

Veneto Families

Grouped According to Distress Risk^(*)

Gruppi di famiglie venete individuati sulla base del rischio di disagio

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Riassunto: I problemi fanno parte del vivere quotidiano. La famiglia subisce il disagio derivante da eventi avversi e dai problemi dei singoli membri, o del gruppo familiare nel suo complesso, quando non è in grado di farvi fronte con le proprie risorse. L'energia che la famiglia è in grado di sviluppare dipende dalla sua struttura e dalla sua storia. Di fronte alle stesse avversità, alcune famiglie riescono a superarle, mentre altre avvertono livelli patologici di disagio. Nella nota si discutono le caratteristiche dei gruppi familiari maggiormente a rischio di disagio. I gruppi a rischio sono stati individuati applicando un metodo di segmentazione binaria basato su *odds* proporzionali riferiti a vari livelli di disagio: uno a cui la famiglia è in grado di far fronte con le proprie forze, uno che richiede un intervento esterno e uno per il quale non c'è nulla da fare. I dati analizzati sono stati raccolti negli anni 2004 e 2005 per conto del *Centro di Documentazione e Analisi sulla Famiglia Veneta*.

Keywords: Family distress, Segmentation analysis, Proportional-odds model.

1. The risk of family distress

Family life is threatened by various critical events. In general, families face critical events with their own resources. Sometimes problems may be so serious that families either have to ask services for help or, in the very severe cases, they accept the situation and wait for the end of the negative phase. Our hypothesis is that families with good own resources are able to face the negative events. Hence, it is to be defined the characteristics of the families exposed to the risk of distress in order to forecast their needs for external help (public services, voluntary services).

Poffe and Fabbris (2005) identified some groups of Veneto families characterised by high risks of distress. In this paper, we identify and discuss the determinants of family distress measured on a 4-grade ordinal scale: no serious problems, problems resolvable with family resources, problems resolvable with social or voluntary services help, irresolvable problems. To achieve this aim, we applied a segmentation analysis method based on the proportional-odds logic (Poffe, 2005) on data collected in 2004 and 2005 by the *Regional (Veneto) Center for Documentation and Analysis of the Family*.

In Section 2, we describe the sampling and research methods. In Section 3, we present the segmentation analysis outcomes and in Section 4 we report some purposive remarks.

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2. Data and research methods

A sample of 3,100 families was randomly selected from the telephone directory for a CATI (*Computer Assisted Telephone Interviewing*) survey. A number of 2459 eligible adults responded to the questionnaire. The questionnaire included questions on both individuals' members' (demographic traits; education; health condition; employment status) and family's characteristics (structure; house, other durable goods; eating, recreational and cultural practices; services and family network trusted in case of need; critical events, financial situation), and a 4-point scale of perceived distress.

In order to identify homogeneous groups of families based on perceived distress, we adopted the method of binary segmentation analysis (Fabbris, 1997). This is a stepwise procedure for binary splitting the sample with respect to a combination of categories of an explanatory variable at a time. The criterion variable was a transformation of the ordinal distress into proportional-odds (McCullagh, 1980). The categories of an explanatory variable are combined in such a way that the ratio between the odds that can be computed for the two resulting groups is maximum. Let $\mathbf{x}_1$ and $\mathbf{x}_2$ be the vectors of covariates of groups 1 and 2, the ratio between the odds is (Agresti, 2002):

$$OR = \frac{\gamma_j(\mathbf{x}_1)/(1 - \gamma_j(\mathbf{x}_1))}{\gamma_j(\mathbf{x}_2)/(1 - \gamma_j(\mathbf{x}_2))} = \exp\{-\boldsymbol{\beta}^T(\mathbf{x}_1 - \mathbf{x}_2)\},$$

where $\gamma_j(\mathbf{x}) = \Pr(Y \leq j | \mathbf{x})$, $j = 1, \dots, k$, is the cumulative probability up to and including category j and Y is the ordinal response variable (McCullagh and Nelder, 1989). The procedure SAS-LOGISTIC was used for the estimate of the proportional-odds.

3 Determinants of distress

The proportion of Veneto families that feel themselves free from serious problems is 74.6%. Another 18.3% has problems that may be overcome with their own resources, 5.9% requires help from the public services, and 1.1% is exposed to irresolvable problems.

In Figure 1, we report the results of the segmentation analysis. The level of distress associated with each node may be perceived from the distance between the frequency distribution of each group and the parent distribution.

The variables that showed significance in partitioning the sample are:

- *the presence of invalids, even in families that are financially self-sufficient.* The risk of hard distress increases more than nine times if one or more members of the family is invalid: OR=9.3 in such families as compared with 'healthy' families. Only 30.5% of families with invalids do not suffer from continuous distress;
- *the presence of not-self-sufficient members affected by chronic-degenerative diseases in families with income lower than 3,000 euro* (OR=4.7). This kind of difficulty determines a risk of hard distress (19.4% as compared with 0.4% of families

Figure 1: Binary segmentation analysis related to “risk of distress” for Veneto families.

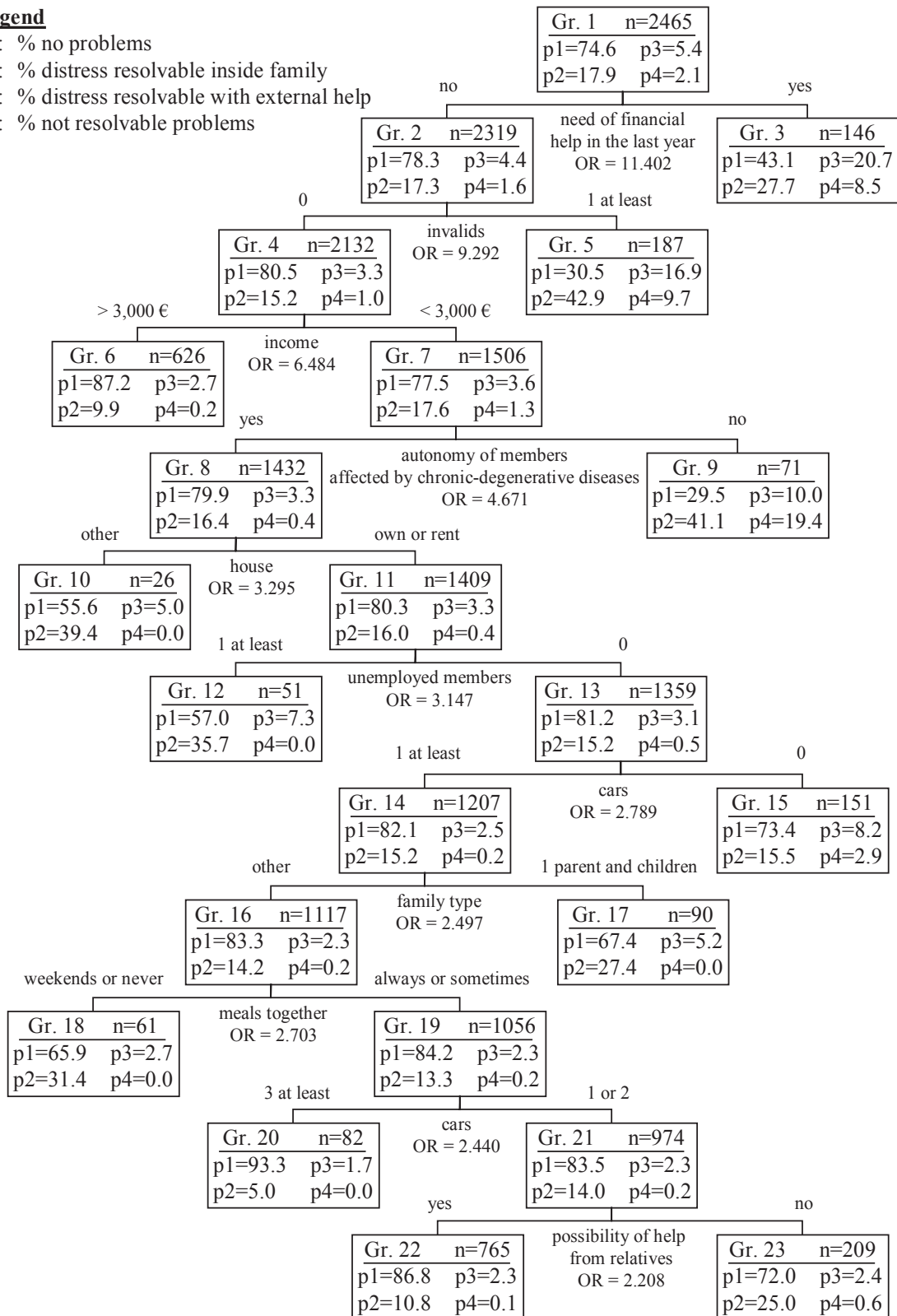
Legend

p1: % no problems

p2: % distress resolvable inside family

p3: % distress resolvable with external help

p4: % not resolvable problems



with self-sufficient members). Even the need for public or voluntary services increases if there are members who are not self-sufficient (10.0% vs 3.3% with all members self-sufficient);

- *an anomalous family structure*. In particular, at serious risk of distress are the families that are composed by a single parent and children. The occurrence of hardships and the need of external help are as frequent, as frequently the negative events occur. Nevertheless, an adult that works faces the distress mostly with his or her own resources and the help of the ‘enlarged’ family and the public services (32.6% distress vs 16.7% of the other families);
- *not possessing a car*. In financially self-sufficient families, without invalids or other not-self-sufficient members, net income lower than 3,000 euro per month, and without unemployed members, i.e. in normal old-aged families, the risk of distress is high: 11.1% vs 2.7% (OR= 2.8) of those families that own their car(s). The car is a tool for moving in the case of need and a symbol of independent lifestyle;
- *the need of financial help*. This happened to 5.9% of the Veneto families each year. The economic difficulties depend on the absence of work and the misery of ‘social’ pensions. These families are tortured by the unlucky events: 8.5% of hard distress and 20.7% of distress for which a public service intervention is needed (OR=11.4).

4. Final remarks

We identified some main groups of Veneto families according to their grade of distress risks. We used a 4-point scale of distress, instead than a two-point scale used by Poffe and Fabbris (2005). The more detailed algorithm gave results similar to, but more refined, than the binary scale one, showing that the families more exposed to hardship are those with health problems. Nevertheless, the families exposed to major distress are those with bare financial self-sufficiency. This continuous exposure to the events makes them weak and likely to experience hard distress.

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