Making decisions and judgments on disability: the disability representation of parents, teachers, and special needs educators

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Abstract

Representations of disability, shaping the opinions, attitudes, and behaviour of parents, teachers and special needs educators were investigated. Two experiments were carried out: in the first one the disability representations of 90 participants were investigated through both qualitative analyses – consisting of textual interpretation of the data gathered by 17 *focus groups*, assisted by the Atlas.ti software – and by quantitative analyses, consisting of Chi-square statistical testing. In the second experiment, the disability representations were investigated by administering the Implicit Association Test (IAT) to 36 participants. The results obtained demonstrated that, on an implicit level, disability is strongly and stereotypically associated with a negative and unpleasant dimension of existence, compared to the richness of *scripts* showed in explicit explanatory disability opinions, attitudes and behaviour of the participants in different contexts.

KEYWORDS: models of disability, parental attitudes, ICF, biopsychosocial model, Computer Assisted Qualitative Data Analysis Software, Atlas.ti, special needs educators, IAT – Implicit Association Test.

INTRODUCTION

The disability models are categorical representations in which the social relations are understood, built, and given; *frames* in which everyone finds his own identity, and also, as *scripts*, in which the identities of other individuals are represented in that complex system of attribution that defines us and lets us to make decisions and judgments.

Therefore, following our perspective, disability models should not only be considered as useful access tools to deal theoretically and practically with a too complex reality, but as the possibility itself to access that reality called disability. The idea of disability should be brought back to etiopathological causes, to social structures, to cultural discrimination, to divine punishment, pertains to the diversity of the models that are not a simple interpretation of a malfunctioning, but the means of experiencing it.

Purpose

In this work we will present the results of two experiments about a qualitative and a quantitative investigation on the representations of disability which orient the opinions and attitudes of people who spend large amounts of their time with a disabled person on a daily basis. Two reasons led us to conduct this investigation: first, to study more in depth the relationship between disability, adaptation, socialization, and development and, second, to verify the spread of the biopsychosocial model proposed by the *International Classification of Functioning, Disability, and Health* [1].

EXPERIMENT 1

Method

Aims of descriptive research and quasi-experimental hypotheses

The implementation of the first experiment is based on the following assumption: the disability models that enlighten the social relations of a disabled student can be inductively inferred by the representations of disability orienting the opinions and attitudes of people.

The quasi-experimental results were analysed using qualitative analyses, text coding and interpretation, and quantitative software-assisted data analyses. The latter were carried out, with explorative purposes, starting from two statistical hypotheses:

1. In the quantitative analyses, the disability model attributed to each role-homogeneous group, depends on the highest number of expressions coded as consistent with that specific model;
2. The disability model, significantly prevailing in each role-homogeneous group, correlates with the participants' modalities of expression of their personal experience.

Participants

The enrolment of participants was carried out exclusively in schools and local educational agencies, or in local associations and organizations dedicated to care, assist, and educate disabled people.

A total of 90 participants (69 F; 21 M; mean age: 47 yrs) were involved in the study: 30 (23 F, 7 M) parents of disabled students, 7 (6 F, 1 M) parents of non disabled students, 20 (18 F, 2 M) non-specialized teachers, 14 (11 F, 3 M) specialized teachers, 6 (3 F, 3 M) professional special needs educators, 13 (8 F, 5 M) social-health workers.

Research Tools

The *focus group* was chosen as the main tool to gather all the data for this study. Several authors [2-7] highlight the expediency of the *focus group* as an investigation tool when the researcher is concerned about exploring complex ideas, connected with the dynamics of personality, such as opinions, emotions, and motivations.

The choice of the tool for the analysis was largely reliant on the aim of the study itself, in addition to the type of data we gathered: the assessment of the underlying disability models, starting from the coding of the main representations emerging from the *focus groups*, is a consistent operation to the approach supported by the scientific foundations of the Grounded Theory [8]. The software Atlas.ti was designed within the frame of the *Computer Assisted Qualitative Data Analysis Software* (CAQDAS) Networking Project [9-11] at the beginning of the 1990s. The software analyse data in a qualitative approach, by means of interpretation, compatible with the theoretical basis of the Grounded Theory [12].

We carried out 17 *focus groups*. All the *focus groups* conversations were audio recorded for a total of approximately 17 hours. The conversations were then transcribed, analysed, and interpreted, following methods and procedures described in the following paragraph.

Qualitative data analysis procedures and results

Manual text analysis procedures

The purpose of the manual analysis of the text was to verify the perspectives on disability according to the different roles of the participants.

At first, all the 17 hours of audio recordings from the *focus groups* were transcribed. Then, the transcripts were carefully read and indexed, namely the most significant verbal expressions were identified and a code/index was assigned to each one. The code categorised the sentences according to the three main disability models: medical, social, and biopsychosocial. Overall, 37 codes emerged from this phase: 17 referring to the social model, 8 to the medical one, and 12 to the biopsychosocial one.

After the manual coding, we calculated the most frequent indexes for each *focus group*, and we assigned to each educational role the prevailing disability model.

Manual text analysis results

The text analysis manually performed highlighted different perspectives on disability, according to the educational role held by each group of participants. In every role-homogeneous group, except for the special needs educators' one, the social model appeared to prevail. However in more than one group the evaluation was not so unambiguous.

Among the parents of disabled and the non-specialized teachers, the social disability model was evaluated as the foremost, since the codes/indexes relative to that model were the most frequent ones in almost all the *focus groups*.

It was not possible to attribute a single model to the other groups. Among the parents of non disabled children, even though the social model seemed to prevail, the presence of the medical model was detected. Among the specialized teachers and the social-health workers emerged a fluctuation between the social and the biopsychosocial models. This would confirm what is reported in the literature about the appearance of a so-called *transitional model* that would account for aspects of both models [13-14].

Results of the qualitative analysis assisted by Atlas.ti

The text analysis carried out with the software partially confirmed the results emerged from manual indexing, showing some additional nuances within and between the groups.

The social model is widespread in all the role-homogeneous groups, except from the specialized teachers that fluctuate through all the three disability models. The parents of non disabled students oscillated between the social and the medical models, confirming what came out from the manual analysis. However, only the parents of disabled students and the non-specialized teachers seemed to strongly claim their adhesion to the social model. The transitional model seems to spread among the special needs educators and the social-health workers, with no preference for the biopsychosocial model, despite the presence of several assumption relative to it.

The parallel analysis developed on a 'dimensions of experience' level, allowed us to discover the existence of a relationship between disability models and participants' modalities of expression. Parents, for example, seem to support some assumptions of the biopsychosocial model, but only at a level of 'opinions', while when they refer to 'behaviours' those assumptions disappear and the social model reappears. In almost all the groups, the medical model is often expressed with 'behaviours', along with emotions like 'anguish' and 'sadness'. Finally, the social model is expressed through 'opinions', 'behaviours', and emotions such as 'anger' and 'disgust'.

Quantitative analysis hypothesis

We performed an additional analysis to test if the qualitative interpretation aiming at assigning a disability model to the participants of each *focus group* according to the majority of the opinions of their components is true. If so, then we should find a greater number of those codes (attributed to the texts of each *focus group*) united in one 'family' relative to the model appearing in each *focus group*.

Results of quantitative analysis using χ^2 distribution

Statistical analysis highlighted significant differences between the groups regarding the distribution of 2 out of 3 disability models: the social and the medical ones (see Appendix 1). No significant differences were observed for the biopsychosocial model, equally spread over the groups divided by role. In general, significant differences in the distribution of the 3 models appeared in all the groups, with the exception of parents of non disabled and social-health workers.

The distribution of the 5 dimensions concerning personal experience resulted significantly different within all the groups (see Appendix 2). Parents, teachers, social-health workers, and special needs educators expressed themselves mainly showing opinions and behaviours, while emotions like anger, sadness, and joy appeared only in parents and non-specialized teachers.

As indicated in Appendix 2, the analysis on the emotions was carried out only on 6 role-homogeneous groups. In the groups in which opinions and behaviours showed a prevalence of the social model, these dimensions were emotionally expressed as well; in groups in which the biopsychosocial model prevailed, the participants expressed mainly opinions, while in groups with preference for the medical model, the participants expressed both behaviours and opinions. Lastly, the distribution of opinions, behaviours, and emotions, resulted significantly different, while the opposite occurred for the distribution of attitudes and myths/stereotypes.

Discussion of the first experiment results

Results of experiment 1 confirmed our hypothesis that there is a different perspective on disability according to the different educational roles.

The results obtained from the qualitative analysis showed that the horizon of perspectives is wider compared to the partition into medical, social, and biopsychosocial models. According to the results obtained we can conclude that:

- The social-health workers and the special needs educators, as interpreted on the basis of the qualitative analysis results, refer more to a *transitional model*;
- The parents of disabled students, the non-specialized teachers, and the majority of the specialized teachers are the groups that adhere the most to the premises of the social model;
- The parents of non disabled students, as interpreted on the basis of the qualitative analysis results, oscillate between the medical and the social model, although this outcome is not confirmed by the χ^2 test.

In the quantitative analysis carried out with the χ^2 test, the statistical hypotheses were confirmed: the attribution of a specific model to each group depends on the greater scores of the codes united in the 'family codes' referring to the model occurring in each group. The statistical analysis of the personal experiences distribution in the groups highlighted an interesting correlation among the foremost disability model in each group and the modalities of expression of the personal experiences of the participants. This would explain even more the presence, within the groups, of different perspectives on disability.

The presence of different models within the groups leads to some additional conclusions:

- There is a cultural predisposition to the adhesion to the biopsychosocial model, since the participants have the tendency to define disability in terms of individual functioning, rather than using ability/inability polarities.
- Among the parents of non disabled students, the presence of a perspective on disability partially different compared to the one that parents of disabled students have, let us think over the role played by the experience of disability on the parents.

EXPERIMENT 2

Method

Aims and hypotheses

As Focus Group methodology is suitable to bring out judgments and opinions for which participants have a certain degree of consciousness, in the following experiment we thought to widen the research question to the so-called automatic processes.

The aim of experiment 2, was to try to establish the strength of the association that participants create between the idea of "disabled" and "non disabled" and a series of dimensional qualities considered as explanatory of two of the three disability models: the medical and the social one. The decision of excluding the biopsychosocial model from this experiment is due to the fact that, being a complex and non linear model, it is not possible to "stereotypy" it and to bring it back to an "aut-aut" logic. On the contrary, both the medical and the social models can be simplified to their basic assumptions according to attributes of opposite couples: healthy/ill for the medical model and outcast/integrated for the social model. Moreover, we introduced a third couple of attributes, "good/bad", to better evaluate the strenght of the association that participants create between the categories "disabled" and "non disabled" and a more basic dimension of the human nature. Our hypothesis is that, in a condition of temporal constrain, participants will rely on the automatic component of the cognitive elaboration when making associations, generating less variable and more stereotypical responses, compared to the ones provided by the focus group.

The aim of this second experiment is to verify if there is a dominant or a prevailing *frame* in the automatic processes to elaborate information concerning disability in a different way compared to what it is observed for the controlled processes, in which it appears to be a complex of *frames* which act as *scripts*, (i.e. adapted answers and environmental conditions) both exogenous and endogenous.

Participants

36 participants (31 F; 5 M; mean age: 42 yrs) were involved in the study: 8 (8 F) parents of disabled students, 6 (4 F, 2 M) parents of non disabled students, 6 (4 F, 2 M) non-specialized teachers, 5 (5 F) specialized teachers, 5 (5 F) professional special needs educators, 6 (5 F, 1 M) social-health workers.

Research Tools

The IAT [15,16] assess the association between a *target-concept discrimination* and an *attribute dimension.* The procedure starts with an introduction of the target-concept discrimination task. The initial discrimination consist in to distinguish image those who are recognizable as "normal" from those recognizable as "disabled". This discrimination task and the subsequent ones are performed by assigning one category responding with the left hand and the other responding with the right hand to the presented stimuli. The second step is the introduction of the attribute dimensions, also in the form of a two-category discrimination (good-bad; healthy-ill; outcast-integrated). After the target discrimination and the attribute dimension tasks, attributes and categories are superimposed in the third step, in which stimuli for target and attribute discriminations appear on alternative trials. In the fourth step, the respondent has to perform a reversal of response assignments for the target discrimination, and the fifth (final) step combines the attribute discrimination (not changed in response assignments) with the reversed target discrimination. If the target categories are differentially associated with the attribute dimension, the subject should find one of the combined tasks (of the third or fifth step) to be considerably easier than the other. The measure of difficulty provides the measure of implicit attitudinal difference between the target categories.

In this study we created 3 different versions of the IAT: for all the versions the target concept couple was the normal vs. disabled one, whether in the first test the couples of attributes were good/ bad, in the second healthy/ill and in the third outcast/integrated.

The hypothesis underlying the IAT [15] is that participants' responses are faster when making associations in line with their beliefs, emotion and implicit motivations. The peculiarity of this method consists in the possibility to evaluate only attitudes without the involuntary tendency of people to alter their response in order to protect self representation. The intensity of the association between two concepts is equivalent to the difference in response time in a classification task between two blocks. Blocks are defined as compatible if the experimental task is congruent with the personal association of the participant, incompatible if the task is not congruent.

In conjunction with the IAT we administered three scales measuring the semantic differential with the intent to evaluate, together with the implicit attitudes, the explicit ones towards disability [17]. Participants are administered a set of paired attributes which are regarded as a description and a quantification of the object in a specific dimension. The semantic differentials used in the present study were constructed using the same couple of attributes included in each IAT. Participants were asked to indicate on a 7 point scale, which one of two extreme was closer to the status of a disabled person. The mean score indicating a neutral position ("neither…nor"), was 4. The mean score of the whole scale was 20. All participants were administered the first 3 IAT followed by the three semantic differential.

Results

The three implicit association tests (IAT), were administered with the intent to measure indirectly the individual differences on the intensity of the association between the category "disabled" and the attributes couples "good/bad", "healthy/ill", "outcast/integrated". The computational algorithm used to measure this association, called "d-biep", is based on the calculation of the difference in the means of response times between the sessions compatible (e.g. non disabled /healthy Vs disabled/ill) and the session non compatible (e.g. disabled /healthy Vs non disabled/ill).

For all the IAT, the one sample T-Test (DoF=35, p<0,000), calculated using the scoring obtained using the "d-biep" (see Table 1) showed that response latencies for the compatible sessions are significantly lower compared to the ones for the non compatible session (see Table 2).

Table 1 – Measures of the d-biep or IAT general effect.

IAT			
	N	**Mean**	Standard deviation
d-biep IAT good/bad	36	**0,984**	0,301
d-biep IAT healthy/ill	36	**0,889**	0,287
d-biep IAT outcast /integrated	36	**0,704**	0,393

Table 2 – One sample T-Test on the d-Biep scoring.

IAT			
	t	DoF	p
d-biep IAT good/bad	19,57	35	0,000
d-biep IAT healty/ill	18,54	35	0,000
d-biep IAT integrated/castout	10,75	35	0,000

In order to analyse the correlation between the 3 IAT, we calculated Pearson's *r* coefficient on the d-biep measures for each IAT. The "good/bad" IAT correlated significantly with the other two: IAT "healthy/ill" (*r* = .39, p<.05) and IAT "outcast/ integrated" (*r* = .41, p<.05). The IAT "healthy/ill" correlates with IAT "good/bad" " (*r* = .39, p<.05) and IAT "outcast/ integrated" (*r* = .54, p<.01). Participants' performance on the "healthy/ill" IAT is weakly associated with performance on the other two IAT, which are strongly correlated. Regarding the semantic differentials, the mean scores obtained by participants for each one of them ("good/bad"= 21,61; "healthy/ill" = 19,30; "outcast/integrated" = 19,27) does not differ significantly from the overall mean score. Participants did not show a significant preference for one item of the couple of attributes, scoring close to the overall mean values.

A good indicator of the validity of the Implicit Association Test is the correlation with explicit measures. [16]. In the present study, we found that the semantic differential "outcast/ integrated" correlates significantly both with the IAT "healthy/ill" (*r* = -.37, p<.05), and the "outcast/ integrated" one (*r* = -.39, p<.05).

Moreover, participants were divided into two groups: relatives of a disabled or not. We did so in order to verify the presence of significant differences on the performance on implicit and explicit tests as a function of this variable. We selected 13 participants as relatives of a disabled on a total of 36. An independent sample T Test highlighted the significant differences between the two groups on the IAT "healthy/ill" (t(34) = 2,84, p = 0,01), showing a stronger association for the compatible category and attribute in the group of relatives of a disabled ("normal", "healthy") compare to non relatives.

Discussion of the second experiment results

Results obtained from the administration of the 3 IAT and the 3 semantic differentials showed that participants tend to establish preferential associations between the category "disable" and the attributes "bad", "ill" and "outcast". Such associations, instead, did not emerge clearly from performance on the explicit tests. Participants' response is more stereotypical and less variable on the implicit tests whereas, on an explicit level, disability in not seen as distinctive of a group of people with clear boundaries like those demarcated by attributes such as healthy/ill, limited/able, outcast/ integrated and so on, but is laid on a continuum.

On an implicit level, the categorisation of the disabled as "bad" seemed to be the strongest one. D-biep scores are higher for the dimension "good/bad" compared to the dimensions "healthy/ill" and "integrated/ outcast". The bipolar dimension "good/bad" seem to better discriminate between the two categories "disabled" and "non disabled" compared to the dimension "healthy/ill". The latter appears to discriminate more compared to the "outcast/integrated" one. Results of the correlational analysis, appeared to confirm the better capacity of the dimension "good/bad" to represent the categorical discrimination between "disabled" and "non disabled". Among the implicit tests, the IAT "healthy/ill" and the IAT "outcast/ integrated" showed a robust correlation, while there was a poor correlation between those dimension with the IAT "good /bad".

As for the correlation between implicit and explicit tests, only a small correlation appeared between the two IAT "healty/ill" and "outcast/ integrated" with the scale of semantic differential "outcast/ integrated". This result might be interpreted as indicative of the degree of separation between a categorisation executed on an unconscious level and the mental models, more complex and variegated, that people unconsciously express when describing their beliefs and experiences with disability.

Finally, the comparison between the scoring of participants in both tests – implicit and explicit - as a function of the presence of a disable person in the family, highlighted the fact that relatives of a disable tended to associate more then others disability as a disease. This might indicate that people with a disabled relative are reinforced in the association of the category disabled with the attribute "bad" as a function of the experience of medicalisation reserved from our society to people with disability, in particular during the first years of their life.

GENERAL CONCLUSION

The aim of this study was to investigate if and in which measure the representations of disability, elaborated by parents, teachers and educators, reflected the different theorical models of disability. Some significant data emerged from our results. First, conscious and unconscious visions do not overlap. In fact, from a conscious perspective people do not appear to rely only on a specific model in order to describe and think disability but they prefer to elaborate more complex points of view, defined by some authors as "in transit" models between different theoretical models [14]. From an unconscious perspective instead, the stereotypical and bipolar dimension appeared to be the most discriminative between disability and non disability and the "good/bad" one. In other words, on an implicit categorization level, the strongest association is the one between disability and the negative and unpleasant dimension of existence: disability is considered, regardless the role or familiarity, as "bad". It is also interesting to point out that the association disabled/bad seemed "reinforced" in a different way on a social environmental level: people with a relative with disability on an implicit tests tend more then others to relate disability with the disease, whether on an explicit level in the focus group, they express with more intensity the "tragic" of the disabled condition. This information might be interpreted in the light of the strong medicalisation experience that our society reserves to disabled people, especially during the first years of their life.

The correlational results between implicit and explicit tests found in the second experiment, confirmed a certain degree of differentiation between the categorisation made at an unconscious level and the mental models, more complex and variegated, that people consciously use in describing their beliefs and experiences with respect to disability. This result is not necessary negative. In fact, it might be explained as an index of a cultural predisposition to comply with the biopsychosocial model, more evolved and complex, compared to the medical and social ones.

Only a capillary and universal action of information and education, inspired by the principles of the universal model of disability, will allow to make salient, for the individual and the group, the instances of a new "culture of diversity"[18].

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Appendix 1. Table of distribution of observed and expected frequencies (among and within) of the 3 disability models in the groups and relative significance scores, applying the χ^2 test ($p < .05$).

Disability models

			Medical model			**Social model**			**Biopsychosocial model**			
Focus Group [FG]			Observed value	Expected value among	Expected value within	Observed value	Expected value among	Expected value within	Observed value	Expected value among	Expected value within	**Sig.**
Parents of disabled students	Lazio	FG1	5	11.18	9.33	16	26.00	9.33	7	10.94	9.33	**0.03**
		FG13	10	11.18	22.33	45	26.00	22.33	12	10.94	22.33	**0.00**
		FG14	7	11.18	18.00	35	26.00	18.00	12	10.94	18.00	**0.00**
		FG15	16	11.18	18.33	33	26.00	18.33	6	10.94	18.33	**0.00**
	Apulia	FG7	9	11.18	22.00	41	26.00	22.00	16	10.94	22.00	**0.00**
	Umbria	FG17	5	11.18	11.00	19	26.00	11.00	9	10.94	11.00	**0.01**
Parents of non-disabled students	Lazio	FG2	18	11.18	16.33	21	26.00	16.33	10	10.94	16.33	0.14
Non-specialized teachers	Lazio	FG3	8	11.18	12.00	20	26.00	12.00	8	10.94	12.00	**0.02**
	Molise	FG8	22	11.18	17.33	21	26.00	17.33	9	10.94	17.33	**0.05**
	Umbria	FG9	22	11.18	25.67	44	26.00	25.67	11	10.94	25.67	**0.00**
Specialized teachers	Lazio	FG4	9	11.18	7.33	7	26.00	7.33	6	10.94	7.33	0.73
	Molise	FG10	9	11.18	13.67	27	26.00	13.67	5	10.94	13.67	**0.00**
	Umbria	FG11	8	11.18	19.33	37	26.00	19.33	13	10.94	19.33	**0.00**
Social-health workers	Apulia	FG5	16	11.18	20.33	26	26.00	20.33	19	10.94	20.33	0.27
	Umbria	FG12	8	11.18	12.00	19	26.00	12.00	13	10.94	12.00	0.10
		FG16	11	11.18	13.33	9	26.00	13.33	16	10.94	13.33	0.34
Special needs educators	Molise	FG6	7	11.18	14.33	22	26.00	14.33	14	10.94	14.33	**0.02**
Sig.			**0.00**			**0.00**			0.11			

Appendix 2. Table of distribution of observed and expected frequencies (among and within) of the 5 dimensions of personal experience in the groups and relative significance scores, applying the χ^2 test ($p < .05$).

Dimensions of personal experience

Focus Group [FG]			Opinions			Attitudes			Behaviours			Myths and stereotypes			Emotions			Sig.
			Observed value	Expected value among	Expected value within	Observed value	Expected value among	Expected value within	Observed value	Expected value among	Expected value within	Observed value	Expected value among	Expected value within	Observed value	Expected value among	Expected value within	
Parents of disabled students	Lazio	FG1	18	40.76	6.60	1	0.35	6.60	9	6.65	6.60	0	0.24	6.60	5	3.50	6.60	**0.00**
Parents of non disabled students		FG2	34	40.76	11.80	1	0.35	11.80	18	6.65	11.80	1	0.24	11.80	5	3.50	11.80	**0.00**
Non-specialized teachers		FG3	13	40.76	9.40	0	0.35	9.40	23	6.65	9.40	0	0.24	9.40	11	3.50	9.40	**0.00**
Specialized teachers		FG4	15	40.76	4.60	0	0.35	4.60	8	6.65	4.60	0	0.24	4.60	0	3.50	4.60	**0.00**
Social-health workers	Apulia	FG5	60	40.76	12.20	0	0.35	12.20	1	6.65	12.20	0	0.24	12.20	0	3.50	12.20	**0.00**
Special needs educators	Molise	FG6	41	40.76	8.60	0	0.35	8.60	2	6.65	8.60	0	0.24	8.60	0	3.50	8.60	**0.00**
Parents of disabled st.	Lazio	FG13	59	40.76	16.25	0	0.35	16.25	5	6.65	16.25	1	0.24	16.25	n.a.			**0.00**
		FG14	46	40.76	13.50	0	0.35	13.50	8	6.65	13.50	0	0.24	13.50				**0.00**
		FG15	49	40.76	14.00	0	0.35	14.00	6	6.65	14.00	1	0.24	14.00				**0.00**
	Apulia	FG7	62	40.76	16.25	1	0.35	16.25	2	6.65	16.25	0	0.24	16.25				**0.00**
	Umbria	FG17	26	40.76	8.00	0	0.35	8.00	6	6.65	8.00	0	0.24	8.00				**0.00**
Non-specialized teachers	Molise	FG8	47	40.76	13.25	1	0.35	13.25	5	6.65	13.25	0	0.24	13.25				**0.00**
	Umbria	FG9	69	40.76	19.50	1	0.35	19.50	8	6.65	19.50	0	0.24	19.50				**0.00**
Specialized teachers	Molise	FG10	35	40.76	9.00	0	0.35	9.00	1	6.65	9.00	0	0.24	9.00				**0.00**
	Umbria	FG11	52	40.76	14.25	1	0.35	14.25	4	6.65	14.25	0	0.24	14.25				**0.00**
Social-health workers	Umbria	FG12	39	40.76	9.75	0	0.35	9.75	0	6.65	9.75	0	0.24	9.75				**0.00**
		FG16	28	40.76	9.00	0	0.35	9.00	7	6.65	9.00	1	0.24	9.00				**0.00**
Sig.			**0.00**			0.81			**0.00**			0.67			**0.00**			