SOCIAL CAPITAL AND JOB SATISFACTION IN HEALTH ORGANIZATIONS

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Abstract
This research investigates the relationship between social capital and job satisfaction amongst personnel for Health organizations (Kurdistan province hospitals) and satisfaction with their activity. Drawing on the literature on social capital, we specify a spatial autoregressive model for social networks which captures the effects on volunteering satisfaction of either goal-specific social capital or social contagion. To test our hypotheses, we refer to a population of 100 volunteers of a Health organization active in the primary healthcare sector. Empirical evidence is reported that instrumental aspects of satisfaction are affected by the opportunity to acquire competences through knowledgeable others, while relational aspects of satisfaction are influenced by centrality in strategic relations and qualities of connected alters.

Keywords: Job satisfaction, Health organization, social capital, spatial econometrics, Kurdistan province, Hospital

1. Introduction
Reductions in funding, together with the expectations for health organizations to provide services and activities which have traditionally been the responsibility of government have been increasing the demand for unpaid workers (Dolnicar, Randle, 2007) and, consequently, the importance of volunteering activity. This has shed new light on the volunteering phenomenon, leading to flourishing research on the topic from various disciplinary perspectives, which have mainly attempted to explain the dynamics of attracting and, then, attaining volunteers. So as to address these issues, several studies have explored the consequences of volunteering for the helper, proving its positive effects on physical and psychological well-being (Wilson and Musick, 2000), life-satisfaction, self-esteem and, more generally, happiness (Wheeler et al., 1998), on accumulation of human capital, through educational and occupational achievements (Brown, 1997; Day and Devlin, 1998) and on accumulation of social capital, in terms of sense of social connectedness and civic capacity (Smith, 2000; Isham et al., 2006). Providing evidence that satisfaction with volunteering itself is the main reason either for persistence in the activity over time (Omoto and Snyder, 1995) or for involvement, in terms of the amount of time regularly devoted to volunteering (Davis et al., 1999), a broad range of contributions have
strictly focused on satisfaction and extensively investigated its main drivers. Amongst them, social interaction within non profit organizations has been highlighted to play an important role. The centrality of social relationships is due to the frequency of interaction amongst volunteers, to the high participation in decision making and to the moderate formalization of hierarchies typical of voluntary associations.

It seems moreover confirmed by that the opportunity for socializing, satisfying a need for affiliation or a sense of belonging, gaining useful contacts and social prestige (Bussell et al., 2001), acquiring skills and competences through interaction with others have been sustained to be among the main motivations which lead individuals to volunteer, beside the obvious altruistic desire to help others. Despite the fundamental impact these findings could have on volunteers’ recruitment and management process, most of them have remained at a purely theoretical level and empirical studies have taken into account exclusively the friendship relation, suggesting the sense of emotional support or solidarity it generates can positively affect satisfaction and, consequently, retention. On the contrary, scarce attention has been devoted to analyze the other effects above mentioned.

In this study we examine volunteering for health organizations (sanandaj hospital) and claim that satisfaction with it is largely affected by interaction amongst members of the same association and that, similarly to what happens in a for work environment, relations with different structures and contents can influence various aspects of satisfaction. In details, we test the hypotheses that interpersonal relations either provide skills and competences useful to improve the quality of individual volunteering and, therefore, to increase satisfaction with the instrumental aspects of the activity itself, or create a sense of solidarity, peers recognition and involvement in decisional processes which specially promote relational satisfaction. Moreover, we verify whether social relations can intervene in the evaluation process of the volunteering activity, i.e. whether individuals form their attitudes towards it via social interaction, in which they weigh and integrate the attitudes of others.

2 Theoretical frameworks

The effects of social interaction on job satisfaction or on work-related perceptions have been extensively investigated for more than a decade in the literature on social capital (Coleman, 1990), which therefore provides a useful framework for examining these dynamics. Focusing on different aspects of social interaction and its consequences, social capital and related theories have demonstrated that interpersonal relations can affect individual attitudes and behavior, e.g. job satisfaction, according to two possibly co-existing, or antagonistic (Borgatti and Foster, 2003), influence mechanisms. Firstly, in a number of papers (Rice and Mitchell, 1973; Dean and Brass, 1985; Flap, 2001) which have appositely studied employees ‘perceptions of their work, it has been argued that social relations established in the work environment can provide individuals with benefits, which affect their level of job satisfaction. Following individual social capital theories (Burt, 1992 and 2001; Flap, 1999; Lin, 2001), which, conceiving social capital as a resource of individuals, suggest they intentionally build social ties so as to have access to resources of others or, alternatively, take advantage of being embedded in social networks, Flap (2001) affirms the goal spasticity of social capital, i.e. social relationships with different structure and content can influence specific aspects of satisfaction.

Adopting a structural approach, the author distinguishes amongst solidarity – or friendship - and strategic - deriving from co-working - relationships and conceptualizes job satisfaction as a
multifaceted dimension, consisting of instrumental, like income, security and skills acquisition, and relational aspects, like general climate and collaboration with peers and superiors. Moreover, elaborating on the structuralism openness versus closure issue, Flap provides empirical evidence that embedded in cohesive solidarity relationships promotes a better perception of organizational climate by individuals and, most importantly, social identity, thus significantly increasing relational aspects of job satisfaction, while connectedness to unconnected others through strategic ties contributes to new knowledge acquisition or access to non-redundant information and other resources, and therefore to instrumental satisfaction. Other scholars (see, for example, Lin, 2001), adopting a compositional approach, stress the role of the diversity of resources embedded in social networks and, hence, of the individuals who possess them. Thus, they claim that one’s satisfaction is enhanced by taking advantage from connectedness to alters, who have specific attributes or are resourceful, as they can mobilize a large network of ties.

Secondly, social interaction can affect job satisfaction directly intervening on its formation. According to this view, satisfaction results from a collective evaluation process, which involves either the individual or his/her surrounding environment. This mechanism, named ‘social contagion’, implies one’s attitudes and perceptions depend on the social context in which they are formulated (Salancik and Pfeiffer, 1978) and from which one experiences the pressure to conform. Hence, interpersonal relations contribute to develop attitudes, since the individuals see the opinions of their significant alters they are somehow connected to as an appropriate benchmark against which to compare their own opinion and further include alters’ evaluations into their own evaluations (Leenders, 1995).

Alters’ influence on individual’s perceptions can be either intentional or unintentional and be exerted through communication, when individuals directly interact and exchange their opinion on a specific topic, or comparison, when one tends to behave like others who occupy a similar position in the network of relationships and, being subject to analogous opportunities and constraints, develops similar perceptions (Marsden and Friedkin, 1993). Studies which investigated job satisfaction or work-related perceptions provide support for the notion that social interaction through contagion mechanism has a more significant impact on satisfaction than traditionally emphasized sources of influence, like individual characteristics or formal position. Moreover, these contributions put forward that the strength of social contagion depends on the relationship content as well, although the findings are rather mixed. Krackhardt and Kildu (1990) demonstrate that friendship network interaction exerts a strong influence on job satisfaction, while Ibarra and Andrews (1993), summarizing previous results, show that work-related perceptions are more affected by strategic relationships through comparison than by friendship relationships through communication. Volunteering represents an ideal context where to verify these dynamics, due to the central role literature assigns to social interaction and more generally to social capital creation and mobilization work is moreover confirmed by that the management of day by day activities in several voluntary associations is based on mechanisms which resemble those adopted by companies: volunteers can be required to work - or, at least, to give their availability - a fixed number of hours per week and to perform specific tasks, can be assigned different hierarchical roles and structured in teams.
Therefore, Flap and others' conceptual framework can be very cautiously extended from job satisfaction to satisfaction with volunteering, once allowed for the obvious differences amongst for profit and non-profit contexts and amongst workers and volunteers.

Satisfaction with volunteering has recently become a fundamental theme in the literature on non-profit and increasing attention has been devoted in the latest years especially to uncover its main drivers. Some papers suggest satisfaction is predicted to some extent by individuals' characteristics, i.e. human capital, but mostly fail to empirically confirm this hypothesis. The significance of these researches is seriously limited by the fact they verify the existence of correlation between some individual attributes and satisfaction with volunteering or a similar outcome, but are not able to clearly assess the existence of causality. Kulik (2007), for example, finds satisfaction negatively correlates with volunteers' level of education, as more educated individuals tend to be more demanding and difficult to satisfy, while positively correlates with volunteers' self-esteem and age. Interesting enough, in other studies satisfaction has also proved to be associated to frequency of volunteering (Meier and Stutzer, 2004) and to formal position within the organization, i.e. volunteering or managing volunteers (Liao-Troth and Dunn, 1999).

The most studies have generally agreed on arguing that motivations fulfillment is the main satisfaction source. Though approaching the topic from different disciplinary perspectives (economic, sociological, managerial), a number of scholars have conceived volunteering satisfaction as strictly dependent on the capacity of the activity performed to meet certain individual needs and goals, or to satisfy certain motives (see, amongst the others, Rubin and Thorelli, 1984; Gidron, 1985) and have claimed that satisfaction, in turn, is likely to affect intention to continue to volunteer and time devoted to it.

3. Hypotheses

In this study we extend the framework proposed to analyze the effects of social interaction on job satisfaction to satisfaction with volunteering spatially in Kurdistan province hospital. Following Flap (2001), we conceive satisfaction as a multidimensional concept, which we distinguish in instrumental and relational aspects, and examine strategic or work-related and solidarity relationships taking place within voluntary associations. Then, we claim that volunteering satisfaction can be affected by these social relationships according to the two kinds of influence mechanisms above mentioned, a simpler influence, which considers individuals’ position within a network of relationships with others, and a more complex one, based on adjusting their own level of satisfaction to that of others. In details, we posit that:

**Hypothesis 1.** An individual social network with a given structure and content can impact on different aspects of satisfaction with volunteering activity.

To be precise, following Lin (1999) and Flap (2001) on individual social capital and its goal specificity, we state that:

**Hypothesis 1a.** The more a volunteer is located in an intermediation position within a network of strategic ties, the more he/she is satisfied with instrumental aspects of the activity like access to non-redundant information or acquisition of competences.

**Hypothesis 1b.** The more a volunteer is central within a network of strategic ties, the more he/she is satisfied with relational aspects of the activity like involvement in decision making and positive regard by others.
Hypothesis 1c. The more a volunteer is central within a network of solidarity ties, the more he/she is satisfied with relational aspects of the activity like social climate and making new friends.

Differently from Flap (2001), we consider also the effect of strategic ties on prestige and involvement in decision-making processes. Hence, we test the same hypothesis Flap does on instrumental satisfaction (H), while we assume that relational satisfaction is influenced by centrality in either strategic (H1a) or solidarity relationships (H1c). To explore H we moreover adopt a compositional approach to social capital (Lin, 1999), thus positing satisfaction is affected also by the characteristics of others the volunteer is connected to.

Hypothesis 2. A volunteer satisfaction with his/her activity is affected by communication with others in his/her network of relationships.

In this study, we hypothesize that satisfaction formation depends on communication with others the volunteer is directly linked to. In details, we posit that either strategic or friendship ties can exert their influence on instrumental and relational satisfaction.

4. Research design
4.1 Methodology
So as to investigate the effects of social interaction on instrumental and relational satisfaction with volunteering we apply social network analysis (Wasserman, Faust, 1994). It allows operationalizing the dynamics above described and to examine the various effects by means of appositely defined measures.

To be precise, we focus attention on individuals volunteering for a non profit organization and then represent interpersonal interaction amongst them by a network, whose nodes are volunteers and ties relations amongst couples of them (dyads). As we consider two kinds of relationships, i.e. solidarity and strategic, we build two networks and analyze them separately.

Formally, a network is represented by an adjacency matrix of size \( (n \times n) \), whose generic element \( a_{ij} \) contains the value assigned to the tie from node \( i \) to node \( j \) \((i = 1; \ldots; n; j = 1; \ldots; n; i \neq j)\).

To test the first hypothesis (H1a, H1b and H) we refer to different conceptualizations of individual social capital. Drawing on the classification proposed by Borgatti et al. (1998), we distinguish amongst structural, compositional and centrality or tie approach, representing respectively the structure of relations surrounding the volunteer \( i \), the characteristics of the others to whom he/she is directly connected, and his/her position in the whole network. As these approaches provide complementary information on the effects of goal-specific social capital H1c, we compute specific network measures for each of them. In order to examine structure and composition, we need to focus on the ego-networks, i.e. the relational networks of each volunteer while the centrality approach requires that the entire network be measured in order to be computed. In details, we apply the measures described in Table 1.

In order to capture the opportunity to have access to volunteering-related information and acquire skills, for the strategic network we compute either effective size or between's centrality of each volunteer. These measures are both a proxy of the possibility to benefit from new knowledge, non redundant information and control exploitation, since they consider the proportion of ego’s useful ties. Although similar, effective size and between's centrality differ in the sense the first refers to the structural concept of bridging social capital, and represents the
ego-network richness in structural holes (Burt, 1982), while the second regards ego’s intermediate position in the whole strategic network.

4.2 Data
We tested hypotheses on Kurdistan province hospital in 10 cites. Personnel of hospital which were excluded from this research, it employs 100 volunteers, aged from 18 to 65 years; they are organized in 9 teams of almost the same numerosity, each managed by a supervisor, and their activities are scheduled in shifts covering evenings and nights in weekdays and 24 hours a day in weekends. Hence, volunteers must guarantee a minimum of around 12 hours per month. Some of them have moreover management, fund raising or training tasks. Since expected to deal with critical patients, volunteers are required to attend a 120 hour course and pass an exam before officially entering the organization.

So as to verify the influence of social interaction, we created an ad hoc roster questionnaire exploring different aspects of satisfaction with volunteering (dependent variable), motivations, individual and volunteering-activity related characteristics, and strategic and solidarity relationships amongst volunteers (independent variables).

Dependent variable
So as to capture satisfaction with volunteering, we identified its possible sources according to prevailing literature. To be precise, we replicated the detailed model proposed by Borzaga and Depedri (2005) and Borzaga and Tortia (2006) for classifying the mix of economic, extrinsic, relational, process-related and other incentives the organization provides in order to match members motivations. As the questionnaire was created for non profit workers, we adapted it to volunteers, excluding items on the economic aspects of the activity, replacing the item on decision-making autonomy with another one on involvement in decision-making processes, which volunteers seemed to highly value, and distinguishing relationships with other volunteers into three items, representing respectively formal (recognition of one's contribution), friendship (solidarity relation) and hierarchical (relations with superiors) ties. To be precise, the following eight items were selected: opportunity to help others, volunteering hours, volunteering security, volunteering variety, involvement in decision-making, recognition of one's contribution, solidarity relations with other volunteers, and relations with superiors. They were measured on a four-point interval Likert-type scale, ranging from 1 (not at all) to 4 (to a great extent).

Independent variables
We exploit as independent variables (X in the model) data on social interaction, which are used to verify the effects of social capital and contagion on satisfaction, and on individual characteristics, which previous studies include as control variables. With reference to relational variables, so as to capture either the structure or the content of social relationships in which the volunteer is involved, following Flap (2001) on solidarity and strategic ties, we investigated two kinds of relationships with name-generating questions: friendship and professional trust.

In order to adapt Flap classification from a for profit to a non profit context, the so-called professional trust relationship was observed by asking the question: "Which volunteers do you regard as competent?" In so doing, we hypothesized that competent volunteers are those others seek for professional advice and discuss problems with about performing the activity. Therefore, they can provide others with useful knowledge on the activity-related aspects of volunteering; at
the same time, because of their competence, they are also particularly well regarded, their opinion is highly valued and they are likely to be involved in decisional processes. Drawing on the literature on informal relationships in work or similar to work environments (Krackhardt, 1992; Krackhardt and Hanson, 1993), we captured solidarity ties by the friendship relationship amongst volunteers. It was measured on a three-point ordinal scale (1=empathy; 2=spending spare time together; 3=being close friends) so as to disentangle the effects of weak and strong ties. In order to limit measurement errors on the relational section, respondents were not restricted to a fixed number of nominations. Furthermore, they were provided with a list of all volunteers. Names and codes and, so as to preserve privacy, were asked to report on the questionnaire the codes of whom they were connected to by friendships or professional trust ties. Since the same questions on relationships were asked to the whole sample, we have individual data on either sending or receiving ties. For strategic ties, distinct directions imply a different meaning of the relationship: receiving ties stands for being regarded as important and skilled, thus gaining peer recognition and being asked for advice, while sending ties means considering others particularly competent. For solidarity ties, which provide one with emotional support and, therefore, represent to which extent the volunteer feels socially integrated within the group, the distinction is less evident and the two effects seem to be mixed, as least from a theoretical perspective.

For each type of relationship observed we built an adjacency matrix, whose rows and columns are labeled with volunteers. Codes, while the intersection cells aij contain the value assigned to the relationship. For professional trust, the generic value in the intersection cell aij equals 1 if there is a tie between volunteer i and volunteer j and 0 otherwise. For friendship, aij assumes values ranging from 1 to 3 on the basis of the strength of the tie between i and j, while equals 0 if there is no tie. Since the relationship can be not reciprocated, as above pointed out, the both matrices are asymmetric.

With reference to individual variables, we focused on three different aspects: socio-demographic characteristics, participation to volunteering and motivations. Namely, as socio-demographic characteristics, drawing on previous studies, we used gender, age (which was further dichotomized as 1=young; 2=adult in order to reduce the number of values for variable) and education (in 5 levels). As variables for participation to volunteering, we selected seniority in the organization, which indicates the time spent building social relationships, and the task performed, represented by the degree of involvement in extra-activities like management and training (measured on a four-point ordinal scale, where 1=never; ...; 4=always). Moreover, we included a dummy for hierarchy, so as to distinguish amongst supervisors and the others (we coded hierarchy as 1=volunteers supervisor; 2=volunteer).

To match questions on satisfaction, we explored the importance of different kinds of motivations, which were measured on a four-point Likert scale (where 1= not at all important; ...; 4 = the most important). We represented intrinsic motivations as interest for the specific volunteering activity examined, desire to help others and to attain civic capacity, and extrinsic motivation as the aspiration to gain peers recognition, to build solidarity contacts within the organization and to acquire skills or competences.
5 Results

5.1 Descriptive individual and network statistics
The questionnaire, appositely pre-tested - content validity and reliability measure (Cronbach α = 0.94). It was returned by 64 volunteers; since 12.5% of them – mostly volunteers in charge of a team or other activities - did not fill in the relational part, the analyses were restricted to 56 individuals. Controlling for socio-demographic characteristics, we verified the self-selected sample well represents the entire population investigated.

We started the analyses by computing the descriptive statistics for individual covariates. The sample consists of 59% males and 41% females, aged mostly from 26 to 35 (35.7%) and from 18 to 25 (30.4%) years old and with a high school (50%) or middle school (26.8%) education. Only amongst youngest volunteers (18-25) the percentage of graduated or university students, mainly attending Medicine and Surgery classes, tends to increase. Seniority in the organization is high: respondents have been volunteering for on average 7.6 years.

Then, we moved to examine friendship and professional trust relations. Thus, for each network we computed basic descriptive statistics, average strength of ties (i.e. mean), density, degree centralization and reciprocity, i.e. the proportion of ties which are reciprocated. As shown in Table 2, we found that the both networks are rather sparse, as just a small proportion of all the possible ties is active (density is respectively 26% for friendship and 21% for professional trust) and that moreover, as expected, friendship is characterized by strong ties (1.82, but with a high standard deviation) and by a significant higher degree of reciprocity than professional trust. This depends on the different nature of the two relations and, together with centralization scores, suggests that professional trust ties are moderately reciprocated and individual choices tend to converge around a small number of volunteers, who are clearly recognized for their competences and specifically asked for advice.

Furthermore, differently from applications to social interaction in work contexts, we observed a high tendency toward multiplicity between the two relations, which then significantly overlap. Since representing the extent to which ties of two types coincide over a population, multiplicity implies that volunteers are likely to seek advice and consider competent those to whom they are also connected by friendship ties.

Table 1. Descriptive statistics on the various aspects of satisfaction with volunteering (n = 220):

<table>
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<tr>
<th></th>
<th>Mean (Std.dev.)</th>
<th>c.v.</th>
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<tbody>
<tr>
<td>I1 Opportunity to help others</td>
<td>3.48 (.63)</td>
<td>0.18</td>
</tr>
<tr>
<td>I2 Volunteering hours</td>
<td>2.86 (.82)</td>
<td>0.29</td>
</tr>
<tr>
<td>I3 Volunteering security</td>
<td>3.11 (.68)</td>
<td>0.22</td>
</tr>
<tr>
<td>I4 Volunteering variety</td>
<td>2.91 (.69)</td>
<td>0.24</td>
</tr>
<tr>
<td>I5 Involvement in decision-making</td>
<td>2.04 (.91)</td>
<td>0.45</td>
</tr>
<tr>
<td>I6 Recognition of one's contribution</td>
<td>2.48 (1.04)</td>
<td>0.42</td>
</tr>
<tr>
<td>I7 Solidarity relations with other volunteers</td>
<td>2.96 (.93)</td>
<td>0.31</td>
</tr>
<tr>
<td>I8 Relations with superiors</td>
<td>2.23 (.89)</td>
<td>0.4</td>
</tr>
</tbody>
</table>

With regard to motivations, we observed respondents declare to be driven to volunteer mainly by the opportunity to feel useful providing help to the community (average importance 3.61) and to acquire skills (3.39), and by the interest for this type of activity (3.41). Important is also considered the possibility to make new friends (2.52), while the desire to attain civic capacity...
(1.61) and peers recognition (1.46) are the less crucial motives. It is worth noticing that results on peer's recognition could be biased by the level of satisfaction with its real fulfillment: in fact, the most disappointed a volunteer is with an aspect of the activity, the less likely he or she will be to emphasize its importance.

So as to replicate theoretical models on different aspects of satisfaction and motivations, exploratory factor analysis was then applied to them both.

The eight items on satisfaction were reduced to two components which, consistently with the literature, were found corresponding to relational (I5-I8) and instrumental (I1-I4) satisfaction. This latter considers the intrinsic aspects of volunteering, like its social usefulness and characteristics strictly regarding the performance of the activity itself, while the former represents satisfaction with benefits of various kinds of embeddedness within the nonprofit organization, in terms of relationships of different content, solidarity or work-related, and with different individuals, peers or superiors. The two components compressively explain 58.56% of the total variance; in details, relational satisfaction accounts for 44.16% and instrumental satisfaction for 14.40% of the variability in the original eight variables. Scores of each component were then computed as the simple mean of the related items.

For motivations two components were found, which account for 62.70% of the variance. Differently from what expected, they do not apparently correspond to the theoretical classification in altruistic and self-oriented motivations.

Rather, we found the all motivations explained by the same component, apart from civic capacity and peers recognition. This is reasonable if we consider that the fulfillment of intrinsic motivations, together with the possibility to benefit from a good organizational climate and to acquire skills useful to better perform volunteering, are all linked to the activity itself, while peers recognition and civic capacity provide advantages solely to the individuals. Since, as described by Davis et al. (1999), motivations affect satisfaction mainly indirectly, through their fulfillment, they were not included as predictors into the regression model which tests satisfaction, albeit were used in a preliminary step of the analyses in order to verify whether our findings on motivations are consistent with those widely illustrated in literature.

### 5.2 Social capital and social contagion effect models

In order to verify hypothesis H1 (H1a, H1b and H1c) we explored the individual dimension of satisfaction, testing the effects on this latter of one's position in the network of either strategic or solidarity relations. Analyses were run in two steps and carried out using CATREG.

Firstly, we controlled for the dependence of satisfaction on individual covariates. This constitutes the Baseline Model, since conceives satisfaction as affected exclusively by one's attributes and his/her kind and degree of participation in volunteering, and is used as a benchmark against which to compare the effects of social interaction. Then, we added network measures related to ego, which depict the effects of dyadic level relations, i.e. having access to information and skill acquisition, gaining prestige within the organization and building friendship ties. To assess the possible consequences of interaction with particularly resourceful or diverse alters we included also the characteristics of alters whom ego is connected to (Model 1).

So as to run these regression models, we computed the network measures mentioned in par. 4.1. For professional trust we calculated between's centrality and effective size on one side and in degree centrality on the other in order to capture the effect respectively of access to knowledge
acquisition and prestige; for friendship, in degree centrality and density so as to capture feeling of social integration and emotional support. As either literature or our results on different aspects of relational satisfaction suggest controlling for the effect of ties with resourceful and different rank volunteers, for strategic ties received we added average alters in degree centrality, IQV Index and EI Index in hierarchy, and standard in degree centrality from higher rank volunteers (supervisors).

Then, to select predictors to include into the regression model we computed correlations amongst the independent variables (network measures and individual covariates) and scores on satisfaction, while checking for the absence of multicollinearity among the predictors. We verified that individual characteristics like gender, age and education do not significantly correlate with satisfaction, thus confirming that they are not able to explain differences in satisfaction level. On the contrary, we found relational and instrumental satisfaction correlate with seniority in the organization (0.32*** per relational satisfaction), consistently with Flap (2001), and task performed (0.33*** and 0.47***) and hierarchy (-0.28*** for instrumental satisfaction) 23, as claimed by Liao-Troth and Dunn (1999). In respect to network covariates, it was observed that neither instrumental nor relational satisfaction correlate with closure and openness measures; therefore, they cannot be explained by the structuralism approach. It follows that volunteers seem more interested in ties they own build or receive than in the larger relational structure surrounding them. Moreover, average alters in degree centrality, which states for being well regarded by others who are themselves prestigious or well regarded, resulted substantially independent from satisfaction (-0.09).

Firstly, we ran the Baseline regression Model, in which only the three individual covariates above mentioned were included as predictors. Table 2 displays results of this model, showing that satisfaction with instrumental aspects of volunteering is positively affected by the task performed and, consistently with literature, especially by the formal position occupied (R² = 0.33). These findings seem to suggest that the more volunteers play an active role in the organization management, because of rank or spontaneous participation in extra tasks/activities, the more they are satisfied with the activity performed. In respect to relational satisfaction, we found it is positively influenced by either the degree of involvement in extra tasks or the seniority (R² = 0.54), which, as Flap puts forward, is a proxy of the time spent in building relations.

Table 2. Effects of individual covariates on volunteering satisfaction (CATREG).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Baseline Model</th>
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<tbody>
<tr>
<td></td>
<td>Instr. satisf.</td>
<td>Rel. satisf.</td>
</tr>
<tr>
<td>Hierarchical level</td>
<td>-.48***</td>
<td>-.04</td>
</tr>
<tr>
<td>Seniority</td>
<td>-.20</td>
<td>.39***</td>
</tr>
<tr>
<td>Task</td>
<td>.36**</td>
<td>.47***</td>
</tr>
<tr>
<td>R²</td>
<td>.33</td>
<td>.54</td>
</tr>
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</table>

*** p < 0.001; ** p < 0.01. *p < 0.05. (2-tailed). (n = 56)
Discussion and Conclusions
In this work we tested the effects of social interaction within non profit organizations on the satisfaction of their members. So as to formalize the dynamics described in the related literature, we adopted a conceptual framework proposed to explore job satisfaction in work contexts, once appositely considered the differences amongst for profit and non profit contexts and amongst workers and volunteers. We moreover drew on the elaborations on social capital and voluntary organizations.

We verified that, consistently with literature, volunteering satisfaction is a multifaceted concept, consisting of two dimensions, i.e. instrumental and relational. These points out those volunteers are interested in the activity itself, in terms of either tangible characteristics or advantages for the community. At the same time, it is confirmed the hypothesis that social interaction affects satisfaction and, precisely, that volunteers specifically take into account the relational aspects of their activity in order to evaluate their experience in voluntary associations. In respect to interpersonal relations within the organization, we furthermore observed that the most critical, and negatively valued, regard recognition of individuals. Contribution and involvement in decision making, thus highlighting volunteers are interested not only in volunteering itself, but also in contributing to decisional processes and to the organization management.

Taking a step further, we explored the process of satisfaction formation, finding out it is mainly individual, as put forward by the insignificance of social contagion mechanisms. This supports the notion that volunteers develop their opinion on the activity performed on the basis of its characteristics and of the benefits it provides, without experiencing pressure to conform to others. Opinions or being somehow influenced by others attitudes and behaviors. Amongst satisfaction drivers, outcomes of social relationships within the voluntary association resulted of primary importance. As put forward by CATREG regression, only some kinds of relations, with very specific structure and content, are able to affect satisfaction and volunteers pay attention either to the quantity or to the quality of ties built with other members. In details, with respect to structure, we found general evidence that volunteers are more interested in direct relations with others than in the wider social environment surrounding them, as proved by the greater explanatory adequacy of the tie approach to social capital, compared to the structural one. Focusing on content, it was pointed out that strategic or co-working relations, who are by definition weak ties, are more able to affect satisfaction than solidarity relations. The main finding in this respect is that volunteers are especially satisfied by the opportunity to be really involved in their organization, playing an active role in decisional processes, by means of centrality and, even more, of connectedness to resourceful others in strategic relations. This particular aspect of social interaction has proved to influence either instrumental or relational satisfaction. With regard to instrumental satisfaction, we in fact observed the unexpected contribution of involvement in decision making and prestige: the negative coefficient of in degree centrality for professional trust, together with the positive one of EI Index, seems to con.rm the finding on satisfaction scores above illustrated and to stress the need for a .at organization (where hierarchies are not formalized and strategic ties exist amongst members which occupy different formal positions). This result is fostered by those on relational satisfaction, which is promoted by being considered competent and then, presumably, asked for advice by either a number of others or especially by volunteers in charge of managing the organization.
The positive coefficient for relational satisfaction of professional trust in degree centrality, which by contrast exerts a negative influence on instrumental satisfaction, furthermore confirms the interest in gaining peers recognition and prestige. In this sense, volunteering is seen as a context where the individual can affirm him/herself and show his/her own abilities.

Finally, having access to information and skills through trustworthy and knowledgeable others, consistently with Flap findings on job satisfaction, positively affects instrumental satisfaction, since it provides the volunteer with better knowledge and, thus, help him/her either to perform his/her own tasks or to acquire skills useful in other contexts. Nonetheless, the effect is rather moderate in magnitude and poorly significant.

Within the framework here illustrated, some findings recall for more attention or stress the need for further refinements and a deeper investigation into the corresponding dynamics. The scarce significance of the solidarity relationship, whose importance on volunteer's enrollment and on decision to continue volunteering has been widely claimed in literature, suggests friendship ties could exert their influence on a dimension different from satisfaction. In this sense, effects of solidarity and sense of emotional support on volunteer's happiness and well-being could be examined. Also the contribution of social contagion to satisfaction formation, which could have been biased by the sample dimension, should be investigated on a larger population or, in details, more complex operationalization of the W matrix could be tested.

Likewise, other forms of social interaction taking place in voluntary organizations could be explored. Mainly the general strategic relation, which here -following Flap (2001) - has been operationalized as professional trust, could be more precisely specified. Advice seeking and involvement in decisional processes, for example, which we have inferred as a consequence of regarding as competent. Considering professionally trustworthy., could be made explicit or other co-working relationships could be investigated.

Finally, attempts to extend the model from the very specific kind of volunteering examined in this paper to others should be made. In so doing, the greatest limitation of this work, i.e. the focus on a volunteering activity whose day-by-day dynamics strongly resemble those of a traditional work context, could be removed.
References


