國立臺灣大學園藝暨景觀學系

【園藝療法】

Chap. 12 The Health Benefits of Recreational Activities on Leisure Farms in Taiwan (III)

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- Natural based recreational activities
- Physiological well-being of Human

- Environment
- Activities
- Experiences

- Benefits

- This study investigates the health benefits of recreational activities on leisure farms in Taiwan.

- Using an on-site survey to conduct the psychophysical experiment on visitors, this study attempts to explore the relationship between recreational activities and health benefits.

Literature

Environment

Experience

Activity

- Natural Based Activities in Taiwan
- Ecotourism
- Rural Tourism
- Agritourism
- Leisure Farm

Benefit

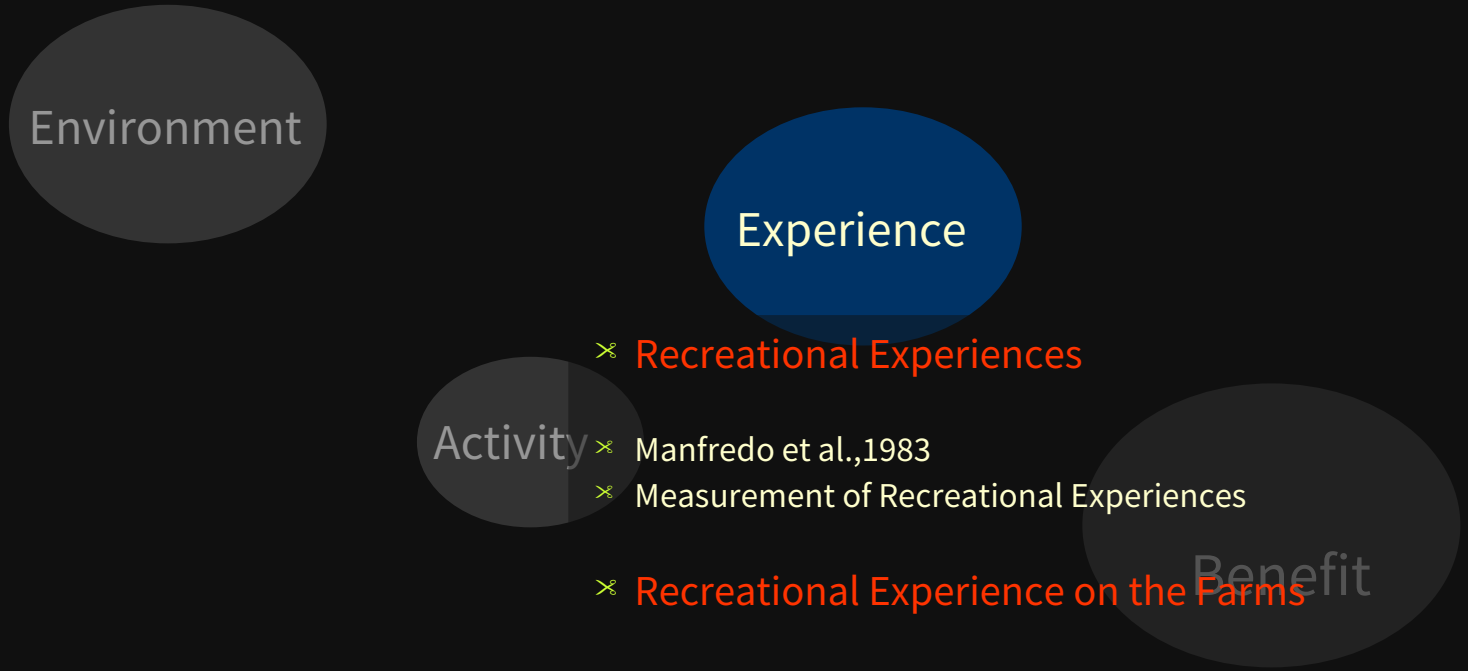
Environment

- Natural Based Environment
- Attention Restoration Theory
  - Kaplan & Kaplan (1989)
- Natural Landscapes vs. Urban Landscapes
  - Laumann et al., (2001)

Experience

Activity

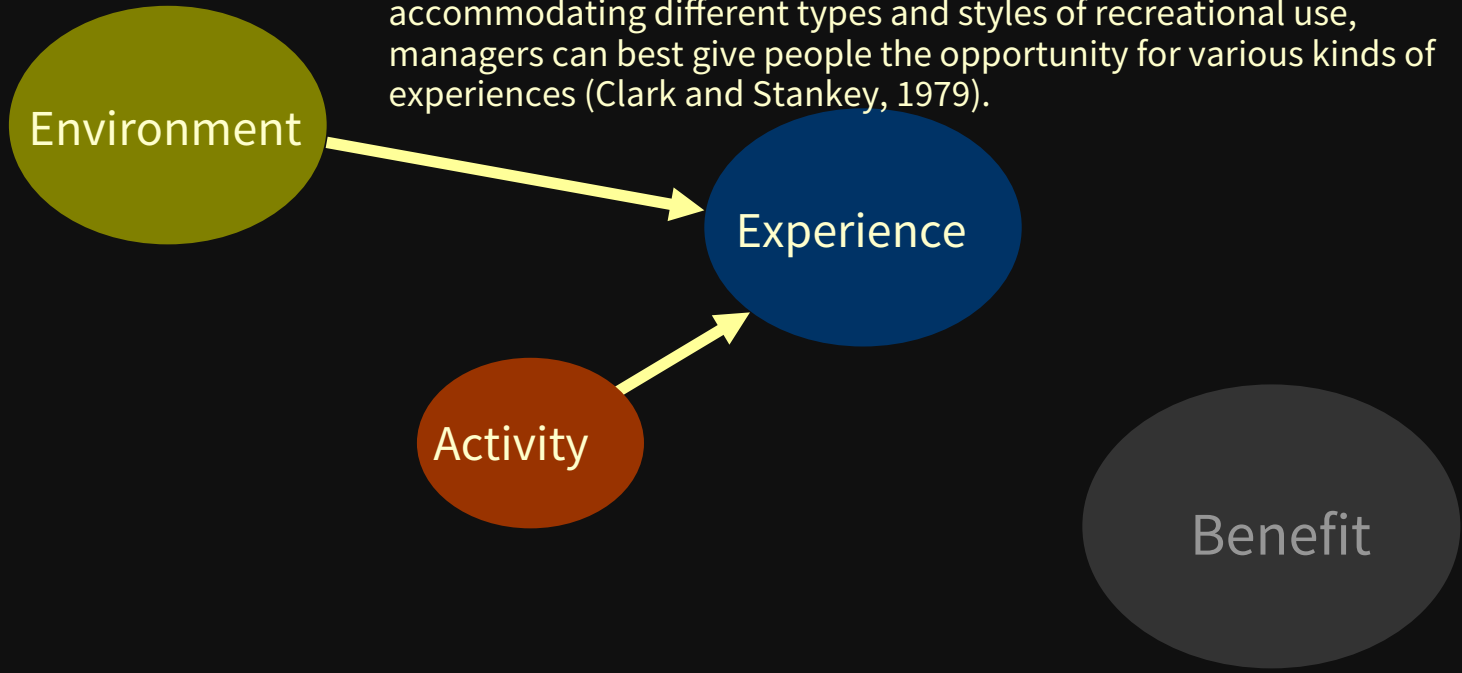
Benefit



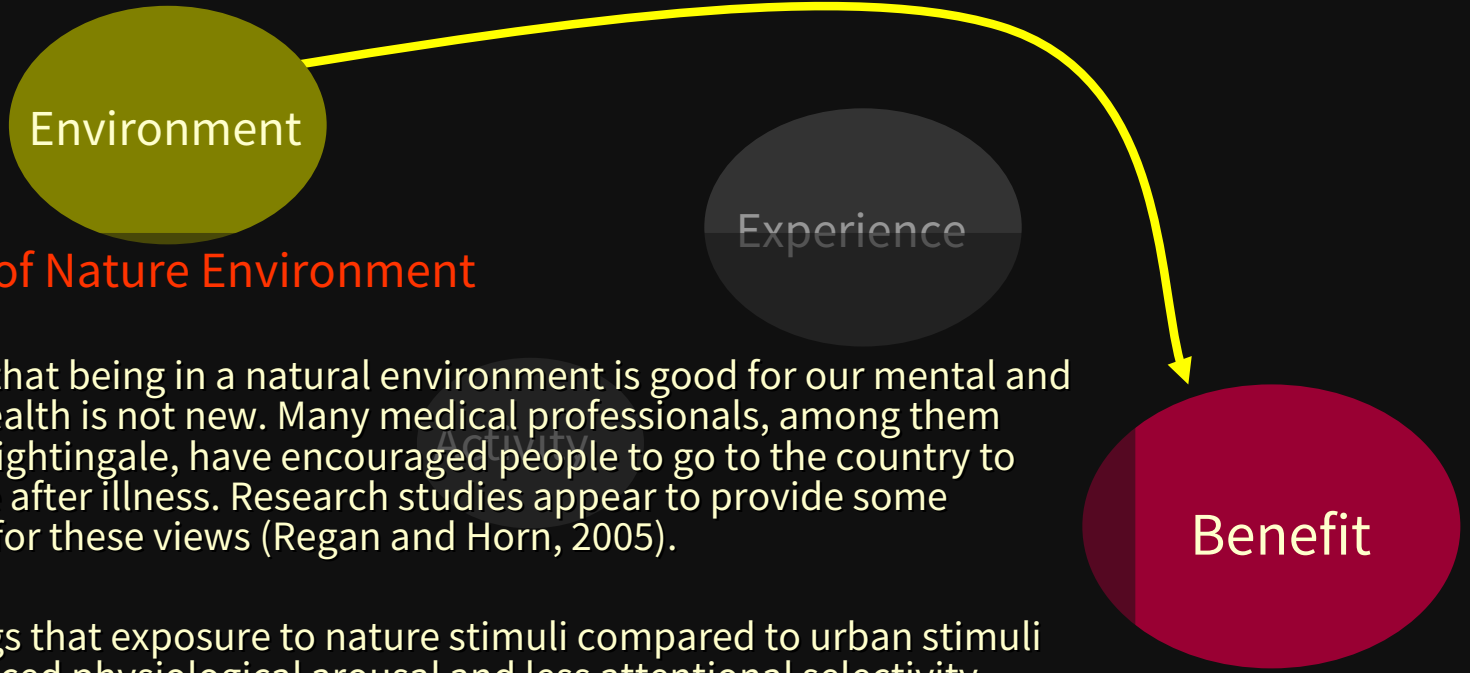
- Recreational Experiences
  - Manfredo et al.,1983
  - Measurement of Recreational Experiences
- Recreational Experience on the Farms

Outdoor Recreation Theories

By providing different kinds of recreational settings and accommodating different types and styles of recreational use, managers can best give people the opportunity for various kinds of experiences (Clark and Stankey, 1979).



Benefits of Nature



- Benefits of Nature Environment
- The belief that being in a natural environment is good for our mental and physical health is not new. Many medical professionals, among them Florence Nightingale, have encouraged people to go to the country to convalesce after illness. Research studies appear to provide some validation for these views (Regan and Horn, 2005).
- The findings that exposure to nature stimuli compared to urban stimuli elicits reduced physiological arousal and less attentional selectivity provide an important step in understanding why nature stimuli are experienced as restorative (Laumann, 2003).

Health Benefits of Recreation Actives

- …park-based leisure activity levels on the physical health of park users. Exercise facilities, including parks… have been found to be associated with vigorous physical activity … that have been positively associated with physical activity include the presence of enjoyable scenery, frequency of seeing others exercise, and access to and satisfaction with recreational facilities (Bedimo-Rung, 2005).
- In addition to the physical health benefits of parks, there may be numerous psychological benefits for park users that arise from the proximity of “natural environments (Bedimo-Rung, 2005).”

Research Design

Environment

Natural Openness
Man-made Openness
Natural Education
Man-made Education

Experience

Activity

Benefit

Natural Openness

Man-made Openness

Natural Education

Man-made Education

Passive
Semi Passive
Semi Active
Active

Relax sitting, Rest, Sight seeing
Walking around
Planting potted plants
Feeding animals

Activity

Benefit

Passive

- Relax sitting
- Rest
- Sight seeing

Semi Passive

- Walking

- Semi Active
  - Planting potted plants


選擇植栽


混和介質
選擇植栽
放置植栽
壓實土壤
調整澆水

- Active
  - Feeding animals

Farm Recreation Experience Scale (FRES)

Sense of Control alpha=0.747
Sense of Social support alpha=0.685
Sense of Exercise alpha=0.648
Sense of Natural empowerment alpha=0.778

Activity

Benefit

Sense of Achievement
Sense of Extraordinary experience

Perceived Restorative Scale (PRS)

alpha=0.765

Hartig et al. (1996, 1997) have developed a perceived environmental restorativeness scale (PRS) with the aim of measuring the restorative components of environments derived from Kaplan and Kaplan's (1989) theory.

Being Away
Extend
Fascination
Compatibility

Experience

Activity

Benefit

Biofeedback Indicators

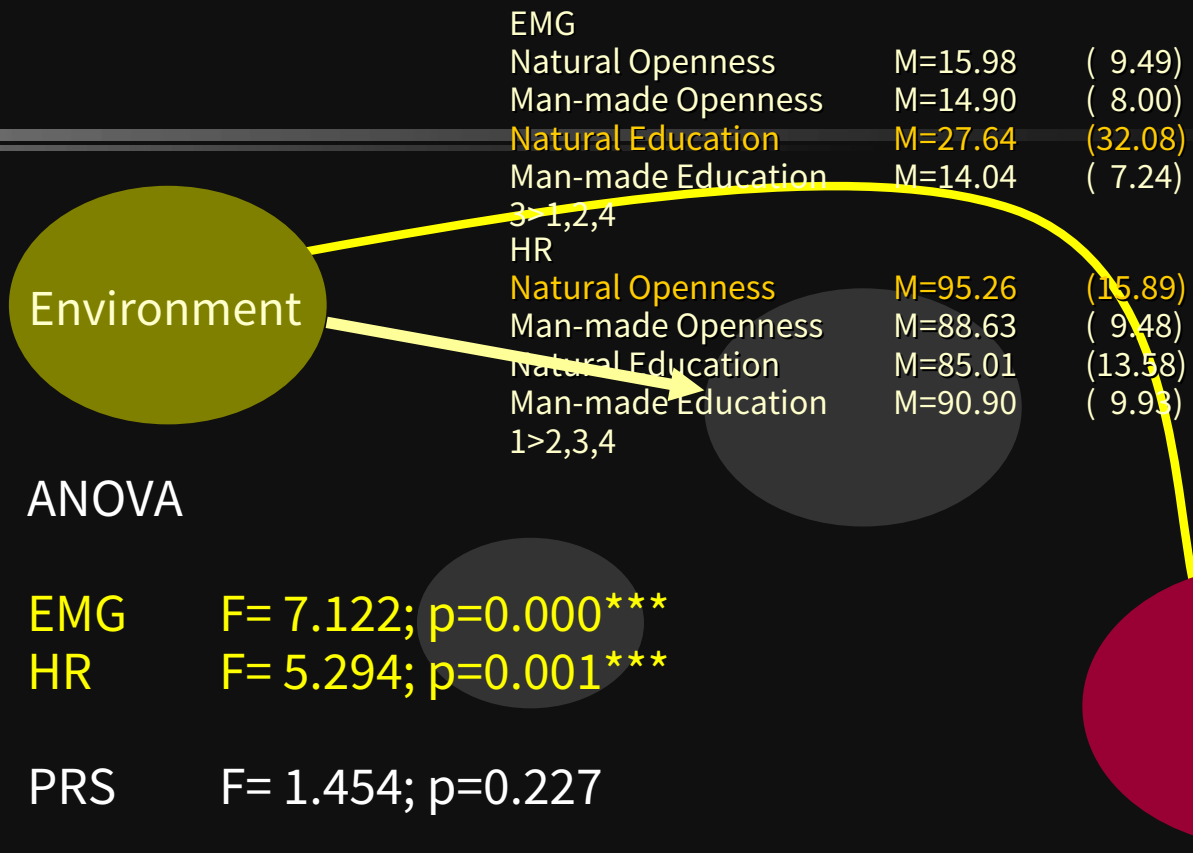
Electromyography (EMG):
EMG measures muscle response to nervous stimulation, which can be used as an index of muscle tension (Carol, l985).
Heart Rate (HR):
Heart Rate measures….

Data Collection Procedure

Respondents

- 272 subjects were tested

- 61% female; 39% male
- 41% respondent between 21-30 years old



ANOVA

EMG F= 7.122; p=0.000***
HR F= 5.294; p=0.001***

PRS F= 1.454; p=0.227

Sense of Natural empowerment

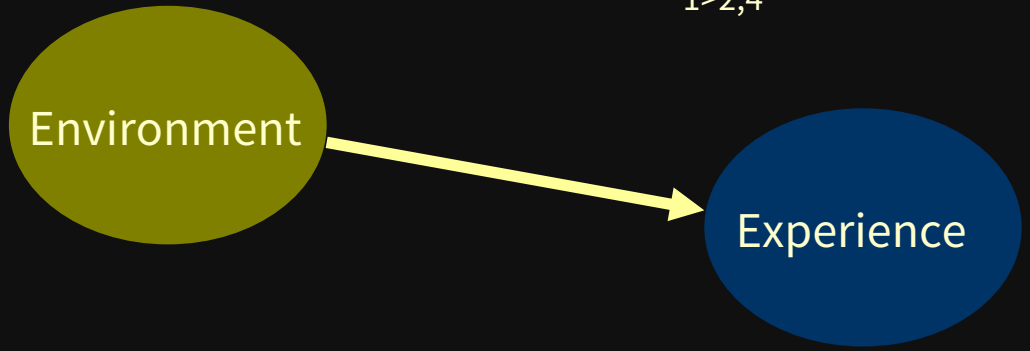
Natural Openness	M=95.26	(15.89)
Man-made Openness	M=88.63	(9.48)
Natural Education	M=85.01	(13.58)
Man-made Education	M=90.90	(9.93)

1>4

Sense of Extraordinary experience

Natural Openness	M=4.03	(0.673)
Man-made Openness	M=3.59	(0.798)
Natural Education	M=3.91	(0.750)
Man-made Education	M=3.74	(0.691)

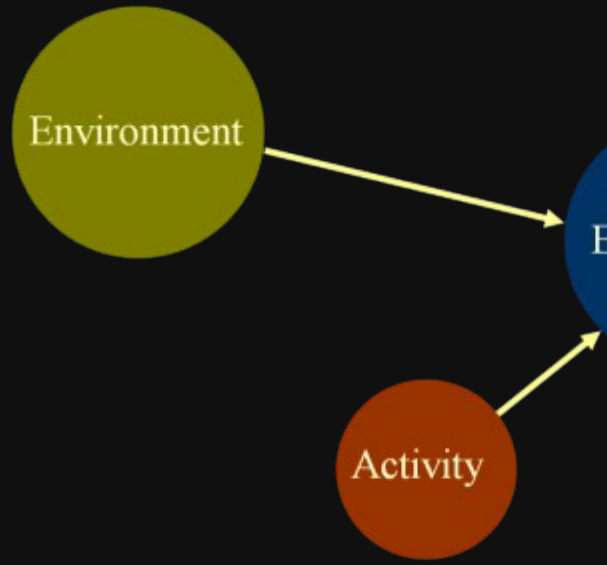
1>2,4



ANOVA

Sense of Control	F=1.300; p=0.275
Sense of Social support	F=0.657; p=0.579
Sense of Exercise	F=2.083; p=0.103
Sense of Natural empowerment	F=2.618; p=0.051(*)
Sense of Achievement	F=1.499; p=0.215
Sense of Extraoridinary experience	F=5.044; p=0.002**

Benefit



2 Way ANOVA

Source	F
Sense of Control	
Environment	7.81 *
Activity	0.01
Environment * Activity	0.01
Sense of Social support	
Environment	1.81
Activity	6.27 *
Environment * Activity	0.00
Sense of Exercise	
Environment	5.63 *
Activity	9.15 **
Environment * Activity	0.09
Sense of Natural empowerment	
Environment	13.51 ***
Activity	3.26 *
Environment * Activity	1.95
Sense of Achievement	
Environment	2.23
Activity	6.30 *
Environment * Activity	2.23
Sense of Extraordinary experience	
Environment	10.40 *
Activity	4.88 *
Environment * Activity	2.72

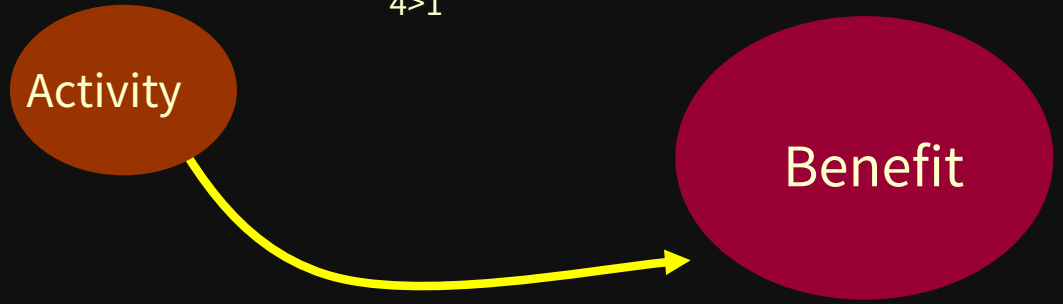
ANOVA

EMG F= 4.019; p=0.008**
HR F=31.921; p=0.000***

PRS F= 1.811; p=0.145

EMG
Passive M=18.35 (15.58)
Semi Passive M=19.23 (10.58)
Semi Active M=13.70 (9.09)
Active M=12.36 (7.62)
1,2>3,4

HR
Passive M=87.84 (11.75)
Semi Passive M=110.61 (20.36)
Semi Active M=91.07 (8.86)
Active M=95.50 (9.83)
2>1,3,4
4>1



ANOVA

Sense of Control	F= 2.999; p=0.031*
Sense of Social support	F= 2.844; p=0.038*
Sense of Exercise	F= 3.118; p=0.027*
Sense of Natural empowerment	F= 1.834; p=0.141
Sense of Achievement	F= 2.969; p=0.032*
Sense of Extraordinary experience	F= 3.540; p=0.015*

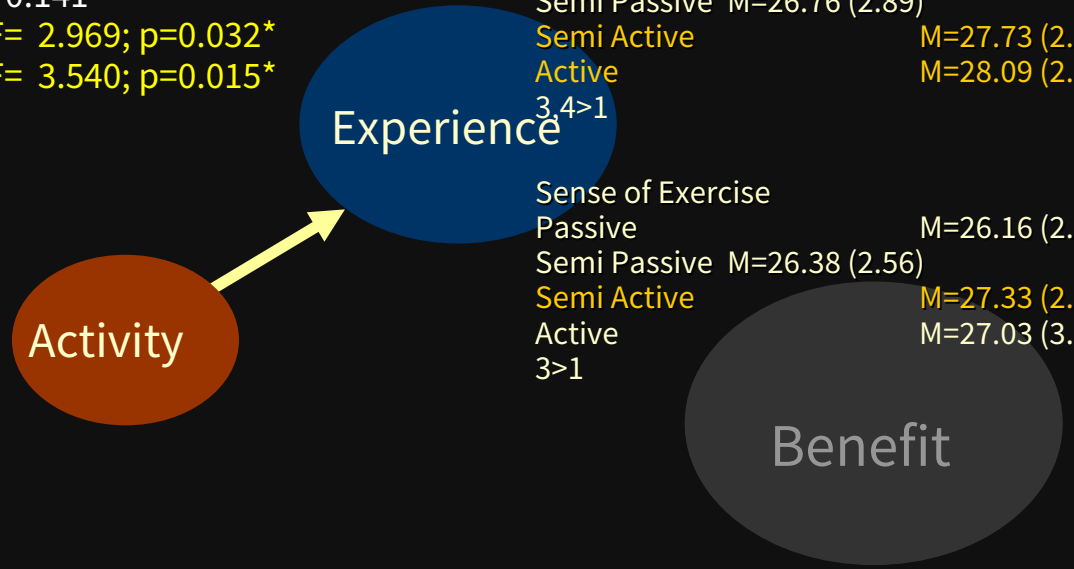
Sense of Control
Passive M=29.41 (2.97)
Semi Passive M=28.29 (3.49)
Semi Active M=29.70 (2.94)
Active M=30.37 (2.54)
3,4>2

Sense of Social Support
Passive M=26.83 (2.88)
Semi Passive M=26.76 (2.89)
Semi Active M=27.73 (2.99)
Active M=28.09 (2.92)
3,4>1

Sense of Exercise
Passive M=26.16 (2.69)
Semi Passive M=26.38 (2.56)
Semi Active M=27.33 (2.98)
Active M=27.03 (3.00)
3>1

Sense of Achievement
Passive M=3.32 (0.69)
Semi Passive M=3.29 (0.58)
Semi Active M=3.58 (0.67)
Active M=3.54 (0.85)
3>1,2

Sense of Extraordinary Experience
Passive M=3.77 (0.74)
Semi Passive M=3.82 (0.67)
Semi Active M=4.04 (0.65)
Active M=4.11 (0.72)
3,4>1



Environment

Experience

Benefit

Pearson Correlation			
	HR	EMG	PRS
Sense of Control	-0.12 (*)	0.00	0.47 ***
Sense of Social support	-0.08	0.12 *	0.45 ***
Sense of Exercise	-0.06	0.08	0.56 ***
Sense of Natural Enpowerment	-0.06	0.02	0.62 ***
Sense of Achievement	-0.09	0.03	0.52 ***
Sense of Extraoridinary experier	0.00	0.04	0.46 ***

Discussion and Conclusion

- Regarding the benefits of recreational activities on health, this study found that different kinds of activities lead to different affective responses.

- HR indicated that sitting is the most relax condition.
- EMG indicated that two activities - planting potted plants and feeding animals - resulted in the most relaxing beneficial effect.
- Planting potted plants and feeding animals also have higher recreation experience scores.

- Active contact types of farm activities get respondents better health well-being.

- Feeding animals and planting potted plants brought about the greatest sense of control, sense of social support, and sense of extraordinary experience for the respondents.

- Environment
  - Activities
- Experiences
  - Health Benefits

Environment

Experience

Thank You

Activity

Benefit

- 合理使用
- 公共財
- 非專屬授權
- Wiki 公共財
- GNU 版權標章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姓名標示 - 非商業性 - 禁止改作


姓名標示 - 相同方式分享


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