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# A Structural Model of the Effects of Organized Leisure Activities on the Well-Being of Elder Adults in Spain

Miguel Ángel García-Martín  
Luis Gómez-Jacinto  
Clara Martimortugués-Goyenechea

**ABSTRACT.** This work analyses the psychological effects of organized leisure activities on the elderly people that participated in them. The study was carried out with a sample of 122 people using the services of a day care center with ages ranging from 50 years to 82 years (mean = 67.6 years). The sample was distributed into four activity groups: maintenance exercise, handicrafts, computing, and art. There was also a control group made up of people applying for these activities who were on a waiting list. A pre-post methodology was used to analyze the changes found in the following variables: Social Support, Loneliness, Life Satisfaction, Depression, Perceived Control, Social Self-Efficacy, and Self-Perceived Health. The adjustment indicators obtained partially confirm the model we proposed. Thus, participation in these activities contributes to reducing the level of depression and loneliness in the participants and increases their level of life satisfaction, and perceived control in their lives. *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address:*

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**KEYWORDS.** Leisure-time, well-being, need-satisfaction, structural models, retirement, Social Services, Community Services, social adjustment

## INTRODUCTION

Most studies analyzing the psychological benefits arising from the participation of elderly people in organized leisure activities have yielded positive results. There is much empirical evidence showing that greater involvement of elderly people in these kinds of activities has significant effects on their subjective well-being (Brown, Frankel, and Fennel, 1991; Dupuis and Smale, 1995; Headey, Veenhoven, and Waring, 1991; Hersch, 1990) as well as on other related variables. Indeed, greater participation in these kinds of activities has the following effects: reductions in feelings of loneliness (Kivett, 1979; McAuley, Blissmer, Márquez, Jerome, Kramer, and Katula, 2000), improvements in mood (Lawton, DeVoe, and Parmelle, 1995; Tinsley, Teaff, Colbs, and Kaufman, 1985, 1987), and better capacity to cope with the changes taking place during the aging process (Steinkamp and Kelly, 1987). This confirms the assertion of Argyle (1996) regarding the relevance of leisure as a source of personal well-being for both people who work or for the retired, as in this case. According to this author, social relationships, work, and leisure are the three cornerstones of well-being.

Riddick (1985) states that participating in leisure activities is the key predictor of life satisfaction for elderly people. The results from pathway analyses carried out by Riddick led her to conclude that variables such as health or income have an indirect influence on life satisfaction via their impact on leisure activities. Headey, Holmstrom, and Wearing (1985)—in their explanatory model of subjective well-being—give an important role to satisfaction via leisure. Similarly, the works of Tinsley et al. (Driver, Tinsley, and Manfredo, 1991; Tinsley, Barret, and Kass, 1977; Tinsley and Kass, 1978, 1979; Tinsley and Eldredge, 1995) are worth bearing in mind. The research carried out by this team over more than two decades has enabled the analysis of the features of different types of activities and their repercussion on the subjective sense of well-being of those who participate in them. The model developed by

Tinsley and Tinsley (1986) highlights the relationship between satisfying a series of needs and the psychological benefits derived from leisure. This need satisfaction contributes, on the one hand, to preserving and improving physical and mental health, and on the other, to life satisfaction and personal growth (see Figure 1).

Initially Tinsley, Barrett, and Kass (1977) identified 44 needs that can be satisfied through participation in leisure activities. Seventeen of them are equally satisfied independently of the activity undertaken, while the remaining 27 are closely related to the actual leisure activity. Tinsley (1984) carried out a factorial analysis of all these needs and grouped them into eight major dimensions: self-expression, companionship, power, compensation, security, service to others, intellectual-estheticism, and solitude.

This wealth of studies highlighting the physical and mental benefits derived from leisure activities contrasts with the scarcity of models proposed regarding the influence exerted by the variables analyzed. To Tinsley and Tinsley's (1986) model we can add the Buffer model of Coleman and Iso-Ahola (1993), and the causal model of Herzog, Franks, Marks, and Holmber (1998). The first of these models focuses on the mediating effect of leisure activities on stress. The second one studies the influence of the educational level and the personal and social self-concept on the kind of leisure activities undertaken.

Bearing in mind this background, this study aims at testing—with a sample of elderly Spanish people—a process model where the behaviour of the variables involved in the relationship between leisure activities and well-being are analyzed. This model maps the hypothesis proposed in this paper both regarding the sequence of variables involved in this relationship as well as the type of relationship and the influence they exert on each other. Thus, the model predicts a positive effect of leisure ac-

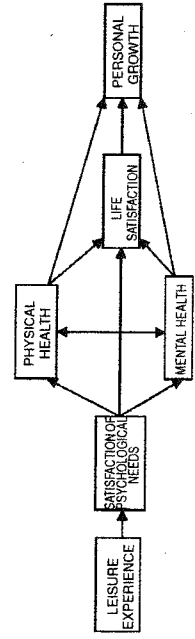


FIGURE 1. Relationship between satisfying a series of needs and the psychological benefits derived from leisure (Tinsley and Tinsley, 1986)

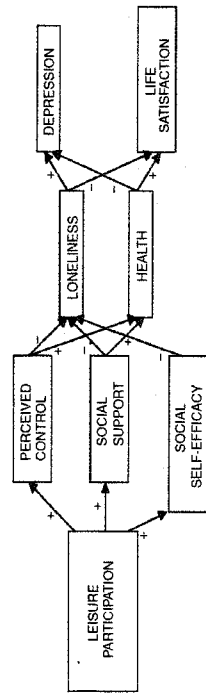
tivities on control, social support, and social self-efficacy as perceived by the participants. All these variables, except social self-efficacy, should also enhance the level of health perceived by the participants and reduce their sense of loneliness. The improvement in health and the reduction in loneliness will have a positive impact on the two variables representing the cognitive and affective dimensions, respectively, of well-being, i.e., life satisfaction and depressive moods. In this sense, we postulate that health will have a positive impact on life satisfaction and a negative impact on depression. On the other hand, loneliness will have a negative influence on life satisfaction and a positive one on depression (see Figure 2).

## METHOD

### Participants

The initial sample consisted of 102 people using the services of a day care center for elderly people located in Málaga (Spain). The only requirements for participation in the organized leisure activities groups were being at least fifty years old and presenting a formal request to participate in some of the organized leisure activities the center offered during 1998-99. These kinds of activities in day care centers for the elderly are an innovative approach in Spain. They are based on promoting the participation of the elderly in the activities they like. These organized leisure activities are carried out in small groups who voluntarily come together to participate in an activity which they find interesting in itself. According to Argyle (1996) any organized leisure activity—to be

FIGURE 2. Proposed model of organized leisure groups effects on psychological well-being in older adults



considered as such—has to fulfill the following requirements: it has to be freely chosen, there is an intrinsic motivation, and it is an end in itself, i.e., it is not conceived as a means to an end (see Argyle, 1996):

*The meaning of leisure [ . . . ] it is those activities which people do in their free time, because they want to, for their own sake, for fun, entertainment, self-improvement, or for goals of their own choosing, but not for material gain. (Argyle, 1996, p. 3)*

Twenty-four people from the original sample were discharged for different reasons: non-attendance; impossibility to contact the person once the activity ended; or refusal to fill in the final questionnaire. The characteristics of the people who concluded the study (i.e., participated in the initial and final evaluation) were as follows: 78 people, age (mean = 67.6; S.D. = 6.9; range = 50 - 82 years old); gender (female = 69.4%; male = 30.6%); marital status (single = 6.1%; married = 59.2%; widower = 31.6%; divorced = 3.1%); educational level (illiterate = 5.1%, primary education not completed = 43.9%, secondary education completed = 27.6%, tertiary education = 18.3%; Higher Education = 5.1%). The low educational level of the sample is a reflection of the well-known characteristic of this generation in Spain who—for historical reasons such as poverty, early insertion into the labor market, and the Spanish Civil War—had difficulties in completing their education. This fact was specifically taken into account when designing the assessment procedure to evaluate the different variables.

The groups were distributed as shown in Table 1 (fitness exercise, computing, handcrafts and painting). The demographic characteristics of the participants do not vary greatly per group, except regarding gender. In fact, the computing group contained a majority of males while maintenance exercise was attended by more women than men.

The sample comprised first experienced participants—people who had participated during the previous year—and prior experienced participants—this was their first experience. By establishing this difference it was possible to obtain a measurement over time of the possible effects derived from participation in these organized leisure activities groups. The results of the comparisons carried out between first experienced and prior experienced participants were statistically significant (García, 2001; García and Hombrosos, 2002; García and Gómez, 2003). Participation in the activities was operational at three levels: (A) “no participation,” (B) “participating in one activity,” and (C) “participating in two activities.”

TABLE 1. Sample of participants in the organized leisure activities groups analysed

	FIRST EXPERIENCE	PRIOR EXPERIENCE	TOTAL
	14	9	23
1 ACTIVITY	16	4	20
	11	4	15
	7	1	8
2 ACTIVITIES (*)	5	7	12
	53	25	78

(\*) Individuals participating in two of the above activities

### Procedure

Five groups were formed, four of them made up of elderly people participating in four different organized activities: fitness exercise, handicrafts, computing, and art. The subjects in the activity groups attended the activities between two and a half hours and four hours per week for eight months, except for the computing group whose activity lasted only two months. The shorter sessions were for fitness exercise, since—given the characteristics of the participants—the amount of physical exercise had to be limited.

The model was verified using LISREL 8.30 software (Jöreskog and Sörbom, 1999) using an unweighted least square estimation. The correlation and covariance matrix was previously calculated with the software package PRELIS 8.30.

### Evaluation Tools

The variables evaluated were as follows: Social support, Loneliness, Life satisfaction, Depression, Perceived control, Social self-efficacy, Health, Cognitive impairment, informal leisure activities practised, and satisfaction level with the organized leisure activity chosen. The DUKE-UNC Scale for functional Social Support was used. This questionnaire, adapted to the Spanish population by De la Revilla, Bailón, Luna and

Delgado (1991), measures two different dimensions of perceived social support, i.e., the confidential and the affective dimensions. In order to evaluate objective social support, the Spanish version (adapted by Montorio 1990) of Fillenbaum's (1978) OARS Scale of Social Resources—Older Americans Resources and Services Schedule—was used. The variable Perceived Loneliness was evaluated with the UCLA-revised Scale (Russell, Peplau and Cutrona, 1980). The discriminant validity of this instrument enabled us to measure loneliness in itself rather than other related aspects such as depression, anxiety or social inhibition. The Life Satisfaction variable measures the cognitive or evaluative component in subjective psychological well-being. To evaluate this variable, we used the Life Satisfaction Index A of Neugarten, Havighurst, and Tobin (1961). The Geriatric Depression Scale (GDS) (Brink, Yesavage, Lum, Heersema, Adey, and Rose, 1982) was used to measure well-being in its affective dimension. Izal and Montorio (1993) adapted this scale to Spanish and validated its use with elderly Spanish people. Perceived control was evaluated with a shortened version of the Locus of Desired Control Scale of Reid, Haas, and Hawkins (1977). This scale provides scores on three dimensions: desire for control, control expectations, and perceived control. Social self-efficacy was measured by the Social Self-efficacy Subscale of the self-efficacy Scale of Sherer and Adams (1985) (Fernández-Ballesteros, 1987).

When evaluating health, four aspects were taken into account: self-reported physical health during the last year and the last two weeks, self-reported mental health, and self-perceived health. A Quality of Life questionnaire specially designed for elderly Spanish people was used for this variable (Fernández-Ballesteros and Maciá, 1993; Fernández-Ballesteros, Zamarrón, and Maciá, 1996). Together with these four indicators, and in accordance with its unifactorial structure—confirmed in this study (67.56% of total explained variance)—a global health index was calculated from the factorial scores.

Most tests, except the self-efficacy scale and cognitive impairment, were filled in by the participants. The actual nature of cognitive impairment made it necessary to administer this test as an interview. Regarding the self-efficacy variable, the questionnaire was carried out in the form of interviews because its format was thought to be slightly too complex for elderly people.

Regarding the evaluation procedure, once the participants were informed about the confidentiality of their responses, they were given a folder including the set of questionnaires except for the cognitive impairment questionnaire and the social self-efficacy scale. Once the

sociodemographic and identity data was filled by the evaluator, he/she explained to the participant how to fill in the rest of the questionnaire. These self-reports had a layout, font size, and clarity of content aimed at facilitating the task. Most subjects filled them in without any problem, but some needed help to read the text or understand the content. Note that 5.1% of the participants were illiterate. In these cases, and other cases where the participants did not understand a specific question, help was provided.

## RESULTS

Global fit indexes show an acceptable fit of the data to the proposed model. The recommendations of Jaccard and Wan (1996) for the use of these indexes were taken into account. These authors attempt to avoid confusion and the discrepancies found between different researchers regarding the application of multiple fit indexes to structural equations. To this end they classify the indexes into categories. The first one includes absolute fit measures between the proposed model and the results obtained. The most relevant ones are the  $\chi^2$  test, the *Goodness of Fit Index* (GFI), and the *Standardized Root Mean Square Residual* (RMR). Jaccard and Wan point out that the  $\chi^2$  test is probably the less suitable due to the statistical constraints it imposes and its sensitivity to the size of the sample. This view is also shared by Bollen and Long (1993). Given that this study comprises a small sample and some of the variables do not present normal distribution, the use of this test is therefore not advisable. The value obtained  $\chi^2 = 179.32$  (d.f. = 17;  $p < .01$ ) indicates a significant difference between the model proposed and the results obtained. On the other hand, the GFI value (.97) shows a very good fit of the model. The same occurs with RMR (.99), with a value very close to its highest value.

The second indicator category measures the degree of parsimony, i.e., the simplicity of the explanatory model proposed. For this reason, this measure penalizes the excessive use of parameters to be estimated, or, in other words, it favors the moderate use of relationships between the model's variables. Jaccard and Wan (1996) propose the use of the *Root Mean Square Error of Approximation* (RMSEA) within this category. Given the high number of relationships between the components of our model a low degree of parsimony was expected. The RMSEA had a relatively high value (.32) compared to what was expected had the model been parsimonious. However, the nature of the variables in-

cluded in the model, which were highly related, made it difficult to reduce the number of relationships.

Finally, the third category includes indexes that offer a relative measurement of the fit of the model compared to alternative models. To this end, the model fit was compared to other possible models, whether randomly or specifically created by the system used. Jaccard and Wan recommend the *Comparative Fit Index* (CFI). This index, like the RMR, yielded a value (.99) close to its maximum value, indicating a good fit between the model and the data obtained.

Table 2 shows the standardized coefficients of relation  $\gamma$  and  $\beta$  corresponding to the direct effects between the variables obtained after testing the model. The causal (both endogenous and exogenous) variables—understood as those exerting an influence—are given as column headings. Those (endogenous) variables being influenced are given as row headings.

Table 3 shows direct effects together with the coefficients corresponding to indirect effects; that is, those effects mediated by variables of an intermediate level.

If we take into account the effects of the only exogenous variable in the model, participating in organized leisure activities has a strong influence on the variables directly related to it (social support, social self-efficiency, and perceived control) as well as on the rest, as they are significant in all cases. The most outstanding refers to the direct influence on social support ( $\gamma = .60, p < .01$ ) and perceived control ( $\gamma = .35, p < .01$ ). Similarly, its inverse relationship with loneliness is noteworthy ( $\gamma = .48, p < .01$ ). Another interesting result is that the  $\gamma$  coefficients for depression and life satisfaction are numerically the same but have the opposite sign ( $\gamma = .37, p < .01$ ). Involvement in leisure activities also has an indirect influence on the health of participants ( $\gamma = .20, p < .01$ ). The remaining indirect influences (see Table 3) are statistically significant, indicating the key mediator role of the five mediating variables of the model: perceived control, social support, social self-efficiency, loneliness, and health.

Regarding the influence of some of the endogenous variables on others, health is influenced by social support ( $\beta = .22, p < .01$ ) and by perceived control, although in this case there is no statistical significance ( $\beta = .13, p > .05$ ). Loneliness is influenced by social support ( $\beta = 0.24, p < .01$ ) and perceived control ( $\beta = 0.22, p < .01$ ). In relation to the variables included in the last level, both life satisfaction and depression are directly influenced by those in the immediately previous level. Thus, depressive mood is influenced by health ( $\beta = 0.43, p < .01$ ) and by the

TABLE 3. Indirect effects, standardized coefficients of relation  $\gamma$  and  $\beta$

Endogenous Variables	Exogenous Variable		Endogenous Variables	
	LEISURE PARTICIPATION	SOCIAL SUPPORT	PERCEIVED CONTROL	SOCIAL SELF-EFFICACY
SOCIAL SUPPORT				
PERCEIVED CONTROL				
SOCIAL SELF-EFFICACY				
LONELINESS	-.48**			
HEALTH	.20**			
DEPRESSION	-.37**	-.38**	-.14*	-.16*
LIFE SATISFACTION	.37**	.37**	.15*	.16*

(\*) Statistically significant ( $\alpha < .05$ )  
 (\*\*) Statistically significant ( $\alpha < .01$ )

sense of loneliness perceived by participants ( $\beta = 0.59, p < .01$ ). The opposite pattern is found between life satisfaction and loneliness ( $\beta = -.63, p < .01$ ) and health ( $\beta = -.63, p < .01$ ).

### DISCUSSION

Although the degree of parsimony of the model proposed is not very satisfactory, the results obtained for the other fit indicators allow us to assert that the model presents a high correspondence with the results obtained. Caution is needed when considering the level of statistical significance of each of the coefficients of relationship found, since these are based on probabilities associated with scores with a normal distribution. However, the numerical magnitude of the relationships is high—as shown by the high correlations—and the sign of these relationships coincides with the model proposed.

These results corroborate the fact that participating in leisure activities has positive effects on the well-being of the elderly people taking part in them. These activities have a clear positive influence on those variables that contribute to adaptation to aging. The results also confirm the model proposed by Coleman and Iso-Ahola (1993), where these activities serve as a protecting element against the stressing life events elderly people have to face. Social support and perceived control reduce the negative

TABLE 2. Direct effects, coefficients of relation  $\gamma$  and  $\beta$  standardized

Exogenous Variable	Endogenous Variables			
	LEISURE PARTICIPATION	SOCIAL SUPPORT	PERCEIVED CONTROL	SOCIAL SELF-EFFICACY
SOCIAL SUPPORT	.60**			
PERCEIVED CONTROL	.35**			
SOCIAL SELF-EFFICACY	.57**			
LONELINESS	-.48**	-.24*		
HEALTH	.22*		.13	
DEPRESSION			.59**	-.43**
LIFE SATISFACTION				-.33*

(\*) Statistically significant ( $p < .05$ )  
 (\*\*) Statistically significant ( $p < .01$ )



impact such events have on the life of these people. Similarly, as suggested by Tinsley and Tinsley (1986), organized leisure activities have an effect on participants' life satisfaction, such effects being mediated by other variables. In this sense, the statistical analysis used in this study clarifies the series of effects derived from these activities on the variables that increase well-being. In other words, participants have more possibilities to obtain social support through these activities, which also increase perceived control in their lives and social self-efficacy. It is well-known that social self-efficacy contributes to the prediction of psychosocial competence (Abler and Fretz, 1988; Reitzes, Mutran, and Verrill, 1995) and, in this case, to the prediction of loneliness and health in elderly people. Leisure activities can help these people to once again adopt more active roles or identities which will lead to positive feedback from the people close to them. This translates into better self-assessment and better levels of life satisfaction as well as a reduction in levels of depression.

These results offer professionals more rigorous knowledge regarding the processes and variables involved in the relationships existing between participation in leisure activities and subjective well-being. In this sense, we think this paper not only provides evidence for the benefits of leisure activities on the health and subjective well-being of elderly people, but also allows us to go further, since it contributes to knowing why these effects occur. The professionals in charge of advising, planning, and putting into practice these kinds of activities must aim beyond common sense. It is commonly agreed and accepted in society that activity is useful for preventing and delaying the psychosocial effects of aging. However, professionals need more rigorous knowledge in this regard and to understand the scientific basis for this well-known relationship. For this reason, further investigations regarding the variables involved are needed—for example, social support, perceived control, and self-efficacy—as well as the processes by which these activities are so beneficial for elderly people (García, 2001; García, Hombrosos and Lara, 2001; García and Hombrosos, 2002). New studies are also required to explore the variables related to the development of these activities. For example:

- A. Analyze the relationship between activity patterns and well-being taking into account motivational variables (Holahan, 1984-85, 1988; Riopel, Kielhofner and Hawkins, 1986).
- B. Study the mediating effects of constructs such as self-image and self-esteem on the relationship between the activity patterns developed during senescence and life satisfaction (McClelland, 1982; Reitzes, Mutran, and Verrill, 1995).

- C. Further investigations on the perception of control as a relevant variable for the effect of leisure activities on the subjective well-being of the elderly person (Baltes, Wahl, and Schmid-Furstoss, 1990).
- D. Extend the study of leisure activities to residential centers for the elderly (Ejaz, Schur, and Noelker, 1997; Madigan, Mise, and Maynard, 1996; Martin and Smith, 1993; Williams, Haber, Weaver, and Freeman, 1998).
- E. Deepen our understanding regarding the beneficial properties each activity has based on its specific characteristics (Driver, Tinsley, and Manfredo, 1991).

In any case, professionals possess much empirical evidence to promote the implementation of these kinds of organized leisure activities in day care centers for elderly people because, among other things, they yield the following positive consequences:

1. They have a positive effect on well-being, and thus on the quality of life of elderly people.
2. They meet the demands of an increasingly large group of the population who are requesting services and social welfare which would allow them to have a more active role in society.
3. They encourage continuous education and training, as well as a sense of autonomy in elderly people who perceive they can have an active role in their aging process.
4. They favour the integration of the elderly within the center as they encourage the meeting and interaction of people of different ages, gender, education, and social status.

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