEP QUALITY 10+1
  - BECK DEPRESSION INVENTORY (PART) 4 ITEMS
- D. Top 3-stressors (Choice of 16 items)
- E. Do burnout and depression affect therapeutic attitude ?  
clinical scenario
- F. Questions specific for head nurses(9 items)

## General Health Q SF-12

Domain (during the last 4 weeks...)	Category	ICU nurses 2011	ICU doctors 2008*
General health status	Quite +really bad	8.6%	11.6 %
Physical shortcomings (did you perform less than planned by..)	yes	28.1%	17.3%
Emotional shortcomings (did you perform less than planned by..)	yes	17.2%	15.3%
Bodily pain (during normal activities at home or at work)	Moderate to a lot	15.2%	14%
Limitation of physical functioning in moderate to average activities	Moderate to a lot	23%	17%
Problems with psychological functioning (depressed , tense)	Often to very often	29%	15%
Lack of vitality	Often to always	34%	31%
Problematic social functioning ( due to emotional or physical problems )	Often to always	19.9%	12%

# General Health Q SF-12

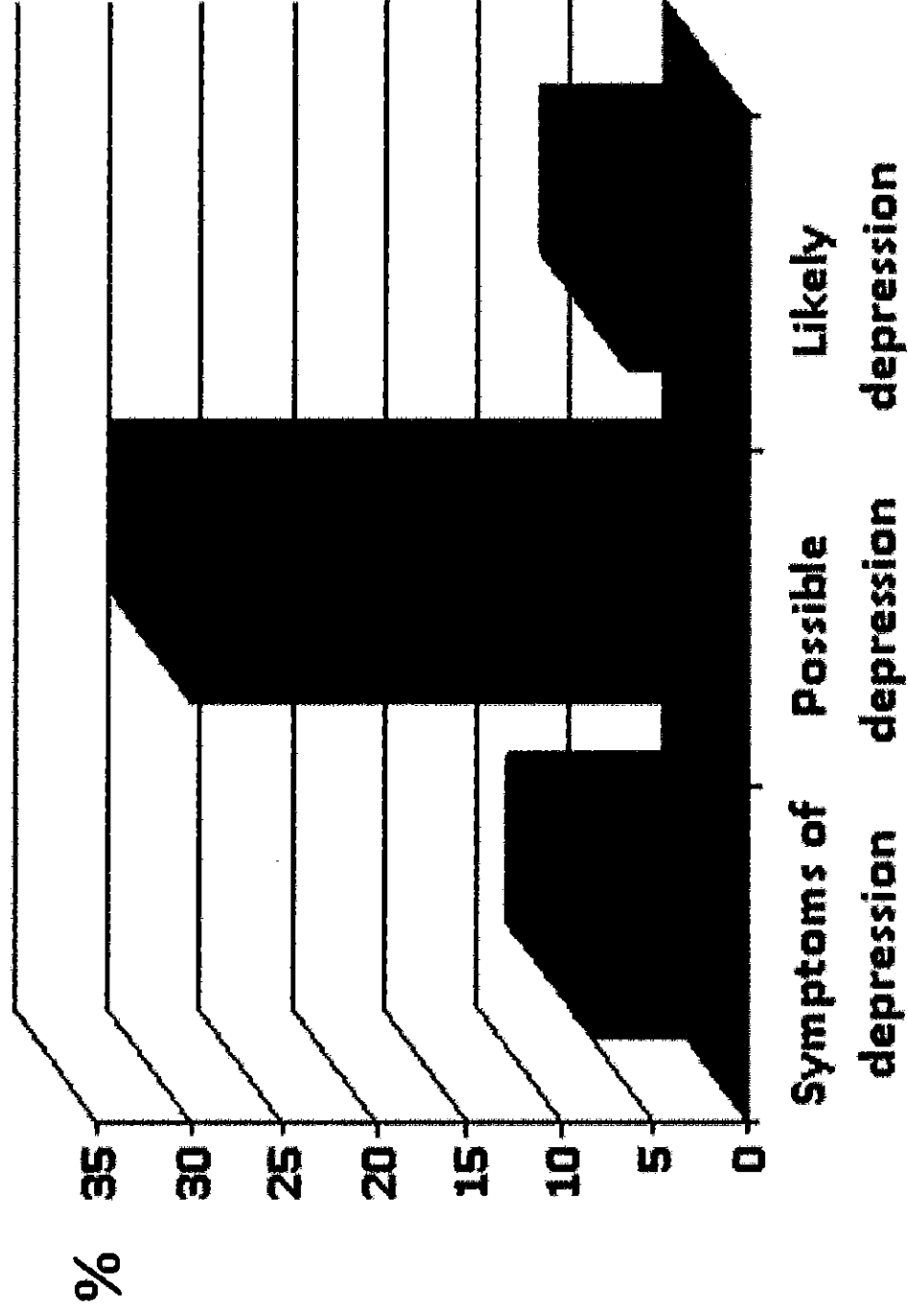
Domain (during the last 4 weeks...)	Category	ICU nurses 2011 : RISK factors
General health status	Quite +really bad	F=D ; older age ; women ; less professional experience ; nr of nightshifts ; less continuous education.
Physical shortcomings (did you perform less than planned by..)	yes	F<D (24.3% vs 33.2% p<0.05) ; older age ; women> men(p=0.04) ; part-time>full time(p=0.03)
Emotional shortcomings (did you perform less than planned by..)	yes	F>D (22.9%vs 9.2% p=0.0004) ; less professional experience ; no extra legal benefits
Bodily pain (during normal activities at home or at work )	Moderate to a lot	
Limitation of physical functioning in moderate to average activities	Moderate to a lot	
Problems with psychological functioning (depressed, tense)	Often to very often	F>D (p=0.02 )
Lack of vitality	Often to always	F>D (p=0.0003) ; older age ; singles
Problematic social functioning ( due to emotional or physical problems )	Often to always	F=D



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# CES-D depression scale in Belgian ICU nurses (n=513)



# CES-D depression scale in Belgian ICU nurses

Total CES-D score	N respondents/ total	% Belgian ICU nurses	
16 = Symptoms of depression	43/513	8.4	5.2
17-23 = Possible depression	154/513	30.0	17.5
>23 = Likely depression	34/513	6.6	8.6

## CES-D depression scale in Belgian ICU nurses

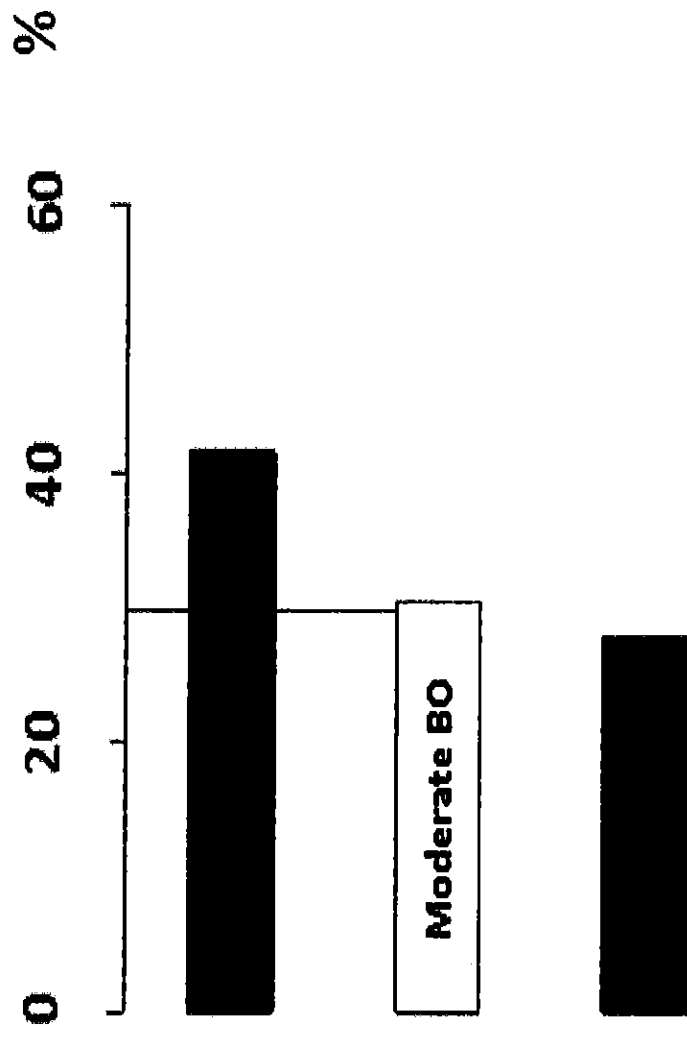
### Risk factors for depression :

1. F=D (7.8% vs 5.0% p=0.22 )
2. Younger age
3. Female > Male ICU nurses
4. Private hospitals>public>university hospitals
5. Non members of professional organisations more at risk .

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# Prevalence of burnout: total MASLACH Burnout Inventory in ICU nurses (BO=burnout)

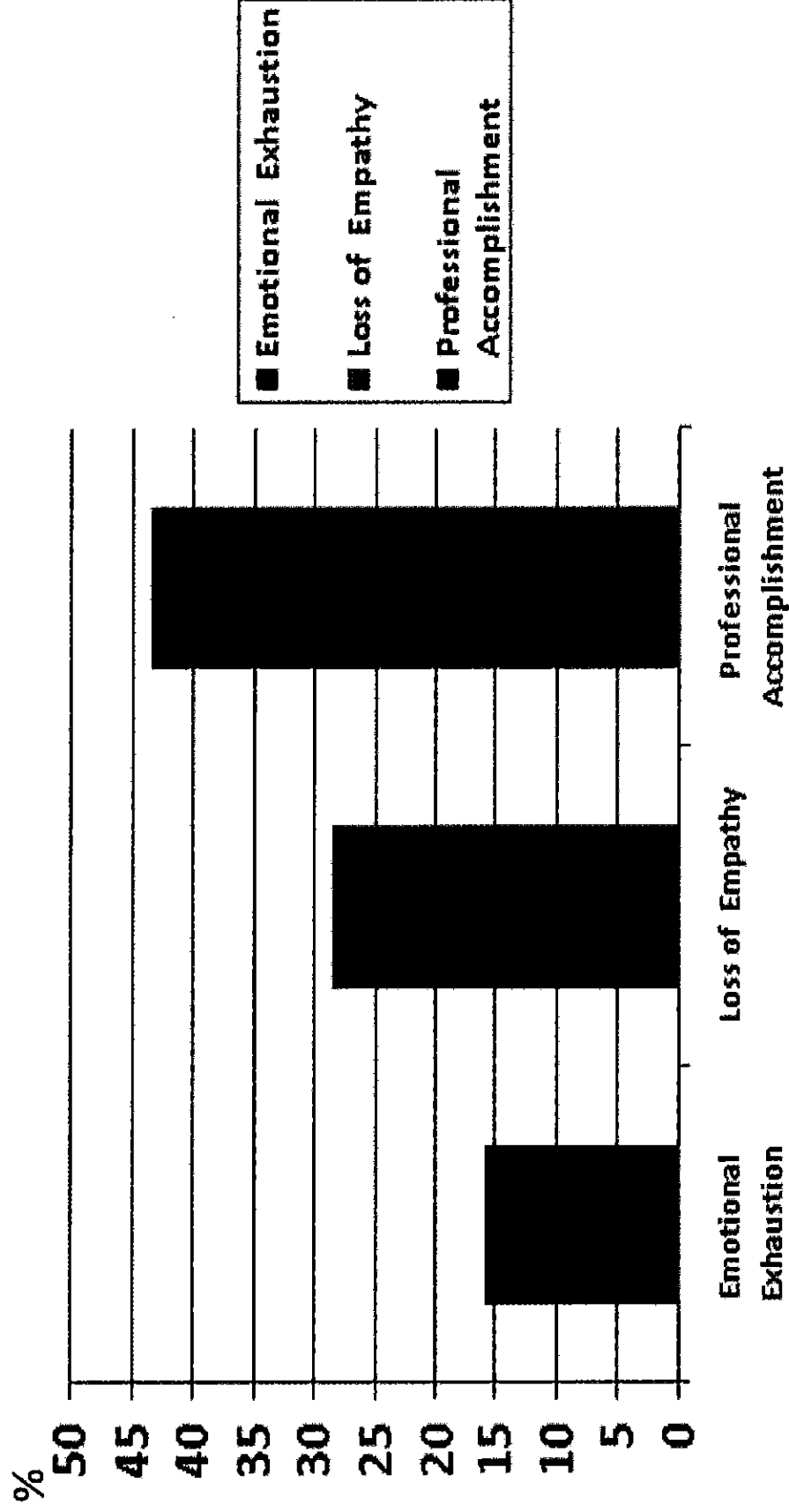


Prevalence of global burnout in Belgian ICU nurses with the MBI (Maslach Burnout Inventory) .

Global burnout	Moderate burnout	High burnout
SBO -8>+34	MBO -9>-21	LBO -22>-45
41.7%	30.2%	27.9%
<b>33%*</b>	<b>30.5%*</b>	<b>36.5%*</b>

\*data Belgian ICU doctors 2008

# MASLACH Burnout Inventory: prevalence of burnout in the 3 sub domains in ICU nurses (n=513)





**MASLACH Burnout Inventory: prevalence of burnout in the 3 sub domains in ICU nurses (n=513)**

<b>Burnout sub domains</b>	<b>Belgian ICU nurses</b>	
Emotional Exhaustion	15.8%	<27 15.4%*
Loss of Empathy	28.5%	<10 38.2%*
Low Professional accomplishment	43.3%	>33 32.4%*

\*data 2008

Prevalence of burnout: total MASLACH Burnout Inventory in ICU nurses (BO=burnout)

Risk factors for **Severe Burnout** :

1. F>D (47.7 % vs 33.2% p= 0.003 )
2. Young age / less professional experience
3. University hospital > private > public hospital
4. Insufficient time for continuous education
5. More than 3 nightshifts per month
6. Non members of professional organisation/non subscribers to professional journals .

Prevalence of burnout: total MASLACH Burnout Inventory in ICU nurses (BO=burnout)

### **Risk factors for Emotional exhaustion:**

1. F>D (21 % vs 8.7% p= 0.0001 )
2. Young age / less professional experience
3. University hospital>public > private hospital

Prevalence of burnout: total MASLACH Burnout Inventory in ICU nurses (BO=burnout)

**Risk factors for Loss of Empathy:**

1. F>D (32.7 % vs 22.6% p= 0.01 )
2. Young age / less professional experience
3. University hospital > public > private hospital

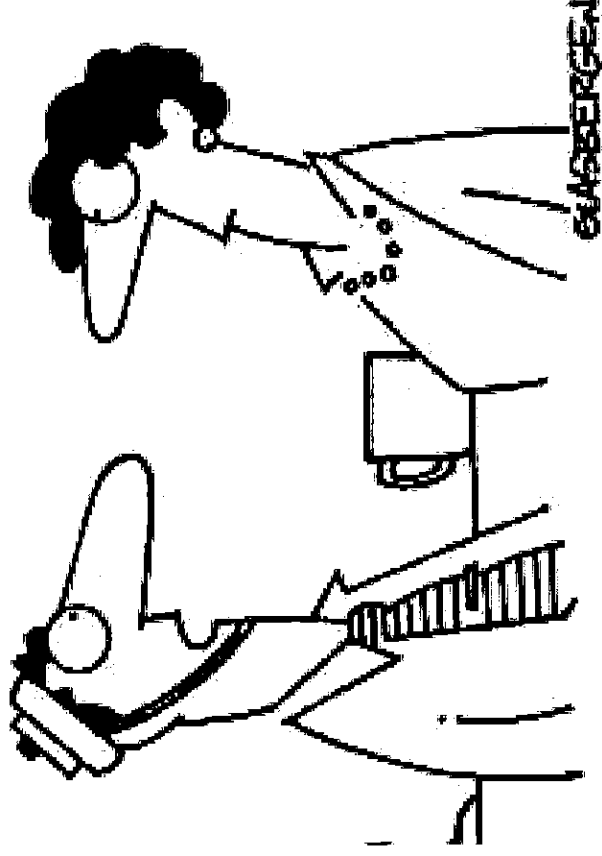
Prevalence of burnout: total MASLACH Burnout Inventory in ICU nurses (BO=burnout)

Risk factors for

**Low Professional Accomplishment:**

1. F<D (39.9 % vs 47.9% p= 0.06 ns )
2. Young age / less professional experience
3. University hospital > public > private hospital

# Burnout



“My doctor advised me to wear a smoke detector to prevent burnout”

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# Percentage of ICU nurses with problematic/pathologic alcohol abuse

ALCOHOL ABUSE	% respondents
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problematic 2.1 AUDIT score > 11

pathologic 7.6 AUDIT score > 8



Percentage of ICU nurses with problematic/pathologic  
alcohol abuse

Risk factors :

1. Full-time > part time
2. Male > female

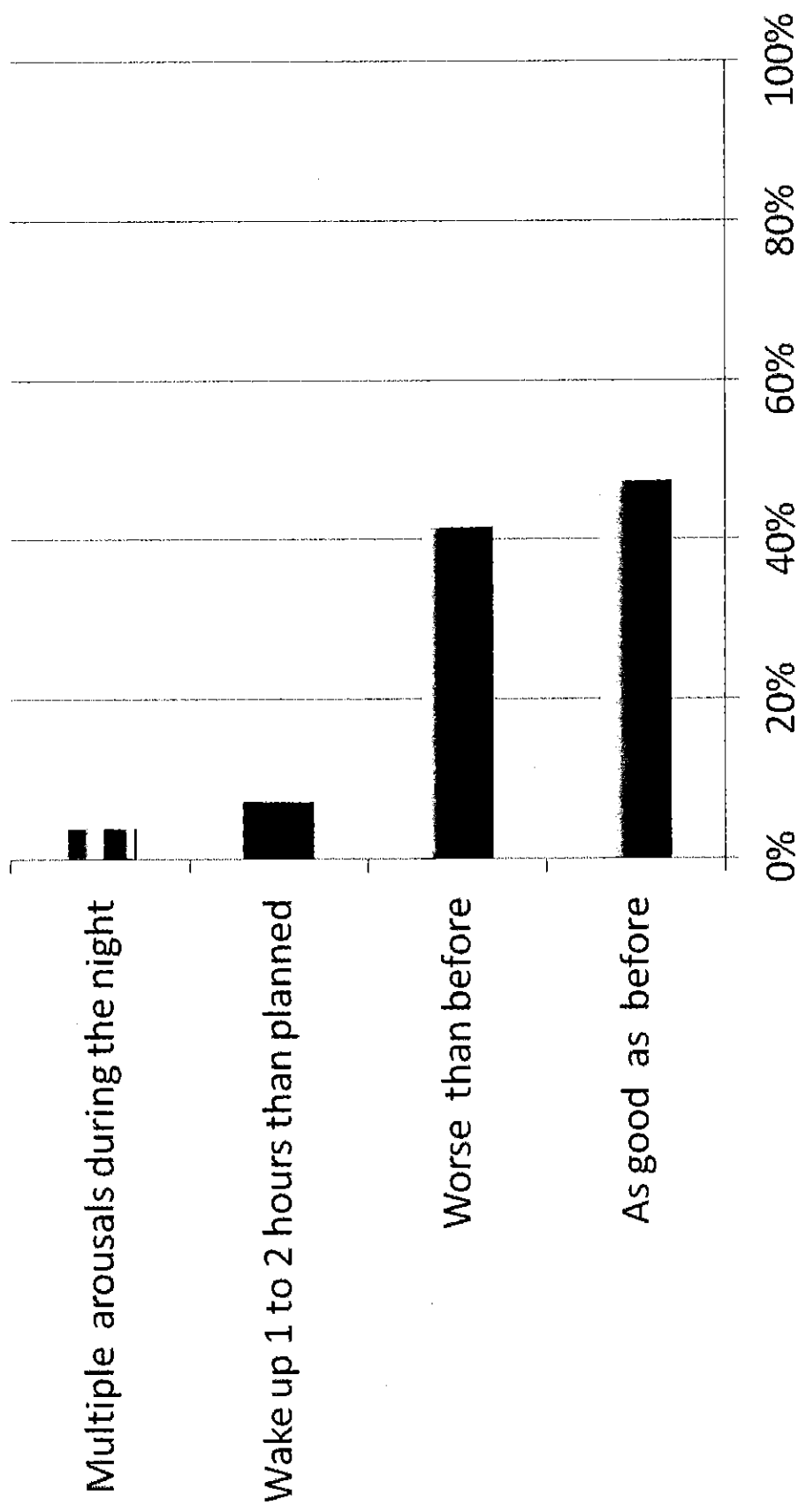
Percentage of ICU nurses with substance abuse  
once in a life time and during the last year

SUBSTANCE ABUSE	Once % respondents	Last year % respondents
Opiates	3.7	0.2
Stimulant drugs	3.7	1.6
Hypnotics/anxiolytics	18.5	20.5
Hallucinogenic drugs	2.1	0
Volatile sniffing agents	1.0	0.4
Cannabis	15.4	4.7

Percentage of ICU nurses with substance abuse  
once in a life time and during the last year

SUBSTANCE ABUSE	Once % respondents	Last year % respondents	
Opiates	3.7	0.2	F<D
Stimulant drugs	3.7	1.6	
Hypnotics/anxiolytics	18.5	20.5	F>D
Hallucinogenic drugs	2.1	0	
Volatile sniffing agents	1.0	0.4	
Cannabis	15.4	4.7	F>D

# SLEEP QUALITY in ICU nurses





# Important stressors for ICU nurses

1. Administrative overload 3
2. Effects of workload on personal /family life
3. Inability to achieve accuracy and state of the art care due to clinical workload/overload 1
4. Shortage/allocation of ICU beds
5. Fear to make wrong decisions 3
6. Fear to make mistakes in treatments or technical acts
7. Inability to deliver high end quality of care 2
8. Confrontation with the ICU patient's family
9. Not comfortable with End-of-life decisions

# Important stressors\* for ICU nurses

	ALL	F	D
Administrative overload	3	3	2
Effects of workload on personal /family life			
Inability to achieve accuracy and state of the art care due to clinical workload/overload	1	1	1
Shortage/allocation of ICU beds			
Fear to make wrong decisions			
Fear to make mistakes in treatments or technical acts			
Inability to deliver high end quality of care	2	2	3
Confrontation with the ICU patient's family			
Not comfortable with End-of-life decisions			

\* F speaking ICU nurses rate stressors higher than D speaking ICU nurses !





# Case Story: “Acharnement Therapeutique”



Disagree

72.5 %

Risk factors for the wrong response :

1. F > D (30.4% vs 23.5%  $p > 0.05$  ns)
2. Likely Depression  $p = 0.013$
3. Burn out: no influence!



## Head nurse survey

### Support in the job as head nurse

None (= "solo practice ")	68.4 %
Other head nurse(s)	3.9%
Deputy head nurse(s)	27.6%

### Number of people led by head nurse

ICU nurses	Mean 28.3+/-17	Max 105
Nurse equivalents in FTE*	Mean 23.8+/-18	Max 90
Others ( non nurses )	Mean 2+/-1.9	Max 8
Others in FTE	Mean 1.2+/-1.7	Max 7

### Frequency of performance interviews

1/year	42.1%
Several times/year	60.6%
If necessary	43.4%
Never	7.9%

### Rota list

#### How is the rota list made ?

Fixed rotation	27.6%
Keeping in account nurses' wishes	51.3%
Automatically	2.6%
By external person	2.6%
None of the above	15.8%

### Time spent on rota list

5.8+/-4.8 hrs	Max 25 hrs
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## Head nurse survey

### Designated medical staff and medical ICU director

Yes	97.4%
No	2.6%

### Cooperation with medical staff

Excellent	21%
Good	51.3%
Average	17.1%
Bad	-
Very bad	2.63%

### Are you implicated in the ICU management?

yes	92.1%
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### Head nurses' involvement in direct patient care

Never	2.6%
On necessity	44.7%
Daily	52.6%

**THXS!**

# How to avoid burnout ?

- > Stay active in domains and with people you appreciate
- 1. Time management : one task at a time , learn to plan and put forward priorities .
- 2. Try to discover what is really important for you in life
- 3. Assertivity : learn to say no , set limits , daily break from technology.
- 4. Listen to yourself : headaches, tendency to isolate..
- 5. Regular physical exercise after work
- 6. Stop worrying but act (ask advice to good counsellors , friends..)
- 7. Avoid extreme perfectionism . Delegate....
- 8. Be yourself with your imperfections : Self-esteem does not depend from other's ideas.
- 9. Do pleasant and sociable activities : take a breather , movie , good book ...
- 10. Smile and see things in perspective



# To Do's

1. Aantal respondents per provincie (10) met Brussel als afzonderlijke entiteit.

2. Rapportering per taalgroep Nederlandstalig versus Franstalig van de

- GHQ-SF12 (alle categorieën zie heironder),
- CES-D score,
- Maslach BI (numerieke analyse),
- AUDIT >8 en >11 en 0,
- Substance abuse,
- Sleep quality (slaapgewoontes),
- stressors
- Wat zou U beslissen in deze situatie.

3. Univariate and multivariate analyses to study the associated factors

- leeftijd,
- burgerlijke staat (gehuwd versus niet gehuwd),
- gender (man versus vrouw),
- professional status (verpleegkundige versus hoofdverpleegkundige +adjunct hoofdverpleegkundige),
- degree of employment (part time versus full time),
- professional experience (aantal jaar actief op ICU :0-5];6-10,11-15,16-20,21-25,26-30,>30),
- type of ziekenhuis (universitair versus openbaar versus privé),
- aantal bedden op ICU (<8,8-12,12-16,16-20,>20),
- aantal nachtschiften (<3,3 en meer),
- personen die vinden dat er wel toereikend aantal opleidingsdagen zijn versus zij die dat niet vinden,
- personen met extralegale voordelen versus die zonder,
- geabonneerd op vakliteratuur versus niet geabonneerd,
- aangesloten bij beroepsvereniging versus niet aangesloten.

voor de

- GHQ-SF12 voor de afzonderlijke domains van deze vragenlijst voor volgende categorieën
- Defined categories
- CES-D voor de scores <16 ; 16 ; 17-23 ; > 23
- Maslach burnout Inventory (numerieke analyse)
- AUDIT score 0 ; 8+ ; >11
- Substance abuse score voor de verschillende subcategorieën ooit versus nooit
- Slaap kwaliteit

4. Wat zou u beslissen in deze situatie ?

Voor deze item is er een ja of neen antwoord .  
Het NEEN antwoord is het correcte antwoord .  
Hier willen we onderzoeken of een afwijking de beslissing beïnvloedt .  
Voor volgende " afwijkingen " :

**GHQ-SF 12** eerste domein versus de rest

Domain (during the last 4 weeks...)

Defined categories

**CES-D** voor de scores <16 ; 16 ; 17-23 ; > 23

**Maslach burnout Inventory** (numerieke analyse)

1. Voor de drie domeinen : Emotional exhaustion BO vs NoBO

Loss of empathy BO vs NoBO

Professional accomplishment BO vs NoBO

2. Voor de globale score No or LBO -22->-45

MBO -9->-21

SBO -8->+34

**AUDIT score** voor de categorieën : 0 ; 8+ ; >11

**Substance abuse score** de subcategorie ooit en de categorie laatste jaar

**Slaapkwaliteit**