

Smjenski rad i zdravlje radnika

Shift work and workers health

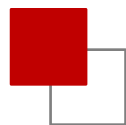
*Tanja Lelas
Ines Kovačević Cvetko
Mirjana Ptičar
Ines Ostović*



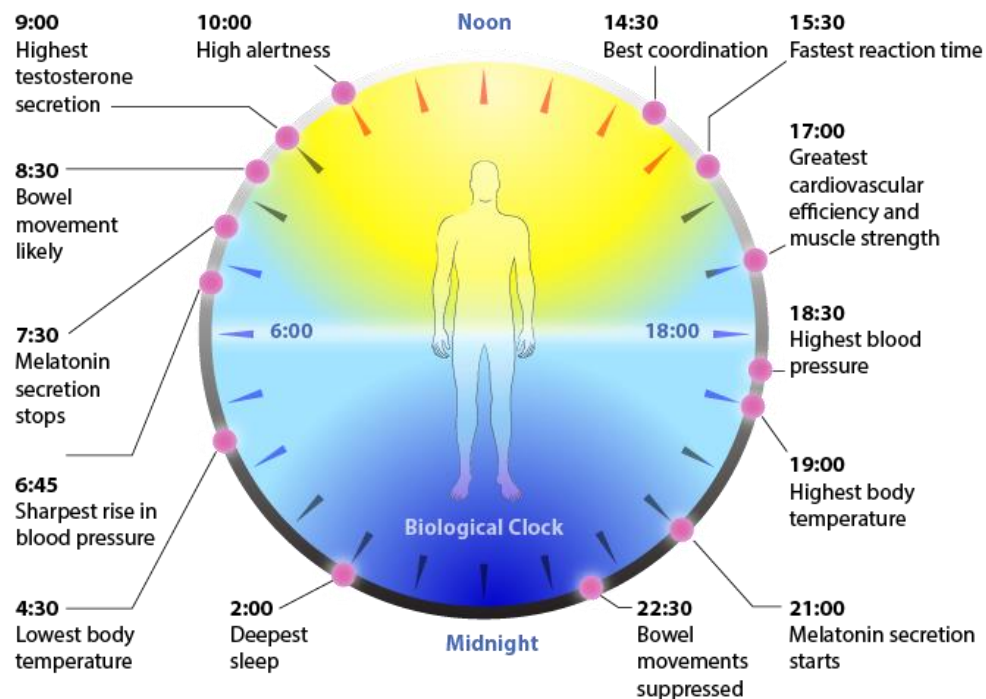
SHIFT WORK

- Economic and technological progress - market globalisation
- Shift work- time schedule is permanent or frequently out of standard daily working hours (8-16 h)
- Night work-working time between 22-6 h
- 20% workers in Europe and North America work in shifts or at night
- healthcare, firefighting, traffic, textile, chemical, food industry,...





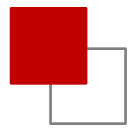
Cirkadian rhythm



Health problems:

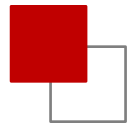
- Sleeping problems and chronic fatigue
- Reproductive, gastrointestinal and psychic disorders,
- Cardiovascular and metabolic diseases
- Carcinoma





- 20% leaves shift work during first year
- 10% has no complains on shift work
- Frequent sickness absence
- Older workers and workers with longer night work experience have higher risk for chronic diseases
- Social isolation
- Bad habits (smooking, alcoholic and stimulating drinks)





RESEARCH

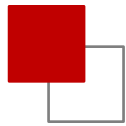
AIM:

- To determine how shift workers assess their health
- Assessment of their health compared to the general population of Croatia

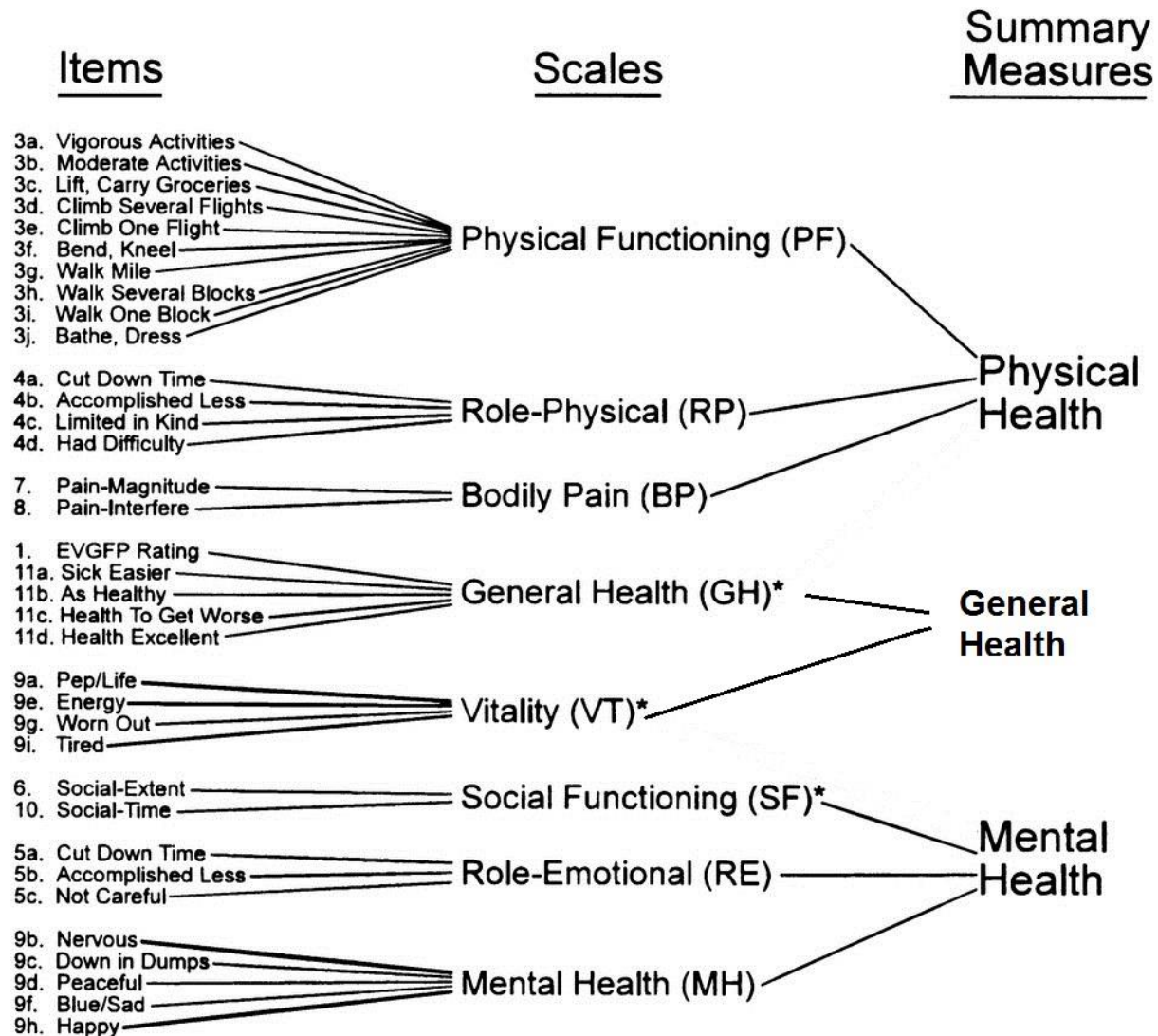
METHOD :

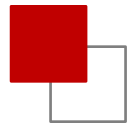
- SF-36 Health Survey
- 8 scales
- 3 general dimensions: physical, general and mental health
- Higher score indicate better assessment of health (scale 0-100)





SF-36 Health Survey

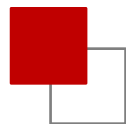




SUBJECTS

- 540 shift workers who work 12h night shifts
- 261 chemical, 195 firefighting, 84 medical services
- 460 (85,5%) male, 78 (14,5%) female
- Age average: 43.57y (SD=9.46, min=20, max=62)
- Night work experience: 20.17y (SD= 9.69)
- Night shifts monthly: 7.89 (SD= 2.05)





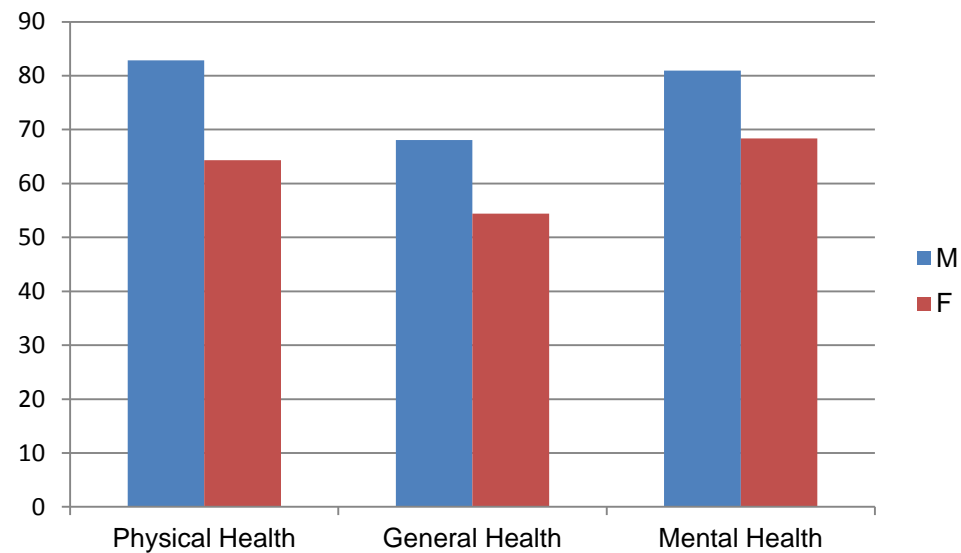
RESULTS

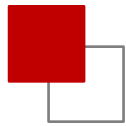
Scale	M	SD	Range
Physical Health	80,17	21,60	14 - 100
Physical functioning– PF	82,67	21,06	5 – 100
Role-physical – RP	81,49	32,63	0 – 100
Bodily pain– BP	76,50	24,16	0 – 100
General health	66,03	16,30	7,50 - 100
General Health– GH	68,78	17,84	5 – 100
Vitality – VT	63,33	17,67	0 – 100
Mental Health	79,17	18,24	8 – 100
Social funkcioninig – SF	77,46	21,88	0 – 100
Role-emotional– RE	88,32	28,14	0 – 100
Mental health – MH	71,93	15,95	2 - 100

M = arithmetic mean; *SD* = standard deviation

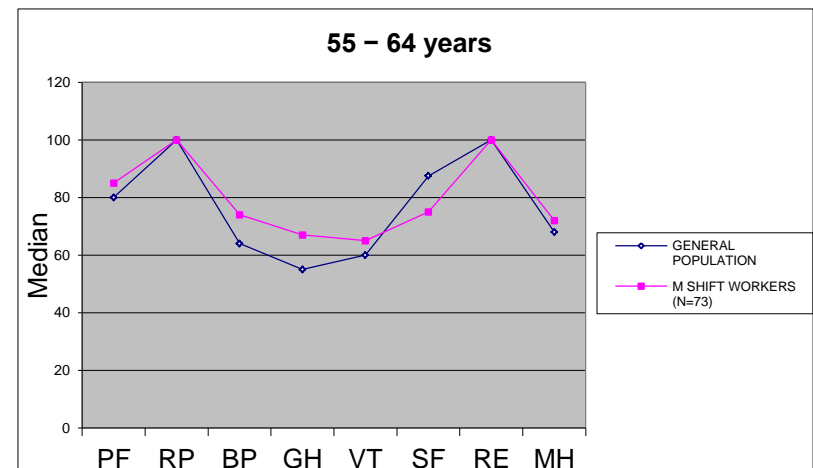
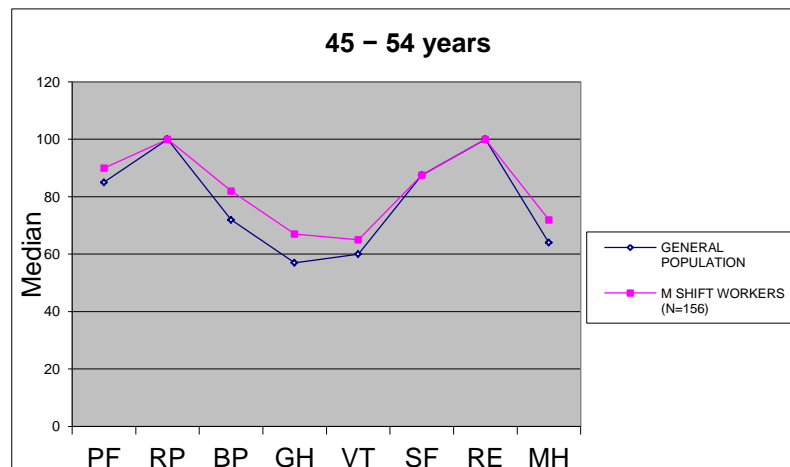
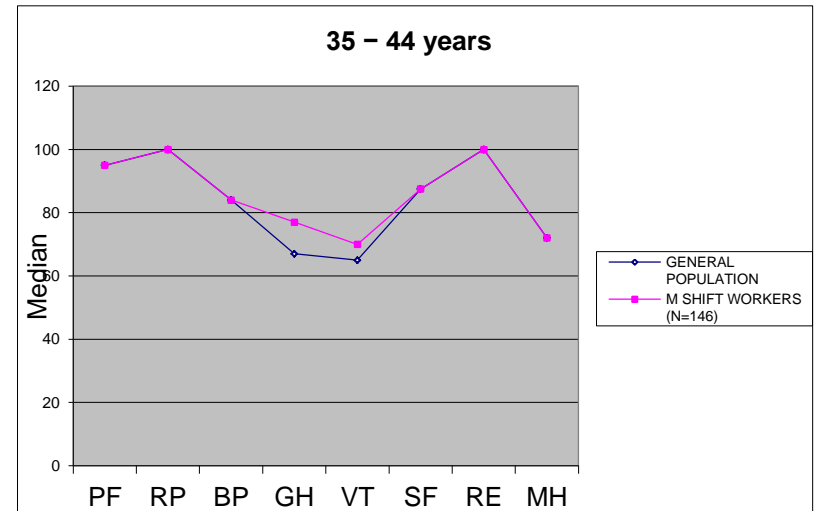
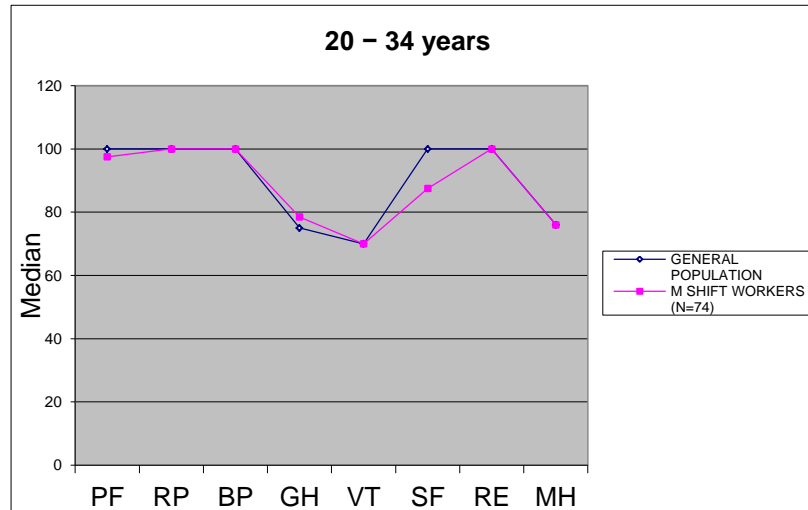
RESULTS

HEALTH DIMENSION	Male (N=458) M (SD)	Female (N=78) M (SD)
Physical Health	82,84 (19,48)	64,33 (24,47)
General Health	68,06 (15,45)	54,38 (16,19)
Mental Health	80,96 (17,24)	68,34 (20,40)



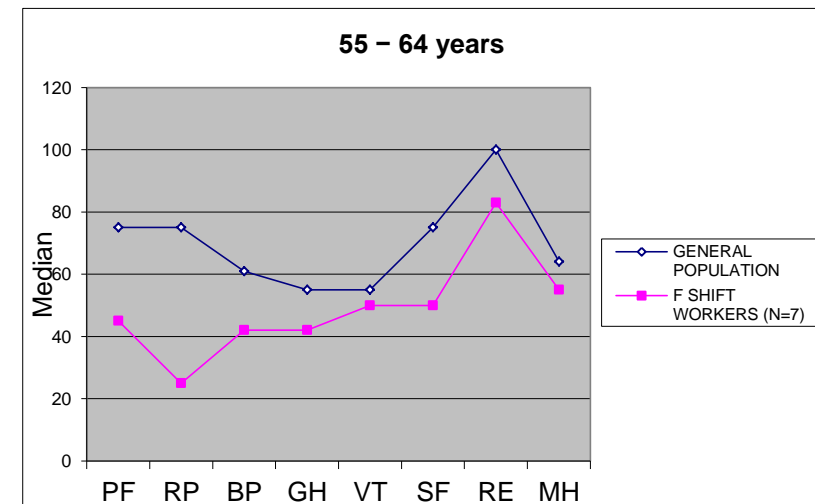
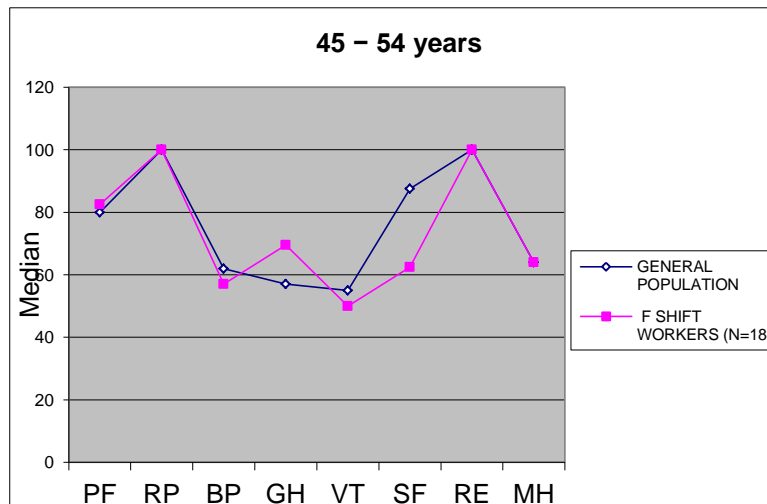
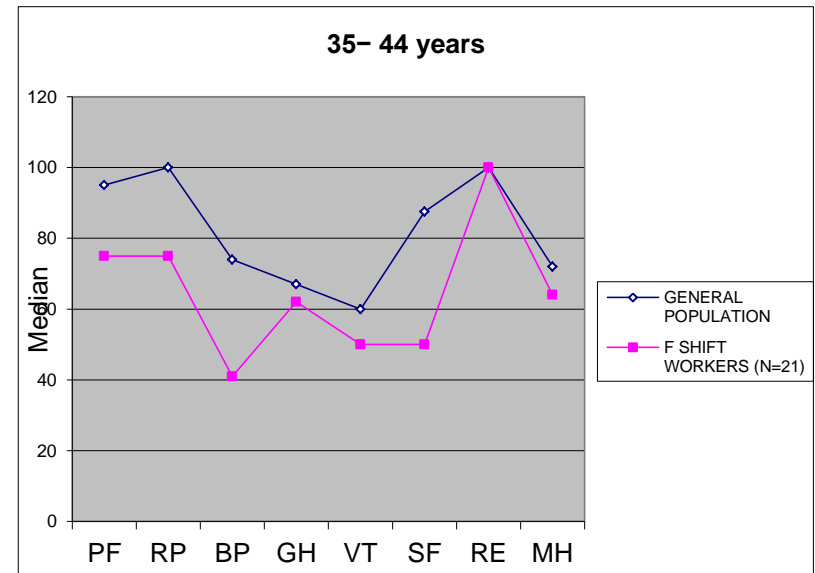
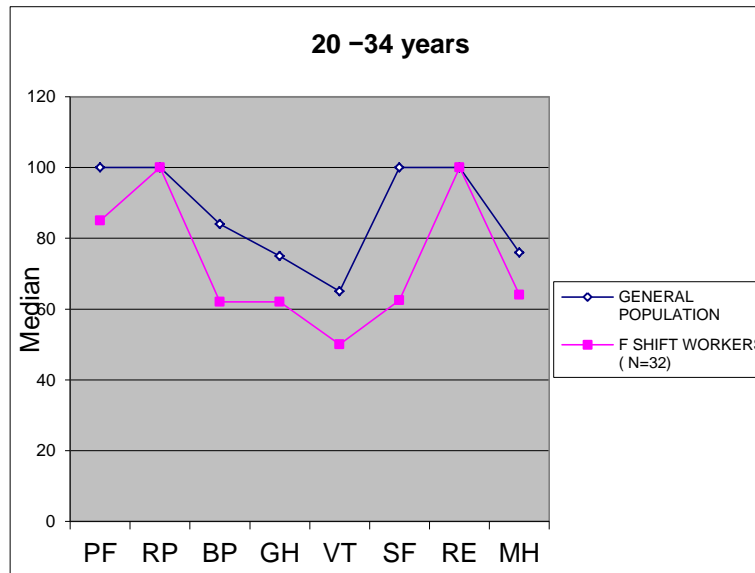


RESULTS- MALE SHIFT WORKERS



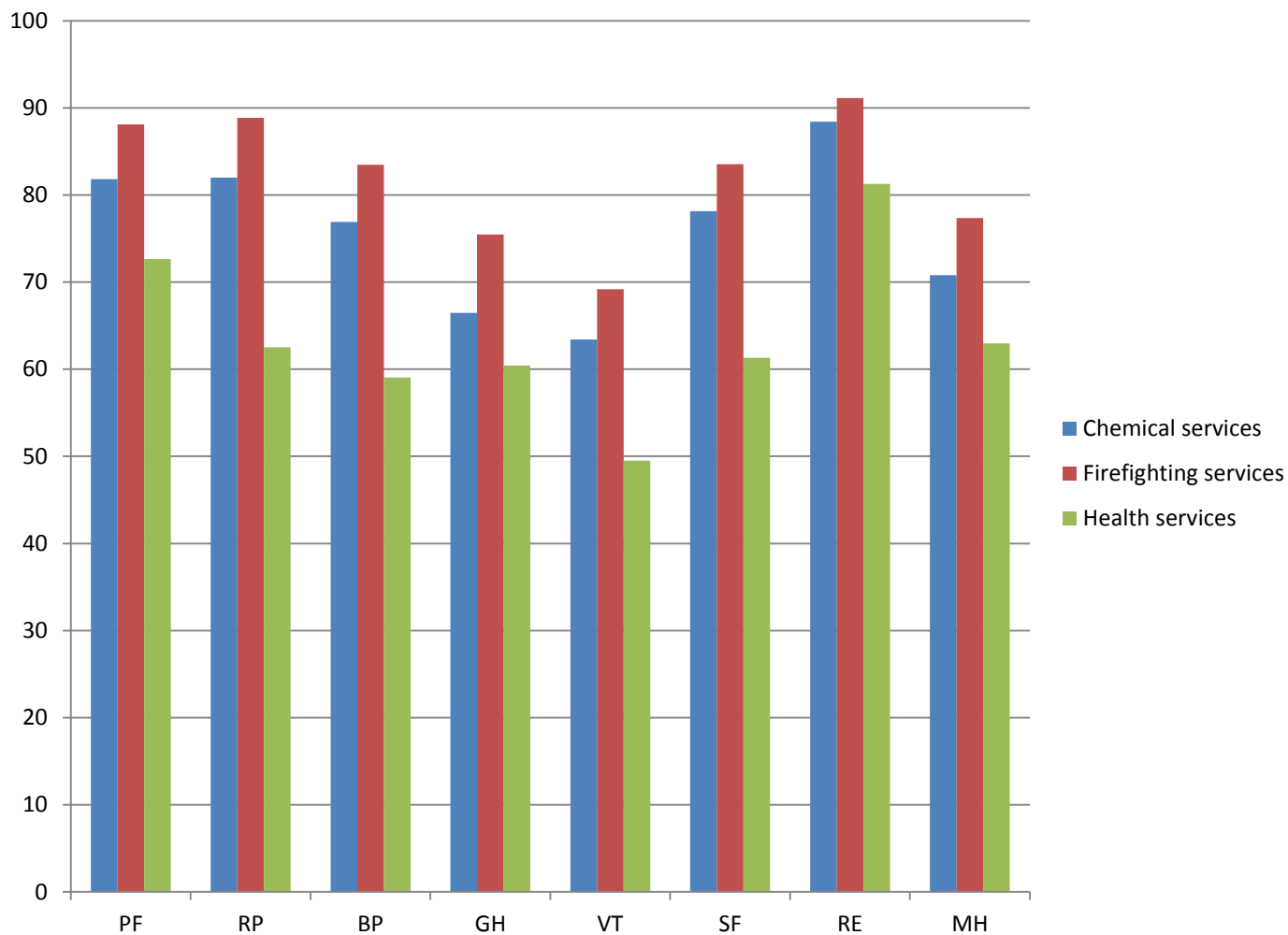


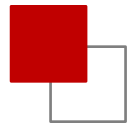
RESULTS-FEMALE SHIFT WORKERS





Comparison of services on SF-36 health scales

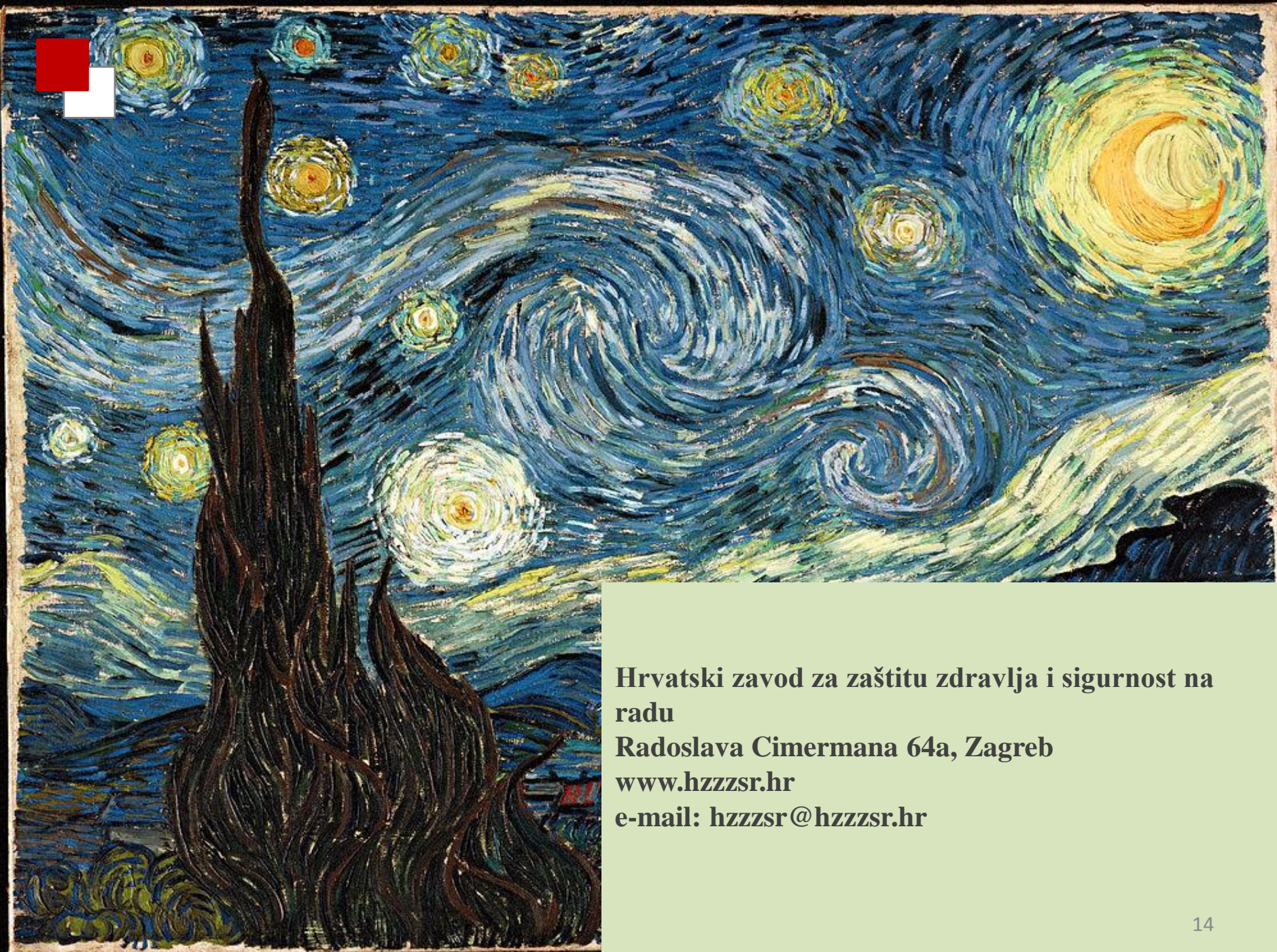




CONCLUSION

- Shift workers assessed their health as satisfactory
- Lowest score in General Health and highest in Physical Health dimension
- Female assess their health worse compare to men
- Lower score in Social Funcioning for younger and older male workers
- Sensitivity of women childbearing age, especially in scales Vitality and Bodily Pain
- Shift work - a risk factor for workers health in combination with other psychosocial risks





Hrvatski zavod za zaštitu zdravlja i sigurnost na radu

Radoslava Cimermana 64a, Zagreb

www.hzzsr.hr

e-mail: hzzsr@hzzsr.hr