

# Effectiveness of Favorite-Place Prescriptions

## A Field Experiment

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**Background:** Previous studies suggest that favorite places provide stress-alleviating experiences and serve emotion regulation. This study used a prospective, experimental design to investigate the hypothesis that a group of adults instructed to regularly visit their local favorite places will experience greater daily restoration and fewer self-reported physical symptoms than a group instructed to avoid all favorite-place visits.

**Methods:** Members of the favorite-place group were asked to visit their local favorite places at least once per day on 5 weekdays. They visited five times, on average, and also reported all other place visits in a structured place diary. Members of the not-visiting group visited their favorite place 0–1 times and daily reported all place visits outside the home. The control group, which was given instructions that did not mention favorite places, reported all place visits outside the home. Restorative experiences (assessed on the Restoration Outcome Scale and including attentiveness, relaxation, clearing one's mind, subjective vitality, and self-confidence) and self-reported physical symptoms (headache, backache, muscle tension and pain) were measured with structured health diaries using Likert scales. Data were collected in 2006 and analyzed in 2007 and 2008.

**Results:** Every day the group visiting favorite places experienced significantly stronger restorative experiences than the not-visiting and control groups. The groups did not differ in the amount of self-rated physical symptoms reported at the end of each day. In all groups such symptoms decreased toward the end of the week.

**Conclusions:** Favorite-place prescriptions and visits affect subjective well-being. Health counseling and research on coping strategies should not ignore the use of sociophysical environments for self- and emotion-regulation.

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### Background

Favorite nearby places provide stress-alleviating experiences and serve emotion regulation.<sup>1–5</sup> Restorative benefits, such as stress reduction and an increase in positive feelings, are reported particularly for natural favorite places, concurring with findings from experimental studies showing the restorative value of experiences in natural environments.<sup>6–8</sup> It has been proposed that favorite-place prescriptions<sup>9</sup> instructing people to visit favorite places regularly might help in stress reduction and might accompany exercise prescriptions<sup>10</sup> in primary health care. This study used a prospective, experimental design to investigate the hypothesis that a group of adults instructed to visit local favorite places regularly would experience greater daily restoration and fewer self-reported physical symptoms than a

group instructed to avoid all favorite-place visits. Differences between the groups were expected to grow toward the end of the experimental period.

### Methods

Volunteers (N=348) drawn from a survey study<sup>9</sup> investigating favorite places outside the home were randomly assigned to three groups ( $n=116$  each). The favorite-place group was asked to visit their favorite places at least once per day during the experimental period and to record each visit and any other place visit (longer than 10 minutes, outside the home) in a structured place diary. The not-visiting group was asked *not* to visit their favorite places but to report daily on any other place visit. The control group was asked to report all place visits, but their instructions did not mention favorite places. There were three reporting periods: Time 1, Time 2, and Time 3. The reports were always to start on Monday morning and continue until Friday 12 MN. Only weekdays were utilized to keep visits close to home and to avoid cultural peculiarities (i.e., the Finnish habit of visiting summer homes on weekends). Each evening before retiring to bed participants filled in a structured health diary.

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**Table 1.** Criteria and descriptions for experimental groups

Group	Criteria	n (women/men)	M age (years [SD])	Percentage of returned diaries for Time 1
Visit favorite place	At least three visits to the favorite place during 5 days	28 (23/5)	48 (14.5)	86
Do not visit favorite place	Maximum of one visit to the favorite place during 5 days	21 (18/3)	46 (14.1)	90
Control: no instructions	No criteria needed	43 (32/11)	52 (14.1)	86

One hundred and forty-one respondents returned diaries. As the instructions regarding the number of favorite-place visits (one per day versus not at all) were not completely obeyed, post hoc inclusion criteria were created (Table 1). Ninety-two respondents (a response rate of 26% of 348) fulfilled these criteria.

### Structured Place Diary

Immediately after every place visit, the respondent described in his or her own words the place; its location; its “favorite-ness” (*Could you call this place your favorite place? yes/no*); the reason for going there; and the use and purpose of medication 0–2 hours before going there. The respondent also completed the Restoration Outcome Scale<sup>9</sup> (ROS; Cronbach’s  $\alpha=0.90-0.96$ ). The ROS scale included nine items (e.g., *I forgot everyday worries*, Likert scale, 0=not at all, 6=very much) covering relaxation, attention restoration, clearing one’s thoughts,<sup>9</sup> subjective vitality,<sup>11</sup> and self-confidence.<sup>12</sup>

### Structured Health Diary

Physical symptoms (*Throughout the day, to what extent have you felt . . .*) included seven items<sup>13</sup> (Likert scale, 0=not at all, 4=very much). Three items (backache, muscle tension and pain, headache) consistently had high loadings on a physical-symptoms factor across the 5 days, forming a mean summary score. Stressful and uplifting daily life experiences (seven items) were measured on the Daily Hassles and Uplifts Scale.<sup>14</sup>

### Analysis

Places were classified post hoc based on earlier studies.<sup>2,9</sup> The effect of the instructions on restorative experiences during the 5-day period was modeled with a mixed 3 (group)  $\times$  5 (day) ANCOVA with two covariates. The main effect of group was of primary interest, as were the effect of day (earlier diary studies<sup>15,16</sup> showed no effect on physical symptoms) and the interaction (larger differences among groups at the end of the period). An ROS mean-item summary score was calculated for each place visit. As favorite-place visits were not isolated from the rest of the day, the daily means of ROS scores were used across all place visits as dependent variables. Thus, they indicated the total daily level of restorative experiences.

The covariates relevant to restorative experiences were the total number of hours spent on work or studies during the week and hassles about money over the experimental days. Thus, instead of feelings of

stress, a more-objective variable (working hours) and a variable known to relate to restorative experiences<sup>9</sup> were used. ANCOVA was repeated with physical symptoms and relevant covariates: the number of chronic symptoms during the 5-day period and the total frequency of reported medicine intake (0–2 hours) before the place visits during the 5-day period. Greenhouse–Geisser corrected values are presented if sphericity assumptions were not met. Paired-samples *t*-tests were used in cross-check analyses. All correlations are Pearson correlations. Analyses were performed in 2007 and 2008.

## Results

### Place Types

The average number of favorite-place visits over 5 days in the favorite-place group was five; not-visiting group, 0.3; control group, four; and to other places, five, eight, and four visits, respectively. Of all visits, one third (32.8%) in the favorite-place group, 10.4% in the not-visiting group, and 19.7% in the control group were to natural environments. Visits to the place of work or study (38.6%) or to community services (21.3%) were most frequent in the not-visiting group; 30.3% and 10.1%, respectively, in the favorite-place group; and 28.4% and 20.7%, respectively, in the control group. The groups (favorite-place, not-visiting, and control) visited exercise places (10.8%, 7.1%, and 8.7%, respectively); their own yards (2.4%, 2.2%, and 2.8%, respectively); and meeting places (7.3%, 9.7%, and 5.6%, respectively) least often.

### Restorative Experiences

The interaction effect between groups and day, and the effect of day on restorative experiences, were insignificant (Table 2). The means of restorative experience differed significantly among the groups. The group instructed to visit their favorite places daily reported stronger restorative experiences than the group instructed not to visit favorite places (Figure 1; mean difference=1.5, SE=0.25,  $p=0.000$ ) and the control group (mean difference=0.99, SE=0.22,  $p=0.000$ ; post hoc comparisons, Bonferroni correction). The latter two groups did not differ from one another (mean difference=0.48, SE=0.24,  $p=0.135$ ).

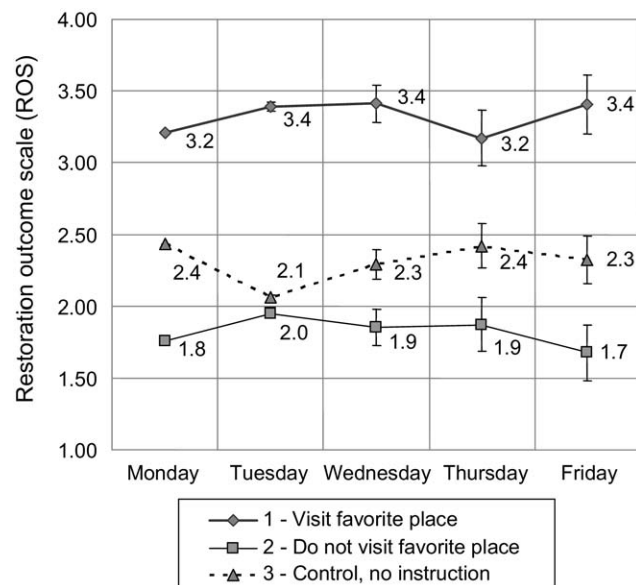
**Table 2.** Mixed 3 (group) × 5 (day) ANCOVA results (two covariates)

Dependent variable	Main and interaction effects	F	df	p-value	Partial $\eta^2$
Restorative experiences	Group	18.8	2, 78	0.000	0.325
	Day	0.09	3.5, 276.7	0.979	0.001
	Group × day	0.74	7.1, 276.7	0.641	0.019
Physical symptoms	Group	0.05	2, 84	0.950	0.001
	Day	2.9	3.5, 296.2	0.027	0.034
	Group × day	0.63	7.1, 296.2	0.734	0.015

To check that the subjects had their most restorative experiences in their favorite places, a 2 (group) × 2 (favorite versus other place) mixed ANCOVA with the two covariates showed that the mean ROS scores over 5 days were significantly higher in favorite places than in other places in the favorite-place group ( $M=4.1$ ,  $SD=0.77$  vs  $M=2.5$ ,  $SD=0.92$ ) and in the control group ( $M=3.2$ ,  $SD=1.2$  vs  $M=1.8$ ,  $SD=0.95$ ;  $F_{(1,57)}=19.3$ ,  $p=0.000$ , partial  $\eta^2=0.25$ ). ROS scores were higher in the favorite-place group than in the control group ( $F_{(1,57)}=9.4$ ,  $p=0.003$ , partial  $\eta^2=0.14$ ).

### Physical Symptoms

The interaction effect between group and day, and the effect of group, were insignificant (Table 2). The effect of the day on the self-reported symptoms was significant (Table 2). There were more symptoms on Monday than on Friday (mean difference=0.28,  $SE=0.08$ ,  $p=0.008$ ; post hoc comparisons, Bonferroni correction) (Figure 2). To avoid confounding the reporting period with group assignment, ANCOVA analyses (with ROS and physical symptoms) were repeated, using scores only from the



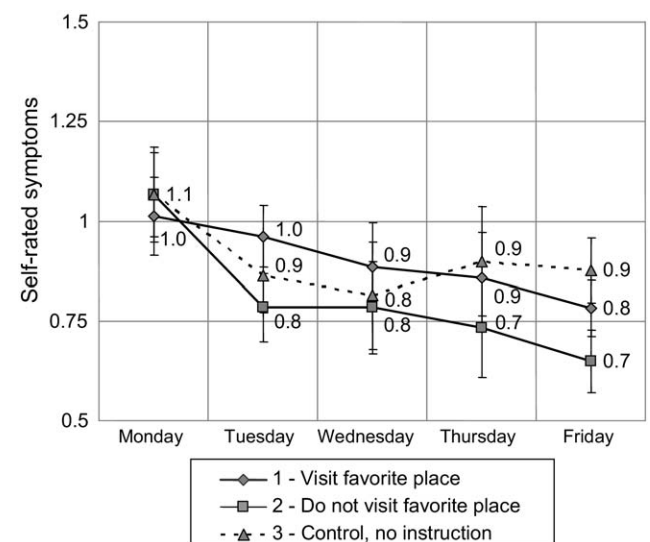
**Figure 1.** Restorative experiences (95% CI of the mean; 0=not at all, 6=very much) in the three groups, after adjusting for total number of hours spent on either work or studies during the week and hassles about money over the experimental days

same time period (Time 1; Table 1). The results were similar. The correlations between daily ROS scores and daily symptoms were low (the average correlation being |0.18|) and insignificant in all groups.

### Conclusion

The group instructed to visit favorite places achieved a higher total daily level of restorative experiences than the not-visiting and control groups. The differences between the groups did not increase toward the end of the week, but were apparent on the first day. Consistent with the literature,<sup>2,12</sup> favorite-place prescriptions and visits had a positive effect on attentiveness, relaxation, clearing one's thoughts, subjective vitality, and self-confidence. The low response rate and the difference between the favorite-place group and the control group in favorite-place ROS scores suggests that the results may be generalized only to volunteers willing to follow place-visit instructions.

No differences among the groups were found in self-rated physical symptoms. A masking effect of the uncontrolled determinants of symptoms (e.g., body awareness<sup>17</sup> and social support<sup>18</sup>) may affect this result.



**Figure 2.** Symptoms (95% CI of the mean; 0=not at all, 1=quite little, 4=very much) in the three groups, after adjusting for the chronic symptoms and frequency of reported medicine intake before the visit to a favorite place

The not-visiting group may not have been satisfied with the constraint imposed on them and may have counteracted to this when reporting their health or by visiting compensatory places more often. The daily confrontation with questions about one's health may have produced a decline in reporting in all groups.<sup>15</sup> Not having an interview after the experiment is a limitation.

In contrast to earlier studies,<sup>15,16</sup> a decrease was found in physical symptoms in all groups toward the end of the week, possibly reflecting illness behavior, which is at a lower level on weekends than during the week.<sup>15</sup>

The strong restorative outcomes of favorite-place prescriptions and visits suggest that health counseling and research on coping strategies<sup>19,20</sup> should not ignore the use of sociophysical environments for self- and emotion regulation. Although natural environments were visited most often by the favorite-place group, the large number of other visited places calls for increased attention to preferred built environments.

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