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COVID 19 and Subjective Mental Well-Being:Changes Throughout the Crisis

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As societies have restrictive health policies and social distancing procedures to reduce the transmission of the COVID-19 virus, these measures have severely affected subjective mental health. In this study, using 3 waves from the U.K. Household Longitudinal Survey, we focus on changes in well-being in the United Kingdom by examining 2 points during the pandemic—short-term effects (April 2020; *N* = 7251) and long-term effects (July 2020; N = 7199). The short-term analysis reveals that 3 groups of people experienced greater levels of deterioration in mental well-being: (a) age group (20–39), (b) females, and (c) those who are facing financial pressures. The long-term analysis, on the other hand, shows some quite different patterns: (a) the age group effect almost disappears, (b) the gender effect disappears, (c) the effect of financial pressures become much stronger particularly for those who are doing the worst, and (d) participating in social networks (living with a partner, having close friends, and having older children) mitigate the detrimental effects of the pandemic. We further show that men benefit from living with a partner significantly more than women in the long-term model. Overall, our findings call for a more nuanced analysis of the pandemic's well-being effects, highlighting the importance of distinguishing between the short-term and long-term mechanisms.

Keywords: COVID-19, subjective mental well-being, social networks, family

Since the beginning of the COVID-19 pandemic, researchers have argued that the virus has exposed vulnerable groups to more harmful outcomes (Laurencin & McClinton, 2020). Vulnerable groups tend to be situated among minority groups and are likely to be most affected by existing inequalities within social structures (Bowleg, 2020; Gauthier et al., 2021). Due to the health crisis, early reports indicate that minority groups are at a greater risk of mortality, intensive care needs, and mental illness (Kapilashrami & Bhui, 2020). Mental illness tends to embody the scope of well-being, often requiring individuals to have psychological, social, and physical resources needed to meet challenges to be stable (Dodge et al., 2012). As such, groups compromised at these levels during COVID-19 may have been affected in terms of well-being. According to research, these include but are not limited to women (Banks & Xu, 2020; Jia et al., 2020), older aged cohorts (Davillas & Jones, 2020), and the unemployed (Li & Wang, 2020). Yet, research has also identified that parents and children (Patrick, et al., 2020), young adults (Jia, et al., 2020), and people not living with their partners experienced issues with subjective well-being (Li & Wang, 2020). Furthermore, due to the social context of COVID-19 (e.g., quarantine restrictions, inconsistent health policies, and social distancing mandates), social networks were compromised, thus affecting outcomes of well-being (Gauthier et al., 2021). In short, age, gender, and financial minorities and those experiencing dynamic changes in social relations may have been acutely during the crisis.In respect of these factors, especially when stay-at-home orders and new health policies were implemented, we consider whether initial mental well-being assessments are maintained as the pandemic is prolonged. By examining the COVID-19 survey, launched by the U.K. Household Longitudinal study, Understanding Society, we examined changes in well-being throughout the global health crisis (University of Essex, Institute for Social and Economic Research, 2021). In accordance with the survey, subjective mental well-being (SWB) is defined as "feeling good and functioning well." This includes eudemonic and hedonic well-being (e.g., ancient philosophical context) and psychological functioning as subjective well-being (e.g., current psychology and social science research). As such, SWB is holistically linked to other aspects of well-being: physical, social and, at times, spiritual. We aim to assess SWB throughout the pandemic, from March until mid-July 2020, and determine which subgroups in the population continually experienced mental well-being outcomes and which developed relative changes within this period.

Subjective Well-Being: "Connectedness" and the "Period Effects" of Quarantine Policies

Subjective mental well-being impinges upon various factors, ranging from adverse life events and greater perceived social support

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(Wilhelm et al., 2010), outcomes that often influence physical health (Mesa et al., 2020). According to Collins et al. (2017), mental health factors are an amalgamation of demographic and perceived mental health issues that comprise contextual social arrangements (e.g., housing, employment, physical environment, and mental health services) and assessments of community (e.g., social cohesion, perceptions of safety, and community values, etc.). As such, the authors cite "connectedness" as the underlining mechanism between these conceptual factors. Therefore, it is reasonable to assume that forms of "connectedness" may have been compromised due to health and safety measures implemented at the pandemic's onset.

Perceptively, Zacher and Rudolph (2021) argued subjective well-being was negatively affected at the onset of the pandemic due to "period effects" (p. 2) According to the researchers, "period effects" are "any outcome associated with living during a particular time period or era, regardless of how old one was at the time" (Zacher & Rudolph, 2021). For instance, the German reunification (Easterlin & Plagnol, 2008) and the United States presidential election in 2016 (Lench et al., 2019) as events that had an influence on subjective well-being among their respective populations (Zacher & Rudolph, 2021). Furthermore, at the onset of the health crisis, stay-at-home orders and socially restrictive health policies were implemented to reduce the rate of transmission of COVID-19 (Engle et al., 2020). Yet, researchers also emphasize the timing of when state and territorial stay-at-home orders were implemented, and when these orders were lifted, it altered the rates of transmission of the disease (Moreland, et al., 2020). Hence, when assessing subjective well-being during a pandemic, it is vital to examine outcomes in the context of timing and sequence of events within this period.

Timing of these orders indicate changes in social behavior thus when examining the pandemic as a "period effect" (Zacher & Rudolph, 2021), in conjunction with the implementation of new and immediate health policies (Engle et al., 2020; Moreland et al., 2020); it is understandable to presume these factors may have produced a transition period into the global health crisis. For instance, Yang and Huang (2003) examined stress-related problems and risk factors during social transition periods among urban residents. The authors discovered that negative changes in social status (e.g., employment, marriage, household's economic level, and level of social engagement) influenced increases in stress, which became serious health problems among subgroups in the population. The researchers also cite decreases in health risk stressors associated with age, increased levels of education, and differences among various occupations (Yang & Huang, 2003). The authors contend that periods of social transitions were influential factors in altering levels of stress, dependent upon the particular social transition and sociodemographic factors of subpopulations. Thus, the transition phase at the beginning of the pandemic may have developed a series of temporary changes that may not have endured beyond the pandemic's onset.

Vulnerable Groups and Social Relations

According to preliminary research, a range of vulnerable groups was affected due to the COVID-19 pandemic (Bowleg, 2020; Gauthier et al., 2021). Among these groups, age was a prominent factor in early assessments of SWB during this period. Moraes Filho et al. (2020) identified the length of quarantine was related to psychological problems, as extended isolation increased the likelihood of experiencing stressors among young people. Specifically, compromised social networks may have significantly influenced the outcomes of SWB among this population. Yet, though disruptions among physical and social networks occurred across the population (Gauthier et al., 2021), older cohorts were not affected to the same degree regarding SWB during the pandemic. Notwithstanding health prevention measures for the elderly to social distance and isolate, the significance of social networks and SWB may be influenced by proximity and quality of social relationships, rather than quantity among the group. For instance, Bruine de Bruin et al. (2020) argued that although older people tend to have fewer relations, these networks are more likely to be concentrated among a small social group, such as friends and neighbors. Conversely, though younger people tend to have larger social networks, these also tend to be weaker and more spread out. Thus, the impact of the quality, rather than quantity, of social networks may be detrimental in assessments of SWB throughout the crisis. Hence, as Collins et al. (2017) contended, dimensions of "connectedness" may arguably be the underlining feature among the generations when outcomes of SWB are concerned.

In addition, age effects tend to coincide with gender disparities and social relationships during this period. For instance, Banks and Xu (2020) argued the effects of social distancing and subjective mental health upon young people, pinpointing a gender difference among young women during the initial stages of the pandemic. Jia et al. (2020) discovered multiple groups experienced declines in mental health at the onset of COVID-19 restrictions—most notably among adults and women. At the same time, Li and Wang (2020) identified the impact of loneliness and psychiatric disorders among young adults and women. Furthermore, O'Connor et al. (20200 found that mental health and well-being were prevalent among various groups, specifically young people (18–29 years old) and women throughout the pandemic. Consequently, the most significant theme within these analyses is young people and women experiencing severe mental health and SWB at the early stages of the health crisis.

Yet, gender effects were identified among parents and relationships as well. For instance, Calarco et al. (2020) identified increased disruptions in familial obligations among women at the onset of the pandemic (April–May). In particular, increased time spent with children and adjustments for paid work affected mothers' well-being. Furthermore, Myers et al. (2020) recognized that working mothers with young children tended to experience more significant declines in work efforts than male colleagues. In comparison, increases in loneliness were documented among those residing without a partner (Li & Wang, 2020). Thus, reconfigurations in childcare and work responsibilities resulted in increased anxiety, stress, and frustrations while parenting during the pandemic.

Furthermore, a rise in psychiatric disorders was identified among the unemployed (Li & Wang, 2020), which quarantine restrictions upon workforce participation may explain. For instance, Barrafrem et al. (2020) argued that negative reports of future economic prospects tend to identify decreased levels of financial well-being during the outbreak of COVID-19. In addition, Davillas and Jones's (2020) assessment of pre-COVID-19 contributors cites unequal opportunities and psychological distress related to financial stress, housing conditions, and employment status as primary factors affecting well-being. As the pandemic prolonged (April 2020),

these factors declined significantly, whereas age and gender became more influential (Davillas & Jones, 2020). According to Netemeyer et al. (2018), perceptions of financial well-being influence overall mental health, particularly when assessments of current perceived financial status and future financial security are considered. Furthermore, as subjective financial health (SFWB) comprises short-term behaviors, management of financial stressors (e.g., lack of self-control, materialism, minimal payments), and long-term projections (e.g., investments, planning for future periods)—factors which may be of particular importance when assessing SWB throughout the pandemic (Netemeyer et al., 2018).

Arguably, Collins et al. (2017) stated that "connectedness" may be the underlining issue sustained throughout the pandemic because researchers contend assessments of subjective well-being were constitutive of social distancing, isolation, and an array of misinformation due to shelter-in-place orders and shifting health policies implemented at the beginning of the global crisis (Mesa, et al., 2020). Thus, peoples' sense of community as distancing factors prolonged may have altered subjective well-being among distinct groups and at separate points within the population (e.g., age, gender, and social relations). Zacher and Rudolph (2021) acknowledged that physical distancing and social isolation among at-risk populations may have led to increased feelings of uncertainty and loneliness. Though decreases in mental well-being occurred across the early stages of COVID-19 restrictions, this did not maintain into mid-July. In addition, though greater total inequality in psychological distress measures were found throughout the United Kingdom, it spread throughout the population. Thus, according to Davillas and Jones (2020), the pandemic is "a leveler" (p. 11).

Therefore, due to the prolonged state of COVID 19, assessments of subjective well-being initially identified among gender (Banks & Xu, 2020; Jia et al., 2020), parental (Patrick et al., 2020), partner and employment status (Li & Wang, 2020) may have altered. Though early research is illuminating, it is vital to understand the underlining semblance within this body of knowledge is preliminary. Baring early research by Zacher and Rudolph (2021), most of these analyses do not account for changes in well-being throughout the pandemic. On that account, examining changes in well-being as the pandemic and health policies prolonged is necessary to assess the variability of these outcomes.

Method

We use three waves from the U.K. Household Longitudinal Survey[1]: Wave 9 of the main survey (Jan 2017–June 2019), first (April 2020), and fourth waves (July 2020) of the COVID-19 modules. These modules are short web-surveys, and participants are recruited from the main Understanding Society sample. This panel survey structure allows us to compare the pre-COVID levels subjective well-being of the same individuals with those during the pandemic.

Our main purpose is to compare the short-term and long-term determinants of subjective well-being changes due to COVID-19. We produced two separate linear regressions for the two time periods to capture this. The dependent variables for these two models are measured as the difference between the pre-COVID aggregate General Health Questionnaire (GHQ)[2] index scores (Wave-9) and the scores during the pandemic—one from April 2020 and July 2020; hence, the study utilizes the same well-being change variable measured at two time periods, 3 months apart. The GHQ is coded such that lower scores indicate better well-being. To make the interpretation of the regression coefficients easier, we multiplied the well-being scores with −1 such that the higher scores indicate better well-being. Collinearity diagnostics does not indicate any issues (see Appendix B for the variance inflation factors).

Most of the explanatory variables we use are straightforward, but some points need clarification. We have created a categorical variable where the base category is the [20–39] interval to get a more a more nuanced understanding of age's effect. A binary variable is created for the minority status using the ethnicity question in Wave 9. All ethnic groups other than British, English, Scottish, Welsh, Northern Irish, and Irish are classified as "minority." The baseline category for the subjective financial situation variable is "living comfortably." The age range for small children and older children are [0–4] and [5–15], respectively. The partner variable is an indicator of "living with a partner" (not having a partner). All variables are taken from their respected COVID waves apart from the "close friends" variable, which was taken only in Wave 9[3]. The baseline category for the latter is "having no close friends." We also included two interactions of gender—one with living with a partner and the other with the minority status. The summary statistics for all the variables are given in Table 1.

Findings

Transitioning, Middle, and Sustained Effects of the Pandemic

Without question, the pandemic has proven to be a dramatic period throughout the United Kingdom. Thus far, the health crisis has developed mental health consequences throughout society—many of which have altered as the crisis has prolonged. During this period, overall SWB decreased throughout the U.K. population, yet our multivariate linear regression analysis (Table 2) indicates which subgroups were affected and when those outcomes became apparent. Our findings reveal that, at the onset of the pandemic, women ($\beta = 2.43$, $p < .01$), younger people (aged 20–39; base category; age [40–59]: $\beta = 1.064$, $p < .01$, age [60–79]: $\beta = .751$ $p < .01$, age [80–99]: $\beta = 2.429$, $p < .01$), and participants with concerns regarding SFWB ($\beta = -.868$, $p < .01$; $\beta = -1.379$, $p < .01$; $\beta = -1.653$, $p < .01$) experienced greater levels of deterioration in SWB.

Yet, as the pandemic entered mid-July (July 2020), we start to see quite different patterns. Age becomes insignificant for all age groups apart from those who are older than 80 ($\beta = 1.458$, $p < .05$), for which the magnitude of the effect has decreased significantly ($\beta1 = 2.429$, $\beta2 = 1.458$)[4]. Also, the gender effect disappears ($\beta = -.250$, $p > .1$). Yet, issues of SWB persisted among participants with concerns of SFWB ($\beta = -.662$, $p < .01$; $\beta = -.985$, $p < .01$; $\beta = -5.287$, $p < .01$; $\beta = -3.884$, $p < .01$). Furthermore, the impact of financial pressures on SWB becomes much stronger, particularly for those who are

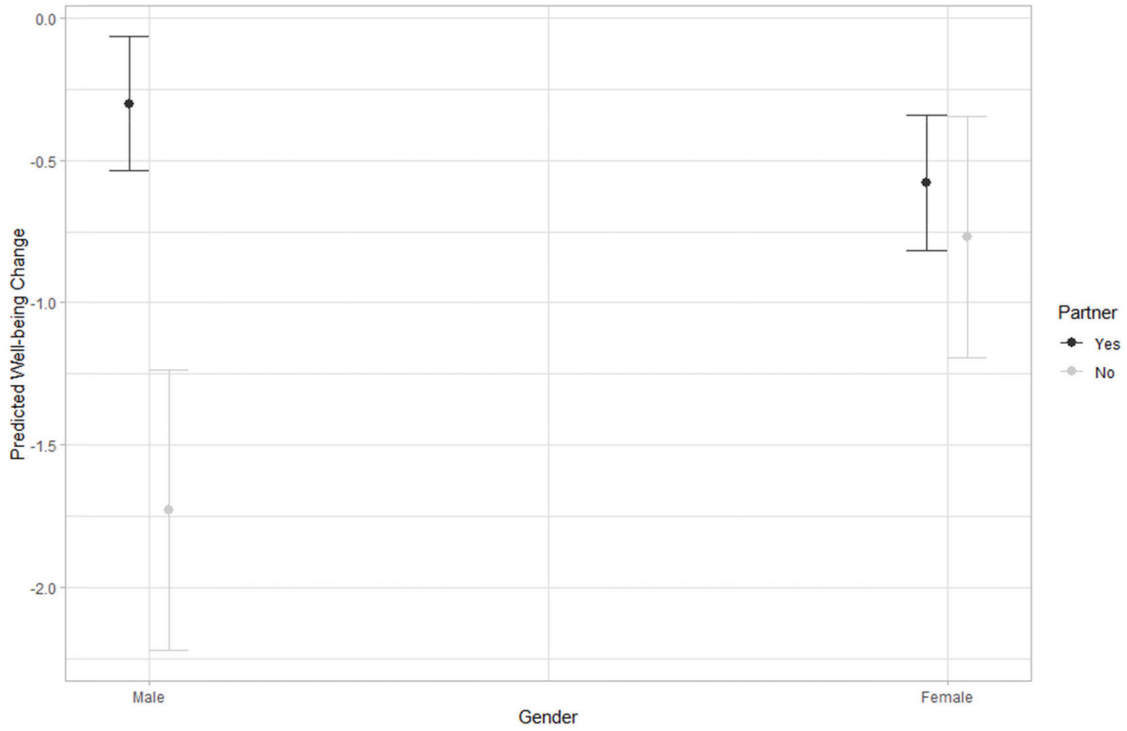
[1] University of Essex, Institute for Social and Economic Research, 2021

[2] The GHQ covers issues ranging from problems overcoming difficulties to the capability of making decisions and loss of sleep. See Appendix A for the exact wording of the questions used.

[3] That means that we are assuming that this variable has not changed significantly between the waves.

[4] The differences in the coefficients are statistically significant ($p < .01$).

Figure 1
Interaction Between Gender and Living With a Partner



doing the worst collectively (β1 = −1.379, β2 = −5.287; β1 = −1.653, β2 = −3.884)[5]. These changes in SWB may provide evidence of a transition period in which variations of influence among separate groups became apparent based on the duration of those effects. Therefore, it is safe to assume that despite many initial reports of relative decreased effects within the population (Davillas & Jones, 2020), these may not have been the only effects, nor were they necessarily prolonged outcomes.

Interestingly, as the coronavirus crisis continued into mid-July (July 2020)—beyond the transition phase—other subgroups of the populations experiencing subjective mental health issues became apparent. When examining relative decreases SWB within the sample, the impact was associated with partners living separately (β = −1.427, $p < .05$). Yet, partnership is an aggregate, and hence further examination of the interaction between gender and participants residing with partners revealed men experienced relative significant increases in SWB within this context (β = 1.237, $p < .01$), yet women were not affected in these terms (Figure 1). Our results further show that detrimental effects of the pandemic on SWB were lower among participants that reported having close friends (1–2, 3–5, and 6+) (β = 1.206, $p < .05$; β = 1.225, $p < .01$; β = 1.167, $p < .05$, respectively) and parents/guardians with older children (+1, +2) (β = .841, $p < .01$; β = .647, $p < .05$, respectively). These phases, the immediate transition into mid-July, represent the effects of the pandemic as the crisis prolonged throughout the society. Though there were apparent "shifts" in the subgroups affected at different points within the pandemic, various groups were continually affected throughout the length of the crisis (March–July 2020). The portion of the most negatively affected population throughout the duration of the pandemic were participants concerned with SFWB. While the old-old cohort (aged 80–99), composed of the Silent Generation, were consistently doing better compared to the younger age group, (20–39) (ibid).

Discussion

Short-Term Effects of the Pandemic: Age and Gender

Age Effect

Per preliminary COVID-19 research, we found age and gender disparities in our short-term results (Banks & Xu, 2020; Jia et al., 2020; Li & Wang, 2020; O'Connor et al., 2020), though these did not persist until mid-July. We found young people (20–30 years aged) initially experienced the highest decrease in SWB at the onset of the pandemic, whereas old-old cohorts (aged 80–99) did relatively better through the periods (beginning and middle). Bruine de Bruin et al. (2020) argued that the quality of friendship networks among young people (>45) tends to be weaker when compared to those of older adults (<60), whereas older generations tend to have higher forms of SWB due to increased age than young people. Thus, as young people tend to have more "active sociability in general… they have more to lose" in terms of friendship during COVID-19 (Alter Agents & Snapchat, 2020, p. 7). Yet, in this respect, adapting to social and environmental conditions (Keck & Sakdapolrak, 2013; Norman et al., 2012) may be evident in changes

[5] The differences in the coefficients are statistically significant ($p < .01$).

Table 1
Summary Statistics for the Variables Used in the Analysis

Variable	April 2020, $N = 7,251$	July 2020, $N = 7,199$
Age group		
0–19	71 (1.0%)	67 (0.9%)
20–39	1,650 (23%)	1,629 (23%)
20–39	1,650 (23%)	1,629 (23%)
40–59	3,306 (46%)	3,279 (46%)
60–79	2,110 (29%)	2,111 (29%)
80–99	114 (1.6%)	113 (1.6%)
Gender		
Male	3,123 (43%)	3,113 (43%)
Female	4,128 (57%)	4,086 (57%)
Close Friends		
0	138 (1.9%)	136 (1.9%)
1–2	1,255 (17%)	1,245 (17%)
3–5	3,406 (47%)	3,380 (47%)
6+	2,452 (34%)	2,438 (34%)
Unemployed	2,181 (30%)	2,176 (30%)
Self employed	597 (8.2%)	596 (8.3%)
Financial difficulty		
Comfort	2,694 (37%)	2,374 (33%)
All right	3,154 (43%)	3,462 (48%)
Getting by	1,082 (15%)	1,099 (15%)
Quite difficult	237 (3.3%)	210 (2.9%)
Very difficult	84 (1.2%)	54 (0.8%)
Living with a partner	6,250 (86%)	6,040 (84%)
Minority	900 (12%)	889 (12%)
Small child		
0	6,493 (90%)	6,509 (90%)
1	580 (8.0%)	526 (7.3%)
2+	178 (2.5%)	164 (2.3%)
Older child		
0	5,416 (75%)	5,415 (75%)
1	973 (13%)	949 (13%)
2	693 (9.6%)	677 (9.4%)
3+	169 (2.3%)	158 (2.2%)

in SWB among young people (aged 20–39), as initial effects identified dissipated by mid-July. This suggests the group may have utilized existing network resources and/or produced an auxiliary avenue to create and maintain social relationships.

For instance, though young adults tend to have larger social networks, this population tends to have lower levels of happiness within their networks than older adults (Fung et al., 2001). Interestingly, assessments of similar measures among older populations are unrelated (Fung et al., 2001), yet the importance of friendship networks tends to be associated with life satisfaction in terms of longevity (Bruine de Bruin et al., 2020). Thus, during the pandemic, the quality of close friendships may be a determining factor when assessments of social networks and SWB are concerns. In conclusion, our analysis identified findings at the onset of the pandemic but discovered the age effect among young people disappeared by mid-July (July 2020). Therefore, any initial difficulties were due to the substance of social relationships rather than the existence of these networks.

Yet, age cohorts varied in experiences of SWB. Compared to the reference group (20–39), middle-aged Gen Xers (40–59 years aged) and older cohorts (aged 60–79, 80–99) composed of "Boomers" and the Silent Generation experienced lower decreases in SWB. Bruine de Bruin et al. (2020) argued that older generations tend to have higher forms of SWB due to increased age than young people. Though Morales-Vives et al. (2020) cited that older people have been more worried during the pandemic, the authors argue the group has shown to be more capable of lessening quarantine effects upon psychological health due to age and adaptation restrictive measures. In effect, older generations may have been more compliant with social distance measures (Brouard et al., 2020), thus experiencing differing outcomes in terms of SWB than other subgroups in the population (Morales-Vives et al., 2020).

However, the age effects dissipated by mid-July (July 2020) for most older-aged participants—minus members of the Silent Generation (aged 80–99). This unique outcome may be due to old-old adults (<80) being more capable of appreciating positive experiences while also having the ability to regulate positive emotions (López et al., 2020). Thus, according to Yang and Huang (2003), these changes in well-being may be largely due to older cohorts progressing past the pandemic's transition phase.

Gender Effect

Age cohorts were not the only subgroup affected while transitioning into the pandemic. As a gender minority group, women experienced severe mental health outcomes at the onset of the pandemic, yet—similar to most of the age cohort findings—the significance of this dissipates by mid-July of the crisis (July 2020). The findings support O'Connor's et al. (2020) initial analysis in which women experienced worse mental health outcomes during the beginning phases of the pandemic (March—May 2020) than the general population. Though we identified decreases in SWB, various stressors women experienced at the beginning of the pandemic may have subsided due to the group reorganizing or reprioritizing obligations and goals by gender values (i.e., family and relationship commitments; Möhring et al., 2020; Myers et al., 2020).

Because gender dynamics are embedded in family relations, experiences among parents differed during the pandemic as well. Generally, Nomaguchi (2012) and Stanca (2012) identified a decrease in well-being among parents of school-age children (<5), yet our analyses produced inverse findings regarding parents and SWB. Specifically, as a group, parents with (+3) school-age children (aged 5–15) were doing relatively better at the beginning of the pandemic. Interestingly, parents with older children (+1, +2) started to do better as the crisis entered mid-July (July 2020). We argue these outcomes were partly due to shifts within "period effects" (Zacher & Rudolph, 2021) among the group. These effects may be evident as parents contend with increased economic constraints, altered intimate social interactions, and school-age children requiring fewer childcare commitments than parents with younger children while in the home (Calarco et al., 2020; Myers et al., 2020), thus, enabling these parents to work-from-home while shelter-in-place policies were in effect, thereby inverting the significance of SWB within parental-child relationships at the onset of the pandemic.

Long-Term Effects: Social Networks (Age and Gender) and Subjective Financial Well-Being

Social Networks

A distinct outcome of the long-term effects (July 2020) of SWB were the significance of social networks and relationships.

Table 2
Regression Results

	Short-term SWB change (April 2020—Pre-COVID-19)	Long-term SWB change (July 2020—Pre-COVID-19)
Age [0–19]	0.188 (0.688)	0.816 (0.580)
Age [20–39]	Base category	Base category
Age [40–59]	1.064*** (0.197)	0.098 (0.187)
Age [60–79]	0.751*** (0.252)	0.201 (0.251)
Age [80–99]	2.429*** (0.550)	1.458** (0.576)
Female	−0.977*** (0.172)	−0.250 (0.173)
Close friends [0]	Base category	Base category
Close friends [1−2]	0.306 (0.486)	1.206** (0.473)
Close friends [3−5]	−0.339 (0.470)	1.225*** (0.454)
Close friends [6+]	−0.101 (0.474)	1.167** (0.460)
Unemployed	−0.123 (0.199)	−0.059 (0.198)
Self employed	0.057 (0.292)	0.249 (0.282)
Financial—Comfortable	Base category	Base category
Financial—All right	−0.172 (0.175)	−0.662*** (0.176)
Financial—Getting by	−0.868*** (0.236)	−0.985*** (0.236)
Financial—Quite Diff	−1.379*** (0.412)	−5.287*** (0.413)
Financial—Very Diff.	−1.653*** (0.619)	−3.884*** (0.865)
Income	0.039 (0.083)	−0.053 (0.078)
No partner	0.258 (0.313)	−1.427*** (0.282)
Minority	0.024 (0.407)	0.272 (0.379)
Small child [0]	Base category	Base category
Small child [1]	−0.111 (0.380)	−0.561 (0.351)
Small child [2+]	0.451 (0.306)	0.051 (0.293)
Older child [0]	Base category	Base category
Older child [1]	0.037 (0.329)	0.841*** (0.312)
Older child [2]	0.545* (0.283)	0.647** (0.271)
Older child [3+]	0.842*** (0.238)	0.375* (0.228)
Female × Partner	−0.616 (0.390)	1.237*** (0.353)
Female × Minority	−0.081 (0.538)	−0.226 (0.506)
Constant	−1.380** (0.657)	−0.590 (0.636)
Observations	7,251	7,199
R2	0.03	0.02
Adjusted R2	0.03	0.02
Residual SE	5.55 (df = 6,316)	5.43 (df = 6,274)
F statistic	5.66*** (df = 35; 6,316)	3.75*** (df = 35; 6,274)

Note. Regional controls not shown.
* $p < .05$. ** $p < .01$. *** $p < .001$.

According to Masi et al. (2011), social relationships influence mental health, with early research on close friends and friendship networks having a significant effect on well-being before the pandemic (Etheridge & Spantig, 2020). Despite alterations in stay-at-home restrictions orders (Engle et al., 2020; Moreland et al., 2020), social distancing and isolation have persisted throughout the global health crisis and have affected social networks within the population (Gauthier et al., 2021; Mesa et al., 2020).

Although "connectedness" among social networks was not apparent in the analyses at the onset of the pandemic (April 2020), as the period entered mid-July (July 2020), we identified a positive relationship between social networks (number of close friends) and SWB, with the effect size improving for each additional set of close friends within-participant networks (1–2, 3–5, 6+). This may result from participants progressing past the pandemic's transition phase (Yang & Huang, 2003), thus an outcome of "period effects" (Zacher & Rudolph, 2021). According to Burton et al. (2021), feelings of belonging, particularly as the pandemic wore on, encouraged people to seek connections within social networks (e.g., friendships, family, and work relationships) to thwart off the effects of loneliness and distress. Though quarantine may have compromised physical, social engagements, participants who cultivated relationships within social groups online and connected with friends and family discovered a renewed appreciation for their social networks. Thus, the significance of social networks and SWB may have improved throughout the pandemic among participants seeking "connectedness" (Collins et al., 2017) and feelings of belonging (Burton et al., 2021).

Gender and Age Effects

Since quarantine compromised social networks among friends, family, and work relationships, reconfigurations of social and family life have become a characteristic of the pandemic. Calarco et al. (2020) argued that household and family arrangements have shifted dramatically, with women taking on the burden of these obligations at the onset of the pandemic, thus experiencing declines in SWB during this period. Consequently, familial and relationship stressors may have been unevenly distributed among partners dependent upon living arrangements (Li & Wang, 2020). Members of the subgroup experienced significant differences in SWB by

mid-July (July 2020). In effect, males residing with their partners experienced lower levels SWB detrimentation, whereas no effect was found among women despite partner living arrangements (Figure 1). This may be due to female partners more often managing most household labor than men while in the home (Del Boca et al., 2020), thus alleviating household burdens from male partners. Also, Möhring et al. (2020) argued perceptions of family satisfaction tended to decrease SWB among mothers, whereas these assessments had no effect or a positive effect under certain conditions for fathers during the onset of the pandemic. Fundamentally, we argue these effects are in part due to women operating a "wider net of concern" for social networks within partnerships; thus, women are more likely to bear the "burden of care" for these networks on behalf of their relationships (Walen & Lachman, 2000). Therefore, men living with a partner may have benefited from their female partners continuing to (or increasing of) manage an assortment of household labor arrangements and social networks on their behalf.

Subjective Financial Well-Being Effect

Although we measure variables at their respective time periods, a transition period was evident among various subgroups in the population—particularly those experiencing issues with SFWB. Participants who expressed financial difficulties continued experiencing declines in SWB as the health crisis entered mid-July (July 2020). In fact, participants who marked "quite difficult" and "very difficult" assessments of their SFWB experienced the most significant declines in SWB by mid-July, thus, discovering similar findings as Barrafrem et al. (2020) regarding the effects of SFWB upon subjective mental health during the crisis. Netemeyer et al.'s (2018) argument of perceptions of SFWB influencing overall mental health—particularly regarding future financial security—may explain the significance of SWB as the pandemic prolonged. Therefore, persistent and inconsistent restrictive quarantine measures (Mesa, et al., 2020; Moreland et al., 2020) may have affected income and thus developed inconsistent conditions of employment (Mousteri et al., 2020). Thus, SWB among the population may have been negatively affected due to future income (Barrafrem, et al., 2020) and employment uncertainty (Li & Wang, 2020). Resulting in participant's compromised ability to accurately assess present and projected financial status, affecting SWB in the population as the pandemic continued into mid-July.

Conclusion

The global health crisis has altered social life in a myriad of ways. Yet, how society has responded to COVID-19 with restrictive policies has had pronounced effects on mental health throughout the population. These effects are most prominently influenced based on time and sequence of social distancing measures, evidenced in changes in subjective well-being among various subgroups within the population and at different points throughout the pandemic. Yet, despite any shifts among subgroups experiencing changes in SWB, long-term effects were also evident. Most notably, participants that expressed difficulty with subjective financial status experienced significant consistent declines in SWB throughout the pandemic, whereas the old-old cohort (aged 80–99) maintained improved levels of SWB. Thus, as the health crisis prolonged, changes in SWB may provide evidence of social adaptability at different points and among distinct groups during the pandemic.

As such, the pandemic has highlighted the intrinsic relationship between individuals and social structures. Evidenced in government sanctions of quarantine measures constrained individuals, communities, and institutions throughout various society sectors (e.g., health, politics, government, etc.). Norman et al. (2012) argued that social adaptability, or resilience of individuals and community, are dependent on responses to natural and/or environmental catastrophes. Yet even responses within the micro and meso levels of society are dependent upon macrolevel (i.e., institutional) boundaries. Keck & Sakdapolrak (2013) argued that social resilience comprises three dimensions: coping capacities, adaptive capacities, and transformative capacities. Fundamentally, the authors contend that individual adaptability to social changes depends on institutional capacities to foster necessary changes. Thus, we argued that social constraints brought on by the pandemic altered SWB throughout society.

Furthermore, in terms of SWB, social adaptability during quarantine depends on individuals having sufficient opportunities for psychological, social, and physical resources needed for stability (Dodge et al., 2012). Arguably, the most pervasive issues in the United Kingdom were among participants engaged with social networks and those who expressed concerns regarding subjective financial status, outcomes which were most likely impingent upon restrictive measures implemented due to the COVID-19. Therefore, the population adapted to quarantine restrictions accordingly but were limited in their resilience capacity due to institutional and structural boundaries. We recommend institutions of government, politics, and the economy implement policies that foster individual, community, and social welfare necessary to sustain economic and community networks necessary to improve SWB throughout the population.

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Appendix A

The General Health Questionnaire

The next questions are about how you have been feeling over the last few weeks.

Q1. Concentration

Have you recently been able to concentrate on whatever you're doing?
- Better than usual
- Same as usual
- Less than usual
- Much less than usual

Q2. Loss of Sleep

Have you recently lost much sleep over worry?
- Not at all
- No more than usual
- Rather more than usual
- Much more than usual

Q3. Useful Role

Have you recently felt that you were playing a useful part in things?
- More so than usual
- Same as usual
- Less so than usual
- Much less than usual

Q4. Capable of Making Decisions

Have you recently felt capable of making decisions about things?
- More so than usual
- Same as usual
- Less so than usual
- Much less capable

Q5. Constantly Under Strain

Have you recently felt constantly under strain?
- Not at all
- No more than usual
- Rather more than usual
- Much more than usual

Q6. Problem Overcoming Difficulties

Have you recently felt you couldn't overcome your difficulties?
- Not at all
- No more than usual
- Rather more than usual
- Much more than usual

Q7. Enjoy Day-to-Day Activities

Have you recently been able to enjoy your normal day-to-day activities?
- More so than usual
- Same as usual
- Less so than usual
- Much less than usual

Q8. Ability to Face Problems

Have you recently been able to face up to problems?
- More so than usual
- Same as usual
- Less able than usual
- Much less than usual

Q9. Unhappy or Depressed

Have you recently been feeling unhappy or depressed?
- Not at all
- No more than usual
- Rather more than usual
- Much more than usual

Q10. Losing Confidence

Have you recently been losing confidence in yourself?
- Not at all
- No more than usual
- Rather more than usual
- Much more than usual

Q11. Believe Worthless

Have you recently been thinking of yourself as a worthless person?
- Not at all
- No more than usual
- Rather more than usual
- Much more than usual

(*Appendices continue*)

Q12. General Happiness

Have you recently been feeling reasonably happy, all things considered?

More so than usual
About the same as usual
Less so than usual
Much less than usual

Appendix B

Collinearity Diagnostics

	April 2020		July 2020	
Variable	Tolerance	Vif	Tolerance	Vif
Age [0−19]	0.918	1.089	0.905	1.105
Age [40−59]	0.509	1.965	0.510	1.962
Age [60−79]	0.384	2.602	0.391	2.557
Age [80−99]	0.842	1.188	0.843	1.186
Female	0.742	1.347	0.759	1.317
Close friends [1−2]	0.118	8.467	0.119	8.420
Close friends [3−5]	0.121	8.264	0.124	8.065
Close friends [6+]	0.136	7.353	0.129	7.752
Unemployed	0.636	1.573	0.642	1.558
Self-employed	0.916	1.092	0.906	1.103
Financial—All right	0.734	1.362	0.764	1.309
Financial—Getting by	0.720	1.389	0.740	1.352
Financial—Quite Diff	0.899	1.112	0.897	1.115
Financial—Very Diff.	0.964	1.037	0.941	1.062
Income	0.804	1.244	0.788	1.268
No partner	0.308	3.249	0.293	3.414
Minority	0.377	2.650	0.374	2.672
Small child [1]	0.546	1.830	0.547	1.829
Small child [2+]	0.569	1.758	0.565	1.769
Older child [1]	0.395	2.531	0.406	2.465
Older child [2]	0.346	2.893	0.356	2.805
Older child [3+]	0.761	1.315	0.767	1.304
Female × Partner	0.269	3.717	0.272	3.679
Female × Minority	0.306	3.265	0.310	3.229

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