



An Assessment of Health Related Quality of Life in Female Participants Exercising in the Green and Indoors

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Abstract

The aim of the present investigation was to assess the Health Related Quality of Life in People Exercising in the Green and Indoors. For the purpose of the study fifty subjects (50 female) who exercise in the green and indoors were selected. The age group of the subject ranged from 30 to 50 years. The data was collected by administering questionnaire SF-36 developed by Ware and Sherbourne. In order to analyze the data a detailed descriptive statistics was applied and the level of significance was set at 0.05. The result of the study indicates that there was a significant difference obtained on the Health Related Quality of Life between people exercising in the green (outdoors) and indoors and the outdoor people had a higher score in Health Related Quality of Life and as well as in all the subscales of Health Related Quality of Life.

Introduction

As urbanisation increases, people find themselves concentrated in neighbourhood of impoverished biodiversity, bringing with it the possible loss of the opportunity to appreciate and benefit from nature (Louv, 2008; Turner, Nakamura and Dinette, 2004).

It is increasingly well established that the natural and built feature of the environment affect behaviour, interpersonal relationship and actual mental states (Frumkin, 2001). The environment can therefore be therapeutic or pathogenic (Burgess, 1988; Gesler, 1992; Lewis and Booth, 1994). Why then, thus nature still seem to have a positive effect on people, despite the increasing urbanisation of modern societies?

The evidence indicates that nature can may positive contribution to our health, help us recover from pre-existing stresses or problems, have an `immunising` effect by protecting us from future stresses, and help us to concentrate and think more clearly.(**Pretty et.al 2004:Pretty,2004**).

Findings from a recent study published in (**Thompson Coon et al, 2011**), which looked into existing studies on Indoor and Outdoor exercises, concluded that:

“...most trials showed an improvement in mental well-being compared with exercising indoors, exercising in natural environments was associated with greater feelings of revitalization, increased energy and positive engagement, together with decreases in tension, confusion, anger and depression. Participants also reported greater enjoyment and satisfaction with outdoor activity and stated that they were more likely to repeat the activity at a later date.”

Results showed that people may prefer outdoor exercise to indoor exercise when it comes to improving their mental, and perhaps, even their physical state. Health experts can create a safe and effective exercise program tailor made to suit you fitness level. They can advise you which exercises, both indoor and outdoor would suit your needs and also answer questions for you, such as which part of your body needs more physical exercise; is your heart rate at the correct level and how and when should you increase your intensity of exercise.

Based on the overall literature that was evident on the health benefits of Green Exercise, it was an urge to assess the Health Related Quality of Life people exercising in the Green and Indoors.

PROBLEM STATEMENT

The problem statement was formulated with a titled “**An Assessment of Health Related Quality of Life in Female Participants Exercising in the Green and Indoors**”.

METHODOLOGY

A total number of fifty subjects (50 female) who exercise in the Green and Indoors were selected for the purpose of study. The age group of the subject ranged from 30 to 50 years. The data was collected by administering questionnaire SF-36 developed by **Ware and**

Sherbourne ; all the necessary instructions were given to the subjects before the subjects were requested to respond to the statement in the questionnaire. The subject did not face any problem in responding to various statements in the questionnaire. In order to analyze the data a detailed descriptive statistics was applied and the level of significance was set at 0.05.

FINDINGS

The data collected from the female (outdoor and indoor) were subjected to detailed descriptive analysis and the results are presented.

Table 1
Independent sample test of Health Related Quality of Life between female Exercising in Green(outdoor) and Indoors

VARIABLES	MODE OF EXERCISE	N	Mean	Std. Deviation	Std. Error Mean	df	t	Sig. (2-tailed)
PF	OUTDOOR FEMALE	25	93.80	5.642	1.128	48	5.581	.000
	INDOOR FEMALE	25	63.88	26.206	5.241	48	5.581	.000
RP	OUTDOOR FEMALE	25	91.00	18.930	3.786	48	5.668	.000
	INDOOR FEMALE	25	49.00	31.853	6.371	48	5.668	.000
BP	OUTDOOR FEMALE	25	80.72	14.718	2.944	48	5.468	.000
	INDOOR FEMALE	25	50.88	22.973	4.595	48	5.468	.000
GH	OUTDOOR FEMALE	25	83.96	7.391	1.478	48	7.697	.000

	INDOOR FEMALE	25	56.84	15.991	3.198	48	7.69 7	.000
VT	OUTDOOR FEMALE	25	85.80	9.755	1.951	48	8.34 5	.000
	INDOOR FEMALE	25	47.20	20.970	4.194	48	8.34 5	.000
SF	OUTDOOR FEMALE	25	84.50	11.570	2.314	48	4.83 5	.000
	INDOOR FEMALE	25	56.50	26.546	5.309	48	4.83 5	.000
RE	OUTDOOR FEMALE	25	97.34	9.220	1.844	48	5.28 7	.000
	INDOOR FEMALE	25	50.66	43.166	8.633	48	5.28 7	.000
MH	OUTDOOR FEMALE	25	84.32	7.296	1.459	48	6.00 1	.000
	INDOOR FEMALE	25	63.84	15.426	3.085	48	6.00 1	.000
PCS	OUTDOOR FEMALE	25	53.14	3.835	.767	48	8.13 0	.000
	INDOOR FEMALE	25	40.81	6.540	1.308	48	8.13 0	.000
MCS	OUTDOOR FEMALE	25	55.96	3.620	.724	48	5.65 5	.000
	INDOOR FEMALE	25	42.48	11.355	2.271	48	5.65 5	.000

The Table-1 above reflects Descriptive Statistics of Health Related Quality of Life between female Exercising in Green (outdoors) and Indoors. Specifically, the table includes the number of cases (N), the mean scores, the standard deviation, estimated standard error mean on Physical functioning(PF), Role physical(RP), Bodily pain(BP), General health(GH),

Vitality(VT), Social functioning(SF), Role emotional(RE), Mental health(MH), Physical component summary(PCS) and Mental component summary(MCS).

To see statistical difference if any, between the green (outdoors) and indoor exercise female group, Independent Sample t - Test was employed.

The Table above illustrates the significant difference if any in the Physical functioning scores between green (outdoor) female exercise group and for indoor female exercise group, with the obtained t-value and its probability, which can be seen in the columns labeled *t a* value of 5.58 is observed. The results indicate that there was significant difference in Physical functioning between outdoor female exercise group and indoor female exercise group $t(48) = 5.58, p = 0.0005$. The mean score for Physical functioning in the case of outdoor female group was 93.80 and for the indoor female exercise group were 63.88. This indicates that the outdoor female exercise group had higher average Physical functioning score when compared to the indoor female exercise group.

The results indicate that there was significant difference in Role Physical (RP) between outdoor female exercise group and indoor female exercise group $t(48) = 5.66, p = 0.0005$. The mean score for Role Physical in the case of outdoor female group was 91.00 and for the indoor female exercise group were 49.00. This indicates that the outdoor female exercise group had higher average Role Physical score when compared to the indoor female exercise group.

The results indicate that there was significant difference in Bodily Pain (BP) between outdoor female exercise group and indoor female exercise group $t(48) = 5.46, p = 0.0005$. The mean score for Bodily Pain in the case of outdoor female group was 80.72 and for the indoor female exercise group were 50.88. This indicates that the outdoor female exercise group had higher average Bodily Pain score when compared to the indoor female exercise group.

The results indicate that there was significant difference in General Health (GH) between outdoor female exercise group and indoor female exercise group $t(48) = 7.69, p = 0.0005$. The mean score for General Health in the case of outdoor female group was 83.96 and for the indoor female exercise group were 56.84. This indicates that the outdoor male exercise group had higher average General Health score when compared to the indoor female exercise group

The results indicate that there was significant difference in Vitality (VT) between outdoor female exercise group and indoor female exercise group $t(48) = 8.34, p = 0.0005$. The mean score for Vitality in the case of outdoor female group was 85.80 and for the indoor female exercise group were 47.20. This indicates that the outdoor female exercise group had higher average Vitality score when compared to the indoor female exercise group

The results indicate that there was significant difference in Social Functioning (SF) between outdoor female exercise group and indoor female exercise group $t(48) = 4.83, p = 0.0005$. The mean score for Social Functioning in the case of outdoor female group was 84.50 and for the

indoor female exercise group were 56.50. This indicates that the outdoor female exercise group had higher average Social Functioning score when compared to the indoor female exercise group

The results indicate that there was significant difference in Role Emotional (RE) between outdoor female exercise group and indoor female exercise group $t(48) = 5.28, p = 0.0005$. The mean score for Role Emotional in the case of outdoor female group was 97.34 and for the indoor female exercise group were 50.66. This indicates that the outdoor female exercise group had higher average Role Emotional score when compared to the indoor female exercise group

The results indicate that there was significant difference in Mental Health (MH) between outdoor female exercise group and indoor female exercise group $t(48) = 6.00, p = 0.0005$. The mean score for Mental Health in the case of outdoor female group was 84.32 and for the indoor female exercise group were 63.84. This indicates that the outdoor female exercise group had higher average Mental Health score when compared to the indoor female exercise group

The results indicate that there was significant difference in Physical Component Summary (PCS) between outdoor female exercise group and indoor female exercise group $t(48) = 8.13, p = 0.0005$. The mean score for Physical Component Summary in the case of outdoor female group was 53.14 and for the indoor female exercise group were 40.81. This indicates that the outdoor female exercise group had higher average Physical Component Summary score when compared to the indoor female exercise group

The results indicate that there was significant difference in Mental Component Summary (MCS) between outdoor female exercise group and indoor female exercise group $t(48) = 5.65, p = 0.0005$. The mean score for Mental Component Summary in the case of outdoor female group was 55.96 and for the indoor female exercise group were 42.48. This indicates that the outdoor female exercise group had higher average Mental Component Summary score when compared to the indoor female exercise group

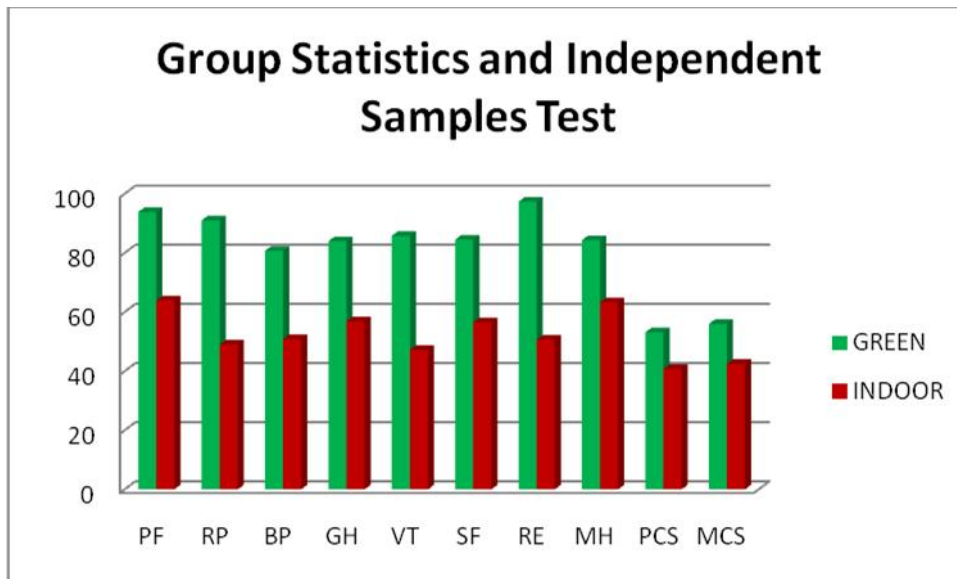


Fig:-1 Mean of Health Related Quality of Life of Female population Exercising in Green and Indoors

DISCUSSION OF FINDINGS

Analysis of data pertaining to Health Related Quality of Life and Body Mass Index in male population exercising in green and indoors, reveal a significant difference in the Health Related Quality of Life in the male population exercising in the green and indoors. Getting outdoors and into the sunshine can be motivating factors for many people when it comes to the debate “should you exercise in indoor or outdoor”. Vitamin-D from sunlight also enhances your mind and body as well as being good for your skin. The result of the present study correlates well with a findings of Coon et.al(2011) who revealed improvement in mental well-being in people exercising in natural environments and well associated with greater feeling of revitalisation, increased energy and positive engagement, together with decreases in tension, confusion, anger and depression. Participants also reported greater enjoyment and satisfaction with outdoor activity and stated that they were more likely to repeat the activity at a later date.

CONCLUSIONS

There was a significant difference obtained on the Health Related Quality of Life (HRQoL) between male population exercising in the green (outdoor) and indoors in which the outdoor male had a higher score in Health Related Quality of Life and as well as in all the subscales of Health Related Quality of Life.

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