

RE-EVALUATING WELL-BEING OUTCOMES OF SOCIAL TOURISM

Elli Vento*, Project Researcher, University of Eastern Finland Business School, Yliopistokatu 2, FI-80100 Joensuu, +358 50 4765179, Email: elli.vento@uef.fi

Timo Tammi, University Lecturer, University of Eastern Finland Business School, Yliopistokatu 2, FI-80100 Joensuu, +358 50 4423995, Email: timo.tammi@uef.fi

Scott McCabe, Professor of Marketing and Tourism, Nottingham university Business School, University of Nottingham, Jubilee Campus, Wollaton Rd, Nottingham. NG81BB. UK, 0044 115 8466683, Email: Scott.mccabe@nottingham.ac.uk

Raija Komppula, Professor of Tourism Business, University of Eastern Finland Business School, Yliopistokatu 2, FI-80100 Joensuu, +358 50 438 7475, Email: raija.komppula@uef.fi

ABSTRACT: This study contributes new findings on well-being outcomes in social tourism initiatives. Based on a two-stage survey of 371 respondents of the largest Finnish Social Holiday Association, including a control group, we assess subjective well-being, experience of inclusion and family outcomes. Positive effects on satisfaction with life, leisure time, mental health, family, social life, employment and economic situation and others were observed, but weaker associations and no effects in other areas such as learning or family cohesiveness. The findings suggest previous studies of well-being over-simplify positive outcomes associated with holidays, the advanced methods employed enable a nuanced analysis of holiday benefits. The study contributes to theory on well-being outcomes for disadvantaged tourists and outlines implications for social tourism organisations.

KEYWORDS: Social Tourism; Subjective Well-Being; Experience of Inclusion; Treatment Effects

*Corresponding author

INTRODUCTION

Tourism is a free choice consumer activity taken purposefully to increase individual's well-being (Griffin & Stacey, 2011). In recent years, a range of studies have found positive well-being outcomes linked to tourism participation, including; increases in mood and happiness levels (Nawijn, 2011), life satisfaction (Gilbert & Abdullah, 2004), quality of life (Dolnicar, Yanamandram & Cliff, 2012; Neal, Uysal & Sirgy 2007), health (Ferrer, Sanz, Ferrandis, McCabe & García, 2016), and social well-being (Pyke, Pyke & Watuwa, 2019). However, much of the previous research on positive outcomes, in both services and tourism has concentrated on mainstream consumers, thus disadvantaged people are underrepresented (e.g. Anderson & Ostrom, 2015), despite this being an important rationale underpinning the provision of social tourism policies and programmes.

Social tourism refers to the inclusion of socially disadvantaged groups in tourism participation through targeted social interventions of a well-defined social nature (McCabe, Diekmann & Minnaert, 2012). The use of public funding for social tourism has been justified by the expected positive outcomes derived, such as increased well-being and social inclusion (see e.g. Kastenholz, Eusebio & Figueiredo, 2015). Programmes typically target the most disadvantaged groups of a society, people who, due to difficult life situations and lack of resources, are socially excluded from holiday-taking (Komppula, Ilves & Airey, 2016). Social tourism can then be considered an investment that provides societal value, for example, in helping to promote a fair society, particularly in those countries where opportunities for tourism are considered a social right (McCabe & Diekmann, 2015). In promoting equitable access to normative consumption opportunities available to wider society, social tourism provision is also often justified as delivering indirect public value in the form of savings on public social and healthcare services (Minnaert, Maitland & Miller, 2009). Social tourism programmes are thus specifically intended to promote positive outcomes for individuals and society (Minnert, et al., 2009).

Although social tourism has been linked to positive individual and societal impacts, the evidence to support these assertions remains weak, which may eventually jeopardise the public acceptance of social tourism in the face of constrained public finances (Minnaert et al., 2009). In practice, the concept covers “a variety of initiatives for a variety of different social groups” (Minnaert, Maitland & Miller, 2006: 7), which is a challenge in terms of developing a systematic evidence base on positive outcomes. Previous quantitative studies suffer from small samples amongst specific user-groups (e.g. McCabe & Johnson, 2013; Pyke et al., 2019) and/or the lack of a control group (McCabe & Johnson, 2013), so there is currently a lack of detailed quantitative analysis of the well-being outcomes of social holidays. Much of the quantitative research focuses on the individual well-being, neglecting the effects on relational outcomes and the experience of inclusion in society. Therefore, whilst social inclusion is a core goal of many publicly funded social tourism initiatives, there is little evidence on people's feeling of inclusion in society as an outcome and its associations with well-being.

This study thus aims to extend knowledge on the types of outcomes of social tourism programmes through an evaluation of well-being *and* experience of inclusion outcomes for Finnish social tourists. In Finland, social tourism is a publicly managed social policy instrument with long traditions. However, quantitative evidence on the positive outcomes associated with Finnish social tourism remains opaque, which, without corrective actions, may jeopardise the future of Finnish social tourism (Vento & Komppula, 2020). The study contributes detailed quantitative analysis of subjective well-being and experience of inclusion by utilising a research design where the treatment group consists of those assigned a social holiday, the control group of those not assigned a holiday, and where both groups are surveyed at two times. The use of the control group is designed to assess

whether potential before-after differences in the treatment group can be attributable to the holiday. Since the groups are not equivalent and may involve ‘noisy elements’, we combine both a traditional ANOVA-based methodology with a propensity score methodology. This is common in many areas of medical and health, behavioural sciences and economics (Stuart, 2010) and frequently used in non-experimental studies as it helps understand the influence of confounding factors and selection bias in group formation. However, although we make progress through utilisation of this research design, the analysis also identifies problems which need to be considered in future studies.

The Finnish Context

The Finnish social tourism system is designed to enable the most disadvantaged sections of society to be involved in tourism. Social holidays in Finland are purposely intended to enhance societal well-being, inclusion and equality, and to promote opportunities for participation, strengthen social networks, support life management, strengthen intra-family relationships, create a sense of community, develop life patterns conducive to health and emotional well-being, and prevent problems (Hyvinvointilomat ry, 2018). These objectives have been set by the government agency dispersing the funds with an aspiration for long-lasting positive impacts that do not vanish immediately after a holiday. The system is funded directly through the profits generated by Veikkaus Oy, a state-owned gaming company. The funds are managed by the Funding Centre for Social Welfare and Health Organisations (STEA, 2020), a governmental body that operates under the Ministry of Social Affairs and Health. Monies are distributed through five social holiday associations, and individuals or families apply through these for a subsidised holiday (Lomajärjestöjen yhteistyöryhmä LYR, 2020). So far, the effectiveness of Finnish social tourism has not been systemically examined, so there is no understanding of how the outcomes of social holidays actualize in practise.

In the Finnish system, a social holiday is typically a five-day full-board domestic holiday designed around the needs of different target groups (e.g. families with children, pensioners, unemployed individuals, people suffering from health issues). Organised activities, entertainment and group support are conventional features of Finnish social holidays, which emphasises notions of inclusion. In previous qualitative studies these have been cited as essential aspects of social holiday experiences (Komppula et al., 2016; Komppula & Ilves, 2018).

SOCIAL TOURISM, SUBJECTIVE WELL-BEING AND EXPERIENCE OF INCLUSION

In this study, subjective well-being and experience of inclusion act as complementary constructs via which the potential well-being outcomes of a Finnish social holiday can be explored in greater detail to include people’s perceptions of, for instance, their satisfaction with life, but also their relationships within their community, as a contributing factor to well-being. Subjective well-being is an individually determined perspective of the experience of life, sometimes defined as life satisfaction and/or happiness (European Social Survey, 2013). Rather than focusing on demographic characteristics that contribute to making ‘a happy person’ (e.g. Wilson, 1967), researchers started to become interested in understanding the aspects and processes that constitute and contribute to subjective well-being (Diener, Suh, Lucas & Smith, 1999). Early approaches conceptualised subjective well-being as consisting of life satisfaction and emotional affect, the latter encompassing the relationship between positive and negative affect, sometimes defined as happiness (Diener, 1984; Diener & Emmons, 1984). Later models expanded the focus to measure satisfaction with different domains of life (Diener et al., 1999). Subjective well-being has also been determined as and/or related to, the construct of quality of life, commonly referring to subjective assessments of satisfaction with the overall quality of life and/or the quality of life domains (Dolnicar et al., 2012; McCabe & Johnson, 2013).

Traditional approaches used to measure subjective well-being have been criticised for oversimplicity (European Social Survey, 2013). This led to the incorporation of new constructs to try to capture developmental aspects of well-being such as, human flourishing, which has been described as “social-psychological prosperity” (Diener, Wirtz, Tov, Kim-Prieto, Choi, Oishi & Biswas-Diener, 2010: 144) and ‘functioning well’, described as “enabling conditions and psychological resources” (European Social Survey, 2013: 2). The multi-dimensional view of subjective well-being provides a more comprehensive assessment adopted in this study. This refers to all aspects of life, such as overall life satisfaction, physical and psychological health and well-being, social and financial well-being, meaningfulness and purposefulness of life, environmental mastery, family and friend relationships, work and leisure (see e.g. European Social Survey, 2013). Since well-being “resides within the experience of the individual” (Gilbert & Abdullah 2004: 105), subjective perceptions are crucial when analysing the phenomenon.

Much of the previous social tourism research has focused on subjective well-being. According to Kakoudakis, McCabe and Story (2017), a social holiday can act as a platform for affective and cognitive development, which may actualise as new confidence, motivation and energy – even as positive changes in attitudes and behaviour. Among children and young people, social holidays may reduce exclusion and the impact of poor family relationships, provide opportunities for learning, and support positive behaviour changes (Minnaert, 2012a; Bos, McCabe & Johnson, 2015). Among seniors, social tourism can offer a recreational escape from mundane routines (Morgan, Pritchard & Sedgley, 2015) and contribute to healthy ageing and an active lifestyle (Ferrer et al., 2016). For people living with disabilities, holiday trips were found to contribute to satisfaction with life across all domains, but importantly found that positive health effects were short-lived compared to people with no disability, holding important implications for policy makers (Pagan, 2015). McCabe and Johnson (2013) found statistically significant improvements in leisure life, family relations, social life, and some aspects of life satisfaction and positive functioning aspects of well-being 5-8 weeks after a social holiday. Pyke et al. (2019) found positive effects three weeks after a one-day family excursion in family relations, social life, material well-being, and leisure.

The European Social Survey has underlined that “the way an individual relates to others and to their society is a key aspect of their subjective well-being” (2013: 5). Whilst relational and social aspects of well-being have been examined in some studies in social tourism, this has mostly been done at the level of family and friend relationships, and so far none has examined the links between an individual’s perception of well-being and their experience of inclusion. Given that social inclusion is an important goal of social tourism programmes, this is a surprising omission. Inclusion embodies the relationship between an individual and their social community, and between the individual and society (Nivala & Ryyänen, 2013). Experience of inclusion assesses subjective perceptions and feelings of belongingness, membership, and a sense of being a meaningful member of some group or a community, which have been identified as essential components of human well-being and identity (Nivala & Ryyänen, 2013). Experience of inclusion is an established concept in Finland, particularly in research on poverty and social policy (e.g. Finnish Institute of Health and Welfare, see Leemann, Kuusio & Hämäläinen, 2015).

Subjective well-being and experience of inclusion are closely related to the objectives of Finnish social tourism. Traditionally, these concepts have been analysed as separate phenomena and in different disciplines. Both constructs have evolved into umbrella terms encompassing a wide range of mixed, overlapping conceptions and theories (e.g. Nivala & Ryyänen, 2013). Both are described as complex, multidimensional and experiential processes that dynamically evolve over

time (Leemann et al., 2015). The objective circumstances do not per se determine their conceptualisation, but the focus is first and foremost on subjective experience (McCabe & Johnson, 2013). Additionally, in recent years elements such as social involvement, meaning and purpose of life, and environmental mastery are identified as components or determinants of both (Isola, Kaartinen, Leemann, Lääperi, Scheinder, Valtari & Keto-Tokoi, 2017; European Social Survey, 2013). A lack of subjective well-being and experience of inclusion have similar consequences, such as health issues, passiveness, apathy, and alienation (Nivala & Rynänen, 2013). For these reasons we examine both the relational and inclusionary aspects of social holidays and well-being, thus building a bridge between tourism and social policy research, which has been called for in previous research (McCabe, 2009). Thus, we hypothesise:

H1. A social holiday leads to increased levels of subjective well-being

H2. A social holiday leads to increased experience of inclusion

Although subjective well-being and experience of inclusion are distinct in the hypotheses, they are related at the conceptual level and overlap to some extent, which means that they encompass partly the same phenomena. In our empirical analysis, the concepts are divided into sub-components, which are measured as separate variables. The components and the applied scales are explained in the following paragraphs and presented in Appendix I.

Satisfaction with life has been identified as a cognitive component of subjective well-being. The Satisfaction with Life Scale (SWLS) developed by Diener, Emmons, Larsen and Griffin (1985) is probably the most common tool measuring overall life satisfaction. However, in line with the multi-dimensional perspective on well-being, quality-of-life experience can be measured by exploring holistic satisfaction with life together with *satisfaction with different life domains* (Dolnicar et al., 2012; McCabe & Johnson, 2013). In this study, the life domains selected are mainly a combination of those applied in McCabe & Johnson (2013) and Gilbert & Abdullah (2004), which were adapted from the British Household Panel Survey (Institute for Social and Economic Research 2009), and Andrews & Whithey (1976) respectively. Some life domains have also been derived from the objectives of Finnish social tourism (Hyvinvointilomat ry, 2018).

The items measuring *emotional affect* and the experience of happiness (e.g. Diener & Emmons, 1984), are based on the Scale of Positive and Negative Experience (SPANE) by Diener et al. (2010). Six of the items measure both positive and negative affect at a very general level, allowing for respondents' own interpretation. This approach is perceived to be superior to scales asking about specific types of emotion (e.g. sadness). According to Diener et al. (2010), a four-week time period is short enough for people to recall their actual experiences and, simultaneously, long enough to avoid respondents' short-term mood swings affecting the results.

Social well-being measures were adopted from and/or developed based on the question modules on the European Social Survey (2013) and New Economics Foundation (nef) (2009). Our primary aim was to analyse respondents' subjective experience of social well-being: their perceptions of being socially supported, needed and cared for. The reciprocity of social relationships is also considered. The original items measure reciprocity to people "close to oneself", transferred to a more general level.

Although the items measuring *experience of inclusion* have mainly been adapted from the scale developed by Finnish Institute for Health and Welfare (Isola et al., 2017), they include aspects related to subjective well-being and, for example, human flourishing (Diener et al., 2010; European Social Survey, 2013). Two additional items (I feel that I am respected; I feel that I am appreciated) have been revised from the European Social Survey (2013). Although being respected and

appreciated by others have been identified as components of subjective well-being, they are also related to social inclusion, which further demonstrates the connections between the concepts (Isola et al., 2017). Reciprocity of social relationships is also considered in the experience of inclusion scale, but otherwise the items do not directly overlap with other survey items. To reduce the bias of rationally knowing something but not necessarily feeling the same way (Isola et al., 2017), some items were modified from their original formats. In these modifications, the Finnish verb “kokea” (cognitive ‘experience’) has been widely utilised to distinguish it from the more emotionally charged feeling of experience (“tuntea”).

Challenging life situation for disadvantaged populations is evidenced by unequal socioeconomic position and lack of opportunities compared to the general populace. Holiday-taking is a highly unequal activity (Griffin & Stacey, 2011). Comparing self to approximate others (i.e. *social comparison*) has been related to formation of subjective well-being (Diener et al., 1999) and we suggest can be linked to experiences of inclusion and equality. However, this aspect has been neglected in previous tourism research.

Low-income families with children form an important target group of social tourism. To date, research on this group has found holidays contribute to: strengthen social and emotional family ties, allow a break from daily routines, and quality time together (see e.g. Minnaert, 2012b). Although the relationship between family holidays and *family well-being* has been recognised in previous studies, family well-being has not been measured as a multidimensional domain of subjective well-being or experience of inclusion. In order to address this lacuna, families with children that applied were sent the questionnaire that included a separate section measuring family well-being. Family well-being measures were mainly adopted from the Brief Family Relationship Scale and implemented on disadvantaged populations (Fok, Allen, Henry and People Awakening Team (2014). The scale consists of items measuring cohesion, expressiveness and conflict, originally developed from the relationship dimension of the Family Environment Scale (Moos & Moos 1994). Since the specific focus of our study is on leisure time, we added one item “Our family spends a lot of time doing things together outside home”. Additionally, social comparison (family’s situation compared to other families) is measured as one dimension of family well-being, when the individual-level items have been transferred to the context of a family.

DATA AND METHODS

To investigate whether a social holiday leads to increased levels of subjective well-being and experience of inclusion, we explored the effect of a social holiday on sub-components of the constructs. A quantitative two-stage survey, with pre- and post-holiday measurements involving the holiday-taking group and the control group, was undertaken. The data was collected in conjunction with Hyvinvointilomat ry, Finland’s largest holiday association, receiving annually almost 10, 000 applications, of which approximately 30 % are accepted. In testing the hypotheses, mixed ANOVA analysis with simple effects tests were conducted on unmatched and matched data and estimates of the average treatment effect on treated (ATET) were conducted on data matched with a propensity score method.

Measures and data collection

Our questionnaire was designed with the aim to measure different sub-components, with multi-item scales (Appendix I). Where possible, items and scales were adopted from previous studies measuring the outcomes of social holidays, to enable comparisons. For scales measuring subjective well-being and experience of inclusion, a 7-point Likert scale was used. The questionnaire included scales and items originally constructed in English and Finnish (the experience of inclusion scale). Differences between the two languages caused some translation challenges, requiring some revision

from their original formats. Before the pilot round of data collection, the questionnaire was tested among a group of 21 individuals, and the wording of some items was slightly modified. Similar modifications were executed after a pilot study in August 2018.

The dataset consists of all those respondents who completed first and second-stage questionnaires in both the holiday-taking group (before data cleaning N=313) and the control group (N=72). Each survey involved exactly the same scales and items (apart from the family group, who received the additional module {N=111 in the holiday-taking group, N=53 in the control group}). The questionnaire was sent by e-mail and postal mail (details and response rates presented in Table 1). Regarding ethical procedures and anonymity, the questionnaire was sent by the holiday association, so that no personal details were available for the research group at any stage of the study. Two waves of data collection were undertaken in November 2018 (application for winter holidays 2019), and March 2019 (application for summer holidays 2019). The first-round questionnaire was sent to all holiday applicants. Later, those who were accepted and had been on a holiday, received the second-round questionnaire one month after the holiday. Each applicant was assigned an identification number, which enabled respondent matching of pre-and post-holiday surveys.

Table 1. The numbers of sent and returned questionnaires and the response rates.

	Sent questionnaires	Returned questionnaires	Response rate %
November 1st-round	2310	835	36,15
November 2nd-round	1004	368	36,65
March 1st-round	4020	1205	29,98
March 2nd-round	959	245	25,55
All 1st-round questionnaires	6330	2040	32,23
All 2nd-round questionnaires	1963	613	31,23
Control group survey	1886	187	10

Control group data was collected in March 2019 amongst those rejected for a holiday. The control group includes respondents who completed both the March 1st round survey (common to all holiday applicants) and the control group surveys. Since the employees of the holiday association had to manually retrieve the rejected applicants from their electronic database, only one wave of data collection was possible. The second-round control group questionnaire was undertaken mid-August 2019, and included questions asking whether respondents had been on a holiday since March 2019. Eventually, we decided to include those respondents who had not been a holiday (N=38) and those who had been on a one-to-three-nights self-paid holiday away from home (N=34) in the control group, since otherwise the group would have been too small. Compared to the other rounds of data collection, the response rate of the control group survey is significantly lower for obvious motivational reasons.

Data and variable construction

Since we analyse the treatment effect of a social holiday, the holiday-taking group is considered as the treatment group and the control group as the untreated group. We conducted data cleaning based on a subject's response behaviour. If 61% or more of a subject's responses were identical, they were excluded (see Schonlau & Toepoel, 2015). Altogether, 14 subjects were removed from the treatment group (N=299) and none from the control group (N=72). Applications for a social holiday were evaluated and scored by the Hyvinvointilomat ry holiday association based on financial,

social, and health-related matters, but selection criteria nor the application scores have been strictly defined.

The summary statistics in Table 2 show that most of the respondents are female (81.4%). Family circumstances (except for the group ‘Other’) and age groups are more evenly distributed. Descriptive statistics for age as a scale variable are presented in note 1 in Table 2. The high mean age of 55 highlights the diversity of people applying for and being supported by the holiday association and also explains the smaller number of people holidaying within the context of a family group.

Table 2. Descriptive statistics of background variables

Variable	Freq.	Percent	Cum.
Gender			
Male	69	18.6	18.6
Female	302	81.4	100
Total	371	100	
Family circumstances			
Living alone	117	31.62	31.62
Single parent	52	14.05	45.68
In a relationship, no children at home	92	24.86	70.54
In a relationship, children at home	98	26.49	97.03
Other	11	2.97	100
Total	370	100	
Age group			
19-37	76	20.49	20.49
38-44	49	13.21	33.69
45-56	61	16.44	50.13
57-68	67	18.06	68.19
69-73	59	15.9	84.1
74-91	59	15.9	100
Total	371	100	

Note 1: Age has a mean of 55.75 ($SD = 17.33$) varying between 19 and 91 ($N = 371$).

Before analysing the data, we created averaged sum variables of the sub-components of subjective well-being and experience of inclusion, all having Cronbach’s Alphas greater than 0.82 (see Appendix II). Satisfaction with different life domains and the additional item of family well-being were analysed as single Likert scale variables. The variables measuring family well-being include only those who have filled this part of the questionnaire, whereas other variables include all respondents.

Descriptive statistics of the original (unmatched) data in the first and the second-round measures are presented in Appendix III by group. The descriptive statistics show some indications of the impacts of selection bias or confounding factors, which are typical in situations where the respondents’ assignment to the treatment group and the control group is non-randomised. Firstly, there are cases where the pre-test difference between the groups is large (and statistically significant, as shown by the corresponding tests in Table 3). The numbers of such cases are nine in the unmatched data but two in the matched data. Secondly, the table shows two cases where the pre-test and post-test mean differences are equal (non-significant). These remain also in the matched data. Thirdly, there is one case, where a statistically significant pre-test difference between the groups disappears in the post-

test comparison. This remains in the matched data. These signs of a non-randomised composition of the treatment and the untreated groups are discussed in more detail in the data analysis section.

Analysis strategy: Addressing selection bias and confounding factors

As explained above, social holiday applicants, firstly, self-selected to be considered for a treatment, and then, were either selected or not selected by the social holiday association. The potential selection bias and confounding factors may mask or falsely generate a statistical association between a treatment and an outcome. To address these issues in the analysis we used both unmatched and matched data and conducted both mixed ANOVA analysis and an average treatment effect estimation. We used two matching procedures. Firstly, case-control matching based on gender, family circumstances and age-groups as covariates was undertaken. The procedure generated an exact match dataset – that is, data with similar groups – with 69 individuals in the treatment group and 72 in the untreated group (see chi-squares reported in Appendix IV).

In the mixed ANOVA analysis we focused on the interaction term, the significance of which suggests that either time (within-subject factor) has a different effect in different groups, or group (between-groups factor) has a different effect in different time points. We then used simple effects test to break the interaction into parts, whereby time (pre-test – post-test difference) was tested at the treatment group and then at the untreated group, and group (treated – untreated difference) was tested at pre-test and then at post-test.

The other matching procedure is based on a propensity score matching with inverse probability weighting procedure (IPW). This procedure uses logistic regression with selected baseline covariates (demographic and other relevant variables measured before the treatment) to calculate a probability of being treated for each respondent. The weighting procedure then generates groups of treated and untreated participants by giving each a weight, which is the inverse of the probability of having had the treatment (Austin, 2011). Consequently, the average treatment effect on treated was calculated and tested based on the weighted dataset. In applying the inverse probability weighting procedure to our data, a limited number of covariates was available (gender, age and dummy-variables for family circumstances). Following Stuart (2010) and Adelson, McCoach, Rogers, Adelson and Sauer (2017), in estimating average treatment effect for a particular outcome variable, we included the pre-test measure of the outcome variable into the set of covariates and checked the balance of the covariates in the groups. We used balance checks based on standardised differences between groups, variance ratio and chi-square test of covariance balance (see Appendix IV for details). Hence, in estimating an average treatment effect for each outcome variable, the set of covariates was adjusted so that a balance in terms of the checks was achieved. However, unmeasured confounding factors are not controlled for in the inverse probability weighting procedure. Additionally, a strategy of responding to selection bias and confounding factors is one among several approaches. Therefore, some caution is needed when interpreting the test results.

As the test results are not uniform, we use scatterplots to gain information of the association between pre-tests and post-tests in the treated and untreated groups. The scatterplots also help to identify whether the treatment has an impact on those whose pre-test scores are low. Figure 1 presents pre-test/post-test scatterplots for each outcome variable. The curves representing the treatment and the untreated groups are Epanechnikov kernel-weighted local polynomial smoothing curves (75% of the data included in the calculation).

RESULTS

We present the results of the surveys in Table 3. As stated, our hypotheses were that a social holiday generates impacts subjective well-being and experience of inclusion (and their sub-components). What Table 3 reports is therefore the time*group interaction term of the mixed ANOVA test and the corresponding simple effects tests conducted with the unmatched and matched data.

If the group variances are not equal and the mixed ANOVA F-test is potentially biased, the F-statistics are marked with an underline. If the groups variances are equal and the interaction term is significant, the simple effects tests are used to interpret whether there is evidence of the treatment effect on treated in the expected direction. All tests of the average treatment effect on treated are based on the balanced data. The baseline covariates used in the inverse probability weighting procedure are provided in the footnotes to Table 3.

Since our aim is to assess the relative impacts of a social holiday accounting for measurement inaccuracies, selection bias and confounding factors, we present the analyses in three categories. First, we report results which *provide evidence of an association* between a social holiday and well-being/inclusion outcomes. Secondly, we turn to cases *indicating signs of evidence* of an association, but with conflicting information. Finally, we present cases where different tests and analyses of scatterplots give *unclear evidence* prohibiting meaningful interpretations.

In terms of evidence of an association effect of a holiday, we found that satisfaction with life, satisfaction with economic situation, satisfaction with employment situation, satisfaction with social life, satisfaction with the quality of leisure time, family level social comparison and the additional family specific item “In our family we spend a lot of time doing things together outside home” have positive results. In these cases, all tests with unmatched data and/or matched data suggest there being an association in the expected direction.

Table 3. Mixed ANOVA test, simple effect test and test of average treatment effect on treated (ATET)

Unmatched data						Matched data						Inverse probability weighted		
Interaction		Simple effect test				Interaction		Simple effect test						
Time*Group		Group <i>MD</i>		Time <i>MD</i>		Time*Group		Group <i>MD</i>		Time <i>MD</i>		ATET	K	Obs.
		Treated - Untreated		Post - Pre				Treated – Untreated		Post - Pre				
<i>F</i>	<i>p</i>	Pre	Post	Treated	Untreated	<i>F</i>	<i>p</i>	Pre	Post	Treated	Untreated			
Satisfaction with Life														
4.37	0.04	0.17	0.43***	0.26**	0.00	<u>2.45</u>	0.120	0.09	0.36	0.25**	0.00	0.82**	1	366
Physical Health														
<u>11.51</u>	0.001	0.12	0.63***	0.26***	-0.25*	6.05	0.015	0.10	0.62**	0.17	-0.25**	0.31	5	370
Mental Health														
8.60	0.004	0.27	0.72***	0.31***	-0.14	12.13	0.001	-0.10	0.52**	0.48***	-0.14	0.34	1	370
Economic Situation														
9.13	0.003	0.39*	0.85***	0.42***	-0.04	1.59	0.210	0.06	0.289	0.19	-0.04	0.37*	1	368
Societal Status														
<u>5.81</u>	0.016	-0.03	0.37**	0.19**	-0.21	<u>3.81</u>	0.053	-0.05	0.330	0.17	-0.21	0.43	6	369
Employment Situation														
2.81	0.095	0.26	0.61**	0.38***	0.03	1.87	0.174	0.19	0.50	0.34*	0.03	0.82***	5	207
Social Life														
3.654	0.057	0.46**	0.77***	0.41***	0.10	2.43	0.121	0.35	0.69***	0.44***	0.10	0.74***	1	368
Family														
6.89	0.009	-0.24	0.16	0.28****	-0.13	2.17	0.143	-0.04	0.26	0.17	-0.13	0.39	1	364
Amount of Leisure Time														
<u>.52</u>	0.471	0.87***	0.99***	0.20**	0.07	.02	0.895	0.32	0.36	0.10	0.07	0.47*	1	367
Quality of Leisure Time														
<u>5.88</u>	0.016	0.52***	0.93***	0.44***	0.03	4.34	0.039	0.18	0.66***	0.51***	0.03	0.80***	5	366
Calmness of Daily Life and Life Management														
<u>4.76</u>	0.030	0.47***	0.82***	0.32***	-0.03	<u>.79</u>	0.375	0.32	0.49**	0.15	-0.03	0.46*	5	370
Reasonableness of Life														

6.05	0.014	0.07	0.44**	0.33***	-0.04	1.09	0.298	0.20	0.37	0.13	-0.04	0.40	1	370
Learning and Self-development														
5.93	0.015	0.00	0.42**	0.16**	-0.26*	3.71	0.056	-0.01	0.35	0.09	-0.26**	0.45	5	368
Positive Affect														
2.78	0.960	0.25	0.47**	0.31***	0.08	2.87	0.093	0.21	0.51**	0.37***	0.08	0.37	5	358
Negative affect														
1.07	0.303	-0.40**	-0.58***	-0.30***	-0.12	2.36	0.127	-0.18	-0.52**	-0.46**	-0.12	-0.09	1	364
Social Well-being														
5.98	0.015	0.36**	0.65***	0.10*	-0.20*	2.35	0.128	0.38*	0.62***	0.04	-0.20*	0.43***	1	369
Experience of Inclusion														
8.02	0.005	0.26*	0.54***	0.15***	-0.14	2.87	0.092	0.26	0.48**	0.09	-0.14	0.29	1	357
Social Comparison														
15.06	0.000	0.22	0.79***	0.17**	0.40***	4.98	0.027	0.11	0.55*	0.03	-0.40***	0.82**	1	368
Family Cohesion														
4.47	0.036	0.03	0.30*	0.07	-0.21*	4.12	0.045	-0.09	0.20	0.08	-0.21**	0.29**	2	161
Family Expressiveness														
7.21	0.008	-0.45**	-0.04	0.23**	-0.18	5.85	0.017	-0.46*	-0.09	0.18*	-0.18*	0.39*	3	159
Family Conflict														
3.63	0.059	-0.074	-0.36*	-0.09	0.20	3.36	0.069	0.05	-0.26	-0.11	0.20	-0.31**	2	161
Family Social Comparison														
4.15	0.043	-0.216	0.24	0.35***	-0.11	2.93	0.090	-0.15	0.27	0.31*	-0.11	0.44**	4	161
Family Doing Things Outside Home														
6.85	0.009	-0.21	0.45**	0.81***	0.15	3.10	0.081	-0.20	0.26	0.61**	0.15	0.55***	3	161

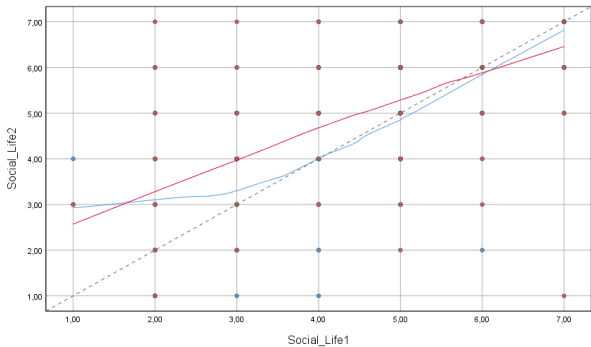
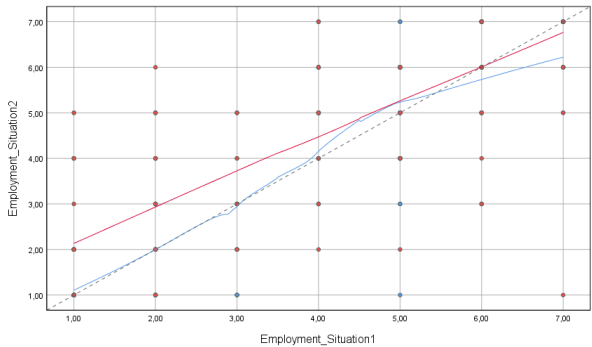
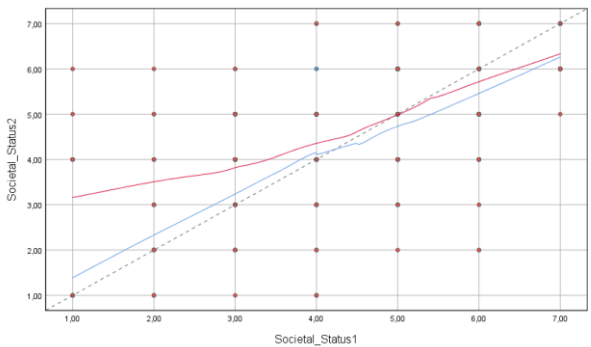
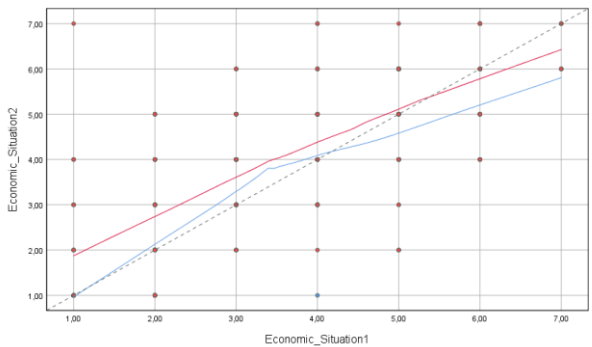
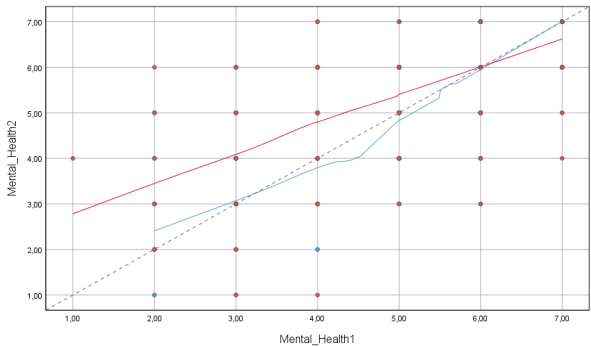
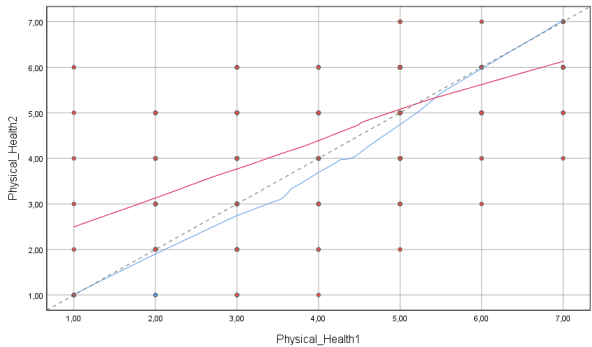
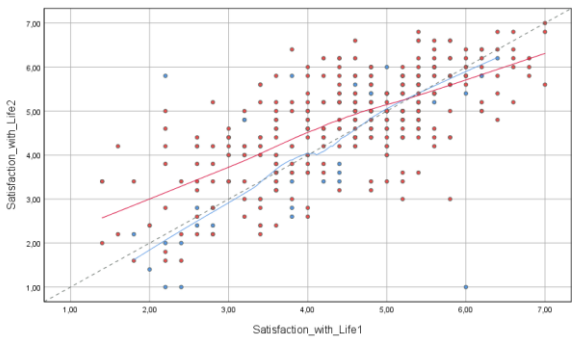
Notes: MD = mean difference; ATET = average treatment effect on treated; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. K denotes the covariate pattern used (in addition to the pre-score) in logistic regression to predict the probability of being treated: 1 Gender, living alone, single parent, couple with children at home, age; 2 Age group; 3 Gender, age group; 4 Gender, single parent, couple with children at home, age; 5 Gender, living alone, single parent, couple with children at home; 6 Gender, living alone, single parent. Others than age were entered as dummy variables.

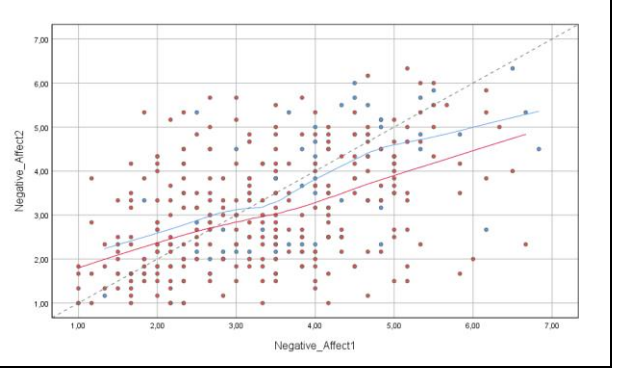
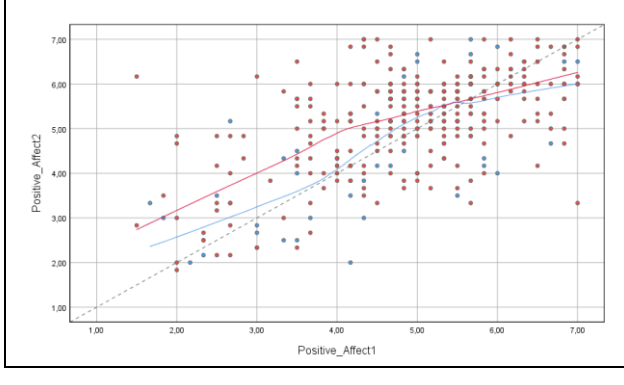
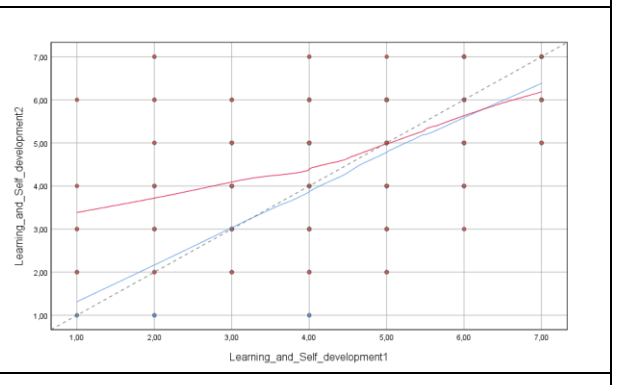
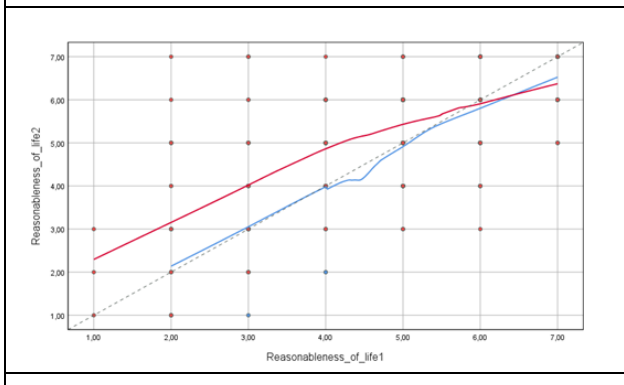
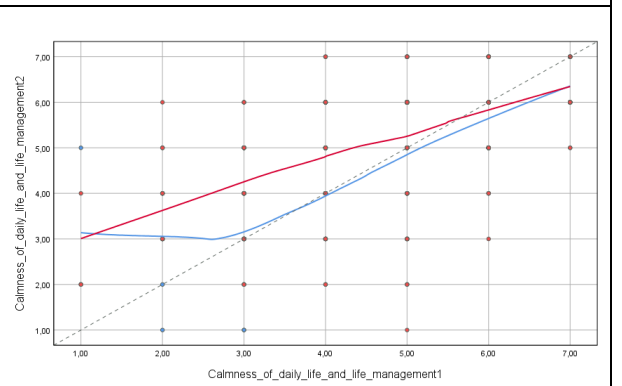
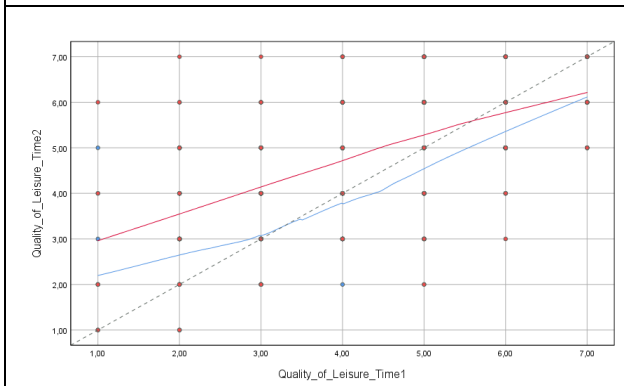
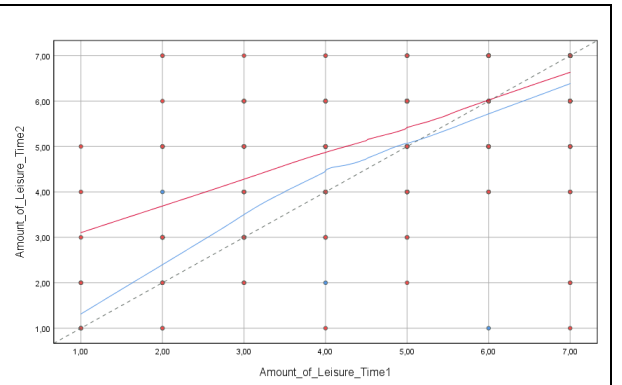
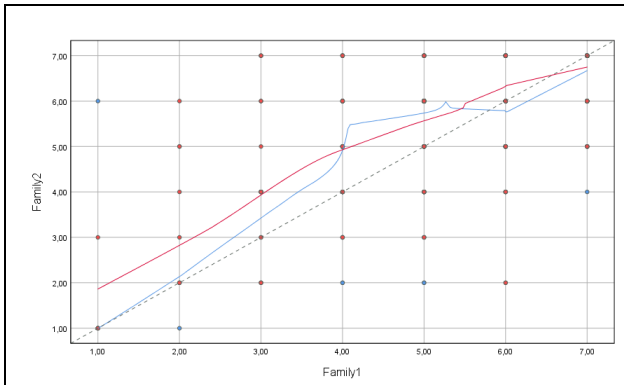
In the more ambiguous set, either the average treatment effect test was nonsignificant or the ANOVA tests suggest conflicting results. However, although the results must be interpreted carefully, signs of a positive association between holiday-taking and well-being/inclusion outcomes cannot be ignored. Satisfaction with mental health is a case where both ANOVA tests imply there being an association, but average treatment effect test does not. A similar case is positive affect, to which the ANOVA test with matched data indicates an association, but the ANOVA test with unmatched data is potentially biased and average treatment effect on treated is nonsignificant. The scatterplot indicates an effect on satisfaction with the amount of leisure time, but the unmatched data ANOVA test is potentially biased, and the matched data ANOVA does not suggest there being an association. Regarding satisfaction with family, neither the matched data ANOVA, nor the average treatment effect test indicate significant association. Quite ambiguous information from the scatterplot is also evident. Family cohesion, family conflict, individual level social comparison, and satisfaction with calmness of daily life and life management are cases where average treatment effect on treated is significant but the ANOVA tests are somewhat ambiguous: there is either significant change in the untreated group (family cohesion, family conflict, individual level social comparison, social well-being) or a potentially biased ANOVA result (social comparison and social well-being). Satisfaction with calmness of daily life and life management is also linked to potentially biased ANOVA results both with unmatched and matched data.

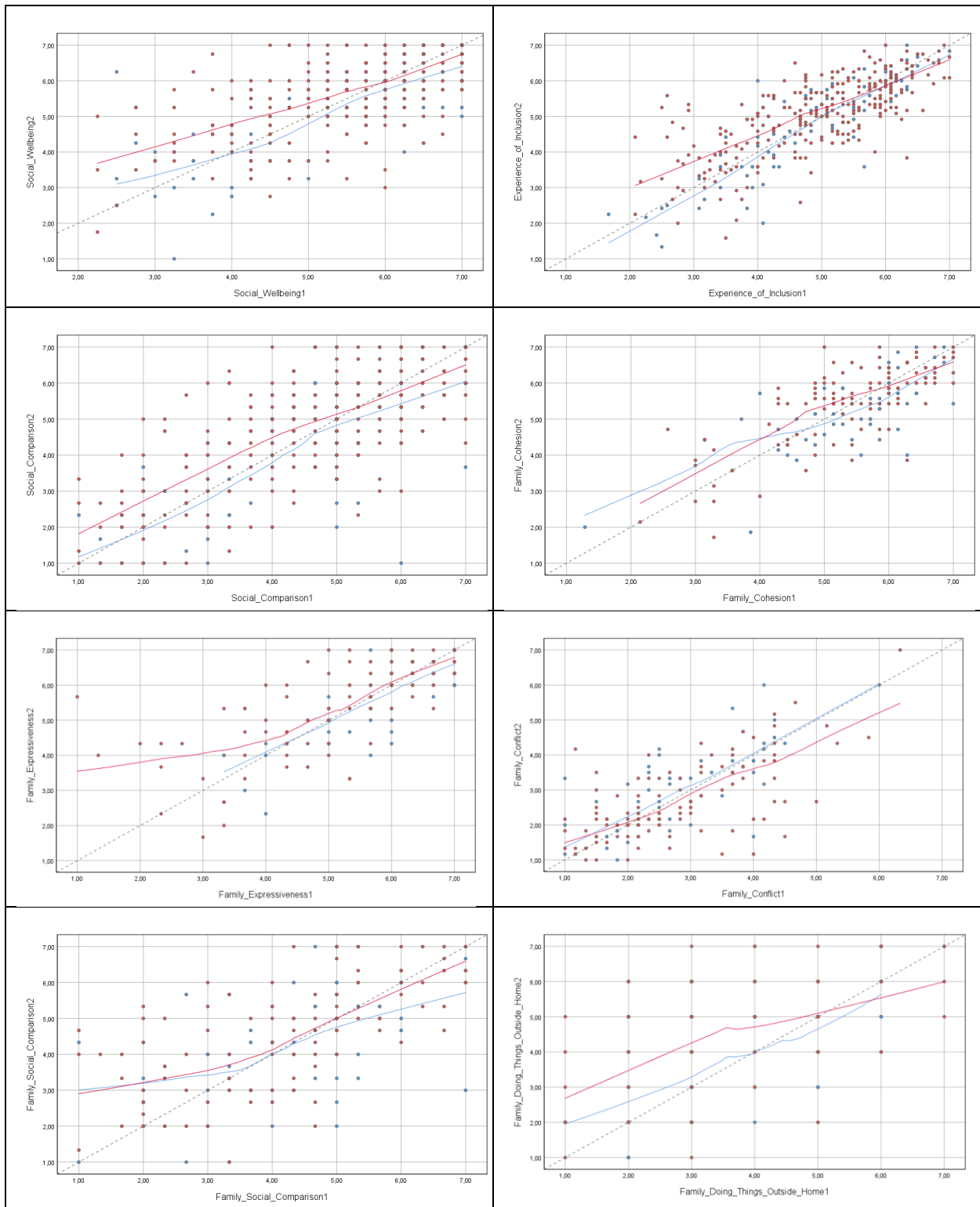
Figure 1. Pre-score vs post-score scatterplots by group (unmatched data)

Legends:

X-axis: pre-score
Y-axis: post score
The dotted diagonal line shows the cases where one's pre-score equals post-score.







From the methodological perspective, a unique case is experience of inclusion, which may suffer from the broadness of scope of the variable measures. Although the corresponding scatterplot suggests a systematic but quite weak association between a social holiday and experience of inclusion, both ANOVA tests are potentially biased and average treatment effect on treated is nonsignificant, which indicates no treatment effect as a result of a holiday. Another unique case is family expressiveness, which meets significant average treatment effect test, significant ANOVA tests and significant treatment group changes towards expected direction, but which is associated

with two critical observations: firstly, family expressiveness in the control group has decreased in the matched data test and also, the group mean scores are apart from each other in the first measurement. Secondly, as shown in the corresponding scatterplot, the control group lacks responses with low values in the first measurement, which may bias the test results. Family expressiveness is also skewed to left, meaning that high values are over-represented in responses.

There are also methodological lessons related to some response variables. In addition to family expressiveness, family cohesion suffers from strong skewness to left, whereas family conflict is skewed to right. This suggests that, due to respondents' tendency to answer with high (or low) values, the variables do not properly measure the intended items. Alternatively, there might be a self-selection problem related to general motivations for applying for a social holiday. This problem may actualise if families with high levels of expressiveness and cohesion and low levels of conflict are more motivated to apply for a social holiday than families with low levels of expressiveness and cohesion and high levels of conflict.

Finally, the most problematic cases are negative affect, satisfaction with reasonableness of life (translated as life being as close to what one could reasonably expect it to be), satisfaction with physical health, satisfaction with societal status and satisfaction with learning and self-development. Regarding these, the average treatment effect on treated is nonsignificant and the matched data ANOVA test does not suggest signs of an association. In the case of negative affect, the scatterplot suggests an effect on the treatment group which, however, is associated with a parallel uncontrolled effect on the untreated group. Although satisfaction with reasonableness of life is quite far away from significant, test results on the scatterplot suggest a quite clear effect.

Other problematic cases are best explained by the presence of some uncontrolled confounding factors. Satisfaction with physical health, satisfaction with societal status, and satisfaction with learning and self-development are cases where the control group pre-post mean difference is negative, indicating that an uncontrolled, confounding factor has caused the effect. On the other hand, similar but nonsignificant factors may have also affected the cases where both treated and untreated respondents, who gave quite low values in the first measurement, reported higher values in the second measurement. Satisfaction with social life and family-level social comparison, as well as satisfaction with calmness of daily life and life management, fall into this category.

DISCUSSION

The study sought to address the effects of a social holiday on subjective well-being and experience of inclusion. The evidence of a positive effect on satisfaction with life as a result of a social holiday confirms previous findings. A holiday-taking group has been found to be happier with their life-satisfaction after a holiday (Gilbert & Abdullah, 2004) and in studies where comparison is made to non-vacationers (Nawijin, 2011). According to one theory, increased satisfaction with leisure life and other major life domains may “spill over vertically” and actualise as increased general-level life satisfaction (Neal et al., 2007). In terms of leisure life, we found a clear positive effect on satisfaction with the quality of leisure time after holiday-taking. Additionally, signs of an effect were recognised on satisfaction with the amount of leisure time. Our findings align with previous studies (Gilbert & Abdullah, 2004; McCabe & Johnson, 2013; Pyke et al., 2019), which found positive relationships between a holiday and satisfaction with leisure. For some, a break from mundane routines and responsibilities (see e.g. McCabe et al., 2010) may have increased satisfaction with calmness of daily life and life management since we found a positive effect also on this domain. Additionally, Finnish social holidays include educational elements which aim to improve life management for participants.

Satisfaction with employment situation and satisfaction with economic situation are interesting cases, since one would not expect these to differ as a result of a holiday. However, we found a positive association between employment situation and economic situation. Previous studies have found that a social holiday can promote optimism and fresh perspectives on life, which can be related, for example, to an opportunity to experience new places (Kakoudakis et al., 2017; McCabe, 2009). It is also possible that since the respondents are not necessarily unemployed, satisfaction with job increased as a result of a holiday. For some people, a full-board holiday may materially improve their economic situation. Our findings correspond with the results of Gilbert and Abdullah (2004), who found a large effect size in terms of the job life domain when comparing holiday-takers and non-holiday-takers, and the results of Pyke et al. (2019) who found a significant effect on the domain of material well-being as a result of a daytrip.

A social holiday has been characterised as a potential platform for learning (Bos et al., 2015), but we found no treatment effect on satisfaction with learning and self-development in the holiday-taking group. One reason might be that learning opportunities have been studied from the perspective of children (Bos et al., 2015), whereas our study provides solely adult perspectives, for whom learning outcomes of tourism are often informal and unintended (e.g. Minnaert, 2012a). We also found no effect on satisfaction with physical health. It is possible that physical activities on holiday do not necessarily promote physical activity and well-being in the home environment (see e.g. Komppula et al., 2016), which contradicts the objectives of Finnish social tourism. Additionally, we found no positive association between holiday-taking and reasonableness of life, which may indicate that satisfaction with this life domain is fairly stable and may relate to high levels of well-being amongst Finns generally.

In terms of satisfaction with mental health, the signs of a positive effect are noteworthy, despite the contradictory information provided by treatment effect values. This aligns with previous qualitative analyses that emphasise the role of psychological recreation as a benefit of social tourism (e.g. McCabe & Johnson, 2013). Among social tourists, the need for mental recreation might be heightened due to challenges faced in daily life. Regarding happiness, we found similar signs of an effect on positive affect, but no signs of an effect on negative affect. When comparing holiday-takers and non-holiday-takers, Gilbert and Abdullah (2004) discovered moderate effects on positive affect and small effects on negative affect as a result of holiday-taking, whereas McCabe and Johnson (2013) found no effect on these aspects after a social holiday. However, it should be noticed that those measures are not directly comparable to those applied here.

In our analysis, satisfaction with family indicates signs of positive association, whereas some previous studies have found a significant effect on the 'family' domain of life after participating social tourism (Pyke et al., 2019). Regarding relational aspects, a positive effect was found on satisfaction with social life and signs of an effect on social well-being. A social holiday can enhance involvement in social networks (Minnaert et al., 2009) and the benefits of social tourism on relational aspects have also been noted in previous quantitative studies (e.g. McCabe & Johnson, 2013). However, our tests did not indicate a treatment effect on experience of inclusion, which to some extent contradicts scores of social well-being, since the scales involve similar elements. The scope and broadness of the experience of inclusion measure might explain this contradiction. Currently, the scale involves items measuring environmental mastery and meaning/purpose of life, as well as social relations and belongingness, which may be ambiguously interpreted. In further analyses, we would consider developing the measure into separate components.

Our analyses suggest ambiguous signs of a treatment effect on individual-level social comparison and no effect on satisfaction with societal status as a result of a social holiday. However, we found a positive effect on family-level social comparison, which is a crucial aim of social tourism providers and suggests that a social holiday can act as a tool to decrease experiences of inequality among

disadvantaged families. According to McCabe (2009), parents of disadvantaged families are often aware that their children are missing out on experiences that are available to most people in society, which provokes feelings of guilt. They also express a need to lead a 'normal' life (McCabe, 2009). Since a disadvantaged socioeconomic position tends to transfer across generations, supporting disadvantaged families has been identified as the most effective way to prevent societal inequality (Finnish Institute for Health and Welfare, 2019).

Concerning other family outcomes, family expressiveness is an interesting case from the methodological perspective. It appears that the control group, which is highly unevenly distributed, is a potential source of bias. After careful examination, we suggest that a family holiday can be associated with improved family expressiveness, referring to the nature and facility of intra-family communication in the treatment group (Fok et al., 2014). Additionally, a relationship was found for things a family does together outside home, which can be seen as an example of positive behaviour change, supporting previous findings linking social tourism to enhanced family outcomes (Minnaert et al., 2009). The association between a subsidised family holiday and family cohesion and family conflict remains ambiguous. The skewness related to these variables, as well as to family expressiveness, indicate that despite challenging life situations, there seems to be emotional bonding and communication within families and family conflicts appear infrequent. One interpretation is that families with low levels of cohesion and expressiveness and high levels of conflict might not be motivated to apply for a family holiday. The self-selection issue should be factored into future analyses. Social tourism organisations also need to be aware that the most disadvantaged families may not be applying for support (McCabe et al., 2012). However, there might also be complexities in measurement of these constructs. Family well-being can be a sensitive topic and some of the items attempt to measure highly personal aspects of family life, leading to a risk of social desirability bias affecting the results (Grimm, 2010).

Confounding factors

The study has indicated that measures of well-being effects that have been utilised in tourism and social tourism research are quite sensitive to the influence of confounding factors, which may lead to misinterpretations of the positive associations between holiday outcomes and well-being. The inclusion of the control group data has demonstrated where such confounding factors come into play and helps to give a more balanced and nuanced picture of the presence and extent of such associations. Some of the constructs, namely positive affect, negative affect, satisfaction with social life, family-level social comparison, and satisfaction with calmness of daily life and life management, indicate positive development both among holiday-takers and, to some extent, also the control group. This may be related to general high levels of well-being and standards of living in Finland, and/or the fact that some in the control group had taken a short holiday trip away from home. The composition of the control group represents a limitation of the study since half of control group has been on a short holiday trip during the follow-up period. Additionally, the control group survey was conducted during summertime, when general levels of happiness may be higher, and is the general holiday season, which could hypothetically affect the results.

Finally, some of the variables indicate no statistically significant differences on the holiday-taking group, but negative differences on the control group. The rejection of a holiday application may have negatively affected the control groups' post-holiday response behaviour. It is also possible that spending a summer holiday mainly at home with limited opportunities to travel and leisure activities may have caused the negative feelings in the control group. Generally, a summer holiday might be a period during which an unequal socio-economic status is somehow emphasised, whereby individuals experience this more strongly than at other times. This may have negatively, but non-significantly, affected satisfaction with societal status and significantly affected individual-level social comparison. Additionally, social well-being, satisfaction with physical health and satisfaction

with learning and self-development also indicate negative significant effect in the control group. For some respondents, the amount of social contacts and overall activity may have decreased during summertime, leading to a passive lifestyle and decline in these dimensions. Overall, these findings accentuate the importance of an annual holiday away from home and illustrate, how exclusion of holiday-taking can potentially lead to decreased well-being.

CONCLUSIONS

It is clear that greater conceptual clarity and sophisticated methods are required to advance our understanding of the impacts of social tourism programmes. This study contributes to the debates on the links between holiday-taking and subjective well-being through the integration of theory of subjective well-being with 'Experience of Inclusion' theory. This increases our understanding of the associations between social tourism and relational, social and inclusionary outcomes, linked to eudemonic, developmental outcomes. The study contributes to the developing theory on experience of inclusion, since follow-up analyses have not previously been undertaken, so there is no understanding of how this concept may be linked to holiday-taking. Additionally, we examined how different aspects of well-being and inclusion are conceptually related, thus contributing to the development of the concepts. Further empirical examination of these potential relationships is an area for future research in this field.

Assessing the effects of a holiday is never straightforward, and there is a need to continue to develop and refine measures and methods of evaluating the relationships between holiday-taking, well-being and broader outcomes such as social inclusion, to address tourism's role as a positive force in society. This study aimed to address these issues through the integration of experience of inclusion concept with subjective well-being measures, exploring the relative effects on different groups. The inclusion of a control group provided extra value in the analyses, but also creates additional issues and complicates the interpretation of the research. Our analysis highlights some dimensions of subjective well-being and experience of inclusion that are sensitive to uncontrolled, confounding factors. Additionally, we found issues with the measures, as well as a potential self-selection bias related to the application process of social holidays. This suggests that future studies should carefully consider the development of empirical tools and longitudinal analyses to contribute further knowledge on the wellbeing outcomes from holiday participation. A limitation of this study is that solely one post-holiday measure was undertaken. A follow-up survey at one, two, and three months after a holiday, would enable capturing the potential fade-out effect of the outcomes (see e.g. Chen et al., 2013). Qualitative data could also complement a greater understanding of the personal and family circumstances, as well as the longer-term role played by social holidays in social inclusion and subjective well-being.

Finally, it is noteworthy that even a sophisticated quantitative methodology provided evidence that a Finnish social holiday is associated positively with a range of well-being outcomes. This signals that the Finnish social tourism system, characterised by some unique features, is effective, which supports the justification and general acceptance of social tourism agenda (Minnaert et al., 2006; Vento & Komppula, 2020). Generally, some of our results align with those of the previous research, whereas some are unique in social tourism. Satisfaction with life, satisfaction or contentment with different domains of life, social well-being, and emotional affect, have been recognised as important outcomes of a holiday amongst the general population as well as for social tourists (e.g. Chen, Lehto & Cai, 2013; McCabe & Johnson, 2013). Our analysis supports these findings, and most of the items indicate either positive effect or signs of a positive improvement resulting from a social holiday. Concerning the effect of a holiday on inclusionary aspects, experience of inclusion seems to be fairly stable and indicates no clear association with the treatment effect of a social holiday. Yet, experience of inclusion measures should be developed further, since they are currently broad and might lead to ambiguous results. Although our findings could also be attributed to a generally

high standard of living amongst Finns, which suggests a need for cross-cultural studies, this study also indicates that a social holiday can be used as a tool to decrease the experience of inequality among disadvantaged families. This supports both hypotheses and demonstrates the societal value of a holiday even amongst societies with advanced well-being levels. Regarding other family well-being outcomes, the positive pre-holiday values generally leave limited scope for improvement.

The findings have important implications for social tourism organisations, beyond the Finnish context. The results provide clear support that such holidays play important functions in both well-being and experience of equality for disadvantaged people. A sense of feeling included in society, evidenced by the social comparison scores, underscores the value of holidays in policy aimed to address social exclusion, and should be emphasised in lobbying work of social tourism organisations. Social holiday providers need to know which aspects of well-being are most effective in order to develop programmes and offers that are based around the optimal balance of social/cohesive and developmental activities that can be tailored to the different needs and life situations of applicants and target groups. A more nuanced understanding of the various ways holidays benefit families can help referrers identify the type and timing of holiday support to maximise outcomes.

Elli Vento is a project researcher at the University of Eastern Finland Business School and is exploring the effects of social tourism in the Finnish context.

Timo Tammi is a university lecturer at the University of Eastern Finland Business School and research interests include behavioral economics, decision making and the behaviour of small and medium-sized firms.

Raija Komppula is professor at the University of Eastern Finland Business School and her field is tourism marketing.

Scott McCabe is professor at Nottingham University Business School and Professor of Tourism Management/Marketing at the University of Eastern Finland Business School, working in social tourism.

Acknowledgements The authors are grateful for funding provided by the Kuluttajaosuustoiminnan Säätiö and for the kind assistance and partnership afforded by the holiday association Hyvinvointilomat ry, without which this research project would not have been possible.

References

- Adelson, J. L., McCoach, D. B., Rogers, H. J., Adelson, J. A., & Sauer, T. M. (2017). Developing and applying the propensity score to make causal inferences: Variable selection and stratification. *Frontiers in Psychology*, 8, 1–10.
- Anderson, L., & Ostrom, A. L. (2015). Transformative service research: Advancing our knowledge about service and well-being. *Journal of Service Research*, 18(3), 243–249.
- Andrews, F., & Whithey, S. (1976). Social indicators of well-being: America's perception of life quality. New York: Plenum Press.
- Austin, P. C. (2011). An introduction to propensity score methods for reducing the effects of confounding in observational studies. *Multivariate Behavioral Research*, 46 (3), 399–424.
- Bos, L., McCabe, S., & Johnson, S. (2015). Learning never goes on holiday: An exploration of social tourism as a context for experiential learning. *Current Issues in Tourism*, 18(9), 859–875.

- Chen, Y., Lehto, X. Y., & Cai, L. (2013). Vacation and well-being: A study of Chinese tourists. *Annals of Tourism Research*, 42, 284–310.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95(3), 542–575.
- Diener, E., & Emmons, R. A. (1984). The Independence of positive and negative affect. *Journal of Personality and Social Psychology*, 47(5), 1105–1117.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71–75.
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of Progress. *Psychological Bulletin*, 125(2), 276–302.
- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S., & Biswas-Diener, R. (2010). New measures of well-being: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research*, 97, 143–156.
- Dolnicar, S., Yanamandram, V., & Cliff, K. (2012). The contribution of vacations to quality of life. *Annals of Tourism Research*, 39(1), 59–83.
- European Social Survey. (2013). Round 6 module on personal and social well-being – Final module in template. London: Centre for Comparative Social Surveys, City University London.
- Ferrer, J. G., Sanz, M. F., Ferrandis, E. D., McCabe, S., & García, J. S. (2016). Social tourism and healthy ageing. *International Journal of Tourism Research*, 18(4), 297–307.
- Finnish Institute for Health and Welfare. (2019). Eriarvoisuus: Lapset ja perheet. Available at <https://thl.fi/fi/web/hyvinvointi-ja-terveyserot/eriarvoisuus/elamankulku/lapset-ja-perheet> Accessed 28.2.2020.
- Fok, C. C. T., Allen, J., Henry, D., & People Awakening Team. (2014). The brief family relationship scale: A brief measure of the relationship dimension in family functioning. *Assessment* 2014, 21(1), 67–72.
- Gilbert, D., & Abdullah, J. (2004). Holidaytaking and the sense of well-being. *Annals of Tourism Research*, 31(1), 103–121.
- Griffin, K., & Stacey, J. (2011). Towards a “tourism for all” policy for Ireland: Achieving real sustainability in Irish tourism. *Current Issues in Tourism*, 14(5), 431–444.
- Grimm, P. (2010). Social desirability bias. In Wiley International Encyclopaedia of marketing. Chichester: Wiley.
- Hyvinvointilomat ry. (2018). Toimintakertomus 2017. Finland: Hyvinvointilomat ry, Helsinki.
- Institute for Social and Economic Research. (2009). British household panel survey, wave 18. Essex: The University of Essex.

- Isola, A.-M., Kaartinen, H., Leemann, L., Lääperi, R., Schneider, T., Valtari, S., & Keto-Tokoi, A. (2017). Mitä osallisuus on? Osallisuuden viitekehystä rakentamassa. Helsinki, Finland: Terveiden ja hyvinvoinnin laitos (THL). Työpaperi 33/2017.
- Kakoudakis, K. I., McCabe, S., & Story, V. (2017). Social tourism and self-efficacy: Exploring links between tourism participation, job-seeking and unemployment. *Annals of Tourism Research*, 65, 108–121.
- Kastenholz, E., Eusébio, C., & Figueiredo, E. (2015). Contributions of tourism to social inclusion of persons with disability. *Disability & Society*, 30(8), 1259–1281.
- Komppula, R., & Ilves, R. (2018). Social tourism as correlates of QoL: The case of disadvantaged people. In M. Uysal, M. J. Sirgy, & S. Kruger (Eds.), *Managing quality of life in tourism and hospitality* (pp. 54–69). CABI.
- Komppula, R., Ilves, R., & Airey, D. (2016). Social holidays as a tourist experience in Finland. *Tourism Management*, 52, 521–532.
- Leemann, L., Kuusio, H., & Hämäläinen, R.-M. (2015). Sosiaalinen osallisuus. In Sosiaalisen osallisuuden edistämisen koordinaatiohanke (Sokra). Terveiden ja hyvinvoinnin laitos (THL). https://thl.fi/documents/966696/3775621/Tietopaketti_Sosiaalinen_Osallisuus.pdf/4bc56a65-8eb2-41c3-87b8-0cd963a2c600 Accessed 28.2.2020.
- Lomajärjestöjen yhteistyöryhmä LYR. (2020). Yleistä tuetuista lomista. Available at: <https://www.lomajarjestot.fi/yleista-tuetuista-lomista/>. (Accessed 28 February 2020).
- McCabe, S. (2009). Who needs a holiday? Evaluating social tourism. *Annals of Tourism Research*, 36(4), 667–688.
- McCabe, S., & Johnson, S. (2013). The happiness factor in tourism: Subjective well-being and social tourism. *Annals of Tourism Research*, 41, 42–65.
- McCabe, S., Joldersma, T., & Li, C. (2010). Understanding the benefits of social tourism: Linking participation to subjective well-being and quality of life. *International Journal of Tourism Research*, 12(6), 761–773.
- McCabe, S., Minnaert, L., & Diekmann, A. (2012). *Social tourism in Europe: Theory and practice*. Bristol: Channel View Publications.
- McCabe, S., & Diekmann, A. (2015). The rights to tourism: Reflections on social tourism and human rights. *Tourism Recreation Research*, 40(2), 194–204.
- Minnaert, L. (2012a). Social tourism as opportunity for unplanned learning and behavior change. *Journal of Travel Research*, 51(5), 607–616.
- Minnaert, L. (2012b). The value of social tourism for disadvantaged families. In H. Schänzel, I. Yeoman, & E. Backer (Eds.), *Family tourism: Multidisciplinary perspectives* (pp. 93–104). Bristol, UK; New York, USA; Ontario, CA: Channel View Publications.
- Minnaert, L., Maitland, R., & Miller, G. (2006). Social tourism and its ethical foundations. *Tourism Culture & Communication*, 7(1), 7–17.

Minnaert, L., Maitland, R., & Miller, G. (2009). Tourism and social policy. The value of social tourism. *Annals of Tourism Research*, 36(2), 316–334.

Moos, R. H., & Moos, B. S. (1994). Family environment scale manual. 3rd. Palo Alto, CA: Consulting Psychologists Press.

Morgan, N., Pritchard, A., & Sedgley, D. (2015). Social tourism and well-being later in life. *Annals of Tourism Research*, 52(2015), 1–15. Nawijn, J. (2011). Determinants of daily happiness on vacation. *Journal of Travel Research*, 50(5), 559–566.

Neal, J. D., Uysal, M., & Sirgy, M. J. (2007). The effect of tourism services on Travelers' quality of life. *Journal of Travel Research*, 46(November 2007), 154–163.

New Economics Foundation (nef). (2009). National accounts of well-being: Bringing real wealth onto the balance sheet. London: nef.

Nivala, E., & Ryyänen, S. (2013). Kohti sosiaalipedagogista osallisuuden ideaalia. *Sosiaalipedagoginen aikakauskirja*, 14(2013), 9–41.

Pagan, R. (2015). The impact of holiday trips on life satisfaction and domains of life satisfaction: Evidence for German disabled individuals. *Journal of Travel Research*, 54(3), 359–379.

Pyke, J., Pyke, S., & Watuwa, R. (2019). Social tourism and well-being in a first nation community. *Annals of Tourism Research*, 77, 38–48, 2019.

Schonlau, M., & Toepoel, V. (2015). Straightlining in web survey panels over time. *Survey Research Methods*, 9(2), 125–137.

STEA. (2020). Funding Centre for Social Welfare and Health Organizations. Available at: <http://www.stea.fi/web/en/frontpage>. (Accessed 28 February 2020).

Stuart, E. (2010). Matching methods for causal inference: A review and a look forward. *Statistical Science*, 25(1), 1–21.

Vento, E., & Komppula, R. (2020). Social tourism practices and implementation in Finland. In A. Diekmann, & S. McCabe (Eds.), *Handbook of social tourism* (pp. 244–255). Cheltenham, UK: Edward Elgar Publishing Ltd.

Wilson, W. R. (1967). Correlates of avowed happiness. *Psychological Bulletin*, 67(4), 294–306.

Appendix I. Applied scales and items, their sources and the original items in a case of revision (* = Revised item, ** = Self-developed item)

SATISFACTION WITH LIFE 1=completely disagree.....7= completely agree		
In most ways my life is close to my ideal	Diener et al., 1985: The SWLS	
The conditions of my life are excellent	Diener et al., 1985: The SWLS	
I am satisfied with my life	Diener et al., 1985: The SWLS	
So far I have gotten the important things I want in life	Diener et al., 1985: The SWLS	
If I could live my life over, I would change almost nothing	Diener et al., 1985: The SWLS	
SATISFACTION WITH DIFFERENT DOMAINS OF LIFE 1=completely unsatisfied.....7=completely satisfied		
Physical health *	McCabe & Johnson, 2013; Gilbert & Abdullah, 2004	Health
Mental health *	McCabe & Johnson, 2013; Gilbert & Abdullah, 2004	Health
Economic situation	Gilbert & Abdullah, 2004	
Societal status **	e.g. Hyvinvointilomat ry, 2018; Finnish institute for health and welfare, 2019	
Employment situation *	McCabe & Johnson, 2013	Employment status
Social life	McCabe & Johnson, 2013	
Family	McCabe & Johnson, 2013; Gilbert & Abdullah, 2004	
Amount of leisure time	McCabe & Johnson, 2013	
Quality of leisure time *	McCabe & Johnson, 2013	Spent leisure time
Calmness of daily life and life management **	Hyvinvointilomat ry, 2018	
Reasonableness of life **	Hyvinvointilomat ry, 2018	
Learning and self-development **	Hyvinvointilomat ry, 2018	
EMOTIONAL AFFECT 1=not at all.....7=constantly		
During the past four weeks my mood has been good *	Diener et al., 2010: The SPANE	Good
During the past four weeks my mood has been bad *	Diener et al., 2010: The SPANE	Bad
During the past four weeks I have experienced positive emotions *	Diener et al., 2010: The SPANE	Positive
During the past four weeks I have experienced negative emotions *	Diener et al., 2010: The SPANE	Negative
During the past four weeks I have experienced pleasant emotions *	Diener et al., 2010: The SPANE	Pleasant
During the past four weeks I have experienced unpleasant emotions *	Diener et al., 2010: The SPANE	Unpleasant
During the past four weeks I have been feeling happiness *	Diener et al., 2010: The SPANE	Happy
During the past four weeks I have been feeling sadness *	Diener et al., 2010: The SPANE	Sad
During the past four weeks I have been feeling fear *	Diener et al., 2010: The SPANE	Afraid
During the past four weeks I have been feeling joy *	Diener et al., 2010: The SPANE	Joyful
During the past four weeks I have been feeling anger *	Diener et al., 2010: The SPANE	Angry
During the past four weeks I have been feeling contentedness *	Diener et al., 2010: The SPANE	Contented
SOCIAL WELL-BEING 1=completely disagree.....7= completely agree		
There are people in my life who really care about me	nef, 2009; European Social Survey, 2013	

I have the opportunity to discuss my personal matters with someone *	nef, 2009	Do you have anyone with whom you can discuss intimate and personal matters? (Yes/No)
I receive help and support from other people when I need it *	European Social Survey, 2013	To what extent do you receive help and support from people you are close to when you need it?
I provide help and support to other people when they need it *	European Social Survey, 2013	And to what extent do you provide help and support to people you are close to when they need it?
EXPERIENCE OF INCLUSION 1=completely disagree.....7= completely agree		
I feel ("kokea") that the things I do in my daily life are meaningful *	Isola et al., 2017: Experience of inclusion scale	I feel ("tuntea") that the things I do in my daily life are meaningful
I feel ("kokea") that I get positive feedback of the things I do *	Isola et al., 2017: Experience of inclusion scale	I get positive feedback of the things I do
I feel ("kokea") that I am trusted	Isola et al., 2017, Experience of Inclusion scale	
I feel ("kokea") that I am appreciated *	European Social Survey, 2013	To what extent do you feel appreciated by the people you are close to?
I feel ("kokea") that I am respected *	European Social Survey, 2013	To what extent you feel that people treat you with respect?
I feel ("kokea") that I (self) receive help when I really need it *	Isola et al., 2017: Experience of Inclusion scale	I (self) get help when I really need it
I feel ("kokea") that I am needed from the perspective of some other person *	Isola et al., 2017: Experience of inclusion scale	I am needed from the perspective of some other person
I feel ("kokea") that I belong to a group or a community that is important to me *	Isola et al., 2017: Experience of inclusion scale	I belong to a group or a community that is important to me
I feel ("kokea") that I can pursue the things that are important to me *	Isola et al., 2017: Experience of inclusion scale	I can pursue the things that are important to me
I feel ("kokea") that I can have an influence on some things in my living environment *	Isola et al., 2017: Experience of inclusion scale	I can have an influence on some things in my living environment
I feel ("kokea") that I can have an influence on how my own life goes *	Isola et al., 2017: Experience of inclusion scale	I can have an influence on how my own life goes
I feel ("kokea") that my life has a purpose *	Isola et al., 2017: Experience of inclusion scale	I feel ("tuntea") that my life has a purpose
SOCIAL COMPARISON (own situation compared to others) 1=completely disagree.....7= completely agree		
I feel that I am equal to other people **	e.g. Diener et al., 1999; Finnish institute for health and welfare, 2019	
I feel that I am at the same level with other people **	e.g. Diener et al., 1999; Finnish institute for health and welfare, 2019	
I feel that I have the same possibilities in life that most other people have **	Diener et al., 1999; McCabe et al., 2010	

FAMILY WELL-BEING 1=completely disagree....7= completely agree		
Cohesion		
In our family we really help and support each other	Fok et al., 2014: The BFRS	
Our family spends a lot of time doing things together at home	Fok et al., 2014: The BFRS	
Our family spends a lot of time doing things together outside home **	Context-specific additional item, not included in the sum variable	
In our family we work hard at what we do in our home	Fok et al., 2014: The BFRS	
In our family there is a feeling of togetherness	Fok et al., 2014: The BFRS	
My family members really support each other	Fok et al., 2014: The BFRS	
I am proud to be a part of our family	Fok et al., 2014: The BFRS	
In our family we really get along well with each other	Fok et al., 2014: The BFRS	
Expressiveness		
In our family we can talk openly at home	Fok et al., 2014: The BFRS	
In our family we sometimes tell each other about our personal problems	Fok et al., 2014: The BFRS	
In our family we begin discussions easily	Fok et al., 2014: The BFRS	
Conflict		
In our family we argue a lot	Fok et al., 2014: The BFRS	
In our family we are really mad at each other a lot	Fok et al., 2014: The BFRS	
In our family we lose our tempers a lot	Fok et al., 2014: The BFRS	
In our family we often put down each other	Fok et al., 2014: The BFRS	
My family members sometimes are violent	Fok et al., 2014: The BFRS	
In our family we raise our voice when we are mad	Fok et al., 2014: The BFRS	
Social comparison (family's situation compared to other families)		
I feel that our family is equal to other families **	e.g. Diener et al., 1999; Finnish institute for health and welfare, 2019	
I feel that our family is at the same level with other families **	e.g. Diener et al., 1999; Finnish institute for health and welfare, 2019	
I feel that our family has the same possibilities in life that most other families have **	Diener et al., 1999; McCabe et al., 2010	

Appendix II. Descriptive statistics for all variables and Cronbach's Alpha for composite variables

[illegible]

I feel ("kokea") that I (self) receive help when I really need it													
I feel ("kokea") that I am needed from the perspective of some other person													
I feel ("kokea") that I belong to a group or a community that is important to me													
I feel ("kokea") that I can pursue the things that are important to me													
I feel ("kokea") that I can have an influence on some things in my living environment													
I feel ("kokea") that I can have an influence on how my own life goes													
I feel ("kokea") that my life has a purpose													
<i>Social Comparison</i>	368	4.59	1.53	1.00	7.00	0.92	371	4.65	1.56	1.00	7.00	0.93	
I feel that I am equal to other people													
I feel that I am at the same level with other people													
I feel that I have the same possibilities in life that most other people have													
<i>Family Cohesion</i>	164	5.38	1.08	1.29	7.00	0.90	163	5.35	1.10	1.71	7.00	0.92	
In our family we really help and support each other													
Our family spends a lot of time doing things together at home													
Our family spends a lot of time doing things together outside home													
In our family we work hard at what we do in our home													
In our family there is a feeling of togetherness													
My family members really support each other													
I am proud to be a part of our family													
In our family we really get along well with each other													
<i>Family Expressiveness</i>	164	5.47	1.30	1.00	7.00	0.87	161	5.54	1.23	1.67	7.00	0.85	
In our family we can talk openly at home													
In our family we sometimes tell each other about our personal problems													
In our family we begin discussions easily													
<i>Family Conflict</i>	164	2.77	1.13	1.00	6.33	0.86	163	2.80	1.16	1.00	7.00	0.87	
In our family we argue a lot													
In our family we are really mad at each other a lot													
In our family we lose our tempers a lot													
In our family we often put down each other													
My family members sometimes are violent													
In our family we raise our voice when we are mad													
<i>Family Social Comparison</i>	164	4.20	1.56	1.00	7.00	0.93	163	4.36	1.54	1.00	7.00	0.94	
I feel that our family is equal to other families													
I feel that our family is at the same level with other families													
I feel that our family has the same possibilities in life that most other families have													
<i>Family Doing Things Outside Home</i>	164	3.60	1.53	1	7		163	4.22	1.58	1	7		

Appendix III. Means and standard deviations by group in the first and second-round measurements

	Treatment group						Untreated group					
	Pre-treatment scores			Post-treatment scores			Pre-treatment scores			Post-treatment scores		
	O b s .	M e a n	Std. Dev.	O b s .	M e a n	Std. Dev.	O b s .	M e a n	Std. Dev.	O b s .	M e a n	Std. Dev.
Satisfaction with Life	296	4.48	1.20	298	4.74	1.12	72	4.31	1.2	72	4.31	1.43
Physical Health	299	4.28	1.51	299	4.55	1.33	72	4.17	1.54	72	3.92	1.69
Mental Health	299	5.02	1.46	299	5.33	1.35	72	4.75	1.35	72	4.61	1.52
Economic Situation	298	3.75	1.51	298	4.16	1.52	72	3.36	1.63	72	3.32	1.65
Societal Status	299	4.44	1.38	298	4.63	1.35	72	4.47	1.6	72	4.26	1.60
Employment Situation	276	4.4	2.05	272	4.68	1.96	72	3.99	1.92	72	4.01	2.20
Social Life	297	4.56	1.44	299	4.98	1.33	72	4.1	1.47	72	4.19	1.59
Family	294	5.44	1.44	297	5.72	1.36	72	5.69	1.46	72	5.57	1.56
Amount of Leisure Time	296	5.33	1.62	299	5.52	1.43	72	4.46	1.82	72	4.53	1.74
Quality of Leisure Time	297	4.55	1.46	297	4.99	1.3	72	4.03	1.67	72	4.06	1.55
Calmness of Daily Life and Life Management	299	4.82	1.32	299	5.14	1.26	72	4.35	1.41	72	4.32	1.50
Reasonableness of Life	299	4.96	1.39	299	5.29	1.26	72	4.89	1.43	72	4.85	1.57
Learning and Self-development	297	4.64	1.38	299	4.8	1.27	72	4.64	1.5	72	4.38	1.66
Positive Affect	295	4.92	1.20	291	5.24	1.05	72	4.69	1.23	72	4.76	1.34
Negative Affect	294	3.35	1.29	296	3.06	1.29	72	3.76	1.23	72	3.64	1.28
Social Well-being	298	5.62	1.13	299	5.72	1.05	72	5.26	1.33	72	5.06	1.35
Experience of Inclusion	292	4.99	1.11	293	5.13	1.03	72	4.72	1.2	72	4.59	1.38
Social Comparison	296	4.63	1.51	299	4.8	1.46	72	4.41	1.61	72	4.00	1.79
Family Cohesion	108	5.38	1.11	110	5.45	1.11	56	5.38	1.05	53	5.15	1.07
Family Expressiveness	108	5.3	1.37	108	5.53	1.25	56	5.8	1.09	53	5.57	1.19
Family Conflict	108	2.76	1.16	110	2.68	1.11	56	2.78	1.09	53	3.03	1.22
Family Social Comparison	108	4.1	1.63	110	4.43	1.57	56	4.39	1.39	53	4.21	1.49
Family Doing Things Outside Home	108	3.55	1.60	108	4.37	1.60	56	3.68	1.42	56	3.91	1.51

Appendix IV. Matching procedures and balance checks

This appendix explains the case-control matching procedure, the calculation of the average treatment effect on treated (ATET), the inverse probability weighting procedure (IPW) and the comparison/balance checks of the treatment and untreated groups.

Case-control matching

Case-control matching procedure was used to produce an exact match data set consisting of respondents in the treatment group and the untreated group. The covariates in matching were gender, family circumstances and age-group. In the matched dataset there are 69 individuals in the treatment group and 72 in the untreated group. As shown in the table A1 below, the chi-square test shows that there is no difference between the groups in terms of the covariates.

Table A1. Comparison of groups after matching

	Untreatment group (N = 72)		Treatment group (N = 69)		Total	
	Freq.	%	Freq.	%	Freq.	%
Gender						
Male	8	57.1	6	42.9	14	100
Female	64	50.4	63	49.6	127	100
$\chi^2 = 0.230, p = 0.632$						
Family Circumstances	Freq.	%	Freq.	%	Freq.	%
Living alone	9	50	9	50	18	100
Single parent	15	51.7	14	48.3	29	100
In a relationship, no children at home	11	52.4	10	47.6	21	100
In a relationship, children at home	37	50.7	36	49.3	73	100
Other						
$\chi^2 = 0.032, p = 0.998$						
Age	Freq.	%	Freq.	%	Freq.	%
19-37 years	24	51.1	23	48.9	47	100
38-44 years	17	51.5	16	48.5	33	100
45-56 years	19	50	19	50	38	100
57-68 years	6	54.5	5	45.5	11	100
69-73 years	5	50	5	50	10	100
74-91 years	1	50	1	50	2	100
$\chi^2 = 0.079, p = 1.000$						

Identifying the average treatment effect on treated with inverse probability weight method

In the so-called potential outcomes framework an individual has two potential outcomes y_i , one without treatment $y_i(0)$ and the other after having the treatment $y_i(1)$. A single individual is assigned only to one or the other group and therefore receives the treatment ($Z_i = 1$) or does not ($Z_i = 0$). In this setting the estimate of the average treatment effect on treated is defined as $ATET = E[\Delta|Z = 1]$, where Δ is the difference between having a treatment and not having a treatment, and where $Z = 1$ denotes to the treatment group (Austin, 2011). Often, the following equation is written:

$$ATET = E[y_i(1) - y_i(0)|Z_i = 1] + \{E[y_i(0)|Z_i = 1] - E[y_i(0)|Z_i = 0]\}.$$

The term in brackets is the difference of the untreated outcomes between the members of the treatment group and the non-treatment group. The term is zero when untreated values in both groups are equal, or $E[y_i(0)|Z_i = 0] = E[y_i(0)|Z_i = 1]$. This happens when the assignment to the treatment group and to the non-treatment group is random. In observational studies (where randomized controlled experimentation is impossible) the inequality between $E[y_i(0)|Z_i = 0]$ and $E[y_i(0)|Z_i = 1]$ means that the difference between the outcomes of the treatment and the non-treatment groups is not a reliable measure of the effect of the treatment.

The *inverse probability matching* procedure aims to balance the dataset. A key factor is a propensity score, which is the probability of an individual being assigned to the treatment group based on her/his characteristics – that is, based on a set of covariates. Let p_i be the probability of the i th individual. Then observations on individuals in the treatment group are weighted by $w_{Z=1} = 1/p_i$ and observations on individuals in the non-treatment group are weighted by $w_{Z=0} = 1/(1-p_i)$. In consequence, weights on treated individuals, $w_{Z=1}$, are large when the probability of being treated is small. Respectively, weights on non-treated individuals, $w_{Z=0}$, are large when the probability of belonging to the treatment group is large. Accordingly, the weight is the inverse of the probability of having the treatment the individual actually had (e.g. Austin, 2011).

In applying this methodology, a limitation is worth of noticing. Namely, we have a quite limited number of background covariates (gender, age and family situation). In many studies, the number of covariates is many times larger. However, we follow Stuart (2010), who suggests ‘another effective strategy’ of including into the covariates a small set of variables which are known (on the basis of the previous research) to be related to the outcomes of interest and, then, checking the balance of the covariates (ibid., 5). In addition, in some cases we even dropped a variable or two from the covariates in order to get adequate balance between the treatment and non-treatment groups. In addition to the background variables, in analysing a particular wellbeing outcome variable (second stage measure), we follow the practice suggested by Adelson et al. (2017) of including the corresponding baseline value (first stage measure) of the outcome variable into the set of covariates.

We use two balance diagnostics methods to check the similarity of the groups. Firstly, for each covariate/baseline variable we use a standardized difference of the variable between the treatment and the untreated group. This difference is calculated for both the raw data and the matched data. As stated by Austin and Stuart (2015), this allows one to compare variables which are measured in different units and in different measuring scales (both dichotomous and continuous). In addition, they prefer this kind of comparison over hypothesis tests (such as t-test) many of which are sensitive to sample size (ibid.). Secondly, we use a chi-square based overidentification balance test for covariates/baseline variables (introduced by Imai and Ratkovic {2014}). Table A2 is an example of these methods for analyzing the quality of matching in analyzing the effect of holiday taking on Satisfaction with Life. The table shows that after weighting the standardized differences are negligible (acceptable if smaller than 0.20), variance ratio is close to unit (acceptable if between 0.8 and 2.0) and that we cannot reject the hypothesis that the IPW model balanced the covariates ($\chi^2(7) = 7.975$; $p = 0.335$). Full reports of the tests are available on request.

Table A2. Standardized differences, variance ratio and covariance balance test after inverse probability weighting (for Satisfaction with Life as the outcome variable)

	Standardized differences		Variance ratio	
	Raw	Weighted	Raw	Weighted
Gender	-0.248	0.163	1.607	0.814
Living alone	0.569	-0.026	2.086	0.986
Single parent	-0.221	-0.000	0.660	0.999
Couple, with children at home	-0.670	-0.017	0.651	0.976
Age	0.884	0.139	2.059	1.437
Satisfaction with Life (before holiday)	0.147	-0.011	0.991	0.924
Overidentification test for covariate balance $\chi^2(7) = 7.975; p = 0.335$				
Observations	Raw		Weighted	
All	366		366	
Treatment group	294		185.4	
Untreated group	72		180.6	