



Leisure time in young people's everyday life and its relevance for wellbeing: longitudinal analyses based on a quantitative panel in Vienna

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Abstract Oualitative studies with young people have shown that wellbeing is something that is felt and sensed in their everyday lives, especially in less formal leisuretime contexts. This article contributes to the current state of research by analyzing the relations between wellbeing and the conditions in young people's leisure time using a longitudinal, quantitative approach. The analyses are based on a new measurement instrument, which captures conditions in young people's leisure time in terms of the extent to which they facilitate correspondence and experimentation, and require adaption. The measurement instrument was inserted twice (2020, 2022) in the quantitative panel of 'Pathways to the Future', a project about young people in Vienna. The analytical sample consists of 239 panel participants (478 observations), and the main results are based on the specification of a random effects model. The findings reveal that possibilities for correspondence in the panel participants' leisure time, i.e., being able to be oneself and to relax, increase their wellbeing. In addition, to a lesser extent, possibilities for experimentation, i.e., discovering new traits about oneself and engaging in stimulating activities, are important for wellbeing. Interestingly, leisure time requiring adaption is not significantly related to wellbeing. More detailed analyses considering decreases and increases of adaption separately by estimating asymmetric effects suggest that adaption can be constraining but can also be more positively connotated. Overall, the results contribute to a relational and situational understanding of wellbeing in quantitative research, which places the focus on the conditions in young people's everyday life.

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Die Bedeutung von Freizeit im Alltag für das Wohlbefinden von jungen Menschen: Längsschnittanalysen auf Grundlage eines quantitativen Panels in Wien

Zusammenfassung Qualitative Studien mit jungen Menschen deuten darauf hin, dass Wohlbefinden im Alltag erfahren und hergestellt wird, insbesondere in weniger formellen Freizeitorten. Dieser Beitrag trägt zum bestehenden Forschungsstand mittels einer quantitativen Längsschnittanalyse der Zusammenhänge zwischen Wohlbefinden und den Bedingungen in der Freizeit von Jugendlichen bei. Die Analysen gehen auf ein neues Messinstrument zurück, das die Bedingungen in der Freizeit von Jugendlichen entlang von Übereinstimmung, Selbsterprobung und Anpassung erfasst. Das Messinstrument konnte in zwei Wellen (2020, 2022) des quantitativen Panels von "Wege in die Zukunft", einem Projekt über junge Menschen in Wien, angewendet werden. Vorgestellt wird ein Random Effects Modell, wobei das Sample für die Analyse aus 239 Panelteilnehmer*innen (478 Beobachtungen) besteht. Die Ergebnisse zeigen, dass Übereinstimmung, d.h. wenn Jugendliche in der Freizeit sie selbst sein und sich ausruhen können, das Wohlbefinden erhöht. In einem geringeren Ausmaß sind auch Möglichkeiten für Selbsterprobung in der Freizeit für das Wohlbefinden wichtig. Kein signifikanter Zusammenhang besteht zwischen Anpassung einfordernde Freizeit und Wohlbefinden. Die Schätzung asymmetrischer Effekte, welche die Zunahme und Verringerung von Anpassung in der Freizeit getrennt betrachten, legen nahe, dass Anpassung sowohl beschränkend als auch positiv konnotiert sein kann. Insgesamt tragen die Ergebnisse zu einem relationalen und situationalen Verständnis von Wohlbefinden in quantitativer Forschung bei, das den Fokus auf die Bedingungen im Alltag von Jugendlichen legt.

1 Introduction

Young people's wellbeing is a topic addressed by various disciplines in youth studies, e.g., psychology, pedagogy, and sociology. According to Cahill (2015, p. 96), wellbeing refers to the "subjective appraisal of quality of life" and is informed by "all domains of experiences". Data from 44 regions and countries across Europe and North America shows that, overall, young people report high levels of wellbeing (Inchley et al. 2016). Yet there is evidence that wellbeing decreases in adolescence (González-Carrasco et al. 2017; Herke et al. 2019). In fact, youth is a stage of life that is accompanied by many challenging tasks, such as detaching from one's parents, modifying one's relationships to peers, and formulating one's own wishes and desires. With an interest in enhancing young people's wellbeing, quantitative crosssectional and longitudinal studies have analyzed how young people's wellbeing is structurally and institutionally conditioned. It has been shown that young people's current and future wellbeing is mediated by their chances in the educational and the occupational system (Rathmann et al. 2018; Herke et al. 2019; Bonanomi and Rosina 2022). In youth, as in other life phases, data shows that wellbeing is associated with a person's prevailing material living conditions (Inchley et al. 2016, p. 76). The findings in relation to gender are mixed, but there are studies documenting a stronger decline of wellbeing for girls than for boys in this life phase (González-Carrasco et al. 2017; Herke et al. 2019). Wellbeing can also be influenced by broader developments, such as the COVID-19 pandemic, which had mostly detrimental effects on young people's wellbeing (e.g., Walper et al. 2021; Henseke et al. 2022).

In the recent theoretical literature, a relational and situational approach to wellbeing emerged (Atkinson 2013; White 2015; Atkinson et al. 2016). This approach also acknowledges that people's wellbeing-their perception, but also understanding of it-"reflect[s] ... positioning by social structure, of age, wealth, gender, or generation" (White 2015, p. 6). At the same time, this approach implies a change of perspective, whereby wellbeing is not assessed in relation to external 'determinants' but rather as something effected in specific times and places (Atkinson 2013, p. 142). Understood as such, wellbeing is then no longer seen as a state that can change but a quality that comes about through relations and engagements in everyday life. Several different qualitative studies have revealed that young people's possibilities for wellbeing are connected to experiences in their everyday leisure time (Sofija et al. 2021; Coffey 2022). These studies have highlighted that certain qualities of less formal leisure-time contexts, such as spaces outside in nature or in the home, can facilitate young people's wellbeing. In quantitative research such an approach to wellbeing is rarely adopted, due to the limited availability of adequate data. The present article addresses this research gap by introducing a relational and situational element in a quantitative analysis about young people's wellbeing.

In the quantitative panel of the project 'Pathways to the Future' information about the qualities characterizing the context in which the participants spend most of their leisure time in their everyday lives was collected. Previous cross-sectional analyses of the data suggest that the participants' wellbeing is related to the conditions characterizing the context in which they spend most of their time in terms of the possibilities it offers to be oneself and to experiment (Mataloni 2023). Building upon these previous findings, this article addresses the following research questions: Is it possible to gain further confidence in the obtained results by extending the informational basis to two waves? Do the qualities characterizing the predominant leisure-time context in young people's everyday lives have an independent effect on their wellbeing?

'Pathways to the Future' followed the lives of young people in Vienna for five years, beginning in the school year 2017/2018. The longitudinal analyses in this article are based on the third and fifth wave of the panel, which were carried out during the COVID-19 pandemic. The main focus of the analysis are the relationships between (changes in) wellbeing and (changes in) the conditions characterizing the context where young people predominantly spend their leisure time. Moreover, by considering structural variables in the specification of the models, the analysis takes stock of previous quantitative research.

2 Theory and state of research

Relational and situational approaches highlight the fact that wellbeing is sensed and felt in everyday life. In the words of Atkinson (2013, p. 142), "wellbeing ... comprises complex assemblages of relations not only between people, but also between people and places, material objects and less material constituents of places ...". According to such an approach, wellbeing is not seen as something an individual possesses but a quality that emerges in the interaction between the individual and the conditions in his or her everyday life. This means that, on the one hand, wellbeing can display stability, since the everyday tends towards continuity and routines; on the other hand, it can change, if the conditions in a person's life align in new ways (Atkinson 2013, p. 142). This is supported by insights from the sociology of the everyday, which reveal that, while everyday life can be predetermined, it also allows for "moments of ... insight and ... creativity" (Gardiner 2000, p. 6). As noted by Gardiner (2000, p. 17), these "utopian moment[s]" in the everyday do not necessarily involve big changes but rather concern the quality of our living.

Some activities and relations in young people's everyday life are more heavily structured and systematized than others, such as the time that young people spend in school, vocational training, or work. This more formal sphere of the everyday takes place in specific physical locations and relies on codified rules, which are sedimented in the body (Burkitt 2004, pp. 220–221). In research, attention is frequently given to this sphere of the everyday as it is manifest in visible and recognizable forms. However, experiences in the less formal sphere of the everyday are also formative for young people. Although "more dispersed and hidden", informal activities and relations have their own time and space (Burkitt 2004, p. 216). They are connected to places like "the home, the streets, playgrounds, cafes, bars, restaurants and other such spaces in the modern urban landscape" (Burkitt 2004, p. 221). Moreover, according to Burkitt (2004, p. 222), informal connections in the everyday are held together less by explicit rules than by "feeling and the desire to constitute them again in a future time and space". As such, activities and relations in this sphere can be a suitable ground for wellbeing even though they are less articulated.

In a recent qualitative study, Sofija et al. (2021) carried out a photo-elicitation study among young people aged 19 to 26 to gain insights into their own understanding of wellbeing and how they create it in their everyday lives. In the across case analysis, most of the themes that are identified as important to young people's wellbeing have to do with the self. The first identified theme "Looking After Yourself" means "taking care of one's physical and mental health" (Sofija et al. 2021, p. 285). This involves following a healthy lifestyle (e.g., going for a run), but also creating wellbeing by "experiencing moments of release" (Sofija et al. 2021, p. 289). Study participants mentioned, for example, possibilities to be "light-hearted" with friends or a partner after a demanding day (Sofija et al. 2021, p. 289). The second theme "Centering Yourself" refers to inner processes that may be brought about through a temporary "dissociation from daily concerns and challenges" (Sofija et al. 2021, p. 296). An example from the study is to become completely absorbed by an activity, such as repairing something, so that worries can be temporarily forgotten. Another example are moments of introspection that may be brought about inside or

outside in nature, with music, or in silence. The third theme "Accepting Yourself" is about feeling happy about oneself (Sofija et al. 2021, p. 290). It emerged from the study that an important element is to attend to who one is instead of "pleasing others" or "letting others constrain who you can be" (Sofija et al. 2021, pp. 291 and 292). This can be encouraged by gaining confidence in oneself (e.g., facing fears) or by feeling in control (e.g., changing something without the approval from others). What is important to stress is that even though these themes concern the individual, they are sustained through concrete experiences in daily life. They are connected to the relations and the places that are relevant to young people's lives. In the study, a young person's own home is identified as a place which sustains wellbeing. Other places mentioned are gyms, park benches, sites in nature, cafés, etc. Considered together, the first three themes associate wellbeing with being at ease with oneself and one's surroundings. Yet the young participants in the study by Sofija et al. (2021, p. 293) also connected wellbeing with "Progressing Yourself". This encompasses formulating goals and working towards them. Moreover, it refers to "stretching [one's] boundaries" by leaving one's comfort zone and having new experiences (Sofija et al. 2021, p. 295). Thus, to a certain extent, "Progressing Yourself' may involve small sacrifices in the present for future wellbeing, or, in other words, a small portion of adaption.

While Coffey (2022) also conducted a photo-elicitation study about young people's wellbeing, she doesn't present an analysis across cases but, rather, of two indepth case studies. Both young people in these case studies, aged 22 and 23, have undergone a period of hardship, which was experienced by one as "pitch-black darkness" and encompassed for the other "destructive tendencies" (Coffey 2022, p. 77). In the analysis, Coffey elaborates on the relations and the engagements in the everyday of the two participants that created new conditions for wellbeing. The case studies draw attention to, on the one hand, the "gradual build up" of weariness, which led a situation previously perceived by the participants as normal to become intolerable (Coffey 2022, p. 73). On the other hand, the study reveals the importance of temporary moments of wellbeing, which are facilitated by supportive others (Coffey 2022, p. 73). Both participants associate wellbeing with spending time outside in nature with a friend. Based on a picture, one of the participants recounts a situation where she was lying down together with a friend on a rock by the water without talking: "It's just peaceful. It's just everything comes into perspective and it's almost like a weight's lifted off you" (Monica in Coffey 2022, p. 74). According to Coffey (2022, p. 74), it is worth researching moments of wellbeing which encompass "human and non-human intra-actions" since they can signal or open up new ways of feeling and relating to oneself and others, and bring about further opportunities for wellbeing. Overall, the results highlight that "all of the various elements of everyday life assemble to produce the conditions of possibility for living, including for 'wellbeing'" (Coffey 2022, p. 79).

In the context of the project 'Pathways to the Future', cross-sectional, quantitative analyses were carried out exploring the relationship between leisure time in young people's everyday life and their wellbeing (Mataloni 2023). The analyses are based on a new measurement instrument: first, a filter question surveyed where the participants spend their time when they are not at school, vocational training, or work, with answer categories also explicitly covering less formal leisure-time contexts. Then, the participants were asked to evaluate the quality of the context where they spend most of their time in terms of the extent to which it facilitates correspondence and experimentation, and requires adaption. Correspondence captures the extent to which leisure-time contexts allow young people to be themselves and relax. Experimentation refers to the possibility to discover new traits about oneself and try out different things. Adaption measures the extent to which it is necessary to adapt to the expectations of others in a given context. Cross-sectional regression analyses reveal significant relationships similar in magnitude between wellbeing and leisure time facilitating correspondence as well as leisure time facilitating experimentation, while adaption is insignificant. The relationships between wellbeing and correspondence as well as experimentation were also observable when controlling for gender, financial means, and primary activity in young people's everyday lives (Mataloni 2023, p. 256). Therefore, we can say that there is, from a quantitative perspective, provisional evidence pointing towards an association between wellbeing and the conditions in young people's everyday leisure time. The quantitative, crosssectional analyses are in line with the reported qualitative insights. Wellbeing is higher when young people's leisure time resonates with their sense of selves (correspondence) and encourages exploration (experimentation). However, the qualitative insights suggest that the strength of relationship with wellbeing should be different for the two concepts; both qualitative studies reviewed above place a greater emphasis on correspondence than on experimentation (Sofija et al. 2021; Coffey 2022).

Relational and situational approaches to wellbeing allow us to hypothesize that young people's wellbeing is related to the conditions they encounter in their everyday leisure time. Such approaches have primarily been taken up in qualitative studies and in a quantitative, cross-sectional setting. To gain a deeper understanding of the relevance of young people's everyday leisure time for their wellbeing longitudinal methods, which consider person specific changes, are necessary. By using longitudinal methods it is possible to assess, if changes in wellbeing are reasonably associated with changes in people's living conditions, here in the specific with changes in their leisure time. The intention of this article is to test if the previously found relationships can be confirmed in a quantitative, longitudinal setting.

Considering the findings from previous studies discussed above, the following hypotheses are formulated for the longitudinal analysis:

Hypothesis 1 There is a direct positive association of wellbeing with leisure time facilitating correspondence as well as with leisure time facilitating experimentation.

Hypothesis 2 The strength of association will be higher for wellbeing and leisure time facilitating correspondence.

Besides facilitating correspondence or experimentation, leisure time in young people's everyday lives may also encompass the necessity to adapt oneself and one's activities to others. In the quantitative cross-sectional analysis, no significant relationship was observed between leisure time requiring adaption and wellbeing (Mataloni 2023, p. 256). Although not in the focus of the analysis, the qualitative study by Sofija et al. (2021) provides some suggestions as to how to explain this result. On the one hand, too much conditioning by others can be detrimental for wellbeing (Sofija et al. 2021, p. 292). On the other hand, wellbeing is also about exposing oneself to new situations and engaging in activities that require an effort (Sofija et al. 2021, p. 295). The longitudinal setting allows us to clarify further the ways in which adaption in young people's leisure time affects wellbeing over time from a quantitative perspective. Additional insights will be obtained by considering increases and decreases of adaption separately in the analysis.

3 Methods

3.1 Analytical sample

The data for this article was collected in the context of the quantitative panel of the project 'Pathways to the Future' carried out by the Department of Sociology at the University of Vienna (Flecker et al. 2020). The population of the panel study are young people who, in the school year 2017/2018, were in the last year of a 'New Middle School (NMS)¹ (Grade 8) in Vienna. In cooperation with the Vienna Board of Education, in the first wave, all 117 NMS in Vienna, comprising of 351 classes and approximately 7500 students in the final year, were contacted. In the first wave, 2850 young people completed the questionnaire in the PC rooms of their schools with nonresponse occurring at the level of schools and classes as well as at the individual level. In the subsequent waves, the panel participants were contacted individually and invited to fill out the annual online survey on their own mobile devices. Panel attrition can be observed in all subsequent waves with the greatest loss occurring from the first wave to the second wave, when participants could no longer be reached in the school setting (Malschinger et al. 2023, in this issue). Further information on the thematic foci and the methods of the panel can be found in Vogl et al. (2020) and Wöhrer et al. (2023). Informed consent for participation in the panel was obtained both from the participants as well as their guardians.

The aim of this study is to analyze the association between (changes in) wellbeing and (changes in) the conditions characterizing the participants' leisure time. The analysis uses the third wave (Mataloni et al. 2020) and the fifth wave (Flecker et al. 2022) of the panel, since these two waves provide information on both wellbeing and leisure time. Data collection of the third wave took place from the 4th of March to the 7th of May 2020; thus, it started shortly before the onset of the COVID-19 pandemic in Austria and the implementation of the first measures to mitigate its spread. The fifth wave was carried out two years later from the 1st of March to 31st of May 2022. Overall, 591 participants completed the two modules of the third wave and 375 the three modules of the fifth wave. Included in the analysis are participants

¹ The Austrian school system differentiates after Grade 4 between an 'Academic track' and a 'Vocational track'. The 'New Middle School', which now is called only 'Middle School', is part of the 'Vocational track'.

with valid answers on the variables used for the mean score index on wellbeing in both waves. In addition to this requirement, participants included in the analysis need to have provided sufficient information on their leisure time in both waves, although the requirements in this regard were less strict (see Sect. 3.2). The number of participants fulfilling these criteria is 239, corresponding to 478 observations over the two time points.

The fairly small size of the analytical sample needs to be acknowledged as a major limitation of the analyses in this article. Due to panel attrition, different participation patterns across waves, and item nonresponse, not all cases from the third wave and the fifth wave could be used. Table 7 in the Appendix provides information on the composition of panel participants in the first, third, and fifth waves of the panel, and in the analytical sample along selected socio-demographic characteristics. The proportions suggest that in subsequent waves increasingly more female participants as well as those participants who had attained better grades at the time of the first wave could be reached. Changes in the composition in subsequent waves appear to be smaller in terms of the highest level of parental education and migration background. The proportions show that the analytical sample does not diverge dramatically from overall participation trends across waves. Only in relation to migration background does the analytical sample seem to be somewhat less diverse. Moreover, there may be fewer sample problems if the aim is not to infer descriptive characteristics of the target group based on the sample but to analyze relationships (Groves et al. 2009, p. 62). Lastly, the sample offers the opportunity to address research questions which cannot be tackled with other data, since it includes questions and items that are not covered in large surveys.

3.2 Measures

The dependent variable, overall wellbeing, was calculated over two survey questions addressing life satisfaction and happiness. As the English translation in Table 1 shows, these survey questions required the participants to consider their life as a whole. Answers could be given in terms of percentages using a slider and range from 0 to 100. In both waves, the mean score index for wellbeing demonstrates very good reliability with Cronbach's α values of 0.83 and 0.88, respectively.

The main explanatory variables are drawn from the new measurement instrument concerning the participants' everyday leisure time. A multiple-response question surveyed where the participants spend their time when they are not at school, vocational training, or work. The answer categories comprised a list of 17 leisuretime contexts², which were defined based on qualitative interviews with the target group. Participants were asked to rank the contexts that they had previously selected in terms of how much time they spend in each, from the one in which they spend the most time to the one in which they spend the least time. This was followed by

² The places/contexts were: participants' own homes; the home of a partner; the home of friends; the home of relatives; the home of acquaintances; outdoors in the city; outdoors in nature; training sessions, courses, or rehearsals; shopping malls; cafés or bars; baths, gyms, or fitness studios; libraries; youth centres; clubs or associations; rented DIY spaces; workplaces of others; and social media.

| Construct | English translation of the questions and items | Reliability of the mean score indices |
|---|---|---------------------------------------|
| Overall wellbeing | How satisfied are you in general in your life? | $\alpha = 0.83 (W3)$ |
| | All things considered, how happy are you at the moment? | $\alpha = 0.88 \text{ (W5)}$ |
| Conditions in partici- pants' leisure time | What is it like when you spend your time in [place]? ^a | |
| Leisure time supporting correspondence | I can just be myself there | $\alpha = 0.69 (W3)$ |
| | I am entirely in my own world there | $\alpha = 0.73 (W5)$ |
| | I can relax there | |
| Leisure time facilitating | I can discover new, unexpected sides of myself there | $\alpha = 0.74 (W3)$ |
| experimentation | I am sometimes surprised by myself there | $\alpha = 0.74 (W5)$ |
| | I can try out something completely new there | |
| Leisure time requiring | I have to be as others want me to be there | $\alpha = 0.72 (W3)$ |
| adaption | I have to fulfil many commitments there | $\alpha = 0.68 \text{ (W5)}$ |
| | I have to do what others decide there | |

Table 1 Measures used and their reliability

^aThe question explicitly refers to the everyday leisure-time context in which each participant indicated spending most of his or her time

the central component of the measurement instrument, which referred to the context in which each participant had previously indicated he or she spends most of his or her time. The question wording, 'What is it like, when you spend your time in [place]?', explicitly referred to the context in question and asked participants to evaluate the conditions in this one context based on nine items. The answer options included: '1—completely disagree', '2—somewhat disagree', '3—somewhat agree' and '4—completely agree' as well as 'don't know' and 'I'd rather not say'.

As shown in Table 1, the items were formulated to assess the extent to which participants feel their leisure time allows for correspondence, facilitates experimentation, and requires adaption. Correspondence measures the possibilities to be oneself, to feel entirely in one's own world, and to relax. Experimentation captures the extent to which it is possible to discover new traits about oneself, to be surprised by oneself, and to try out new activities. The items for adaption assess the extent to which participants feel they have to be as others want them to be, fulfill duties, and do what others decide. Exploratory factor analysis of the data from the third wave reveals that the items load as expected on three distinct factors (Mataloni 2023, pp. 247–248). Based on the data of the fifth wave, this three-dimensional structure could be confirmed (not shown). For this article, mean score indices were calculated when the participants had at least two valid answers over the three items. The reliability of the indices, which can be considered as good (0.68 > Cronbach's $\alpha < 0.74$), remains almost the same over the two waves.

In the analyses, the participants' age is included as a time-varying control variable. Since age proceeds with time in the observational window, it does not only reflect individual developmental processes but also general contextual developments, such as those induced by the COVID-19 pandemic. For this reason, the inclusion of this variable does not allow us to discern if observed effects are due to age or the COVID- 19 pandemic. Moreover, the study considers several time-constant control variables that are antecedent to the main effects under investigation. Gender is included with male as the reference category. The subjective evaluation of the available 'financial resources' in the family at the time of the first wave is used as a proxy for social background, where a higher value equals more means. 'Highest level of parental education' differentiates between 'tertiary education', 'secondary education', 'basic or no education' and the residual category 'don't know'³. Participants' and their parents' country of birth are used for 'migration background' distinguishing between 'none', '1st generation', '2nd generation' (both parents born in another country) and '2.5th generation' (one parent born in another country)⁴. Finally, the principal activity of the participants at the start of the observational window is also included as a control variable. Participants reported attending a 'school to qualify for university admission', 'part-time vocational schools' and 'schools for intermediate vocational training' as well as being in other more 'provisional positions'.

3.3 Strategy of analysis

As previously noted, this article applies a longitudinal approach, which uses the information collected from two points in time. Methodically, this is congruent with an understanding of wellbeing that evolves together with the conditions that young people encounter in their everyday lives. Longitudinal methods are not (only) based on the variation between different individuals but the variation within the same individuals over time (Brüderl and Ludwig 2015, p. 330). From a statistical point of view, longitudinal approaches allow more accurate estimates to be derived, since they are less influenced by observed and unobserved individual characteristics other than the variables of interest (Scherer 2013, p. 105 and 118).

First, variation in wellbeing as well as variation in the conditions in the participants' leisure time are described by considering dynamics on the individual level. These analyses provide insight into the extent of stability and change in these variables between wave 3 and wave 5. Moreover, changes in wellbeing are discussed for different groups of participants on a bivariate level.

The main results of this article are based on the specification of a random effects (RE) model with clustered standard errors. This model allows us to investigate if changes in the dependent variable wellbeing are significantly associated with changes in the conditions in participants' leisure time as well as with age. A random effects model is a longitudinal method of analysis that considers both the variation within individuals as well as between individuals (Scherer 2013, pp. 105–106). To ensure the robustness of the results, they were compared to results obtained by fixed effects (FE) estimation, which is based *only* on the variation within individuals

³ The parent with the higher level of education determines the value of this variable. If the level of education was provided only for one parent, this information is used. If no information was provided, the category 'don't know' applies.

⁴ In this article, 'migration background' is categorized as in other research outputs by the project 'Pathways to the Future' (Astleithner et al. 2021; Valls et al. 2022). However, it must be critically noted that ascribing young people to migration groups and generations can contribute to the construction of this social category and may not reflect their subjective experiences (Schels and Wöhrer 2022, p. 223).

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(Table 8 in the Appendix). Both the inspection of the estimated coefficients as well as the Hausman test (Scherer 2013, p. 120) show that the results obtained using the two methods are substantially the same. In this article, the results from the RE model are presented, since it also allows the association with time-constant variables to be estimated. To gain a fuller picture, the above-mentioned control variables were introduced into the model.

With these methods (RE and FE estimation), it is possible to test if there is a significant association between two variables over time. However, significant associations can be brought about in different ways. Do increases and decreases of an explanatory variable have the same effect on a dependent variable? Or do the effects diverge? To address these questions, a simple Ordinary Least Squares (OLS) regression is specified, which allows for the exploration of potential asymmetric effects. The dependent variable is the difference in wellbeing between the two time points (t_5-t_3) . Also for the independent variables (i.e. the conditions in leisure time) the difference between the two time points is calculated, but categorized as 'unchanged', 'increased', and 'decreased'. In the model, the category 'unchanged' is defined as the reference category whereas 'increased' and 'decreased' are inserted as dummy variables. By comparing the direction and the magnitude of the estimated coefficients, it is possible to explore if the effects of 'increased' and 'decreased' are symmetric or if they diverge.

4 Results

4.1 Descriptive results

Considering the responses from all participants in the analytical sample, the level of wellbeing decreased from 71.59 (SD=19.89) in wave 3 to 67.32 (SD=20.52) in wave 5. A paired samples t-test showed that the difference in wellbeing between the two time points is statistically significant (t=3.327; df=238; p=0.001). Of relevance for the subsequent analyses, however, are not the averages in the analytical sample but the individual differences (Table 2). In the considered time window, the reported wellbeing decreased by more than 5 points for 46% of respondents, increased by more than 5 points for 29%, and remained unchanged for 26% (where differences were between -5 and 5).

The average levels of correspondence, experimentation, and adaption in respondents' leisure time remained relatively stable across the two time points with no significant changes. The means (M) suggest rather pronounced opportunities for corre-

| | 1 | 6 | | |
|-----------|-----------|-----------|-----------|--|
| | Decreased | Unchanged | Increased | |
| Wellbeing | | | | |
| Freq | 109 | 61 | 69 | |
| % Valid | 45.61 | 25.52 | 28.87 | |

Table 2 Changes in the reported wellbeing between wave 3 and wave 5 (n=239)

The categories are 'unchanged' for differences between -5 and 5; 'decreased' for differences lower than -5; and 'increased' for differences greater than 5

| | Decreased | Unchanged | Increased | |
|-----------------|-----------|-----------|-----------|--|
| Correspondence | | | | |
| Freq | 50 | 150 | 39 | |
| % Valid | 20.92 | 62.76 | 16.32 | |
| Experimentation | | | | |
| Freq | 59 | 103 | 77 | |
| % Valid | 24.69 | 43.10 | 32.22 | |
| Adaption | | | | |
| Freq | 50 | 135 | 54 | |
| % Valid | 20.92 | 56.49 | 22.59 | |

Table 3 Changes in correspondence, experimentation, and adaption from wave 3 to wave 5 (n = 239)

The categories are 'unchanged' for differences between -0.5 and 0.5; 'decreased' for differences lower than -0.5; and 'increased' for differences greater than 0.5

spondence (wave 3: M=3.46 and SD=0.58; wave 5: M=3.41 and SD=0.68), moderate opportunities for experimentation (wave 3: M=2.50 and SD=0.88; wave 5: M=2.57 and SD=0.85) and low requirements for adaption (wave 3: M=1.78 and SD=0.64; wave 5: M=1.85 and SD=0.71). However, fairly stable averages may not reflect the experiences of everyone in the analytical sample. The micro dynamics in Table 3 suggest that the perceived conditions in the dominant leisure-time context changed for a considerable part of the panel participants. Leisure time supporting correspondence diminished or increased for 37% of the participants, leisure time facilitating experimentation decreased or increased for 57%, and leisure time requiring adaption diminished or increased for 44%. Thus, considering these within-person changes, experimentation demonstrates greater variability than correspondence and adaption across the two time points.

This study is focused primarily on the relationships between (changes in) wellbeing of the panel participants and (changes in) the conditions characterizing the context where they spend most of their leisure time. However, before presenting the main results, it is useful to take a closer look at the groups of panel participants for which the dependent variable varied (Table 4). Compared to males, the wellbeing of female participants changed more often over the observational window. More specifically, the change in wellbeing for the latter was more often for the worse. A similar pattern can be observed in relation to the perceived financial resources in wave 1, which is used as a proxy for social background. Changes in wellbeing occurred more often among respondents who reported 'low' or 'moderate' financial resources as compared to those with 'high' resources. More concretely, in the former group, the proportion with diminished wellbeing was higher than in the latter. When it comes to the 'highest level of parental education', the proportions of respondents with relatively stable wellbeing are approximately the same across all categories. However, increases in wellbeing seem to be more frequent among respondents who have at least one parent with tertiary education and decreases among respondents who did not provide information on their parents' education in wave 1. Migration background does not provide a clear picture: the proportion of those with relatively stable wellbeing is highest among those with no migration background followed by those with both parents born in another country (2nd generation), while lowest

| Reported wellbeing | Decreased | Unchanged | Increased |
|--|---------------------|-----------|-----------|
| Gender $(n = 235)$ | | | |
| Male | 33 | 34 | 25 |
| | 35.87 | 36.96 | 27.17 |
| Female | 76 | 25 | 42 |
| | 53.15 | 17.48 | 29.37 |
| Financial resources in wave 1 (n= | = 232) | | |
| Low and moderate | 87 | 44 | 53 |
| | 47.28 | 23.91 | 28.80 |
| High | 19 | 16 | 13 |
| | 39.58 | 33.33 | 27.08 |
| Highest level of parental educatio | n in wave 1 (n=233) | | |
| Tertiary education | 15 | 11 | 18 |
| | 34.09 | 25.00 | 40.91 |
| Secondary education | 52 | 29 | 25 |
| | 49.06 | 27.36 | 23.58 |
| Basic or no education | 17 | 10 | 12 |
| | 43.59 | 25.64 | 30.77 |
| Don't know | 23 | 10 | 11 |
| | 52.27 | 22.73 | 25.00 |
| Migration background from wave | 1 (n = 224) | | |
| None | 27 | 22 | 19 |
| | 39.71 | 32.35 | 27.94 |
| Generation 1 | 22 | 10 | 14 |
| | 47.83 | 21.74 | 30.43 |
| Generation 2 | 28 | 19 | 18 |
| | 43.08 | 29.23 | 27.69 |
| Generation 2.5 | 25 | 7 | 13 |
| | 55.56 | 15.56 | 28.89 |
| Principal activity in wave 3 $(n = 2)$ | 37) | | |
| School to qualify for university | 60 | 36 | 41 |
| admission | 43.80 | 26.28 | 29.93 |
| Part-time vocational school | 18 | 13 | 12 |
| (dual training) | 41.86 | 30.23 | 27.91 |
| School for intermediate | 19 | 7 | 7 |
| vocational education | 57.58 | 21.21 | 21.21 |
| Provisional positions | 12 | 3 | 9 |
| | 50.00 | 12.50 | 37.50 |

 Table 4
 Changes in the reported wellbeing between wave 3 and 5 for different groups of panel participants (absolute frequencies and percentages)

stability is found among those with one parent born in another country (2.5th generation). Lastly, wellbeing tended to remain stable among those who, in the third wave, were in a school to qualify for university admission or in dual apprenticeship training. Although it is reasonable to expect wellbeing to vary more often in the other two categories, a word of caution is necessary as the respective sample sizes are fairly small.

4.2 Multivariate, longitudinal analysis

The results from longitudinal analysis for wellbeing as outcome variable using random effects specification are presented in Table 5. The random effects specification exploits both the variation in wellbeing between individuals and within the same individuals over the two timepoints. The θ value of 0.43 indicates that this model is almost equally based on both sources of information.

The upper part of the table reports the estimated relationships between the conditions in the respondents' leisure time and their wellbeing. The coefficient largest in magnitude can be observed in relation to correspondence, which is statistically significant at a 0.001 level. It reveals that leisure time facilitating correspondence increases subjective wellbeing. The coefficient for experimentation, which is lower in magnitude and statistically significant at a 0.05 level, suggests that leisure time facilitating experimentation is also important for wellbeing but to a lesser extent than correspondence. Leisure time requiring adaption does not reach statistical significance. These results can be considered as robust since they are substantively similar to those obtained by the fixed effects specification, which uses only the within variation, displayed in Table 8 in the Appendix. Changes in correspondence and changes in experimentation are both associated with changes in wellbeing, but the difference in the relative importance is even more pronounced.

The lower part of Table 5 displays the results for age as well as several covariates that, according to the literature, are related to wellbeing and antecedent to the main effects under examination. It can be observed that the level of wellbeing decreases with age. This result is in line with previous research reporting a progressive decline of wellbeing over adolescence (González-Carrasco et al. 2017; Herke et al. 2019). The result may also be linked to the COVID-19 pandemic, which, according to previous studies, had mostly negative impacts on young people's wellbeing (e.g., Walper et al. 2021; Henseke et al. 2022). As shown in the literature (Inchley et al. 2016), this study also confirms that wellbeing increases with available financial means, here captured as a subjective evaluation in wave 1. The multivariate setting reveals gender differences with lower levels of wellbeing among female participants. In addition, it is reasonable to expect that the level of wellbeing is associated with the respondents' educational and/or occupational situation. The level of wellbeing seems to be lower among respondents who, in wave 3, attended an intermediate vocational school compared to those in dual apprenticeship training, albeit only at a marginal level of significance. A possible explanation could be that, in the Austrian vocational education and training (VET) system, dual apprenticeship training represents a strong point of reference with corresponding opportunities for wellbe-

| | Wellbeing | | | | |
|-------------------------------------|---------------|--------|-----------------|--|--|
| | Est | Std | <i>p</i> -value | | |
| Main explanatory variables | | | | | |
| Correspondence | 5.93*** | 1.496 | 0.000 | | |
| Experimentation | 2.59^{*} | 1.173 | 0.027 | | |
| Adaption | -2.13 | 1.460 | 0.145 | | |
| Control variables | | | | | |
| Age | -1.98^{**} | 0.619 | 0.001 | | |
| Gender | | | | | |
| Male (ref.) | | | | | |
| Female | -4.97^{*} | 2.243 | 0.027 | | |
| Financial means in WI | 3.97** | 1.323 | 0.003 | | |
| Highest level of parental education | | | | | |
| Tertiary education (ref.) | | | | | |
| Secondary education | 0.79 | 3.178 | 0.804 | | |
| Basic or no education | -2.11 | 3.691 | 0.568 | | |
| Don't know | -5.91 | 4.061 | 0.146 | | |
| Migration background | | | | | |
| None (ref.) | | | | | |
| Generation 1 | 3.10 | 3.320 | 0.351 | | |
| Generation 2 | 3.57 | 2.971 | 0.230 | | |
| Generation 2.5 | 2.75 | 3.478 | 0.430 | | |
| Principal activity in W3 | | | | | |
| Part-time vocational school (ref.) | | | | | |
| School to qualify for university | -3.37 | 2.975 | 0.257 | | |
| School for interm. voc. training | -7.45+ | 3.919 | 0.057 | | |
| Provisional positions | -3.09 | 4.144 | 0.456 | | |
| Constant | 70.90^{***} | 14.425 | 0.000 | | |
| Theta | 0.43 | | | | |
| R^2 within | 0.18 | | | | |
| R ² between | 0.14 | | | | |
| R^2 overall | 0.15 | | | | |
| n/observations | 219/438 | | | | |

 Table 5
 Relationships between wellbeing and the conditions in the panel participants' leisure time while controlling for socio-demographic factors (multivariate regression with RE estimator)

Dummy variables controlling for differences between respondents with and without missing values on the indices for leisure time are not significant. Results from the Hausman test with the indices for leisure time, the dummy variables controlling for missing values, and age: $\chi^2 = 5.59$, df = 7, *p*-value = 0.59 Significance levels: ***p < 0.001; **p < 0.01; *p < 0.05; *p < 0.10

ing. Finally, parents' highest level of education and migration background are not statistically significant.

4.3 Estimation of asymmetric effects

The longitudinal analyses have shown that (changes in) correspondence and experimentation are significantly associated with (changes in) wellbeing. As discussed in Sect. 4.1, for some respondents, opportunities for correspondence and/or experimentation increased whereas, for others, they decreased over the two time points. Are increases of the respective opportunities particularly important for wellbeing? Or are decreases more disadvantageous for wellbeing?

To answer these questions, an OLS model was specified that allows us to explore to what extent wellbeing is associated with an increase or a decrease in the variables describing the leisure-time conditions (see Table 6). The outcome variable is the change in wellbeing calculated as the difference between wave 5 and wave 3 for each respondent. The explanatory variables—the changes in the conditions characterizing respondents' leisure time—are introduced in the model as dummy variables with 'no change' as the reference category. The results reveal that, compared to unchanged opportunities, both increases and decreases of correspondence correlate with almost symmetrical significant increases and decreases in wellbeing. The fact that correspondence has an effect on wellbeing over time in both directions might explain why it manifests the strongest association with wellbeing out of the three variables (see Table 5). In the case of experimentation, the results reveal an

| | Change in wellbeing from W3 to W5 | | | | |
|----------------------|-----------------------------------|-------|-----------------|--|--|
| | В | Std | <i>p</i> -value | | |
| Intercept | -7.81*** | 2.287 | 0.001 | | |
| Correspondence | | | | | |
| No change (ref.) | | | | | |
| Decreased | -7.96* | 3.163 | 0.013 | | |
| Increased | 5.92+ | 3.401 | 0.083 | | |
| Experimentation | | | | | |
| No change (ref.) | | | | | |
| Decreased | -0.83 | 3.064 | 0.786 | | |
| Increased | 6.49 [*] | 2.859 | 0.024 | | |
| Adaption | | | | | |
| No change (ref.) | | | | | |
| Decreased | 8.80^{**} | 3.143 | 0.006 | | |
| Increased | 2.26 | 3.063 | 0.461 | | |
| R^2 | 0.14 | | | | |
| Corr. R ² | 0.11 | | | | |
| n | 239 | | | | |

 Table 6
 Change in wellbeing from W3 to W5. Exploration of asymmetric effects using multivariate

 OLS regression with dummies for the changes in correspondence, experimentation, and adaption as independent variables

Significance levels: *** *p* < 0.001; ** *p* < 0.01; **p* < 0.05; +*p* < 0.1

asymmetrical pattern. While increases of experimentation correlate with changes in wellbeing, the coefficient for decreases is close to 0 and not significant. Hence, the overall effect of experimentation might be lower (see Table 5) since an effect can only be observed in one direction. Interestingly, the coefficient for a decrease in adaption manifests the strongest association with changes in wellbeing. Compared to the reference category, decreased requirements for adaption are significantly associated with positive changes in wellbeing. However, while not reaching significance, increases in adaption also display a positive coefficient, which compromises the overall significance of this variable in the RE model in Table 5.

5 Discussion and conclusion

Relational and situational approaches to wellbeing highlight that it is something that is experienced in everyday life (Atkinson 2013; White 2015). By obtaining detailed information about the context where young people spend most of their everyday leisure time, it is possible to introduce such an understanding of wellbeing into quantitative research. The aim of this article is to analyze, from a longitudinal perspective, the relations between wellbeing and the conditions in young people's leisure time as they evolve over time. The results show that wellbeing is positively associated with leisure time that allows for correspondence and leisure time that facilitates experimentation, confirming the first hypothesis. While the same relationships could be observed in a previous cross-sectional analysis of the data (Mataloni 2023), the findings in this article can be considered as a more robust evidence for them. The findings are based on longitudinal data and estimation techniques that control for unobserved heterogeneity, which provides them with a more solid foundation. Additionally, the more accurate estimates obtained by applying a longitudinal approach show that correspondence and experimentation differ in their relative importance for wellbeing, contributing to a more nuanced picture.

The estimation of asymmetric effects brings to the fore that leisure time allowing for correspondence affects wellbeing in both directions: decreases of correspondence correlate with reduced wellbeing, whereas increases of correspondence correlate with improved wellbeing. Previous qualitative studies explored young people's own understanding of wellbeing and the ways in which it is created in everyday life (Sofija et al. 2021; Coffey 2022). Various aspects that emerged from these studies can be linked to the concept of correspondence, such as being light-hearted with others, becoming immersed in a context, or taking a break. According to these studies it can be beneficial for young people's wellbeing to spend time alone or with others in contexts that resonate with their sense of selves. The RE and FE models in this article underscore the importance of leisure time allowing for correspondence, since it displays the strongest significant association with wellbeing out of the three variables for leisure time.

While to a lesser extent, leisure time facilitating experimentation is also significantly correlated with wellbeing. A closer examination of this association reveals that only increases of experimentation are related to positive changes in wellbeing. This suggests that possibilities to discover new traits about oneself and to try out different activities are beneficial for wellbeing when they arise. At the same time, it appears that it is not necessary to constantly have new experiences in one's leisure time to keep one's level of wellbeing. The weaker association between experimentation and wellbeing is plausible against the background of the qualitative results reported. The young participants in the study by Sofija et al. (2021, p. 295) related wellbeing to expanding one's horizon but mentioned it only as one aspect among many. Together the results in this article confirm the second hypothesis, which postulates a weaker, but significant association between wellbeing and leisure time facilitating experimentation.

Both concepts—correspondence and experimentation—refer to the ways in which young people experience wellbeing in their everyday lives. For Coffey (2022, p. 75), it is worth researching "these qualities of feeling" since they "are often taken-for-granted or 'commonsense', but rarely feature in studies of youth wellbeing". These feelings, moreover, may go beyond the moment by signaling or opening up other ways of engaging with oneself, other people, or the environment to bring about future wellbeing (Gardiner 2000, p. 17; Coffey 2022, p. 75). A relevant question in this regard is: in which ways do different places and contexts in young people's leisure time facilitate possibilities for correspondence and experimentation? In the study by Coffey (2022, p. 77), participants mentioned open spaces outside in nature; the study by Sofija et al. (2021) adds the home, cafés, and gyms. In this regard, the data collected with this new measurement instrument could also be analyzed with reference to different leisure-time contexts in young people's everyday lives.

In the longitudinal analysis, the association between leisure time requiring adaption and wellbeing was also tested, and overall found not to be significant. However, by considering decreases and increases of adaption separately, some additional insights could be gained. Decreased requirements for adaption in the participants' leisure time are significantly correlated with increases in wellbeing. This suggests that fewer expectations from others (peers or adults) and fewer obligations may have a positive influence on wellbeing. Yet, despite not reaching statistical significance, the coefficient for increased adaption is also positive, indicating increased wellbeing. Although counterintuitive at first, it needs to be considered that a certain degree of adaption may be necessary for young people to reach goals that they deem to be important for their wellbeing or to grow on a personal level (Sofija et al. 2021, p. 293 and 295). The results, thus, suggest that there are two forms of adaption, which are qualitatively different from each other: one that is constraining and one that is positively connotated.

Although not at the center of the analysis, the inclusion of control variables provides some suggestions as to how wellbeing is structurally and institutionally influenced. In this analytical sample, wellbeing decreased with age and was lower for females, participants with fewer financial means, and participants in schools for intermediate vocational training. In addition, it needs to be considered that due to the timing of the data collection, the COVID-19 pandemic likely affected the results of this article. The observed decline of wellbeing with age could be a life-phase specific development as reported in other studies (González-Carrasco et al. 2017; Herke et al. 2019) but also induced by the disruptions of the COVID-19 pandemic (e.g., Walper et al. 2021; Henseke et al. 2022). Similarly, differences in wellbeing

across groups of respondents might have been exacerbated due to the COVID-19 pandemic (Anders et al. 2022).

A limitation of the quantitative approach in this study is that the dependent variable—overall wellbeing—does not reflect a relational and situational approach to wellbeing. In this study such an approach was adopted for the explanatory variables, which show that wellbeing is brought about in specific times and places. Hence, to provide a more complete picture of people's wellbeing also future studies should take into account such variables and/or adopt a relational and situational approach to wellbeing. As other life spheres, also the panel participants' leisure time is likely to have been influenced by the COVID-19 pandemic (Lee Ludvigsen et al. 2023). Without a pre- or post-pandemic point of reference it is not possible to determine its impact. Notwithstanding these limitations, this study reveals the importance for young people of experiencing wellbeing in their leisure time through opportunities for correspondence and experimentation. As noted by Atkinson (2013, p. 138), the adopted approach to wellbeing directs possible policies for its enhancement. The results in this article require paying close attention to the ways in which different leisure-time contexts facilitate correspondence and experimentation.

6 Appendix

| nate i | | | | |
|---|--------|---------------------|---------------------|------------------------------|
| Selected socio-demographic charac- teristics | Wave 1 | Wave 3 ^a | Wave 5 ^a | Sub-sample for analy- sis |
| Gender | | | | |
| Male | 52.0 | 48.2 | 41.4 | 38.5 |
| Female | 46.6 | 49.9 | 56.2 | 59.8 |
| Can't or don't want to categorize myself | 0.5 | 0.1 | 0.0 | 0.0 |
| No answer | 1.0 | 1.8 | 2.4 | 1.7 |
| n | 2850 | 739 | 459 | 239 |
| Highest parental education in wave 1 | | | | |
| University degree | 17.7 | 17.2 | 18.7 | 18.4 |
| Upper secondary degree | 17.0 | 15.7 | 16.1 | 17.2 |
| Vocational training | 22.7 | 22.7 | 24.6 | 27.2 |
| Basic education | 14.3 | 15.4 | 12.2 | 11.7 |
| No education | 5.6 | 6.0 | 5.2 | 4.6 |
| Don't know | 22.6 | 20.2 | 20.0 | 18.4 |
| No answer | 0.3 | 2.8 | 3.1 | 2.5 |
| n | 2850 | 739 | 459 | 239 |

| Selected socio-demographic charac- | Wave 1 | Wave 3 ^a | Wave 5 ^a | Sub-sample for analy- | |
|--------------------------------------|--------|---------------------|---------------------|-----------------------|--|
| teristics | wave 1 | wave 5 | wave 5 | sis | |
| Migration background from wave 1 | | | | | |
| None | 20.6 | 21.7 | 24.6 | 28.5 | |
| 1st generation | 22.0 | 20.3 | 21.6 | 19.3 | |
| 2nd generation | 34.5 | 31.0 | 29.6 | 27.2 | |
| 2.5th generation | 15.4 | 17.6 | 16.4 | 18.8 | |
| Information missing ^b | 7.5 | 9.5 | 7.8 | 6.3 | |
| n | 2850 | 739 | 459 | 239 | |
| Average grade in wave 1 ^c | | | | | |
| German | 3.5 | 3.3 | 3.1 | 2.9 | |
| Mathematics | 3.7 | 3.4 | 3.2 | 3.1 | |
| English | 3.4 | 3.2 | 3.0 | 2.8 | |
| n | 2440 | 656 | 411 | 220 | |

Table 7 (Continued)

^aThe reported proportions refer to the participants who took part in module 1 of the respective wave. The number of participants completing the whole questionnaire is lower: 591 participants completed the two modules of the third wave and 375 the three modules of the fifth wave

^bParticipant's, mother's and/or father's country of birth not provided in wave 1

^cThe school grades from the in-depth (*'vertieft'*) and basic (*'grundlegend'*) general education groups in the major subjects were combined into a single scale ranging from '1' (highest grade) to '7' (lowest grade). For those in the basic general education group, two points were added to the corresponding grade, resulting in a possible range from '3' to '7'. A '3' in the in-depth general education group is thus equal to a '1' in the basic general education group

| Table 8 | Relationships | between | wellbeing | and the | conditions | in the | panel | participants' | leisure tim | ıe |
|----------|------------------|-----------|------------|---------|------------|--------|-------|---------------|-------------|----|
| (multiva | riate regression | ı with FE | estimator) | | | | | | | |

| | Wellbeing | | |
|------------------------|-----------|--------|-----------------|
| | Est | Std | <i>p</i> -value |
| Correspondence | 7.07*** | 1.555 | 0.000 |
| Experimentation | 2.76* | 1.316 | 0.037 |
| Adaption | -1.61 | 1.940 | 0.408 |
| Age | -2.12** | 0.625 | 0.001 |
| Constant | 78.74*** | 14.157 | 0.000 |
| R ² within | 0.18 | | |
| R ² between | 0.04 | | |
| R ² overall | 0.07 | | |
| n/observations | 235/470 | | |

Dummy variables controlling for differences between respondents with and without missing values on the indices for leisure time are not significant.

Significance levels: ***p<0.001; **p<0.01; *p<0.05

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