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**Ejercicio para los Adultos Mayores:  
Perceptions and Emerging Themes in the Elderly Population of Monteverde**

Globalization and Community Health Field School 2010  
University of South Florida-Instituto de Monteverde

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## **Background**

Studying the elderly is a timely new focus for the Instituto de Monteverde and the Globalization and Community Health Field School of USF. Currently, 7% of residents of the Monteverde Region are over 60 (EBIAS 2009). In 20-30 years this number is expected to mushroom, as 18% of individuals living in the Monteverde Region are between 40 and 60 years old (EBIAS 2009).

Exercise has long been considered an important part of maintaining health and, along with a nutrient rich diet, is seen as especially important in guarding against and managing the chronic, global illnesses of heart disease, obesity, and type II diabetes. Additionally, the World Health Organization has linked exercise to an increase in the quality of life of the elderly because it increases elderly individual's ability to successfully perform activities of daily living (Demura et al 2009, Sato et al 2007, Wagner and LaCroix 1992). The resulting decrease in task-related anxiety and increase in confidence protects this population from depression and other mental illnesses (Levkoff et al 1995, Sato et al 2007, Yokoya et al 2008). Thus, the promotion of physical activity within the elderly community is integral to "successful aging" (Demura et al 2009).

Being physical active, alone, may be only half of the picture. A study by Crum and Langer, for example, shows that physical activity is more beneficial when one *also* perceives oneself to be doing exercise or activities good for one's health (2007). In this study, the researchers recruited housekeepers from 4 hotels in the USA (n=84) to participate in a study aimed at testing the placebo effect. This group of 18-57 year-old, mainly Hispanic, women were divided into two groups. Individuals in each group maintained a cleaning regimen at work of 15 rooms each day. One group (n=44) was informed of the health benefits of the physical activity of the work they were performing daily, while the other group (n=40) was not. After four weeks, researchers found that the informed group had a decrease in body weight, blood pressure, body fat, waist-hip ratio, and body mass index. In addition to the health impacts of this study, these findings are important because, as Foster notes, elders in many societies are more strongly linked to traditional health and cultural practices (1977), which may not be consciously recognized as exercise.

As a first phase of investigation and under guidance from a community advisor, our nutrition group chose to focus both broadly on elder health and more specifically on physical activity/exercise. The specific aims of our research were three-fold. First, we sought to determine if exercise was a culturally-salient and cohort-appropriate term by asking. Our second aim was exercise and specific to an organized group currently operating in Santa Elena. The organizers were especially interesting in data regarding the exercises most enjoyed by the elderly and what were self-perceived barriers to and motivations for participating in both exercise and the group. From our research a secondary objective emerged – to

better understand the difference in the perspectives between San Luis residents and the perspective of those *adultos mayores* participating in the Santa Elena group regarding what physical activity was emphasized as exercise.

### ***Los Adultos Mayores***

The elderly population of the Monteverde Zone is commonly referred to as *los adultos mayores* which translates literally as, the older adults. This literal translation, however, does little to describe what it means to be an *adulto mayor* in Monteverde. Through working with this population we have seen a variety of *adultos mayores* like the 84 year old woman who walks 4 kilometers to attend any and all community events or the older gentleman who loves his family so much that he is willing to narrate each of their life stories to a group of students, for example. In San Luis, where we held our health fair for the community, we asked a total of 18 *adultos mayores* between the ages of 53-81 to answer open-ended questions on a survey. Of those 18 we surveyed, 6 men and 12 women, most had walked to the health fair. This was the largest population of *adultos mayores* that we were able to speak with. The focus group we held consisted of 4 men and 3 women, for a total of 7 participants. They were ranging in ages from 60-80 years. The final data collection site was at the local Farmers' market where we conducted more open-ended surveys to a total of 11 participants, 6 men and 5 women ranging in ages of 55-77.

### **Methods**

The research methods we employed to gather data were informal interviews and participant observation, unstructured and semi-structured interviews, surveys with open-ended and close-ended question, and a focus group. We employed Microsoft Word, PASWS v. 19, and hand-coding to analyze our data (see chart 1).

### **Limitations**

Limitations plague all research. Spanish language acquisition, small sample sizes, convenience samples, and lack of qualitative analysis software hindered our research. Specifically, we were only able to collect socio-demographic and anthropometric and health data on San Luis residents. Similarly, our representation of non-active *adultos mayores* from Santa Elena area small (n=5).

### **Results/Discussion**

*Ways los adultos mayores can stay healthy?* Our first – and most general finding – is important groundwork for future studies of physical activity of *los adultos mayores* living in the Monteverde Zone. Exercise (*ejercicio*) was one of the most frequent terms used when responding to ways the elderly can stay healthy. *Ejercicio* was seen as almost equally important as diet according to two groups surveyed and to one focus group (as represented in chart 2). Thus the term *ejercicio* is a culturally salient term that is conceptually linked to maintaining health in this community.

*What do los adultos mayores in the area consider exercise?* However, exercises overlapped with physical activities to such an extent that in order to answer what *adultos mayores* in the area consider exercise; we decided to look at questions addressing both exercise and physical activity in order to present a more accurate picture. As depicted in chart 3, general group/companion activities was a very important theme, seconded only by walking. The prevalence of these themes was followed closely by dancing and working (in the house, the yard, the farm, or the country). Tellingly, the emerging themes from each set of surveys were the same for both groups indicating to us a strong cultural consensus regarding ways and activities considered exercise.

*But, what motivates los adultos mayores to participate in the physical activities mentioned above?* We asked the above question of the participants in the San Luis Health Fair, of the focus group in Santa Elena and as follow-up questions to some of the responses to the open-ended survey at the Farmers' Market. We also asked members of the focus group what motivates them, or would motivate others, to participate in the group. This question yielded almost identical responses.

The major themes emerging from the inquiries into physical activity can be grouped in the following ways: self-motivation, community or social motivation, or motivation by another. However, the particulars of these motivators tended to be group-specific. Most notably, the desire to be motivated by another takes the form of an "invitation" (n=5), "phone call" (n=1), "conversation" (n=1), or "encouragement from another" (n=1) community member, while the members of the elder group uniquely emphasized being motivated by "a person who knows how to motivate the people and...who teaches exercises." Having a teacher to help motivate *los adultos mayores* was absent from the responses of San Louis residents. Similarly, self-motivation was a general theme regardless of the group. Specifically, San Louis residents phrased this as "taking initiative" (n=1) and "helping in the community" (n=1), "helping with work" (n=1), or "volunteering" (n=1); Santa Elena group members and survey respondents articulated the need for individuals to have the "will to leave the house for a little bit" either to "go out and walk" or "to go out and breathe the fresh mountain air." Also, "having a routine" of exercise or physical activity built into one's day was represented as an important motivation for physical activity and group participation. Finally, social/community motivation proved to be a salient motivating factor. All groups emphasized the importance of meeting as a group to fulfill both psycho-social and physical health needs.

*Barriers and Community Offerings:* Three themes regarding barriers to both group participation and physical activity emerged from our focus group: transportation to the group, age of potential participants, and presence of a group leader. Getting to the group posed a barrier for people living farther away from the center of town, people without transportation, or people who were unable to walk. Also, lack of communication regarding transportation for group members who need it was identified as a barrier to others' (regular) participation.

- "A lot of people can't come because they don't have transportation."
- "Some people I can bring sometimes but sometimes we don't communicate so no one comes from them. But I think that the distance."
- "Well there are a lot that perhaps don't come because of the distance. It's not a problem for me because I have means to get places but there are some that don't have anything and have to walk a lot so then they don't come. But yeah I think that for some it's because of the distance."

(quotes from 3 different focus group participants)

Age was another interesting theme that emerged as both a barrier to participation, itself, and as it relates to activity and to physical health. The following quote from Participant 5, a 77 year-old woman, who describes herself as very physically active and very involved in the group, best encapsulates this theme: "I don't know. Some don't come because they are very old. That happens, too. Even though there is a woman who is 83- years old who lives in Cañitas, and she almost always comes. She is very active. 83 years old, and she walks like 4 km to come. But there are others that are not the same. And there are others that don't like to walk. Or some that can't because they have problems with their knees."

The final and most prevalent theme arising from our discussion of barriers was the desire for group leadership. This theme occupied the most time, involved the greatest number of focus group members

with little prompting, and often emerged when we were not specifically discussing barriers or their future desires for the group. Thus, when talking about what types of exercises and physical activities they enjoyed doing in the group, a few responded, “whatever the teacher decides we like.” However, the longest exchange regarding the lack of an active group leader was situated within the discussion of barriers to group participation and physical activity. As evident from the transcript of the focus group excerpt below, not only wanting someone to organize, but also someone to teach, to be in charge, and to help the group, defined what the group was looking for in a leader.

7: We need someone to teach us

2: We need someone in charge of it

5: We don't have anyone to come to be in charge

2: We need one good organizer and we don't have one.

The older community members (53-81 years old) in San Luis were surveyed regarding what the community offers *los adultos mayores* to maintain their health. While the vast majority said “nothing” as a lone response (n=8). The second most prevalent response was the health post (n=4). However, half of responses regarding the health post were phrased as “Nothing. Well, a health post.” and “Almost nothing...a health post.” The other two responses associated activities like “seeing the doctor,” “getting medicine,” and “getting the flu shot” with the presence of the health post.

*What activities do los adultos mayores like?* Focus group participants like a wide array of activities: Yoga, aerobic routines, stretches – especially for their hips, neck, and sides – embroidery, the activities of the golden games, walking, dancing, using exercise machines, working outside, core strengthening movements, and balance-maintenance movements. In general, the group emphasized enjoying group exercise taught by an instructor. One person said, “Whatever they offer we like, we just need someone to teach.” One point of concern regarding group activities was individual ability. Thus, some members emphasized the need for “slower, gentler movements,” or for movements that would not irritate a weakened “knee,” or “hip,” for example. Most people who did express having limitations noted their desire to focus on their stronger areas. Thus, one 68 year-old women stated, “I would like to do exercises for my arms because my legs aren't so good.” The group was split between those who were more limited by what physical activities they could do-- and were stating an interest in specialized routines-- and those who were less limited and insistent that the their group members could do any exercise. This did not fall clearly along age lines. What united the group was that they all enjoyed exercising in groups.

For those *adultos mayores* interviewed at the *Farmers' Market*, we compiled a list of physical activities and exercises from which they could pick. The highest score any activity received was a 9 and the lowest was a 2. Total number of respondents was 10 for this survey question. All of the highest and lowest scores are represented in chart 3, except bicycling and *boliche* (n=2, respectively) and *argollas and baloncesto* (n=3, respectively). Activities related to group exercise or workout facilities were equally divided, but did not correlate to group participation by respondents.

*Differing perceptions of exercise:* While conducting the focus group in Santa Elena we found an interesting emerging theme of the idea of exercise changing for participants in an organized exercise group as opposed to those who have never attend. We think the group has a different perception of exercise because of the fact that when we interviewed the focus *group* in Santa Elena, they differentiated between physical activity and exercise by using the phrase, “*I don't exercise, I just walk.*” Similarly, this group heavily focused on motivation by a teacher and exercises taught to them in a group, while failing to mention dance (an important theme from our surveys in San Luis) until we specifically asked.

*Ejercicio and Physical Activity (Actividad Física):* Due to the seeming difference of perceptions between the San Luis group and the Santa Elena focus group regarding what they emphasized as exercise, we sought to better understand the conceptual relationship between *ejercicio and actividad física*. Thus, in our last round of surveys – asked of individuals at the agricultural fair – we probed deeper into this hypothesized difference. We found that, although ten of the eleven individuals stated that there clearly was a difference between exercise and physical activity, only two individuals could articulate this difference. Furthermore, the ability to articulate a difference was not divided by group participation. Thus, our findings remain inconclusive.

*Distribution of Handouts:* Jamie Drake created a pamphlet to be handed out at the focus group in Santa Elena as well as the local Farmers' Market. The pamphlet included 14 exercises as well as a description of how to perform the exercises and the benefits of doing so. Also included was a calendar of events pertaining to the activities of the local group of elderly. The intention of the pamphlet was to serve as a cue to action for *adultos mayores* to do simple exercises in the home. The pamphlets were happily received and the participants reported that they would include these activities in their daily routine. Others reported that they would pass the information along to a spouse, friend, or community member. The community advisor will also be distributing these pamphlets at the local health clinic (Appendix C).

#### **Recommendations for Future Research**

In general, future studies should include those elderly who are homebound, less active, or dependent on others for care. Further research into the relationship between exercise and physical activity would be beneficial for understanding changes in perceptions. Also, research aimed at determining if there is a change in which exercises are valued by those who become involved in formal groups and its impact on health outcomes would be pertinent to subsequent inquiries. Finally, integrating Quality of Life surveys and anthropometrics into an evaluation of the elder group as an intervention aimed at “Successful Aging” would yield important information for secondary-level state efforts aimed at serving the elderly.

**Chart 1**

<b>Method of Data Collection</b>	<b>Description</b>	<b>#</b>	<b>Type of Data</b>	<b>Method of Analysis</b>
Informal interviews and Participant observation	With our host families and in the Monteverde Region	4	Qualitative	Recorded in field journal, coded for themes
Unstructured and Semi-structured Interviews	Community advisor EBIAS doctor Elder group exercise coordinator	4 1 1	Qualitative and Instructive	Recorded in field journal, coded for themes
Surveys (Appendix B and Appendix C)	San Luis Health Fair Farmers' Market	18 11	Qualitative and Quantitative	Transcribed and translated the surveys into MS-Word and used the "find" function to identify themes. Entered the most prevalent themes as dichotomous variables, and ran t-tests, frequency, and crosstab analysis controlling for age group, socio-demographics, and health indicators.
Focus Group Santa Elena (Appendix D)	Meeting with <i>adultos mayores</i> group members	5-7	Qualitative	Recorded notes in field journal Transcribed and translated recorded focus group meeting into MS-Word and used "find" function to identify themes.



Chart 2

<i>Ways of staying healthy?</i>								
<i>Qué piensa que podrian hacer los adultos mayores para mantenerse en buena salud?</i>								
<i>Group</i>	<i>Health Fair n=18</i>	<i>Health Fair</i>	<i>Agricultura l Fair n=11</i>	<i>Agricultura l Fair</i>	<i>Focus Group n=5</i>	<i>Focus Group</i>	<i>Total n=34</i>	<i>Total</i>
<i>Exercise (Ejercicio)</i>	8	44.44 %	6	54.54%	3	60%	17	50.00% 48.28%
<i>Diet (Alimentacion)</i>	8	44.44%	7	63.63%	3	60%	18	52.94% 51.72%

Chart 3

<b>Most Prevalent Emerging Physical Activities/Exercise Themes conversations about the ways elderly can stay healthy</b>				
<b>Theme</b>	<b>Health Fair in San Luis, n=18</b>		<b>Agricultural Fair, Santa Elena, n=11</b>	
	<b>Number</b>	<b>Percentage</b>	<b>Number</b>	<b>Percentage</b>
<b>Walking/trotting/ or running</b>	16	88.89%	11	100%
<b>Group Activities/Things that integrate and foster strong relations with family, friends and community/ Not staying in the house*</b>	13	72.22%	6*	54.55%
<b>Working</b>	13	72.22%	6	54.55%
<b>Dancing</b>	9	50.00%	5	45.45%
<b>Being mobile/ increasing movements/staying active</b>	6	33.33%	3	27.27%

**Chart 4**

<b>Results by Theme</b>					
<b>Walking</b>		<b>Working</b>		<b>Cultural Sports and Activities</b>	
Caminar solo	9	Trabajo en la casa	8	Futbol	2
Caminatas en la Montana	9	Trabajar la tierra	8	Penales	2
Caminar alrededor de una cancha de futbol	7	Trabajo en el campo	8	Nadar	3
Caminar en grupos	5	cuidar los ninos	2	Bordar *(only asked women)	4*
Trotar	5			Andar a caballo	5
Correr	2			Bailar	5
Ejercicio de respiracion	8			Baile lento	6

**Appendix A**

**Open Ended Survey San Luis**

**Code:** \_\_\_\_\_

**Interviewer:** \_\_\_\_\_

1) ¿En general cómo describiría Ud. su salud? Excelente Buena Regular Mala Muy mala

2) ¿Qué piensa que podrían hacer los adultos mayores para mantenerse en buena salud?

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3) ¿Qué ofrece la comunidad para que los adultos mayores puedan mantenerse sanos?

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4) ¿Qué otras cosas serían beneficiosas para ellos?

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5) ¿Cómo se podría animar a los adultos mayores para que participen en actividades físicas?

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6) ¿Qué significa el ejercicio para Usted?

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7) Por favor deme tres ejemplos de actividades que Ud. considere como ejercicio.

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## **Appendix B**

### **Focus Group Questions**

What can you all do to stay healthy?

- Qué piensa que podrian hacer ustedes para mantenerse en buena salud?

What do you all consider exercise?

- Qué consideran ustedes que es el ejercicio?

What types of exercise do you all enjoy doing?

- Qué tipos de ejercicios les gustan hacer a ustedes?

What motivates the elderly population to do physical activity?

- Qué motiva a los adultos mayores a participar en actividades físicas?

What prevents the elderly population from doing physical activity?

- Qué les impide a los adultos mayores participar en actividades físicas?

What are other alternatives are there to get people to exercise?

- Qué otras alternativas existen para que la gente major laga ejercicio?

What would they like to be offered in the group?

- Qué les gustaria que les ofrezcan en el grupo de los adultos mayores?

What motivates the elderly population to go to the group?

- Qué les motiva a participar en el grupo de adultos mayores?

What prevents the elderly population from going to the group?

- Qué les impide a participar en el grupo de adultos mayores?

## Appendix C

### Open Ended Survey from Farmers' Market

Nombre \_\_\_\_\_

Edad \_\_\_\_\_

Sexo \_\_\_\_\_

- 1) ¿Qué piensa que podrían hacer los adultos mayores para mantenerse en buena salud?
  
- 2) ¿Qué actividades físicas hace usted?
  
- 3) ¿Qué considera usted que es el ejercicio?
  
- 4) ¿Hay una diferencia entre estar activo/a y hacer ejercicio? Prompts: Usted piensa que todos las actividades físicas que usted hace en un día son ejercicio?
  - Si sí, por qué?
  
- 5) Por favor escoge todo que usted le gusta como ejercicio (on likert scale):

Caminar solo/a	Correr	Yoga
Trabajo en la casa	Levantar pesas	Caminatas en la montaña
Trotar	Usar máquinas de ejercicio	Aeróbicos
Caminar al supermercado	Trabajo en el campo	Baloncesto
Ejercicios de respiración	Caminar en grupos	Penales
Marcado (baile)	Andar en bicicleta	Boliche
Fútbol	Estiramiento	Bordar
Nadar	Argollas	Andar a caballo
Caminar alrededor de una cancha de fútbol	Baile movido (como merengue, salsa, cumbia)	Baile lento (como bolero, cha cha cha, etc.)
Trabajar la tierra	Cuidar los niños	

- 6) No me gusta el ejercicio
  
- 7) ¿No hay otros ejercicios que le gustaría añadir?
  
- 8) ¿Usted asiste al grupo de adultos mayores? (El grupo de Doña Betty)



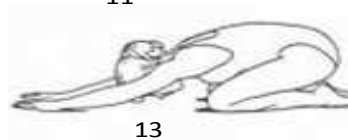
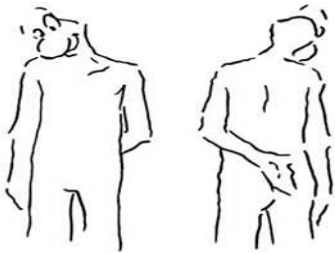
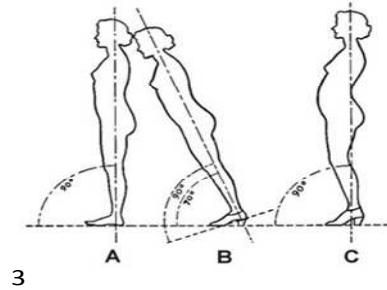
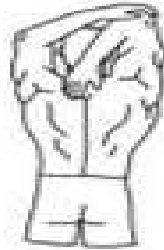




# Appendix C

## Exercises and Benefits from the Pamphlet

Standing and sitting exercises



## Exercises and Benefits

- 1) **Shoulder Rotation**: Slowly roll one straight arm in large circles forward and then backwards. This exercise will help with flexibility in the shoulder.
- 2) **Triceps Stretch**: With one palm facing your back, gently pull elbow behind head. This exercise will increase flexibility in the back of the arm.
- 3) **Balance**: In a position with both feet flat on the floor, abdomen tightened, slowly move body weight from front to back. This exercise will help to increase balance.
- 4) **Neck Stretch**: Place one arm behind back, lean head in opposite direction. This exercise will help in increase flexibility in the neck and shoulders.
- 5) **Chest Stretch**: Clasp hands behind back and gently pull shoulders backward. This exercise will help to increase flexibility in the chest and shoulders.
- 6) **Sit and Stand Exercise**: Place both feet flat on the floor, from a seated position, stand straight up and then sit down again. This exercise will help to increase strength in the legs.
- 7) **Calf Stretch**: Both hands placed against wall or to the back of a chair, stretch one leg behind and place the foot on the ball of your toe, press heel toward floor. This exercise can help increase flexibility in the calf.
- 8) **Shoulder Stretch**: Place one arm across the body, gently pull the elbow toward the body, and hold for a count of 30. This stretch will help with flexibility in the shoulder.
- 9) **Hip Stretch**: Standing to the side, place one hand on a wall or chair, cross the leg that is closest to chair or wall over the top of the opposite leg. This exercise will help with flexibility in the hips.
- 10) **Wrist Rotation**: Slowly rotate hands in a clockwise direction for a count of 30, then rotate in opposite direction. This exercise will help with flexibility in the wrist.
- 11) **Full Back Stretch**: In a position with hand and knees on the floor, gently stretch spine toward the sky and then lower stomach toward the floor. This exercise will help with flexibility in the back.
- 12) **Ankle Rotation**: In a seated position, lift foot from the floor and rotate in one direction for a count of 30, then rotate in opposite direction. This exercise will help with flexibility in the ankle.
- 13) **Lower Back Stretch**: In a position with both hands and knees on the floor, sit back on heels and reach forward. This exercise will stretch the lower back.
- 14) **Side Body Stretch**: In a standing position, place both arms overhead and hold together, lean slowly to one side and hold for a count of 30, slowly come to an upright position and lean in the opposite direction. This exercise will help with flexibility in the torso section of the body.

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