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JUSTICE

ME.D.I.C.S.



MEntally Disturbed Inmates  
Care and Support



# ME.D.I.C.S.PROTOTYPE FOR DATA PROCESSING

This is a short guide aiming at facilitating the data processing of the information gathered through the administration of the questionnaires.

It is opportune to specify that the methodology below derives from the experience of the technicians who approached, in a “pioneering” spirit, such an ambitious and complicated study.

There was the need to catch all the various shades of meaning, understandable by a psychological interpretation of the data. Indeed, those shades could provide clarifications about the perceived datum of mental discomfort. This led to a very complex structure of the questionnaires which were adopted. Such a complexity increased the problems, from a technical point of view, for data analysis, but the whole process can be subdivided into three steps.

## STEP 1 : “Data digitalization”

Since the questionnaires were administered in papers, it is necessary to digitalize the data obtained from the questionnaires in order to process them. We used a very simple “Excel” software, which is very widespread and practical. Indeed, that software is particularly fit to the methodological requirements of our study; it allows to create one spreadsheet per each questionnaire item.

A formal value was then attributed to each variable, enabling to homogenize our analysis.

1. We would like to know your opinion on what can greatly affect the psychic balance of inmates.

Please tick one case per line		4	3	2	1	
		It can surely cause troubles	Probably it can cause troubles	Unlikely to cause troubles	It is surely not a cause of troubles	Do not know
A	Acute pain			X		
B	Risk for unstable glycaemia					
C	Insomnia					

	Acute Pain	Risk for unstable glycaemia	Insomnia	Risk for powerlessness	Social Isolation	Grief
	B	C	D	E	F	G
1						
2	B01	3	3	2	4	4
3	B02	4	3	3	4	4
4	B03	4	4	4	4	4
5	B04	4	3	4	3	4
6	B05	3	3	4	4	4
7	B06	4	3	3	4	4
8	B07	2	2	2	2	2
9	B08	4	3	4	4	4
10	B09	4	4	4	4	4
11	B10	4	3	4	4	3
12	B11	4	3	3	3	4
13	B12	4	4	4	4	4
14	B13	4	3	4	3	3
15	B14	4	3	4	4	3

You can find above the different variables taken into consideration in the reference item as an example: ITEM 1 – NURSES – “COMPROMISSION OF PSYCHIC BALANCE OF INMATES”

- A) acute pain;
- B) risk for unstable glycaemia
- C) etc. ...

The figure indicated below each item corresponds to the value which was arbitrarily associated beforehand. Therefore, as an example, “4” corresponds to “it can surely cause troubles”.

The codes on the left B01 – B02 – B03, etc. indicate the abbreviation of the subject, that is “B” = subject belonging to Bologna prison sample and 1, 2, 3 = subsequent numbers assigned to each questionnaire reply.

Please note that for the items where a scale of values is not foreseen, but only a dichotomous answer is expected, we used "1" (present); "0" (absent). Then the number of variable "present" was calculated and afterwards its percentage on the whole sample was calculated.

After the digitalization of each datum concerning each item, we went to the following step.

## **STEP 2 : "Data analysis"**

Each one of the variables was calculated by exploiting the Excel formulas: "Average", "Deviance", "Variance", "Standard Deviation".

For example: for the variable of "Grief" the average value was calculated as amounting to 3,37, that is a value which is slightly beyond "Probably it can cause troubles" and towards "It can surely cause troubles". It can therefore be interpreted as one of the items which is likely to be considered as a factor compromising a subject's psychic balance. Afterwards, the standard variation was calculated in order to understand the differences among the various samples involved in the Italian survey as well as among the various items proposed.

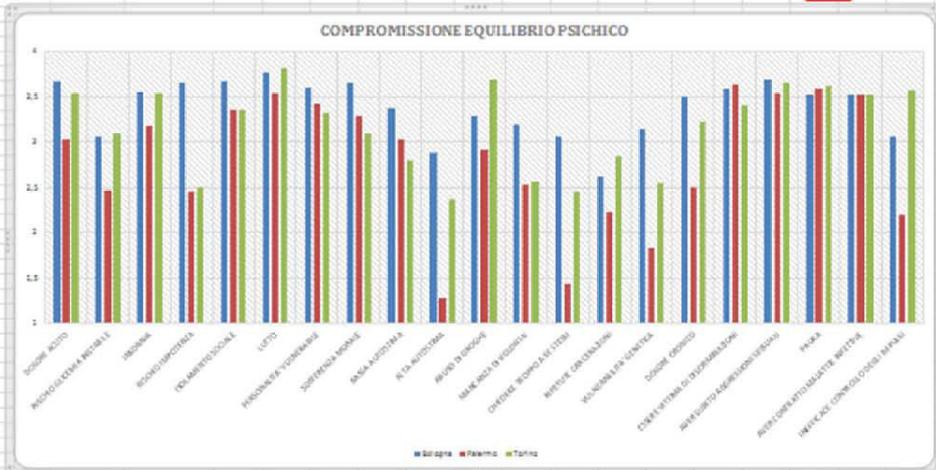
B63		"LUTTO" $f_x$	"GLICEMIA INSTABILE"	RISK FOR UNSTABLE GLYCAEMIA		
	A	B	GRIEF	C	D	E
63	T16		4	4	3	3
64	T17		3	3	3	2
65	T18		4	4	4	4
66	T19		4	4	4	3
67	T20		4	3	1	4
68	T21		4	2	4	1
69	T22		4	3	4	3
		AVERAGE VALUE				
		VALORE MEDIO				
73	BO	3,666666667	3,055555556	3,55556	3,64706	
74	PA	3,037037037	2,48	3,18519	2,45833	
75	TO	3,545454545	3,090909091	3,54545	2,5	
76						
77	TOT	3,373134328	2,846153846	3,40299	2,79365	
78	DEVIANZA					
79	Devianza	0,22881688	0,237822845	0,09101	0,92697	
80						
81	Varianza	0,11440844	0,118911422	0,04551	0,46349	
		VARIANCE				

BO, PA, TO = abbreviations of the various prisons involved: Bologna, Palermo, Torino

AVERAGE VALUE  
VALORE MEDIO

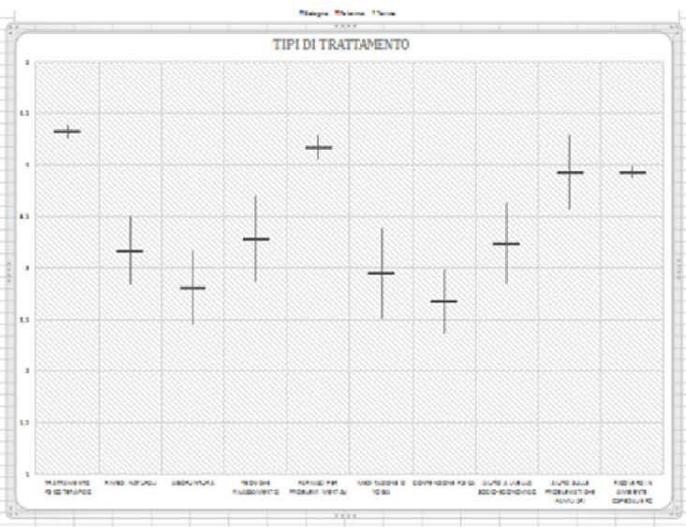
On the basis of the obtained data, some graphics were drawn aimed at further clarify the survey outcomes. The graphics were drawn with the data concerning the average values or the standard deviation.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
BO	3,66644467	3,05555556	3,5556	3,64704	3,64667	3,74471	3,61111	3,64704	3,375	2,075	3,29412	3,1075	3,0425	2,625	3,14206	2,5	3,51024	3,6075	3,52941	3,52941	3,04667	
PA	3,037037037	2,48	3,18519	2,45033	3,36	3,53046	3,42309	3,2963	3,03704	1,20	2,92309	2,53046	1,44	2,30777	1,84	2,5	3,62963	3,53046	3,59259	3,52	2,2	
TO	3,545454545	3,090909091	3,54545	2,5	3,34364	3,81018	3,33333	3,09524	2,8	3,36142	3,68192	2,57143	2,45	2,85714	2,55	3,22727	3,46909	3,65	3,61905	3,52381	3,57045	
TOT	3,273143228	2,846153846	3,40299	2,79365	3,44615	3,69231	3,44615	3,32208	3,04762	2,05	3,27692	2,71429	2,19472	2,53969	2,39	3	3,54545	3,6129	3,50462	3,52381	2,84441	
Devianza	0,22891688	0,237922845	0,89901	0,92497	0,61284	0,04475	0,80407	0,15759	0,16861	1,37492	0,28944	0,27525	1,38335	0,20349	0		55165	0,02751	0,01248	0,0043	4,6E-05	0,99291
Varianza	0,11448844	0,11891422	0,44951	0,46249	0,30342	0,02238	0,40204	0,0788	0,0842	0,68746	0,14472	0,13763	0,69317	0,10174	0		27583	0,01376	0,00624	0,00215	2,3E-05	0,49646
Dev. Standard	0,338243167	0,344835355	0,21332	0,6808	0,17728	0,14959	0,64225	0,28071	0,29035	0,82913	0,38042	0,37898	0,83257	0,31897	0		52519	0,11728	0,079	0,04635	0,00479	0,7046



Graphic drawn with average values highlighted in blue

11	4	2	2	3	6	3	3	6	3	5	5	5	5	5	5	5	5	5	5	5	5	5
12	4	4	1	5	5	4	5	5	4	5	5	4	5	5	5	5	5	5	5	5	5	5
13	4	2	1	3	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
14	4	2	1	3	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
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19	5	3	1	3	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
20	5	3	1	3	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
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25	5	3	1	3	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
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51	5	3	1	3	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
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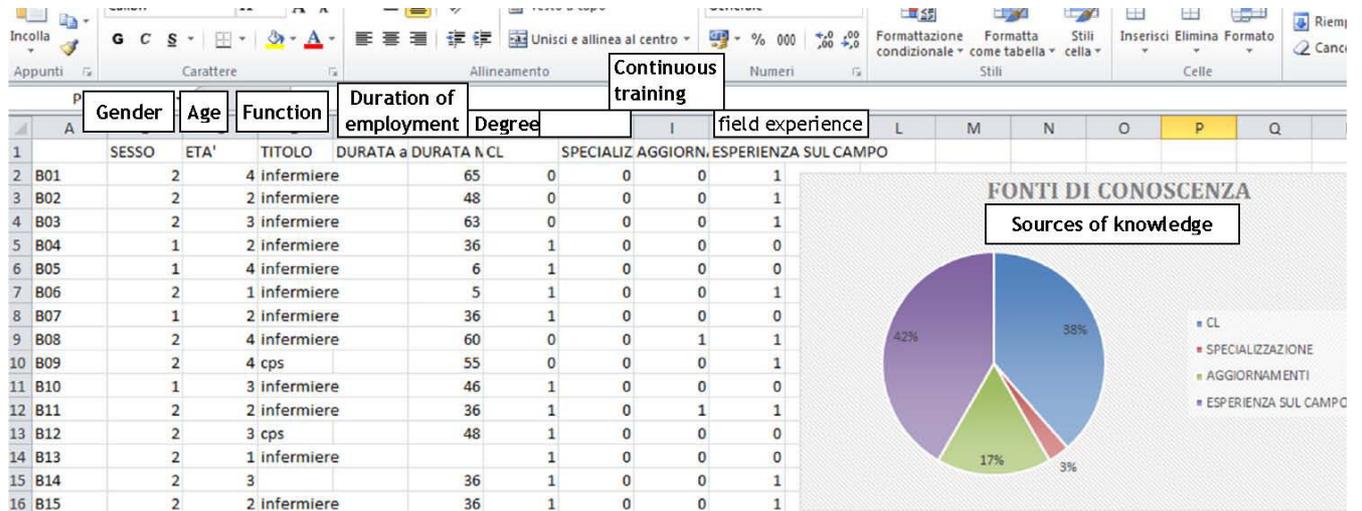


Graphic drawn with data relevant to standard deviation highlighted in blue

In the last graphic above, the vertical perpendicular lines indicate the level of relevant disagreement. Therefore, if data are read in a specular way, the items having lines of very small dimensions indicate a higher degree of agreement and are to be understood as the items which are more important to the majority.

After having drawn graphics also for personal data (histograms and pie charts) which allow us a

better knowledge of our sample, we went on to step 3.



### STEP 3: "DATA INTERPRETATION"

After having read the graphics, the most important data have been highlighted and then a proposal of psychological/interpretative reading was made.