International Conference *Meanings of the Rural – between social representations, consumptions and rural development strategies*

28-29 September 2015, University of Aveiro, Portugal

Theme 2

SOCIAL AND PSYCHOLOGICAL DIMENSIONS OF PARTICIPATION IN FARMER FIELD SCHOOLS: LESSONS FROM RURAL GREECE

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Introduction

More than 25 years after the first implementation of Farmer Field Schools (FFS)[1], several studies converge to show that participation in FFS increases farmers' agricultural knowledge (Feder, Murgai, & Quizon, 2004), decision-making skills (Friis-Hansen and Duveskog, 2012), productivity (Davis et al, 2012), and consequently incomes (Sanglestsawai, Rejesus, & Yorobe, 2015).

On the other hand, FFS contribute in building and/or enhancing rural social capital (Settle & Garba, 2011); farmers participate in agricultural education (or extension) programs not only to gain knowledge but also to expand their social circles (Charatsari, Černič Istenič, & Lioutas, 2013) Therefore, FFS – and extension education in general – have a social dimension as well. In this vein it can be argued that FFS can serve some social goals or

[1] FFS were developed based on adult learning principles in order to facilitate farmer understanding and application of IPM through learning-by-doing and social learning or discovery learning.

psychological functions of farmers. However, to date, the way social/psychological motives affect farmers' propensity to engage in activities of agricultural education or extension is not dealt with.

In this work, drawing upon the social behavior literature and social psychology theory, we built two instruments to measure the degree to which farmers base their decision to participate in FFS on social or psychological needs. Our hypothesis is that farmers' willingness to participate in FFS is not only guided by their expectation to gain knowledge or tangible rewards (participation subsidy, increase of income) but also by their desire to gain acceptance by their fellow community members, as well as by their internal need to develop new (or mending old) relationships and to seek new (or to repair old) social bonds.

To test this hypothesis we examined the influence of two separate, but related, meanings on farmers' willingness to participate. The first one refers to the concept of community acceptance, i.e. the sense of being accepted or excluded by the other members of the community. The second is the "need to belong" (Baumeister & Leary, 1995), concerning the fundamental human need to create and maintain strong, long lasting and pleasant interpersonal relationships.

Method

Procedure

From December 2014 to February 2015 an FFS program was advertised through websites, newspapers, flyers and announcements in village cafés. After a first collection of farmers' applications to participate we visited some of the applicants' villages and informed local farmers about the FFS program (March 2015). In this stage we also collected a number of new applications. All the informed farmers (applicants and not applicants) completed a questionnaire which included a series of instruments (see: "Measures").

Subjects

This piece of work utilizes data from 51 cotton producers (86.3% men; average age: 39.7) who live and work in two villages located in Thessaly (Central Greece). Farmers were separated into two groups: those who expressed their willingness to participate in the FFS project (Participants; n=24) and a comparable sample of cotton producers from the same

region who although had been informed were unwilling to participate (Non-Participants; *n*=27). Between the two groups no differences in terms of age (t=-1.16, p=0.253), gender (χ^2=0.33, p=0.565) and level of education (U=304.5, p=0.681) were detected.

Measures

Community acceptance scale (CAcS)

To assess community acceptance we used an 18-item scale. In the measure 14 positively (e.g., "*Others ask me to take part in common ventures*") and four negatively worded items (e.g., "*I believe that others don't feel any special connection with me*") referring to participants' perceived acceptance within their communities are included. Response options range from 1 (not at all true) to 5 (very true). Items were factor analyzed (principal axis factoring) using varimax rotation. The analysis resulted in six factors accounting for 85.3% of the total variance (Table 1). Each factor comprises of three items. The first factor (Closeness) includes items reflecting the person's sense of closeness while interacting with other community members. The second factor (Support) concerns the support individuals enjoy within the community. The next factor (Alignment) is related to the alignment between the individual's and community's value systems. The fourth factor (Solidarity) represents the solidarity people experience within their communities. The fifth factor (Collaboration) refers to the degree to which the individual is accepted as a part of intra-community collaboration schemes. Finally, the sixth factor (Connectedness) relates to the sense of connectedness persons derive from the interaction with their community peers. Scores for the subscales were obtained by averaging the relevant items, after recoding negatively worded statements. In all cases Cronbach's alphas are quite satisfactory.

Need to belong

To measure the strength of subjects' need for belonging we developed three items which assess the degree to which this need is unmet (e.g. "*Sometimes I felt isolated and lonely*"). All items followed the stem "*During the last few months…*" Subjects rated these items on a seven-point scale, ranging from 1 (not at all true) to 7 (very true). The three items load on a single factor accounting for 75.1% of the variance (Cronbach's alpha: 0.83). A composite score was calculated by averaging the three items.

Table 1. Community Acceptance Scale (CAcS): Example items, explained variance, Cronbach's alphas and mean scores

Sub-scale	Example item	Variance %	Cronbach's alpha	Mean score (S.D.)
Closeness	I feel that other members of my community believe that I am "of the same stuff" with them	20.9	0.89	3.52 (1.01)
Support	People from my community care about me, even those they don't know me well	19.1	0.91	3.12 (1.15)
Alignment	I feel that other community members accept me, even if I don't follow the unspoken rules of the community	14.4	0.90	2.86 (0.91)
Solidarity	Members of my community help me when I am in need	12.9	0.89	3.22 (0.94)
Collaboration	Others ask me to take part in local/neighborhood organizations/associations	10.3	0.88	3.95 (0.91)
Connectedness	The community makes me feel that I am a part of it	7.7	0.87	3.46 (1.07)

Results

To test for significant differences between the two groups of subjects we used independent samples t-tests. The results of the tests reveal that Participants indicate significantly lower levels of Closeness and Connectedness compared to Non-Participants (Table 2). Moreover, our analysis indicates that the two groups of farmers differ in the strength of their need for belongingness. The mean score for the group of Participants is significantly higher ($t=2.06$, $p=0.045$), indicating that they experience a more pressing desire to form social bonds and relationships.

Table 2. Mean differences between the two groups on CAcS and Need for belongingness

Domain	Mean score		t-test
	Participants	Non-Participants	
CAcS			
Closeness	3.04	3.95	-3.57**
Support	3.06	3.19	-0.40^{ns}
Alignment	2.93	2.80	0.49^{ns}
Solidarity	3.03	3.38	-1.35^{ns}
Collaboration	3.78	4.09	-1.26^{ns}
Connectedness	3.04	3.83	-2.78**
Need for belongingness	3.74	3.26	2.06*

*Note: * p<0.05, ** p<0.01, ns: No significance*

Following, to confirm our results, we used a Complementary Log-log regression analysis. In this model, CAcS sub-scales and Need for belongingness were used as predictors of willingness to participate in FFS (Table 3). The procedure revealed that Closeness (p=0.003) and Connectedness (p=0.005) are significant predictors of farmers' willingness to participate, whereas the strength of their need for belongingness also contributes significantly to the model (p=0.018).

Table 3. Results of hierarchical regression analysis

Predictors	Wald	Estimate
Closeness	8.84	1.09**
Support	0.79	0.22^{ns}
Alignment	0.17	-0.12^{ns}
Solidarity	3.34	0.59^{ns}
Collaboration	0.81	0.29^{ns}
Connectedness	7.92	0.87**

Need for belongingness	5.58	-0.81*

*Note: * p<0.05, ** p<0.01, ns: No significance*

Conclusion

Given the importance of various forms of extension education within strategies for rural development and the emphasis on Farm Advisory Systems (FAS) on the part of the EU CAP, in this work we examined two important – yet underrepresented in the literature – dimensions of farmers' participation in FFS. The analysis revealed that both social and psychological motives are important precursors of farmers' willingness to participate in FFS. Since both community acceptance and the sense of belongingness positively affect individuals' well-being (Baumeister & Leary, 1995), the findings presented herein indicate that agricultural extension/education, apart from its role in delivering agricultural knowledge, can be viewed as a vehicle for the fulfillment of farmers' social and psychological needs, contributing thus to rural people's social and psychological prosperity.

Acknowledgment

This research project is funded under the Project 'Research & Technology Development Innovation Projects'-AgroETAK, MIS 453350, in the framework of the Operational Program 'Human Resources Development'. It is co-funded by the European Social Fund through the National Strategic Reference Framework (Research Funding Program 2007-2013) coordinated by the Hellenic Agricultural Organization - DEMETER (Plant Breeding and Genetic Resources Institute / Scientific supervisor: Dr A. Kalivas).

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