

Football volunteering and subjective well-being: A multi-country study of different voluntary roles and well-being measures

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Football volunteering and subjective well-being:

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7,947 words

Abstract

Research question: Drawing on different theoretical views of subjective well-being (SWB), this study examines the associations between football volunteering in general, volunteering in specific roles, and different SWB measures. It also assigns monetary values to volunteering using the well-being valuation approach.

Research methods: The analysis uses survey data of adult football club members and volunteers in seven European countries ($n=19,939$). Volunteering is measured by the number of monthly volunteering hours in total and in administrative, sport-related, and operational roles. SWB is captured by life satisfaction, happiness, and a multi-item scale. Linear and instrumental variable (IV) regression models are estimated.

Results and findings: The number of volunteering hours has no significant association in the linear models, but a significant positive association with all three SWB measures in the IV estimations. Differences in volunteering hours between during and before the pandemic are positively associated with differences in SWB. Administrative and sport-related hours are negatively associated with some SWB measures in the linear models, while the IV models reveal a positive association for sport-related roles. Operational roles tend to be positively related to SWB independent of estimator and SWB measure. The monetary values of the IV estimations are higher than those of the linear models. The values from the happiness models exceed those of the life satisfaction models. One hour of volunteering in an operational role is valued higher than one hour in a sport-related role.

Implications: For scholars, it is more important to distinguish between different voluntary roles than between different SWB measures. For practitioners, the results imply that support should be targeted particularly at volunteers in administrative and sport-related roles.

Keywords: Happiness; Instrumental variables; Life satisfaction; Volunteerism; Well-being valuation

Introduction

Non-profit football clubs are important providers of grassroots football in many European countries (Breuer et al., 2018b; Bürgi et al., 2018). Following the Union of European Football Associations (UEFA, 2020), the Social Return on Investment from grassroots football is estimated at €39.4 billion. Breaking this figure down into three dimensions, €10.8 billion belong to the economic dimension, €12.3 billion to social benefits, and €16.3 billion to health impacts (UEFA, 2020). Recent country-specific estimations identify a Social Return on Investment of €13.9 billion for Germany, €45 million for Albania, and €90 million for Estonia (UEFA, 2020).

Within grassroots football clubs, volunteers are critical for the functioning of club operations and the provision of football programs (Breuer et al., 2018b). However, when comparing football clubs (Breuer et al., 2018b) with clubs providing other sports (Breuer & Feiler, 2020), football clubs experience bigger problems regarding the recruitment and retention of volunteers, including voluntary board members, coaches and instructors, and referees. Hence, the situation of volunteers in football clubs warrants closer examination.

Typically, sport volunteering yields a number of positive outcomes such as development of social capital and skill development (Kay & Bradbury, 2009), personal development (Downward & Ralston, 2006), and improved well-being (Kumnig et al., 2015; Stukas et al., 2016). The focus of this study is on subjective well-being (SWB), where existing research indicates that not all voluntary roles yield higher SWB (Wicker & Downward, 2020). Specifically, a positive impact on SWB is only evident for operational roles such as the organization of sporting events, support of day-to-day club activities, and transportation. On the contrary, for administrative and sport-related roles, research suggests that happier people are more likely to engage in these roles (Wicker & Downward, 2020). Given the above context, the question is whether football volunteering is associated with well-being and whether such well-being outcomes are evident across different voluntary roles.

Previous research reveals that not only the type of voluntary activity is relevant (Wicker & Downward, 2020), but also the type of SWB measure (Thormann et al., 2022). For example, Thormann et al. (2022) found that volunteering has distinct impacts on life satisfaction in general and satisfaction with different life domains. Other studies have used single-item measures for life satisfaction (e.g., Wicker & Downward, 2020) and happiness (Downward & Dawson, 2016) or different multi-item scales (Kumnig et al., 2015; Stukas et al., 2016). Collectively, most studies employ only one SWB measure, hence ignoring the different views and dimensions of the construct.

The purpose of this study is to examine the association between football volunteering and SWB. Specifically, this study considers different voluntary roles and different SWB measures including life satisfaction, happiness, and the WHO-5 scale of the World Health Organization (WHO, 1998). It advances the following main research questions: (1) how is football volunteering in general and in different voluntary roles associated with different SWB measures? And (2) what monetary values can be assigned to volunteering using the well-being valuation approach?

Theoretical framework and literature review

Subjective well-being: Views and measures

SWB is defined as “a person’s cognitive and affective evaluations of his or her life” (Diener et al., 2020, p. 63). This definition indicates that individuals’ assessment of whether they have a good life or not is based on both emotional aspects and cognitive judgements (Diener et al., 2002). This distinction is echoed by the different views on SWB that emerged in the literature, including the hedonic and eudaimonic view (Ryan & Deci, 2001). In the hedonic view, SWB is considered an experience of pleasure, with happiness being “the totality of one’s hedonic moments” (Ryan & Deci, 2001, p. 144). The experience of pleasure and the good/bad elements of life are more related to the affective part of SWB.

On the contrary, the eudaimonic view is distinct from happiness, recognizing that not all outcomes that yield pleasure also increase individuals' well-being (Ryan & Deci, 2001). The eudaimonic perspective "calls upon people to live in accordance with their daimon, or true self. [. . .] eudaimonia occurs when people's life activities are most congruent or meshing with deeply held values and are holistically or fully engaged" (Ryan & Deci, 2001, p. 146). Activities supporting personal growth and development are considered large well-being contributors (Waterman, 1993), suggesting that these activities are more related to the cognitive dimension of SWB.

Existing research comparing the role of people's social and economic conditions in explaining life satisfaction and happiness suggests that life satisfaction and happiness are similarly affected by social factors, while life satisfaction is also strongly dependent on one's economic conditions (Peiro, 2006). These results support "the existence of two distinct spheres of well-being: happiness and satisfaction" (Peiro, 2006, p. 362), suggesting that economic conditions are more related to the cognitive dimension (life satisfaction), while social conditions are more related to the emotional dimension (happiness). Applying these views to sport volunteering, the question is whether or which voluntary activities are more associated with pleasure and happiness, and which activities are more related to personal development and life satisfaction. However, knowledge on the associations of sport volunteering with life satisfaction versus happiness is not available yet.

Voluntary roles and subjective well-being

From a theoretical perspective, different voluntary roles might have distinct associations with happiness and life satisfaction. This study uses Wicker and Downward's (2020) distinction of voluntary roles, including administrative, sport-related, and operational roles. Administrative roles include activities like board or committee work, marketing, or office activities (Wicker & Downward, 2020). These activities tend to be more cognitively oriented (as opposed to emotionally oriented), potentially yielding personal development and

growth. Gains in personal development and skills through volunteering can serve as a signal in the general labor market (Wallrodt & Thieme, 2020), which administrative volunteers might value. Additionally, some administrative tasks such as applying for public subsidies or organizing all sorts of issues around sport facilities like renovation or maintenance are very time-consuming and characterized by high levels of bureaucracy (Wicker, 2022). Because of their complexity and the involved paperwork, these activities typically do not produce directly visible outcomes, potentially yielding displeasure rather than enjoyment. Thus, administrative volunteers might experience these complex tasks as burdens rather than pleasure, reducing any potential happiness associated with such activities. Collectively, administrative roles might be associated with life satisfaction rather than happiness.

Sport-related roles typically include activities like coaching and refereeing/officiating (Wicker & Downward, 2020). These activities tend to be characterized by a mix of cognitive and emotional aspects, though the emotional aspects are more likely related to displeasure rather than pleasure. Coaches need to conceptualize the training sessions, develop athletes, and adjust the training to the abilities of their respective training groups (Robinson, 2010). This work is cognitively demanding, and the effects of training are typically evident in the mid- or long-term, hence potentially yielding life satisfaction. Moreover, when consumers of training sessions have enjoyed the practice, coaches might feel pleasure, potentially contributing to their happiness. However, coaching can also be associated with displeasure as sport consumers tend to become more and more demanding and behave like customers rather than club members (Wicker, 2022). Likewise, coaching children can yield displeasure when parents have differing expectations of what their children should be doing or not (Wiersma & Sherman, 2005).

Refereeing also involves cognitive tasks such as the evaluation of game situations requiring attention and cognitive abilities (Hüttermann et al., 2018). Hence the accomplishment of these tasks during a game might be associated with life satisfaction.

However, existing research points to the frequent occurrence of physical and verbal abuse of referees, particularly in football and also at the amateur level in lower leagues (Dawson et al., 2022). Experiencing abuse might be related to displeasure when refereeing and lower happiness levels. Collectively, for sport-related roles, the associations with happiness are expected to be smaller than with life satisfaction.

Operational roles include activities like support of day-to-day club operations, cleaning, transportation, or organization of sporting events. These activities are rather short-term, and the outcomes of these activities can be seen directly (Wicker & Downward, 2020). Volunteers might experience pleasure when they have successfully completed these activities, such as when they have assisted in organizing a sport event or cleaning sport facilities. Such feelings of pleasure might be associated with happiness. The associations between operational voluntary roles and life satisfaction might be lower (than with happiness) as these activities are typically cognitively less demanding, hence contributing less to personal development.

Method

Data collection

The data were gathered using multiple nation-wide online surveys of volunteers and active football members across seven European countries, including England, France, Germany, Italy, Norway, Poland, and Switzerland. A questionnaire was initially developed and adapted to country-specific requirements in consultation with each country's national football association. Since the initial questionnaire was in English, each national association translated it into their native language(s). The German questionnaire was translated by the research team. Afterwards, the country-specific online surveys were programmed for each country on the platform [soscisurvey.de](https://www.soscisurvey.de). Data were collected between November 2020 and June 2021.

The national associations distributed the survey link to regional associations and football clubs with the request to forward it to adult members, member volunteers, and non-

member volunteers. Moreover, the national associations' websites, social media accounts, and intranets were used for the distribution of the survey. This snowball sampling approach yielded a convenience sample – similar to previous research examining football volunteers (Breuer et al., 2018ab; Emrich et al., 2014). This sampling procedure might be associated with sample selection issues as individuals self-select into the survey. However, most volunteering studies share this problem as no registry of volunteers exists which could be used to draw a random sample. Such a sampling approach would only be possible for registered volunteers of a sport event, but not in the present sport club context.

Across all countries, the survey generated 53,337 clicks, which resulted in 21,824 completed questionnaires, representing a completion rate of 40.9%. During the data cleaning process, observations with implausible (e.g., for volunteering hours per month) and 'prefer not to say' answers (which were offered in the socio-demographic questions) were removed. The final sample consists of $n=19,939$ respondents. It is one of the largest samples in existing volunteering research, especially in studies on volunteering outcomes (Wicker & Downward, 2020).

The sample is made up of 771 respondents from England, 942 from France, 6,738 from Germany, 1,011 from Italy, 1,889 from Norway, 1,188 from Poland, and 7,400 from Switzerland. The size of the German sub-sample mirrors the size of the German Football Association (DFB); it is the sport association with the highest number of memberships worldwide. The size of the Swiss sub-sample most likely results from the Swiss national association being able to send some e-mails directly to registered voluntary referees and coaches. The small English sub-sample results from the comparably lower efforts of the English Football Association to distribute the survey link.

Questionnaire and variables

Table 1 provides an overview of all variables and their descriptive statistics. The survey period fell within the beginning of the Covid-19 pandemic. Since the pandemic-related

restrictions and the effects on grassroots football changed frequently and also differed between countries, the research team and national associations agreed that the survey should capture the (more typical) situation before the pandemic. However, this pre-pandemic focus might be associated with respondents having difficulty to recall their situation at the time. While this retrospective perspective is not ideal, previous SWB studies have also relied on a retrospective assessment (e.g., Bellis et al., 2013; Maxcy et al., 2019).

Insert Table 1 here

Subjective well-being. SWB was captured with three variables. In line with the theoretical framework, the study included measures for life satisfaction (*Life satisfaction*) and happiness (*Happiness*). These variables were single-item measures assessed on a scale from 0 to 10. The measurement of life satisfaction is identical to the German Socio-Economic Panel (Becchetti et al., 2008; Ferrer-i-Carbonell & Frijters, 2004; Orłowski & Wicker, 2018) and previous SWB research in sport (Wicker, 2020). It is similar to the World Values Survey using a scale from 1 to 10 (Peiro, 2006). The 11-point scale allows more variation than shorter life satisfaction measures from 1 to 4 (Wicker & Downward, 2020). The happiness measure was identical to previous sport research (Maxcy et al., 2019) and similar to the Taking Part Survey in the UK using a scale from 1 to 10 (Downward & Dawson, 2016).

The survey also included a multi-item SWB measure for comparative purposes with the life satisfaction and happiness findings (Cheung & Lucas, 2014). This composite SWB measure addresses the call by some scholars that multi-item measures would outperform single-item measures and should, therefore, be preferred (Organization for Economic Co-operation and Development [OECD], 2013). The five-item SWB scale of the World Health Organization (WHO, 1998) was selected because it captures well-being, but is not specifically linked to the hedonic or eudaimonic perspective. Scales employed in existing sport volunteering and well-being research have captured slightly different concepts such as psychological or personal well-being (Kumnig et al., 2015; Stukas et al., 2016) and they

consist of more items, which was considered less promising for survey completion.

Furthermore, the WHO-5 has already been applied in previous sport research (e.g., Schlegel et al., 2017; Wicker & Thormann, 2022). It captures SWB with five items on a 6-point scale (0=at no time; 5=all of the time; Table A2). Cronbach's alpha of the scale was 0.845, suggesting good reliability (Hair et al., 2010). The final SWB index was calculated by summing up the five items and multiplying the sum by 4, which resulted in scores between 0 and 100 (*WHO-5*).

To control for possible changes (reductions) in SWB because of the pandemic, respondents' life satisfaction, happiness, and SWB (*WHO-5*) was also assessed at the time of data collection (i.e., during the pandemic). Three difference variables were obtained by subtracting respondents' well-being before the pandemic from respondents' well-being during the pandemic (*Difference Life satisfaction; Difference Happiness; Difference WHO-5*).

In the present sample, average life satisfaction ($M=8.12$) is slightly higher than the life satisfaction of active sport participants in Germany in 2016 ($M=7.52$) and the German resident population in 2015 ($M=7.38$; Wicker, 2020). Similarly, respondents' average happiness ($M=8.20$) is slightly higher than the happiness level of residents in the UK ($7.7 > M > 7.8$), which was, however, only assessed on a 10-point scale (Downward & Dawson, 2016; Downward et al., 2018). The average *WHO-5* score ($M=75.49$) is higher than among active sport club members in Germany ($M=62.11$; Wicker & Thormann, 2022), with a value below 50 indicating a possible depression (Topp et al., 2015). The difference variables indicate that all SWB measures and the number of volunteering hours were on average lower during the pandemic.

Volunteering. The section assessing football volunteering started with a short description of what is considered volunteering, which was adapted to each country to ensure that country-specific peculiarities were included, and that terms and expressions were used which respondents were familiar with (Table A1 for an overview). All descriptions have in

common that volunteering is a freely and willingly committed activity and that volunteers do not get any salary, only a reimbursement of expenses or a small reimbursement – in line with existing conceptualizations of sport volunteering (Orlowski & Wicker, 2015). The threshold for these small reimbursements to be subject to taxation differs between countries.

Afterwards, respondents were asked if they volunteered in a football club before the Covid-19 pandemic and, if yes, in which voluntary roles they were engaged. Based on previous research (Orlowski & Wicker, 2015; Wicker & Downward, 2020) and consultation with the national football associations, 22 different volunteering roles were pre-selected. For the selected roles, respondents were asked how many hours per month they volunteered in the respective roles. Those hours were summed up and reflect the total number of volunteering hours per month (*Volunteering hours*). Potential changes in volunteering hours due to the pandemic were assessed by asking respondents for the number of monthly volunteering hours at the time of data collection (i.e., during the pandemic). A difference variable was computed by subtracting the before-pandemic hours from the during-pandemic hours (*Difference Volunteering hours*).

Based on previous research (Wicker & Downward, 2020), the 22 volunteering roles were allocated to three broader role categories of administrative roles (*Administrative roles hours*; i.e., president, treasurer/accountant, committee member, head of football department, youth officer, secretary, web and IT services, marketing or sponsorship manager, press officer), sport-related roles (*Sport roles hours*; i.e., coach, referee/official), and operational roles (*Operational roles hours*; i.e., medical support, organization of games or social events, catering, facility management, ground-keeping, cleaning, driving services, child and youth care, photographer, commentator). To exploit voluntary roles more comprehensively, we also included the two voluntary activities in each role category in which the most monthly volunteering hours were performed and computed variables reflecting the monthly hours in

these six specific roles (*President hours, Youth officer hours, Coach hours, Referee hours, Child care hours, Organization events hours*).¹

In the present sample, the average of 28.2 monthly volunteering hours is higher than in previous research: For example, volunteers dedicated 23.9 hours per month in German football-only clubs and 17.2 hours in multi-sports clubs having a football department (Breuer et al., 2019). Similar values of 23 monthly hours were obtained for German football and athletics clubs (Swierzy et al., 2018) and of 22 monthly hours for Swiss football clubs (Bürigi et al., 2018). The higher mean value in this work might be driven by the more detailed assessment of voluntary tasks and the inclusion of (informal) operational roles.

The average of 9.66 hours in administrative roles is lower than in previous research where administrative volunteers in German football clubs volunteered about 30 hours per month (Breuer et al., 2018a). The present mean value of 11.61 hours for sport-related roles is also lower: In German football clubs, voluntary coaches and instructors were found to work 4.5 hours per week (Breuer et al., 2018a), resulting in about 19.5 hours per month. In Swiss football clubs, coaches and instructors volunteered 35 hours and referees 18 hours per month (Bürigi et al., 2018). The differences to previous studies might be attributable to international variation and country-specific differences in volunteering.

Control variables. The study included several control variables that were also found to affect SWB in previous research (Becchetti et al., 2008; Downward & Dawson, 2016; Wicker & Downward, 2020). Specifically, not only volunteering in football, but also actively practicing the sport can affect SWB (Downward & Dawson, 2016; Wicker, 2020). Respondents were asked if they played football before the Covid-19 pandemic and, if yes, how many hours they played in a typical week (*Football hours*). The study also controls for a number of socio-demographic factors, including age (*Age_18-34; Age_35-49; Age_50-65;*

¹Further exploitation of voluntary roles is restricted by the limited availability of instrumental variables.

Age_66+), gender (*Female; Male; Diverse*), disability (*Disability*), educational level (*Low education; A-levels; University*), whether the respondent has a foreign nationality (*Foreigner*), and income (*Income*). Since respondents come from different European countries with different living conditions, their income was converted into purchasing power parities (PPP; Eurostat, 2022).

Instrumental variables (IVs). The Volunteer Function Inventory (VFI; Clary et al., 1998) was included in the survey to provide a list of variables that could potentially be used as IVs in the empirical analysis. The VFI represents one of the most commonly used scales to assess perceived functions of volunteering and was applied in previous volunteering research in sport (Kim et al., 2010; Stukas et al., 2016) and beyond sport (Brayley et al., 2015). The questions covered five categories (i.e., career motivations, social motivations, new learning experiences, altruistic motivations, understanding of political processes) with two items each, resulting in ten variables (Table 1).

Empirical analysis

The empirical analysis consisted of three steps. First, twelve sets of regression models were estimated with the three SWB measures as dependent variables. Models 1-3 included the total monthly volunteering hours² as independent variable of interest, while the difference variables for SWB and volunteering were entered in Models 4-6. Models 7-9 included the monthly volunteering hours in the three broad volunteering roles (i.e., administrative, sport-related, and operational), while Models 10-12 included the six specific voluntary roles.

The control variables (Table 1) were included as independent variables in all models. Since their correlation coefficients were below 0.8, all variance inflation factors were below 3, and the tolerance scores above 0.5, multicollinearity should not be an issue in the present analysis (Hair et al., 2010). The life satisfaction and happiness variables were treated as

²A potential non-linear effect of monthly volunteering hours was examined by including squared terms, but they were insignificant.

continuous variables (Becchetti et al., 2008; Powdthavee & van den Berg, 2011) because comparative SWB studies have shown that linear and ordered models produce similar results (Ferrer-i-Carbonell & Frijters, 2004). All models were estimated with heteroscedasticity-consistent standard errors.

Each model was estimated using ordinary least squares (OLS) and an IV estimator. For the latter, the generalized method of moments (GMM) estimator was employed similar to previous cross-sectional studies (Becchetti et al., 2008; Downward & Dawson, 2016). IV models were estimated additionally because of potential reverse causality (as a form of endogeneity)³ in SWB models related to sport participation and volunteering (Guan & Tena, 2021; Thormann et al., 2022). The significant Sargan-Hansen tests rejected the null hypotheses that the independent variables are exogenous, supporting the use of IV models (Baum et al., 2003).

We attempted to address endogeneity by using IVs for volunteering and football hours (Becchetti et al., 2008; Thormann et al., 2022; Wicker & Downward, 2020), which should be correlated with volunteering and football hours, but not with SWB (Baum et al., 2003). The items of the VFI (Clary et al., 1998) served as potential instruments. Following Dolan et al. (2014), we used functional statements about potential perceived benefits of an activity as instruments. Dolan et al. (2014) argue that “it is rather unlikely for perceived benefits of certain behaviors, such as volunteering or recycling, to have a direct impact on SWB other than increasing the probability of one actually engaging in that activity” (p. 1369). These IVs passed several diagnostic tests (Downward & Dawson, 2016; Wicker, 2020): All *F*-values of the first-stage regressions were statistically significant and >10 (Stock et al., 2002). All Hansen *J* tests were insignificant (Baum et al., 2003). Each set of models was estimated with the same IVs (specified in table notes).

³Other sources of endogeneity include simultaneity issues and omitted variable bias. The latter is driven by variables that might also be relevant to SWB, but are not included in our analysis (e.g., marital status, children).

Second, monetary values were calculated using the well-being valuation approach (Orlowski & Wicker, 2019). This method has already been applied in previous sport (Downward & Dawson, 2016; Thormann et al., 2022) and non-sport research (Powdthavee, 2008; Powdthavee & van den Berg, 2011) to assign monetary values to leisure activities and socio-demographic factors. One requirement for calculating these values is that the variable of interest is statistically significant, and that the income coefficient is significant and positive (Powdthavee, 2008). The monetary value indicates how much income (here: in PPP) an individual would be willing to forego to be able to keep performing the activity of interest (here: volunteering) while maintaining the same level of SWB. Monetary values were calculated by dividing the income coefficient by the coefficient of the variable of interest (Orlowski & Wicker, 2019; Powdthavee, 2008). Monetary values were obtained for volunteering, playing football, and socio-demographic characteristics based on the linear and IV models.

Another issue is possible endogeneity of the income variable. Previous research has suggested lagged variables and instruments to address this issue (Powdthavee, 2010). In the present study, lagged income variables are not possible given the cross-sectional nature of the data and the survey excludes potential instruments for income. However, as noted by Powdthavee (2010, p. 77), “the issue of income endogeneity in life satisfaction equations has rarely been addressed.” Removing the income variable from the models is not an option either as it is required for calculating monetary values. We acknowledge that the income effects would be larger when endogeneity is dealt with (Powdthavee, 2010), meaning that the present monetary values are rather conservative estimates.

Third, effect heterogeneity in the data was explored further. Since over 70% of the sample is made up of respondents from Switzerland and Germany, models only including these two countries were estimated. Moreover, the association between volunteering and SWB might differ depending on individuals' age. Therefore, the sample was split by

respondents' mean age (42 years) and estimations were provided for the two age-specific subsamples of ≤ 42 years and > 42 years.

Results

Table 2 displays the linear and IV models for monthly volunteering hours. While the relationship between volunteering hours and SWB is insignificant for all three outcome measures, the IV estimates show a significant positive association for all three SWB variables. Table 3 summarizes the models for differences in volunteering hours. Both the linear and IV estimates reveal a significant positive relationship between differences in volunteering hours and differences in the three SWB measures. This means that changes (reductions) in volunteering hours between pre-pandemic and during-pandemic were associated with changes (reductions) in SWB.

Insert Tables 2 and 3 here

Table 4 reports the estimations for the three broad volunteering roles. In the linear models, the number of monthly hours spent on administrative roles is negatively associated with the composite SWB measures (WHO-5), while the number of hours dedicated to sport-related roles has a significant negative relationship with both life satisfaction and happiness. In the IV models, the relationship between administrative roles and SWB is insignificant for all outcomes, while volunteering in sport-related and operational roles has a significant positive association with all three SWB measures.

Table 5 displays the models for the six specific voluntary roles. In the linear models, the monthly hours spent as a youth officer have a significant relationship with WHO-5, while the number of monthly referee hours has a positive relationship with this outcome. In the IV estimations, only the number of monthly referee hours has a significant positive relationship with happiness.

Insert Tables 4 and 5 here

The analysis of the Swiss-German sub-sample (Table A3) indicates that the number of monthly volunteering hours in administrative roles has a significant negative association with all SWB measures in the linear models, while the number of sport-related hours has a significant negative relationship with life satisfaction and happiness. In the IV models, the number of hours spend on administrative and sport-related roles has a significant positive association with all three SWB measures, while the hours dedicated to operational roles are only positively related to life satisfaction and happiness. These findings partially differ from those of the full sample (Table 4), indicating that the results are not purely driven by these two countries.

The analysis of the age-specific sub-samples (Tables A4-A5) shows that in the linear models, administrative roles have a significant negative relation with WHO-5 in both sub-samples. The number of hours spent on sport-related roles has a significant negative association with WHO-5 in the younger sub-sample, while the hours dedicated to operational roles have a positive association with these two outcomes in the older subsample. In the IV estimations, sport-related roles have a significant positive association with all SWB measures in the younger sub-sample, while operational roles are positively related to all SWB measures in the older sub-sample. In both estimations, the significant associations of sport-related roles in the full sample tend to be driven by the younger sub-sample, those of operational roles by the older sub-sample.

Table 6 displays the monetary values resulting from the linear and IV estimations. The monetary values from the IV models tend to be higher than those of the linear estimations. Also, the values for WHO-5 are higher than for the other SWB measures. For example, in the IV models, the value of one monthly volunteering hour in a sport-related role is 354 PPP (life satisfaction), 434 PPP (happiness), and 649 PPP (WHO-5), respectively. With 732 PPP (life satisfaction), 783 PPP (happiness), and 1,671 PPP (WHO-5), respectively, the corresponding monetary values for one operational hour are clearly higher than for sport-related roles. The

monetary values for one hour of playing football and for socio-demographic characteristics are much higher than for volunteering.

Insert Table 6 here

Discussion

This research set out to investigate the associations between volunteering hours in general and in different voluntary roles and three different SWB measures using large-scale survey data from European grassroots football. The associations of the control variables in the regression models are similar to previous research: Older people, individuals with more financial resources, and physically active respondents tend to report higher SWB levels, while those with a disability had lower SWB (e.g., Downward & Dawson, 2016; Thormann et al., 2022; Wicker & Downward, 2020). Hence, the findings for volunteering hours and voluntary roles should have some credibility.

The present findings for the monthly volunteering hours and different voluntary roles are difficult to compare with previous studies because of differences in volunteering measures and contexts, estimators, and the use of only one SWB measure. What stands out in the present findings is the high degree of similarity in each set of models: The associations for volunteering hours and differences in volunteering hours between during-pandemic and pre-pandemic are consistent across the three models for life satisfaction, happiness, and WHO-5 (Models 1-6). To a lesser extent, the same applies to the models for the broad voluntary role categories and the six specific voluntary roles for the life satisfaction and happiness equations (except Model 11b). Consequently, the conclusion by Cheung and Lucas (2014) that “social scientists would get virtually identical answer to substantive questions regardless of which measure they use” (p. 2809) also applies to the SWB measures in our study. It is possible that respondents do not really distinguish between life satisfaction and happiness, or at least not to the extent that is suggested by theoretical perspectives (Ryan & Deci, 2011) and previous

empirical findings (Peiro, 2006). This explanation is supported by similar associations with the composite SWB measure in 15 out of 24 models.

The findings for different voluntary role categories partially support and partially contradict the theoretical assumptions. The number of administrative hours is insignificant in all life satisfaction and happiness models (except for the models based on the Swiss-German subsample; Table A3). Drawing on the different theoretical views of SWB (Ryan & Deci, 2001), the assumption was that administrative roles might be more associated with the eudaimonic perspective and would be more associated with life satisfaction because of the cognitive nature of the involved tasks (Wicker, 2022). While it might still be true that the tasks of board and committee members are cognitively demanding, it is likely that they are too long-term, frustrating, and bureaucratic in nature, yielding no cognitive mastery or goal achievement and, hence, no SWB gains. The significant negative relation with WHO-5 suggests that administrative hours are even associated with reductions in SWB, especially when volunteers are youth officers. This notion is supported by Wicker and Downward (2020), documenting insignificant and even significant negative effects of the number of administrative roles on life satisfaction.

Volunteering in sport-related roles is negatively associated with life satisfaction and happiness in the linear models, while the IV models suggest a positive association. This change in signs from linear to IV estimations was also evident in Wicker and Downward (2020), though the other way around. Hence, the actual association remains unclear. When disentangling the two sport-related roles into coaching and refereeing, the negative association with life satisfaction and happiness remains for coaching, while the number of refereeing hours are positive in one WHO-5 and one happiness model. Accordingly, coaching seems to be associated to a lesser extent with cognitive tasks contributing to personal development and growth that are typically related to life satisfaction and also less with pleasure-yielding experiences typically related to happiness than refereeing. The present study

specifically examining football volunteers indicates that football refereeing seems a cognitively and emotionally rewarding activity. Hence, both the hedonic and the eudaimonic view on SWB apply to this voluntary role. The same applies to operational hours having positive associations with life satisfaction and happiness, similar to previous life satisfaction findings (Wicker & Downward, 2020).

The monetary values indicate that the SWB gains per volunteering hour are higher for operational roles than for sport-related roles. Across variables, the monetary values tend to increase from life satisfaction to happiness, implying that volunteering in general and in specific roles is valued more as a contributor to happiness than to life satisfaction. Moreover, the values obtained from IV models are much higher than those from linear models, suggesting that the former need to be treated with caution (Thormann et al., 2022). Similar to previous sport (Thormann et al., 2022) and non-sport research (Powdthavee & van den Berg, 2011), different SWB measures result in different monetary values. The magnitude of monetary values has practical implications in the sense that not only different voluntary roles can be compared, but comparisons with socio-demographic characteristics are also possible. For example, volunteering in operational roles can generally compensate lower SWB levels because of having a disability or a foreign nationality, with the concrete number of volunteering hours required for compensation depending on the SWB measure and estimator. Such monetary values can also be integrated into Social Return on Investment analyses of football. This type of analysis is increasingly conducted to quantify the social value of sports and leisure activities (Davies et al., 2019).

Regarding managerial implications for football clubs and governing bodies, the findings suggest that a detailed consideration of specific voluntary roles is necessary. It is not sufficient to develop support programs simply directed to all football volunteers as different roles have different associations with SWB. These differences indicate that some voluntary roles need more support than others in an effort to also make them a (more) rewarding

activity. Supporting initiatives need to be directed especially at administrative volunteers where cognitive challenges need to be reduced. For example, the bureaucracy and paperwork involved with sport facilities, taxation, and application for government subsidies could be reduced to make these voluntary activities more cognitively rewarding. Likewise, sport-related roles and especially coaching need more attention by football associations in terms of the possibilities of contributing to personal development and generating pleasure.

Implications for scholars relate to the choice of measures for volunteering and SWB. Typically, choices along the trade-off between attention to detail and questionnaire length have to be made when designing surveys. The findings suggest that volunteering should be measured in detail in surveys by assessing different voluntary roles, while it is not necessary to add length to a survey by including multiple SWB measures. Moreover, the frequent lack of consensus between linear and IV estimations echoes existing research (Thormann et al., 2022) stressing the need to pay attention to the type of estimator when examining associations between volunteering and SWB and obtaining monetary values using the well-being valuation approach.

Conclusion

This study examined the association between football volunteering and SWB using large-scale survey data from seven European countries. It provided a nuanced analysis by distinguishing between different voluntary roles and between two single-item and one multi-item SWB measure. The present work contributes to the volunteering and SWB literature in several ways. First, it adds to the limited body of work examining outcomes of sport volunteering (rather than determinants). Second, it is based on a unique, comprehensive, and multi-country sample, including both Northern, Western, and Southern European countries, hence providing empirical evidence for a large geographical area. This sample is one of the largest samples in sport volunteering research. This study also provides evidence for a specific sport which facilitates designing support programs and possible interventions. Third,

it provides a more nuanced analysis than most previous studies by distinguishing between different voluntary roles and different SWB measures. Understanding differing associations allows designing better targeted support for specific voluntary roles. Fourth, this research outlined different theoretical perspectives for life satisfaction and happiness, hence contributing to a better understanding of the theoretical mechanisms that are responsible for the association between volunteering and SWB. Fifth, the present study is also one of very few studies providing monetary values for sport volunteering based on the well-being valuation approach. The assignment of quantitative figures is important for comparisons with other leisure activities or sports and to underline the importance and value of volunteering to society. The use of variable monetary values for different voluntary roles may contribute to a better understanding of the social outcomes of sport. Sixth, this research provides an empirical pre-pandemic vs. during-pandemic comparison of football volunteering and SWB and enhances our understanding of how the Covid-19 pandemic has affected grassroots sports and people's lives.

This study has some limitations that can guide future research. First, it shares the limitation of all surveys that were conducted during the Covid-19 pandemic where researchers attempted to provide some evidence that does not only apply to the period of the pandemic. Nevertheless, the survey answers and findings might be affected by recall biases as respondents might have had some difficulty remembering their situation and behavior before the pandemic. Another limitation is the snowball sampling approach which only yielded a convenience sample and might be associated with sample selection issues. Third, further socio-demographic factors that might also affect SWB (e.g., marital status, children) could not be included in the survey as the questionnaire was already relatively long. Fourth, estimating models with contemporaneous SWB measures and lagged volunteering hours was not possible because the long-lasting effect of volunteering is (theoretically) not clear, we cannot control for all potentially confounding variables like other pandemic-induced leisure activity

changes, and we cannot empirically disentangle the volunteering-induced effect from more general pandemic-induced effects. Fifth, while the study was able to instrument volunteering and football hours, income could not be instrumented. Despite passing the diagnostic tests, the IV results need to be interpreted with caution as they differ from the linear findings. Future research should attempt to find more suitable IVs to provide better causal insights.

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Table 1

Overview of variables and summary statistics (n=19,939)

Variable	Description	Mean	SD
<i>Dependent variables</i>			
Life satisfaction	General life satisfaction (0=completely dissatisfied; 10=completely satisfied)	8.12	1.29
Happiness	General happiness (0=extremely unhappy; 10=extremely happy)	8.20	1.29
WHO-5	Additive well-being index of 5 items (Table A2; 0=very low well-being, 100=very high well-being)	75.49	13.62
Difference Life satisfaction	Life satisfaction during the pandemic minus life satisfaction before the pandemic	-1.51	2.00
Difference Happiness	Happiness during the pandemic minus happiness before the pandemic	-1.55	2.00
Difference WHO-5	Well-being during the pandemic minus well-being before the pandemic	-18.76	22.27
<i>Independent variables of interest: Monthly volunteering hours</i>			
Volunteering hours	Total number	28.17	37.53
Difference Volunteering hours	... during the pandemic minus hours before the pandemic	-15.84	29.97
Administrative roles hours	... in administrative roles	9.66	22.61
Sport roles hours	... in sport-related roles	11.61	16.73
Operational roles hours	... in operational roles	6.90	16.97
President hours	... as president	2.44	11.30
Youth officer hours	... as youth officer	1.62	7.42
Coach hours	... as coach	10.34	15.75
Referee hours	... as referee	1.27	6.08
Child care hours	... spent on child caring	1.70	6.58
Organization events hours	... spent on organizing social events	0.87	3.81
<i>Control variables</i>			
Football hours	Weekly hours of football participation	3.95	3.75
Age_18-34	Age of respondent is between 18 and 34 years (1=yes; 0=no)	0.326	---
Age_35-49	Age of respondent is between 35 and 49 years (1=yes; 0=no)	0.364	---
Age_50-65	Age of respondent is between 50 and 65 years (1=yes; 0=no)	0.252	---
Age_66+	Respondent is older than 65 years (1=yes; 0=no)	0.058	---
Male	Respondent identifies as male (1=yes; 0=no)	0.866	---
Female	Respondent identifies as female (1=yes; 0=no)	0.133	---
Diverse	Respondent identifies as diverse (1=yes; 0=no)	0.001	---
Disability	Respondent has a physical and/or psychological disability (1=yes; 0=no)	0.076	---

Variable	Description	Mean	SD
Low education	Respondent has a degree below A-levels or no degree (1=yes; 0=no)	0.382	---
A-levels	Respondent has a university entry degree (1=yes; 0=no)	0.256	---
University	Respondent has a university degree (1=yes; 0=no)	0.362	---
Foreigner	Respondent has a foreign nationality (1=yes; 0=no)	0.099	---
Income	Personal monthly net income in purchasing power parities (in 1,000)	2.438	1.187
England	Respondent is from England (1=yes; 0=no)	0.038	---
France	Respondent is from France (1=yes; 0=no)	0.047	---
Germany	Respondent is from Germany (1=yes; 0=no)	0.338	---
Italy	Respondent is from Italy (1=yes; 0=no)	0.051	---
Norway	Respondent is from Norway (1=yes; 0=no)	0.095	---
Poland	Respondent is from Poland (1=yes; 0=no)	0.060	---
Switzerland	Respondent is from Switzerland (1=yes; 0=no)	0.371	---
<i>Instrumental variables (1=totally disagree; 5=totally agree)</i>			
Career options	Volunteering allows me to explore different career options	3.14	1.02
Career CV	Volunteering experience will look good on my CV	3.66	0.98
Social friends	My friends volunteer	3.42	0.91
Social important	Volunteering is an important activity to the people I know best	3.47	0.90
Understanding perspective	Volunteering allows me to gain a new perspective on things	3.95	0.76
Understanding experience	Volunteering lets me learn things through direct hands on experience	4.07	0.71
Altruistic community	Volunteering in a football club contributes to the local community	4.42	0.69
Altruistic children	Volunteering in football clubs is important to (my own) children's well-being and upbringing	4.13	0.87
Political process	Volunteering in football helps me understand political processes	3.08	0.98
Political democratic	Volunteering in football clubs helps me understand democratic decision-making processes	3.38	0.95

Table 2

Linear and IV models for volunteering hours (n=19,939)

	Model 1a (OLS): Life satisfaction	Model 2a (OLS): Happiness	Model 3a (OLS): WHO-5	Model 1b (GMM): Life satisfaction ^a	Model 2b (GMM): Happiness ^a	Model 3b (GMM): WHO-5 ^a
Constant	7.745***	7.951***	73.258***	4.554***	4.492***	16.362*
Volunteering hours	0.000	-0.000	-0.005	0.045***	0.049***	0.603***
Football hours	0.024***	0.025***	0.303***	0.374***	0.403***	7.309***
Age_18-34	REF	REF	REF	REF	REF	REF
Age_35-49	0.031	-0.001	-0.202	0.226	0.205	6.453**
Age_50-65	0.167***	0.070*	1.541***	0.564*	0.492	13.093***
Age_66+	0.496***	0.336***	4.495***	1.061**	0.938**	20.102***
Male	REF	REF	REF	REF	REF	REF
Female	0.018	0.037	-0.200	0.725***	0.802***	12.582***
Diverse	-0.791	-0.905*	-9.927*	0.324	0.308	6.885
Disability	-0.467***	-0.462***	-4.732***	-0.430***	-0.423***	-3.512**
Low education	REF	REF	REF	REF	REF	REF
A-levels	-0.100***	-0.182***	-1.506***	-0.113*	-0.196***	-1.917**
University	-0.128***	-0.193***	-2.151***	0.110*	0.066	1.925*
Foreigner	0.071*	0.087**	1.528***	-0.177*	-0.181*	-3.386**
Income	0.117***	0.112***	0.301**	0.122***	0.117***	0.406
Germany	REF	REF	REF	REF	REF	REF
England	-0.348***	-0.335***	-0.890	-0.065	-0.031	5.385**
France	-0.231***	-0.233***	2.645***	-1.17***	-1.259***	-10.142***
Italy	0.222***	0.236***	7.000***	-0.422**	-0.464**	-3.933
Norway	-0.040	-0.126***	0.148	0.964***	0.962***	19.006***
Poland	0.048	-0.019	0.754	-0.796***	-0.940***	-11.037***
Switzerland	0.056*	0.018	2.111***	0.570***	0.578***	9.483***
R ²	0.042***	0.041***	0.046***	268.53***	234.70***	172.39***

Note: * $p < 0.05$; *** $p < 0.01$; **** $p < 0.001$; displayed are the unstandardized coefficients; REF=reference category; ^aInstruments: *Altruistic children, Altruistic community, Career options*.

Table 3

Linear and IV models for differences in volunteering hours (n=19,939)

	Model 4a (OLS): Difference Life satisfaction	Model 5a (OLS): Difference Happiness	Model 6a (OLS): Difference WHO-5	Model 4b (GMM): Difference Life satisfaction ^a	Model 5b (GMM): Difference Happiness ^a	Model 6b (GMM): Difference WHO-5 ^a
Constant	-1.890***	-2.136***	-25.410***	0.075	0.038	7.394
Difference Volunteering hours	0.004***	0.003***	0.035***	0.066***	0.061***	0.753***
Football hours	-0.045***	-0.043***	-0.455***	-0.199*	-0.245**	-3.906**
Age_18-34	REF	REF	REF	REF	REF	REF
Age_35-49	0.068	0.199***	1.662***	0.184	0.200	0.038
Age_50-65	0.120**	0.321***	2.097***	0.192	0.227	-1.633
Age_66+	0.412***	0.592***	3.977***	0.478	0.444	-1.142
Male	REF	REF	REF	REF	REF	REF
Female	-0.224***	-0.198***	-2.677***	-0.535***	-0.569***	-8.647***
Diverse	0.382	0.226	3.113	-0.595	-0.724	-9.495
Disability	0.086	0.053	-0.034	0.146	0.089	0.143
Low education	REF	REF	REF	REF	REF	REF
A-levels	-0.018	0.082*	0.720	-0.037	0.071	0.680
University	0.120***	0.232***	2.934***	-0.023	0.078	0.645
Foreigner	-0.127*	-0.214***	-2.724***	-0.017	-0.071	-0.304
Income	-0.012	-0.022	0.444**	-0.044*	-0.052*	0.043
Germany	REF	REF	REF	REF	REF	REF
England	0.733***	0.736***	7.280***	0.226	0.202	-0.352
France	1.013***	1.054***	10.875***	1.427***	1.437***	15.688***
Italy	1.083***	0.848***	4.976***	0.514**	0.380*	0.119
Norway	0.953***	1.073***	14.214***	-0.007	0.048	-0.733
Poland	0.704***	0.757***	9.464***	1.137***	1.168***	14.697***
Switzerland	0.824***	0.920***	8.035***	0.341**	0.462	2.139
<i>Wald χ^2</i>	0.065***	0.077***	0.079***	610.93***	785.72***	807.42***

Note: * $p < 0.05$; *** $p < 0.01$; **** $p < 0.001$; displayed are the unstandardized coefficients; REF=reference category; ^aInstruments: *Altruistic children, Altruistic community, Career options*.

Table 4

Linear and IV models for the three broad volunteering roles (n=19,939)

	Model 7a (OLS): Life satisfaction	Model 8a (OLS): Happiness	Model 9a (OLS): WHO-5	Model 7b (GMM): Life satisfaction ^a	Model 8b (GMM): Happiness ^a	Model 9b (GMM): WHO-5 ^a
Constant	7.751***	7.953***	73.093***	7.207**	7.921**	69.108*
Administrative roles hours	0.000	-0.001	-0.023***	0.034	0.040	0.378
Sport roles hours	-0.001*	-0.001*	0.002	0.058***	0.067***	0.741**
Operational roles hours	0.002*	0.002*	0.014	0.121**	0.120*	1.910**
Football hours	0.025***	0.026***	0.296***	-0.185	-0.291	-3.299
Age_18-34	REF	REF	REF	REF	REF	REF
Age_35-49	0.033	0.001	-0.231	-0.991	-1.262	-15.902
Age_50-65	0.166***	0.069*	1.568***	-1.197	-1.644	-19.626
Age_66+	0.485***	0.327***	4.596***	-1.218	-1.801	-22.624
Male	REF	REF	REF	REF	REF	REF
Female	0.007	0.025	-0.176	-0.093	-0.170	-3.492
Diverse	-0.793	-0.905*	-9.846*	0.411	0.332	6.915
Disability	-0.471***	-0.467***	-4.780***	-0.775**	-0.798**	-9.825**
Low education	REF	REF	REF	REF	REF	REF
A-levels	-0.098***	-0.178***	-1.451***	0.083	0.004	1.613
University	-0.126***	-0.189***	-2.116***	0.061	-0.040	0.728
Foreigner	0.072*	0.088**	1.524***	0.216	0.302	4.117
Income	0.118***	0.114***	0.326**	0.165***	0.154***	1.143*
Country dummies	Included	Included	Included	Included	Included	Included
R ²	0.042***	0.041***	0.047***	215.26***	182.66***	140.69***

Note: * $p < 0.05$; *** $p < 0.001$; displayed are the unstandardized coefficients; REF=reference category; ^aInstruments: *Social important, Understanding experience, Understanding perspective, Political process, Political democratic.*

Table 5

Linear and IV models for six specific voluntary roles (n=19,939)

	Model 10a (OLS): Life satisfaction	Model 11a (OLS): Happiness	Model 12a (OLS): WHO-5	Model 10b (GMM): Life satisfaction ^a	Model 11b (GMM): Happiness ^a	Model 12b (GMM): WHO-5 ^a
Constant	7.757***	7.957***	73.078***	4.646*	4.947*	25.358
President hours	0.001	0.001	-0.004	0.001	0.019	0.043
Youth officer hours	-0.001	-0.002	-0.057***	0.537	0.404	-0.122
Coach hours	-0.001*	-0.001*	0.000	-0.056	-0.067	-1.360
Referee hours	0.000	0.000	0.037*	0.261	0.289*	3.362
Child care hours	0.002	0.000	0.013	0.325	0.472	10.481
Organization events hours	-0.000	0.001	-0.026	-0.334	-0.377	-1.156
Football hours	0.025***	0.026***	0.302***	0.367	0.333	5.285
Age_18-34	REF	REF	REF	REF	REF	REF
Age_35-49	0.038	0.006	-0.167	0.278	0.253	6.321
Age_50-65	0.171***	0.073*	1.578***	0.670	0.577	13.302
Age_66+	0.494***	0.330***	4.546***	1.243	1.065	15.286
Male	REF	REF	REF	REF	REF	REF
Female	0.011	0.029	-0.166	0.947	0.797	1.967
Diverse	-0.798	-0.909*	-9.816*	0.423	0.416	9.980
Disability	-0.467***	-0.463***	-4.745***	-0.256	-0.304	-6.482
Low education	REF	REF	REF	REF	REF	REF
A-levels	-0.101***	-0.182***	-1.495***	-0.050	-0.090	1.781
University	-0.128***	-0.192***	-2.138***	0.164	0.129	4.323
Foreigner	0.072*	0.089**	1.541***	-0.397	-0.334	-2.650
Income	0.117***	0.112***	0.306**	0.171	0.164	1.524
Country dummies	Included	Included	Included	Included	Included	Included
<i>Wald χ^2</i>	0.042***	0.041***	0.047***	80.02***	76.04***	58.36**

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; displayed are the unstandardized coefficients; REF=reference category; ^aInstruments: *Social important, Understanding experience, Understanding perspective, Political process, Political democratic, Altruistic children, Career CV, Career options.*

Table 6

Overview of monetary values in PPP (n=19,939)

Variable	Life satisfaction		Happiness		WHO-5	
	OLS	GMM	OLS	GMM	OLS	GMM
Volunteering hour	n.s.	370.05	n.s.	417.06	n.s.	n.s.
Administrative roles hour	n.s.	n.s.	n.s.	n.s.	-71.79	n.s.
Sport roles hour	-11.30	353.99	-13.16	434.39	n.s.	648.75
Operational roles hour	13.46	732.10	14.29	781.68	n.s.	1671.19
Football hour	204.98	3066.88	222.89	3436.50	1005.09	n.s.
Age_35-49	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Age_50-65	1421.24	4621.81	618.99	n.s.	5116.53	n.s.
Age_66+	4227.26	8689.11	2989.92	n.s.	14922.19	n.s.
Female	n.s.	5941.85	n.s.	6834.05	n.s.	n.s.
Diverse	n.s.	n.s.	-8053.98	n.s.	-32958.08	n.s.
Disability	-3981.07	-3520.65	-4115.08	-3600.67	-15712.03	-8569.36
A-levels	-854.90	-928.30	-1619.01	-1665.81	-5001.61	n.s.
University	-1096.00	898.14	-1717.34	n.s.	-7141.21	n.s.
Foreigner	603.11	-1452.64	775.14	-1539.06	5074.58	n.s.

Note: Continuous variables: values per hour; dummies: values for variable=1.