Participation of Spanish older people in educational courses: The role of sociodemographic and active aging factors

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Abstract

This study examines the factors associated with participation in educational courses among Spanish older people. Data were drawn from the Survey on Older People 2010, carried out by Spain's National Institute of Older People and Social Services and based on a nationally representative sample. Overall, only 7.4 percent of the sample participated in an educational course. To analyse the factors related to this participation, we ran multivariate analyses using sociodemographic background data and participation in different kinds of active aging activities. Gender, location, age, leisure activities, volunteering and political activity were found to be predictors of participation in educational courses. Leisure and productive activities showed greater predictive value for participation in educational courses than sociodemographic variables. In the light of the data, policies to promote older people's participation in educational courses are discussed.

Keywords

active aging, learning in later life, educational courses

The face of aging has changed dramatically in the past few decades. People over 60 now expect to live longer and in better health than they did previously; they are also better educated and, at least in developed countries, have more financial resources. These changes mean that older people are more able and willing to maintain or initiate activities that were traditionally associated with younger people. Concepts such as active aging (World Health Organization, 2002), which have become increasingly popular in scientific and political arenas (Boudiny, 2013; Walker, 2009), reflect this capacity of older adults to participate in social, economic, cultural and civic activities. Learning and further education are often cited as activities typical of active aging (Boulton-Lewis, 2006).

Learning activities are not only indicators of active aging but also the main way to provide older people with instruments to promote their participation in other areas. Education, for instance, enhances the development of civic skills, which in turn facilitates greater civic and community engagement (Verba et al., 1995). Given that active participation in later life has been related to the maintenance of personal autonomy, increases in individual wellbeing and improvements in social capital (Lee, 2006; Siegrist et al., 2004), there is a growing desire to implement social policies that promote adult learning in later life (European Commission, 2006).

Despite the potential benefits of older people engaging in education, only a minority actually do so. In the United States, Hamil-Lucker and Uhlenberg (2002) showed that just 16.3 percent of people aged between 66 and 75 years participated in a non-accredited learning activity organized by community or business institutions, while the National Household Education Survey (NHES) of 2005 estimated that 23 percent of Americans over 65 years old had participated in a formally organized educational activity in the previous year (O'Donnell, 2006). In Europe, Kailis and Pilos (2005) found that 30 percent of people aged between 55 and 65 years had participated in an educational activity in the last year. Moreover, if older generations are included, the rate of participation decreases further. The rates also vary dramatically between countries: in northern Europe 20 percent of those aged 55–74 years typically participate in educational activities, while the rates are below 10 percent in Mediterranean countries (Eurostat, 2011).

In the case of Spain, a study found that only 9 percent of those aged 60–75 years had participated in a non-formal educational activity in the previous 12 months (Villar and Celdrán, 2013); indeed, in Spain, the emphasis on educational learning as a culturally approved later life activity is recent in comparison to other developed countries. The present elderly generation in Spain grew up in a dictatorship, a context that did not encourage organized social participation. Most therefore tend to consider retirement as a time to rest or, at most, as an opportunity to be involved in leisure activities. As a result, most of older people in Spain spend their free time in passive leisure activities, such as watching TV, or in informal social activities that involve family or friends (Imserso, 2012). Accordingly, so far, there is a virtual lack of any public policy in Spain supporting education in later life.

To implement such policies and increase the engagement of older people in education, we need to understand their motivations for engaging in educational programmes and must identify factors that can be targeted. However, research is scarce and focuses on small, intentionally selected samples. The present study develops and evaluates different predictive models of educational participation using a nationally representative sample of elderly people in Spain. Specifically, we test a model based on sociodemographic variables, including age, income, education, location and gender; and then assess whether the inclusion of lifestyle variables,

such as leisure-oriented activities or productive activities, increases the model's predictive value.

The influence of sociodemographic background

Most studies aimed at predicting the factors that facilitate elderly participation in educational courses have focused on sociodemographic variables. Some authors have tried to explain these background influences by linking them to the presence of certain resources (for example, Choi, 2003; Wilson and Musick, 1997). This approach assumes that performing an activity (for example, participating in an educational course), or playing a certain role, implies certain opportunities or resources related to time, effort, motivation and ability. As people have different levels of access to resources, this should determine the extent to which a given individual is likely to be involved in a given activity (Warburton and Stirling, 2007). Sociodemographic background factors such as age, health, education and income have been considered indicators of the level of resources at a person's disposal. If this assumption is correct, these variables should predict the likelihood of participation in educational activities. Accordingly, research in this area has focused on core factors, such as age, education, health or income. However, most of the research has been focused on work-related training in adulthood (for example, European Commission/EACEA/Eurydice, 2015; Brunello et al., 2007), but there is little research focused on older adults.

In that respect, younger adults clearly participate more in formal and non-formal learning than older people (Kailis and Pilos, 2005). Because most studies treat people over 60 or 65 as a single group, there is little evidence of the influence of age among older age groups. However, some studies have found that age may have some influence on educational participation among older people (for example, Villar and Celdrán, 2013), with the increasing prevalence of health conditions acting as a barrier to participation with advancing age (Villar and Celdrán, 2014). This negative effect of age and health on participation has also been observed in other active aging activities, such as volunteering (Choi, 2003; Hanck and Stuck, 2008). Educational level also seems to have a strong influence on participation, being considered the single best predictor of older people's participation in educational activities (Kim and Merriam, 2004). The tendency of well-educated people to participate in educational courses is a recurring theme in studies with representative samples of adults (Hamil-Luker and Uhlenberg, 2002; Kailis and Pilos, 2005), specific samples of older people (Villar and Celdrán, 2013), and intentional samples from educational courses for older people (Alfageme, 2007). Because younger cohorts tend to be better educated than older ones, the effect of age may also have a partial influence on education, suggesting a continuity of interests and activities that go beyond the retirement transition (Villar and Celdrán, 2013). In a similar way, income seems to be a good predictor of participation in active aging activities (American Council on Education, 2007).

Although it is questionable whether gender is an indicator of resource use, most studies include this variable when assessing predictors of participation in educational activities. Some studies have found that older women participate more than older men, particularly in non-formal learning activities such as courses provided by community organizations (Hamil-Luker and Uhlenberg, 2002) or 'Universities of the Third Age' (Alfageme, 2007; Orte et al., 2004). In contrast, other studies have found a small effect of gender (Kailis and Pilos, 2005; O'Donnell, 2006). These conflicting results suggest that gender effects are not straightforward.

Other variables associated with resources, such as location, could also affect participation. Opportunities for study must be available in a person's community. In that respect, living in an urban area may favour participation in non-formal learning because of the greater availability than in rural areas. Nonetheless, the effect of location has rarely been considered.

The role of co-occurring activities

Beyond the influence of sociodemographic variables, participation in education may also be predicted by engagement in other activities. Although we do not have empirical results, activities that connect older people with their community, increase their social networks, and promote an active lifestyle could be predictors of involvement in educational activity (Merriam and Kee, 2014). However, the direction of this relationship is open to debate. One might think that, because every activity requires a certain amount of time and effort, allocating time and effort to one specific activity might limit people's availability to take part in others. In fact, though, the available research supports the opposite view: that active aging activities tend to complement each other, rather than compete, because they reinforce one another by providing social support and institutional ties. In a study of volunteers, Burr et al. (2005) found that caregiving behaviour fostered greater involvement. Similarly, Burr et al. (2007) showed that productive activities such as volunteering, informal helping, caregiving, or paid work were more likely to complement than compete with each other.

So far, most studies into the role of co-occurring activities have focused on the trade-offs between productive activities (Morrow-Howell, 2010) and have excluded leisure or educational activities. Specifically excluding leisure neglects an important set of activities engaged in by older people which produce many physical and psychological health benefits (Boudiny and Mortelmans, 2011). In addition, the type of activity could be relevant given that not all activities considered 'active' share the same attributes. For instance, Manell (1993) distinguishes between high and low investment activities according to the effort and commitment required. Similarly, Bukov et al. (2002) differentiated between high and low resource-demanding activities. While many leisure activities are low demand, productive or educational activities could require a higher investment of effort and commitment (Villar and Celdrán, 2012; Bass and Caro, 2001).

Objectives

The objective of this study was to analyse the factors that predict elderly participation in educational courses. First, we tested a sociodemographic model based on background variables, including age, education, health, income and gender. Second, we added the co-occurrence of different leisure and productive activities to the model in order to assess their effect on the model's predictive value.

Conceivably, participating in educational activities could compete with other high-investment productive activities (Bass and Caro, 2001), but would be compatible with less demanding leisure activities. However, if participating in educational activities followed the trend of mutual reinforcement observed in volunteering, participation in leisure and productive activities might predict participation in education.

Methods

Participants

The data for this study came from the Survey on Older People 2010, conducted by Spain's National Institute for Older People and Social Services. This survey was designed to study older people's life conditions and was based on a nationally representative sample of 2,535 phone interviews in Spain. Participants were selected by simple random sampling, using the telephone directory. The sample was controlled for sex, age (four age groups: 65–9, 70–4, 75–9, 80 and plus), autonomous community (17 Spanish regions), and location size (up to 5,000 inhabitants, 5,001 to 10,000 inhabitants, 10,001 to 20,000 inhabitants, 20,001 to 100,000 inhabitants, and over 100,001 inhabitants) to ensure that the distribution variables in the final sample resembled their distribution in the Spanish population. We included 2,530 respondents living in the community (those living in long-term care institutions were not included in the survey) and aged 65 years or older. We excluded those who did not provide valid answers. In total, 1,278 women and 1,252 men were included, with 1,260 aged 65–75 years and 1,270 aged 75 years or older.

Measures

Attending educational courses was set as the dependent variable, while sociodemographic factors and indicators of leisure and productive activities were set as predictive independent variables.

Sociodemographic background

We used the following sociodemographic variables: gender, age (65–74 and ≥ 75), education (incomplete primary education or less, primary education, secondary education or more), income (≤ €300, €301–900, ≥ €901 per month), type of residence (rural ≤ 10,000 inhabitants, and urban ≥ 10,000 inhabitants), and subjective health (good, fair and bad). Income levels were established according to the distribution of frequencies, grouping categories which were closer to the distribution tertiles.

Engagement in active aging activities

Participation in leisure activities was measured by three activity variables: attending shows, doing sports, or attending a recreational centre for older adults at least once over the past week. Participation in productive activities included three variables: taking care of grandchildren regularly while their parents work, belonging to a political association (political parties, labour unions, or older people's associations with a political aim), and participating regularly in any kind of volunteer activity. For each activity, participation was coded as 1 and non-participation as 0.

Outcome variable

Participation in learning activities was measured by attendance at a course at least once over the past week. Attendance at such courses was coded as 1, not attendance as 0.

Data analysis

First, we conducted bivariate analyses to test the association between the dependent variable, participation in educational activities, and each independent variable. Second, logistic regressions were performed to test three models in three

steps: in step one we tested a model of sociodemographic variables; in step two, we added leisure activity variables to the model, and in step three, we included productive activities. In each step, we checked if the predictive value of the model increased after the inclusion of the new set of variables. These logistic regression analyses were not conducted to infer causality, but rather to identify characteristics that were uniquely associated with the likelihood of participating in educational activities.

Results

Only 188 of the 2,530 valid responders (7.4 percent) had participated in an educational course in the last week. To identify the variables associated with participation, we conducted a series of bivariate analyses.

<Insert Table 1 near here>

These analyses indicated that gender did not influence participation (χ^2 [1] = 3.29; *n.s.*). Participants in educational courses were more likely to be younger (χ^2 [1] = 21.09; $p<0.001$), better educated (χ^2 [2] = 6.57; $p<0.05$), and live in urban contexts (χ^2 [1] = 29.39; $p<0.001$) than non-participants. However, income (χ^2 [2] = 2.85; *n.s.*) and subjective health (χ^2 [2] = 1.91; *n.s.*) did not affect participation in educational courses.

<Insert Table 2 about here>

As for engagement in other types of leisure activities (see Table 2), older people who participated in educational courses were more likely to have attended shows (χ^2 [1] = 34.25; $p<0.001$), to have done sports (χ^2 [1] = 35.54; $p<0.01$), or to have attended a recreational centre for older adults (χ^2 [1] = 33.46; $p<0.001$).

<Insert Table 3 about here>

Older people who participated in educational courses were also more likely to participate in productive activities (see Table 3), such as caring for grandchildren (χ^2 [1] = 13.489; $p<0.001$), volunteering (χ^2 [1] = 38.70; $p<0.001$), and being involved with civic and political organizations (χ^2 [1] = 17.20; $p<0.001$). Overall, these results show that leisure and productive activities are significantly associated with participation in educational courses.

To explore the relationships between these variables, a series of logistic regression analyses were run (see Table 4). The first regression, which included sociodemographic variables, revealed three main effects. The odds of participating in educational courses were 57 percent higher for women than for men (*OR* = 1.57, $p<0.001$) and 58 percent higher for younger (65–74) than for older participants (*OR* = 1.58, $p<0.001$). Living in an urban area increased the odds of participation almost 2.5 times (*OR* = 2.42, $p<0.001$). No effects were found for educational level, income, or subjective health.

<Insert Table 4 near here>

When leisure activities were included in the model, the effects of gender and location were maintained, but the effect of age disappeared. Additionally, significant relationship with attending to educational courses was shown with the inclusion of all the three leisure activities in the model. Thus, the odds of attending courses were more than 2.5 times as high for people who also had attended a recreational centre for older adults (*OR* = 2.61, $p<0.001$) than for those who had not, and the odds of attending courses were twice as high among people that did sports (*OR* = 1.95, $p<0.01$). People who had attended shows were 77 percent more likely to attend educational courses than people who had not (OR = 1.77, $p<0.05$). The goodness of

fit of the model, as indicated by Nagelkerke's pseudo R^2, increased from 0.057 to 0.116.

All the effects remained when productive activities were included in the regression analysis, which additionally identified two significant effects. The odds of attending courses was more than twice as high for people who belonged to political organizations (*OR* = 2.07, $p<0.01$) than for those who did not, and almost three times as high for people who had also volunteered than for those who had not (*OR* = 2.93, $p<0.001$). However, caring for grandchildren did not have a significant effect on the probability of attending educational courses. The goodness of fit of Model 3 was better than the one provided by Model 2 (Nagelkerke's pseudo R^2 increased from 0.116 to 0.151).

Discussion

This study aimed to examine the extent to which sociodemographic variables and the co-occurrence of leisure or productive activities could predict the participation of older people in educational courses. Our results indicate that the predictive power of these models increases dramatically when active aging activities (both leisure and productive) are taken into account. In fact, among the sociodemographic background variables, only gender and location significantly predicted participation in all the models. Consistent with other reports (Hamil-Luker and Uhlenberg, 2002; Alfageme, 2007), women tended to participate more than men. The wider and more diverse offer of educational courses in bigger towns and cities probably accounts for location-related differences. Notably, variables associated with resources, such as income, education level, or health, had no predictive value in our study. Consequently, sociodemographic factors appear to be less important predictors of participation in educational courses, but it is possible that leisure and productive activities may mediate the relationship between age, location, gender and participation in educational courses.

The findings for age are particularly interesting. Previous research had identified age as being predictive of participation (Kailis and Pilos, 2005; or Villar and Celdrán, 2013) and our data support this. However, this only occurred in the bivariate analyses and when sociodemographic variables were included in the first model, but its influence disappeared when active aging activities were introduced. This suggests that age per se does not really explain the differences in participation, and may even conceal a more complex picture of participation in educational activities among older people. The key may therefore be maintaining or leading an active lifestyle, rich in leisure and productive activities.

In this vein, our results clearly showed that participating in other active aging activities generally increased the probability of joining an educational course. Thus, they acted as mutual re-enforcers, rather than as alternatives that compete for the scarce personal resources of time or effort. Despite their different natures in terms of commitment and effort requirements, leisure and productive activities functioned similarly as predictors of older people's participation in educational courses. These results are coherent with previous ones suggesting that productive activities in older age are more complementary than competitive (Burr et al., 2007; Hank and Stuck, 2008; Serrat et al., 2015), and expand these findings to some leisure and educative activities. Consequently, an active aging lifestyle seems to function as a single package, with older people who are already socially involved and contributing to their communities being more likely to engage in learning activities. This participation may

favour even greater involvement in cultural, social and productive activities, thus closing the circle.

Our results also suggest that participation in educational courses in older age may be favoured by social connectedness. Thus, people who are socially engaged in leisure-oriented (for example, associations for older people) or productive-oriented (for example, voluntary or political organizations) activities are more likely to join educational courses. Communities in which there are more opportunities for older people to participate and maintain activities, with stronger formal networks and ties, and more social capital (Putnam, 2000) appear to promote training and learning as lifelong tasks, leading to strong networks and high levels of trust.

We also found, however, that caring for grandchildren was a clear exception to the reinforcing role of leisure and productive activities. According to our results, although caring for grandchildren did not diminish the probability of participating in education, it did not favour it, as did the other leisure and productive activities. To interpret this result, we must take into account that caring for grandchildren is a productive activity that involves social connectedness (within the family, in this case), but, unlike the other activities, it is questionable whether it is truly voluntary. Thus, many grandparents consider that the care they offer to their grandchildren is an extension of their duties as parents, and that such help is taken for granted by many children (Villar et al., 2012). Such care-related tasks (for example, looking after grandchildren while parents are at work) are a particularly frequent and intensive activity among older people in Spain, consistent with experiences in other Mediterranean countries (Hank and Buber, 2009). This could account for the lack of a reinforcing effect observed with regard to educational participation.

There are several limitations to this study. First, information about the intensity or the frequency of activities was not available from the survey, and this could have given a more accurate view of the determinants of participation in educational courses. In this respect, key resource measurement was limited by some of the variables included in the study (for example, income is an imperfect way to measure material resources, or self-rated health maybe is not the best way to measure health). However, variables selected were the only ones available in the survey. Second, only face-to-face courses were identified in the survey, therefore older people's participation in on-line courses was not recorded. Consequently, conclusions cannot be drawn in relation to on-line participation. Additionally, the cross-sectional nature of the data precludes determining cause and effect associations. Further longitudinal studies are needed to explore changes over time and to shed light on the relationship between education in older age and other active aging activities. Finally, our data are restricted to Spain. As noted in the introduction, the sample of our study grew up in Franco's dictatorship, a context in which organized social participation was not supported nor encouraged, and retirement was looked on as a time of social disengagement. Consequently, any generalization to other geographical or cultural areas should be made with caution.

If later life education is the key to promoting age integration and strengthening the contribution of older people to society, then there is a need to develop social policy and increase public support for learning opportunities in old age, particularly in countries such as Spain, where such a policy has been absent so far. Despite its limitations, this study has important implications for designing such policies and practices. For instance, given that participation in active aging activities predicts enrolment in educational courses, a good strategy to promote education in older age might be to increase the range of courses on offer to people who already participate

in those activities. In this regard, associations for older people, sport clubs, or voluntary organizations could be good places to advertise or even organize educational courses directed at this age group. Additionally, and given that older people living in rural contexts may have less access to face-to-face courses, promoting online courses could be one way to decrease the disparity between urban and rural areas. Our results also suggest that policies aiming at promoting older age education exclusively guided by age could be mistaken, since age, per se, does not predict educational involvement in later life. On the contrary, policies should target specific activity and lifestyle profiles of older people to increase their probability of being successful. They should support an educational offer that takes into account the priorities and interests of specific groups of potential learners, instead of treating older people as a single and homogenous group.

Similarly, we also need to encourage education among older people who are not involved in any activity. According to our results, a way of doing so is to implement policies to increase the social capital of communities and promote active aging. Increasing the range of activities available for older people in every community (and, at the same time, targeting and advertising such activities to specific groups) and deactivating stereotypes that connect older age with disengagement, dependence, or passivity could also indirectly favour participation in educational courses among older people. Thus, it seems necessary to promote a shift in cultural values, emphasizing the contributions of learning to older people's lives, underlining their learning potential regardless of age and changing the idea that there are life stages where education is a must and other ones where it is simply 'not needed' or even a waste of time.

Further research is, however, needed to discover the barriers that prevent older people from participating in existing courses and would help to fine-tune policies regarding education in later life.

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Table 1 Comparison of sociodemographic variables between older people participating and not participating in educational courses

Variable	Participants (n = 188)	Non-participants (n = 2342)	Total (N = 2.530)
Gender			
Male	44.1	51.0	50.5
Female	55.9	49.0	49.5
Age ***			
65–75	66.0	48.5	49.8
75+	34.0	51.5	50.2
Education level *			
Incomplete primary or less	67.2	75.6	75.0
Primary education	19.1	14.9	15.2
Secondary or more	13.7	9.5	9.8
Location ***			
Urban	79.3	59.2	60.7
Rural	20.7	40.8	39.3
Income			
≤ €300	21.1	16.1	16.5
€300–900	63.2	66.8	66.5
> €900	15.8	17.1	17.0
Subjective health			
Bad	43.2	48.6	48.2
Fair	45.4	41.0	41.4
Good	11.4	10.4	10.4

Note: All results are percentages. p-values are based on the chi-square statistic. *p<0.05; **p<0.01; ***p<0.001

Table 2 Comparison of leisure activities between older people participating and not participating in educational courses

Leisure activities	Participants (n = 188)	Non-participants (n = 2342)	Total (N=2,530)
Attending shows ***			
Yes	21.3	8.4	9.3
No	78.7	91.6	90.7
Older people association ***			
Yes	58.0	36.7	38.3
No	42.0	63.3	61.7
Doing sports ***			
Yes	48.9	28.3	29.8
No	51.1	71.7	70.2

Note: All results are percentages. p-values are based on the chi-square statistic. *p<0.05; **p<0.01; ***p<0.001

Table 3 Comparison of productive activities between older people participating and not participating in educational courses

Productive activities	Participants (n = 188)	Non-participants (n = 2,342)	Total (N=2,530)
Caring for grandchildren ***			
Yes	41.5	29.7	29.7
No	58.5	70.3	70.3
Political participation ***			
Yes	14.4	6.4	7.0
No	85.6	93.6	93.0
Volunteering ***			
Yes	20.2	7.3	8.2
No	79.8	92.7	91.8

Note: All results are percentages. p-values are based on the chi-square statistic. *p<0.05; **p<0.01; ***p<0.001

Table 4 Logistic regression of factors associated with participation and non-participation in non-formal education

Variable	Model 1[1] *Odds Ratio[95% CI]*	Model 2[2] *Odds Ratio [95% CI]*	Model 3[3] *Odds Ratio [95% CI]*
Gender (male = 0)			
Female	1.57* [1.08–2.31]	2.01** [1.26–3.47]	1.83* [1.08–3.07]
Age (75+ = 0)			
65–74	1.58** [1.11–2.25]	1.04 [0.70–1.55]	0.84 [0.55–1.29]
Education level (>= secondary = 0)	0.58 [0.33–1.06]	0.67 [0.35–1.29]	0.77 [0.39–1.52]
Primary education	0.89 [0.47–1.69]	1.04 [0.52–2.08]	1.13 [0.55–2.31]
Secondary or more			
Location (Rural = 0)			
Urban	2.42*** [1.61–3.63]	2.01*** [1.36–3.22]	2.07** [1.34–3.20]
Income (>900 = 0)			
≤ €300	1.49 [0.76–2.92]	1.31 [0.62–2.78]	1.41 [0.65–3.06]
€301–900	1.55 [0.90–2.66]	1.37 [0.76–2.44]	1.40 [0.77–2.54]
Subjective health (Good = 0)	0.80 [0.46–1.40]	0.83 [0.46–1.48]	0.83 [0.46–1.51]
Bad	1.10 [0.64–1.89]	1.12 [0.64–1.98]	1.58 [0.65–2.07]
Fair			
Attending shows (Yes = 0)		1.77* [1.10–2.85]	1.83* [1.13–2.98]
No			
Older people Association (Yes = 0)		2.61*** [1,81–3.75]	2.47*** [1.72–3.56]
No			
Doing sports (Yes = 0)		1.95** [1.33–2.86]	1.86** [1.26–2.74]
No			
Caring for grandchildren (Yes = 0)			1.45 [0.99–2.13]
No			
Political organizations (Yes = 0)			2.07** [1.27–3.46]
No			
Volunteering (Yes = 0)			2.93*** [1.87–4.62]
No			
Model sum. Chi Square (df, *p* value)	49.161 (9, <001)	101.43 (12, <.001)	132.23 (15, <.001)

Log likelihood	1054.45	1001.70	970.57
Nagelkerke	0.057	0.116	0.151

*p<0.05; **p<0.01; ***p<0.001

[1]Model 1: Sociodemographic background variables.
[2]Model 2: Sociodemographic background + Leisure activities variables.
[3]Model 3: Sociodemographic background + Leisure activities + Productive activities variables.