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Regione Piemonte ASL1



Ministero della Salute



OSSERVATORIO  
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Dipartimento di Epidemiologia  
ASL RME

# Gender differences in heroin addiction: results from the VEdeTTE cohort

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# VEdeTTE study

Acronym for “Evaluation of Effectiveness of Treatments for Heroin Dependence”

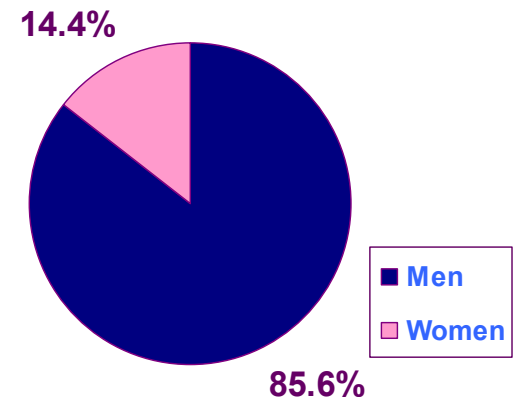
Aim: to measure the effectiveness of treatments carried out by drug abuse treatment centres of the National Health Service (NHS)

13 out of 21 Italian regions participated in the study, with a non random sample of 115 treatment centres

September 1998 - March 2001: each participating centre enrolled subjects over an 18 months period

Italian heroin addicts, 18 years or over

10,454 recruited with data available for analysis



# Methods (I)

A multivariate analysis was used to estimate gender differences as regards:

- socio-demographic characteristics at enrollment
- history of addiction
- substance use
- risk behaviours
- health and psychiatric problems

Information had been collected through a structured interview at the time of enrollment

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# Gender differences at enrollment (I)

	<b>N</b>	<b>Adjusted OR</b>
<b>Civil status</b>		
single	6287	1.00
married	2576	<b>1.29</b>
separated/divorced/widow	914	<b>3.05</b>
<b>Living condition</b>		
with parents/ relatives	5380	1.00
with partner/ sons	2665	<b>3.41</b>
with friends/ alone	1033	<b>1.68</b>
in therapeutic community	544	0.80
homeless	155	<b>1.89</b>

OR women vs men estimated through multivariate analysis, adjusted for variables statistically significant in univariate analysis

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# Gender differences at enrollment (II)

	N	Adjusted OR
<b>Education level</b>		
< 6 years	1688	<b>0.54</b>
6-8 years	5800	1.00
9-13 years	2214	<b>2.17</b>
> 13 years	75	<b>2.67</b>
<b>Job</b>		
steady	3300	1.00
temporary	2581	<b>1.97</b>
student	102	<b>4.07</b>
non-working status	334	<b>8.49</b>
unemployed	3460	<b>3.36</b>

OR women vs men estimated through multivariate analysis, adjusted for variables statistically significant in univariate analysis

# Gender differences at enrollment (III)

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	N	Adjusted OR
<b>Imprisonment/ legal problems</b> (last 12 months)		
no	6765	1.00
yes	3012	<b>0.63</b>
<b>Age at first access to treatment</b>		
10-21 years	3009	1.00
22-24 years	2403	<b>0.63</b>
25-28 years	2334	<b>0.61</b>
29-65 years	2031	<b>0.64</b>
<b>Length of addiction</b>		
0-7 years	2644	1.00
8-11 years	2513	<b>0.64</b>
12-16 years	2445	<b>0.55</b>
17-35 years	2175	<b>0.36</b>

# Gender differences at enrollment (IV)

Substance use	N	Adjusted OR
<b>Alcohol</b>		
no	4566	1.00
yes	5211	<b>0.69</b>
<b>Tranquilizer/ sedatives</b>		
no	8066	1.00
yes	1711	<b>1.51</b>
<b>Amphetamine/ ecstasy</b>		
no	9593	1.00
yes	184	<b>1.74</b>

OR women vs men estimated through multivariate analysis, adjusted for variables statistically significant in the model

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# Gender differences at enrollment (V)

	N	Adjusted OR
<b>Needles sharing</b>		
no	8068	1.00
yes	1709	<b>1.38</b>
<b>HIV/ AIDS</b>		
no	8975	1.00
yes	802	<b>1.71</b>
<b>Psychiatric comorbidity</b>		
no	8459	1.00
yes	1318	<b>1.22</b>

OR women vs men estimated through multivariate analysis, adjusted for variables statistically significant in the model

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# Gender differences at enrollment (VI)

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	Before use of heroin		After use of heroin	
Psychiatric problems	N	Adj. OR	N	Adj. OR
<b>Loss of interest/ depression</b>				
no	5060	1.00	1522	1.00
yes	4717	<b>1.55</b>	8255	1.18
<b>Self-destructive behaviours</b>				
no	8441	1.00	7162	1.00
yes	1336	<b>1.73</b>	2615	<b>1.50</b>
<b>Suicide attempts</b>				
no	9141	1.00	8589	1.00
yes	636	<b>3.50</b>	1188	<b>1.55</b>

OR women vs men estimated through multivariate analysis, adjusted for variables statistically significant in the model

No significant differences in hetero-aggressive behaviours, perception/ thought disorders, psychiatric treatments and hospitalization

# Treatments

In both genders methadone maintenance therapies followed by detoxification are the most frequent ones,

BUT

Women seem to be:

- more inclined to undertake counselling or psychotherapy
- more able to agree on the conclusion of treatment

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# Methods (II)

Differences in MM retention were analyzed using survival models

- Kaplan Meier curve (univariate analysis)

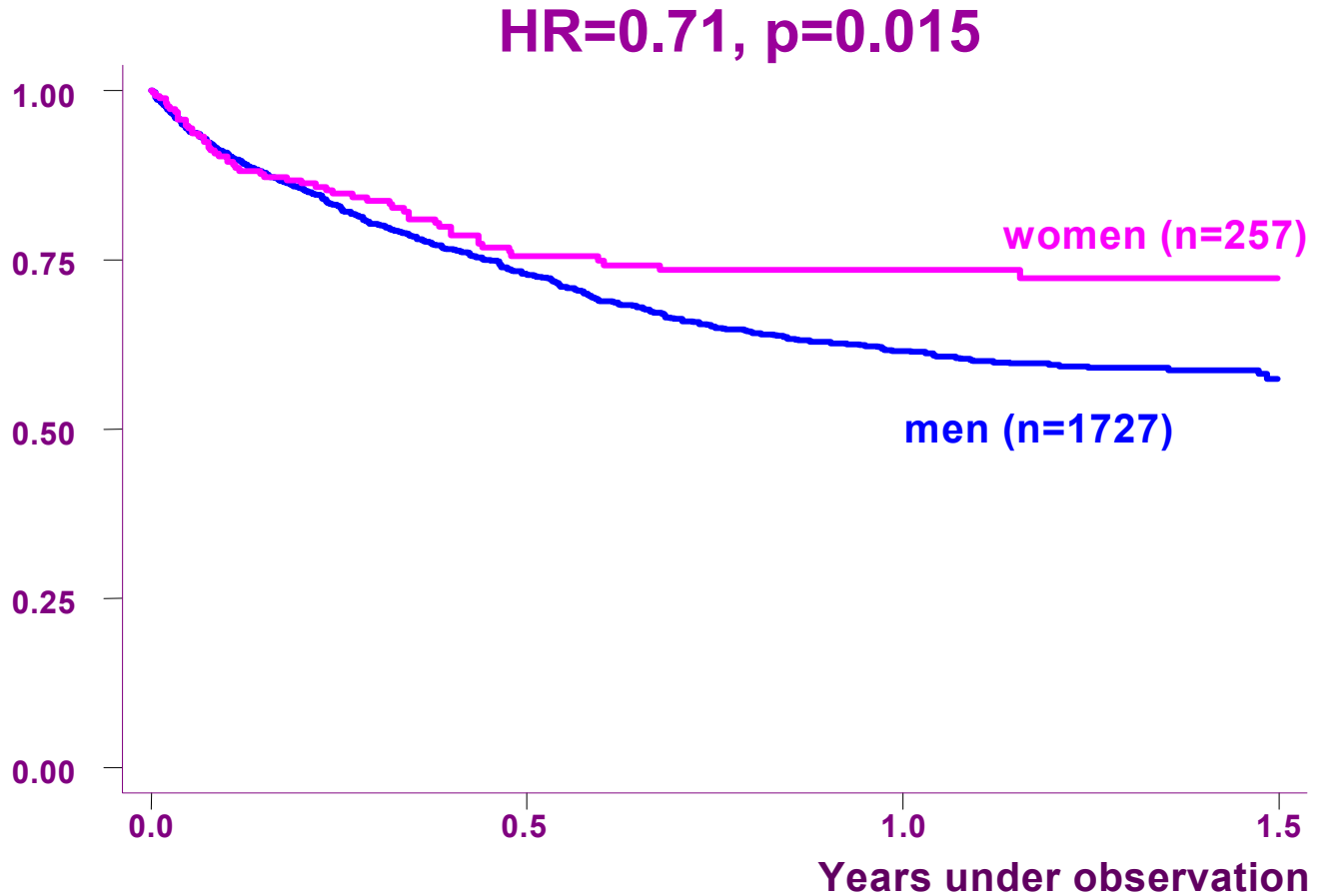
- Cox regression analysis (multivariate analysis)

Only the first MM treatment started in the first 6 months was used for the analysis, in order to have at least 1 year of observation for each patient

Cox model was used to point out risk factors for treatment interruption (stratified for gender)

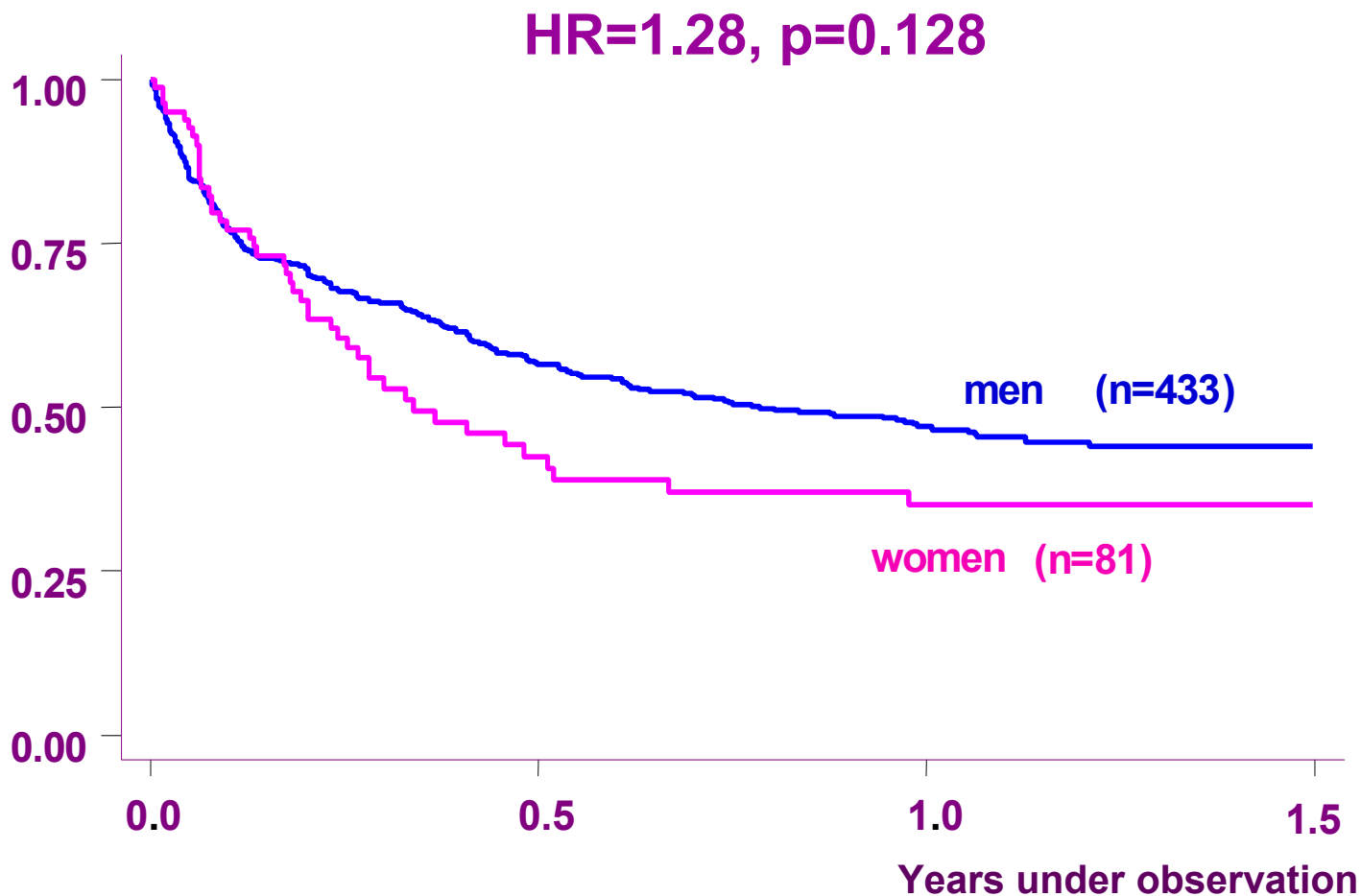
# MM: retention in treatment

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# CT: retention in treatment

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# MM interruption risk factors (I)

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	Men (N=1634)		Women (N=246)	
Characteristic	Adj. HR	p	Adj. HR	p
<b>Duration of addiction</b>				
>= 6 years	1		1	
<= 5 years	<b>1.40</b>	<b>0.005</b>	0.85	0.637
<b>Needle/ parafrenalia sharing</b>				
no	1		1	
yes	1.13	0.296	<b>2.22</b>	<b>0.007</b>
<b>Heroin use</b>				
no	1		1	
yes	<b>1.62</b>	<b>&lt;0.0001</b>	1.80	0.075

# MM interruption risk factors (II)

	Men (N=1634)		Women (N=246)	
Characteristic	Adj. HR	p	Adj. HR	p
<b>Job situation</b>				
steady	1		1	
temporary	<b>1.38</b>	<b>0.004</b>	2.03	0.090
<b>Living conditions</b>				
with parents/ relatives	1		1	
with partner/ sons	1.05	0.677	1.45	0.278
with friends/ alone/ in TC	1.23	0.174	1.27	0.587
homeless	<b>1.93</b>	<b>0.009</b>	<b>11.0</b>	<b>0.004</b>
<b>Imprisonment (last 12 months)</b>				
no	1		1	
yes	<b>1.53</b>	<b>&lt;0.0001</b>	1.39	0.273

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# MM interruption risk factors (III)

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Characteristic	Men (N=1634)		Women (N=246)	
	Adj. HR	p	Adj. HR	p
<b>Methadone dose</b>				
1-39 mg/day	1		1	
40-59 mg/day	<b>0.78</b>	<b>0.023</b>	0.64	0.182
=> 60 mg/day	<b>0.62</b>	<b>0.001</b>	<b>0.32</b>	<b>0.017</b>
<b>Concomitant treatments</b>				
no one	1		1	
MM + Other	<b>0.47</b>	<b>&lt;0.0001</b>	<b>0.55</b>	<b>0.047</b>
MM + Other + psychoterapy	<b>0.30</b>	<b>&lt;0.0001</b>	0.33	0.073

# Conclusions

Gender differences do exist as regards:

- risk factors
- substance use
- treatment adherence

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# Recommendations

At admission, pay attention to anamnesis as regards:

- psychiatric comorbidity
- self destructive behaviours
- infective diseases

In planning treatment strategies take into account:

- gender specific needs
- higher compliance of women with counselling and psychoterapy
- higher risk of interrupting therapeutic community among women
- lower risk of interrupting methadone maintenance among women

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