

Loneliness and social media use in the European Union

HIGHLIGHTS

- Approximately 34.5% and 26.1% of respondents aged 16–30 use social networking sites and instant messaging tools for over 2 hours per day, respectively. The corresponding figures for respondents 31 or older are 13.1% and 8.8%.
- Over one third of young respondents exhibit patterns of social media addiction. Approximately 12% of respondents aged 31 or older fall into this category.
- Spending more than 2 hours per day on social network sites is associated with a substantial increase in the prevalence of loneliness. Intense passive use of social media is also linked with increased loneliness.
- There is not a significant association between intensive use of instant messaging tools or active use of social media and loneliness.
- The relationship between social media use and loneliness does not vary by age group.
- These findings are consistent with previous research and suggest that *how* social media is used matters more than *how often* social media is used.

Background

The increasing use of social media worldwide has resulted in a level of interpersonal connectivity never seen before. This phenomenon has prompted numerous inquiries regarding the impact of social media on society.

Social media enables communication, collaboration, and the exchange of thoughts, images, and ideas between an unlimited number of people worldwide. It can help form new relationships and communities regardless of physical distance. A variety of social media tools enable us to communicate with friends and family members at any time of day and receive immediate feedback from them.

The scientific community has questioned a possible cause-and-effect relationship between the increasing use of social media and feelings of loneliness, especially among younger people. Social media users may become increasingly lonely because they replace face-to-face relationships with online connections, which lack the intimacy and quality of face-to-face relationships. This concept is known as the displacement hypothesis. The stimulation hypothesis, on the other hand, asserts that using social media can reduce loneliness by boosting existing relationships and making new ones. Recent research suggests that the motivations underlying social media use (e.g. replacing vs enriching existing relationships) and the type of social media can influence the correlation between loneliness and social media use.

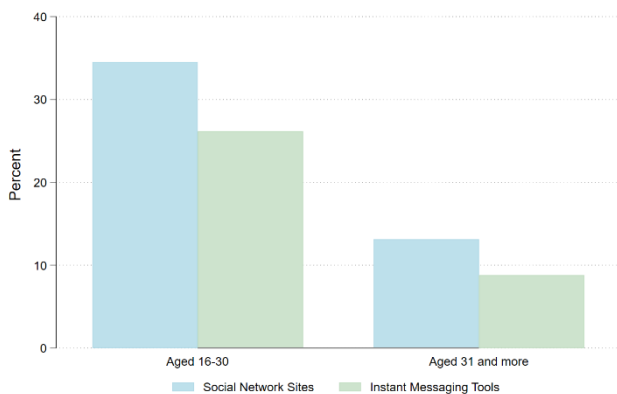
The EU-wide survey on loneliness, (EU-LS), conducted by the JRC as part of a European Parliament pilot project in partnership with the Directorate General for Employment, Social Affairs & Inclusion provides a detailed overview of loneliness and social media use in the EU.¹ This policy brief exploits this unique feature of the EU-LS to provide insights on social media use in the EU and its relationship with loneliness. As both social media and loneliness patterns might vary across generations, all analyses in this brief distinguish respondents aged 16-30 from those aged 31 and older.

Social media use in Europe – generational differences

Before examining statistics on social media usage, it is important to explain what social media is used for. The literature makes a distinction between social network sites (SNS) and instant messaging (IM) tools [1, 2].

SNS are online applications that allow users to create and share personal profiles. They can be used to establish connections with other users. SNS may be centred on images (such as Instagram and TikTok), text (such as X), or both (such as Facebook).

Figure 1 – Share of intensive users of social network sites and instant messaging tools in the EU, by age cohort.



Source: EU-LS. Intensive users are defined as respondents who report that they spend more than 2 hours per day on social network sites and instant messaging tools.

IM tools, on the other hand, are web services that enable individuals to have private, real-time conversations online, typically via text messages, e.g. WhatsApp, MSN Messenger (Facebook), and Snap messaging.

In the 2022 EU-LS, respondents were asked how much time they spend *per* day using SNS and IM tools, with eight potential responses ranging from ‘never’ to ‘more than 5 hours’. The percentage of respondents who report spending more than 2 hours per day on social media is summarised in **Figure 1**.

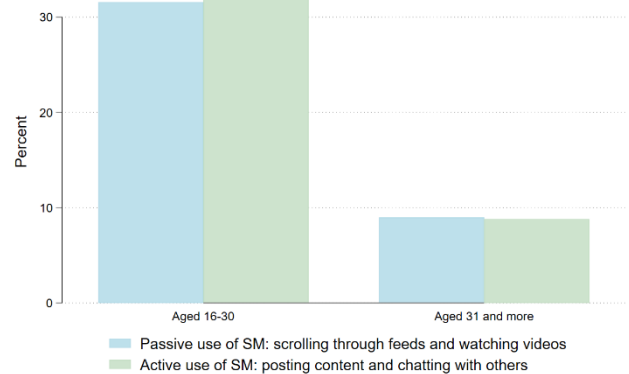
¹ For additional information on the survey and on loneliness prevalence in Europe, see [4].

Approximately 34.5% of respondents aged 30 or younger report using SNS for more than 2 hours per day. In this age group, 26.1% reported spending over 2 hours on IM tools. In contrast, 13% and 9% of respondents aged 31 years or older spend more than 2 hours on SNS and IMT, respectively.

Social media users can be categorised into active and passive users. Active use generally involves action that enables immediate interaction with other individuals. (e.g. posting, sharing and commenting on content as well as chatting in groups or privately) whereas passive use includes activities like scrolling through pictures, videos, and status updates on profiles, and reading news and personal information in other people’s profiles and chat groups.

In the EU-LS, respondents indicated how frequently they look through feeds, view videos (i.e. passive usage), or publish content or chat with other people (i.e. active usage) with six potential answers ranging from ‘never’ to ‘more than 30 times per day’. **Figure 2** summarises the answers by reporting the share of ‘intense’ active and passive social media users, i.e. the proportion of respondents who use social media more than 16 times per day in both passive and active modes. Approximately 30% of young responders are heavily passive social media users. For this age group, intense active use is just as common as intense passive use. In comparison, less than 10% of respondents aged 31 or older indicate that they are intensive passive or active social media users.

Figure 2 – Share of ‘intensive’ passive and active social media users in the EU.

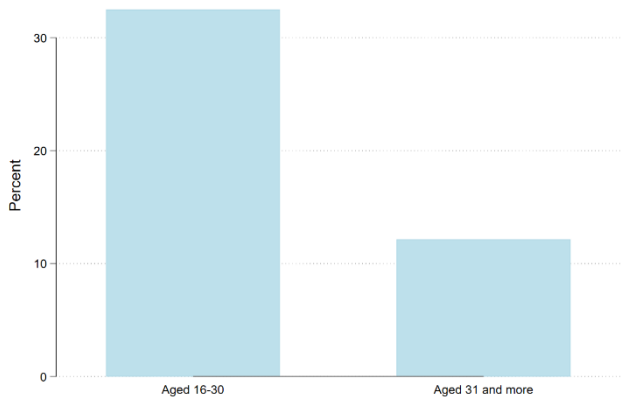


Source: EU-LS. Respondents who report scrolling through posts or watching videos 16 times or more per day are classified as intensive passive social media users. Similarly, intensive active social media users are those who report posting content or chatting with others 16 times or more per day.

When looking at how often people use social media, and especially how it might be linked to loneliness, it is important to look at trends in social media addiction. The survey collects information on this. More specifically, **Figure 3** shows that around one in three young respondents neglects work, family

or school several times per week or more because of social media use. This is the case for 12% of respondents aged 31 and over.

Figure 3 – Share of users in the EU showing patterns of social media addiction, by age cohort.



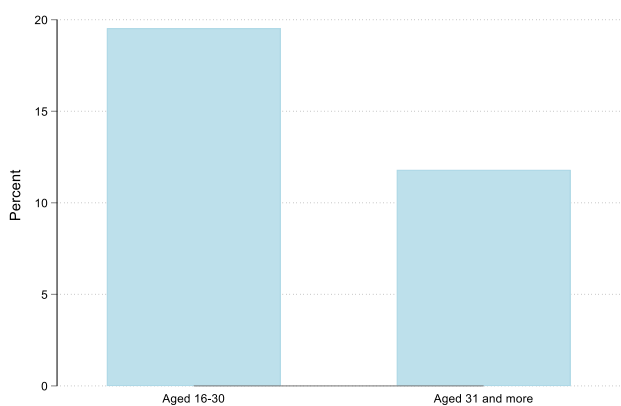
Source: EU-LS. The figure is based on the following question: ‘During the last three months, how often have you experienced the following? I neglected work, school or family duties because of the time I spent on social media’. The six answer categories range from never to several times a day.

Loneliness prevalence – generational variations

Up to this point, it has been emphasised that individuals aged 16-30 use social media far more than those aged 31 or older. How prevalent is loneliness among these two age groups?

Figure 4 shows loneliness prevalence using a direct measure of loneliness. Specifically, the figure indicates that over 19% of respondents aged 30 or younger feel lonely most of the time or all of the time, whereas only 12% of respondents aged 31 and older share this feeling. Although not reported for brevity, loneliness prevalence using indirect measures of loneliness reveals comparable differences between the two cohorts.

Figure 4 – Share of lonely people in the EU, by age cohort.



Source: EU-LS. The figure is based on the following question ‘How much of the time, during the past 4 weeks, have you been feeling lonely?’, with 5 answer categories ranging from ‘none of the time’ to ‘all of the time’. ‘Lonely respondents’ are those reporting to feel lonely most of the time or all of the time.

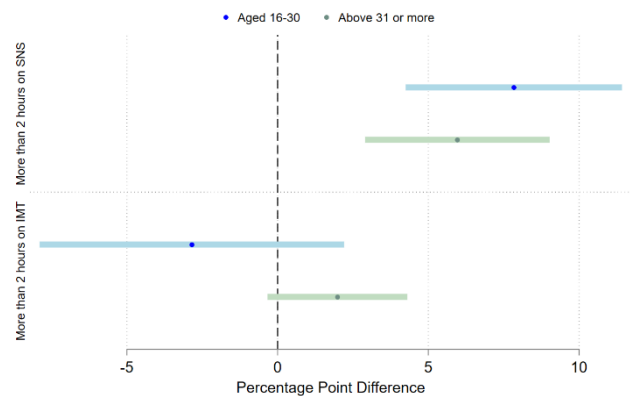
These findings are consistent with the recent overview of loneliness in Europe based on the same survey [4], which shows that loneliness prevalence declines with age.

Loneliness prevalence and social media use

As mentioned above, some argue [1, 5] that the increasing use of social media around the world and the growth of loneliness, particularly among young people, may be linked. There are two broad hypotheses. The first holds that people who spend a lot of time on social media may be lonelier because they replace face-to-face relationships with online ones. Furthermore, online contact is not as close or as effective as face-to-face contact. However, the second contends that social media use can reduce loneliness by strengthening existing relationships and forging new ones.

In the remainder of this policy brief, a multivariate setting is used to determine whether intense social media use is statistically connected with loneliness. **Figure 5** shows the effect of using SNS and IM technologies for more than 2 hours per day on the likelihood of feeling lonely most of the time or all of the time, after accounting for respondents’ socioeconomic characteristics and geography.

Figure 5 – Effect of intense social media use on the probability of feeling lonely

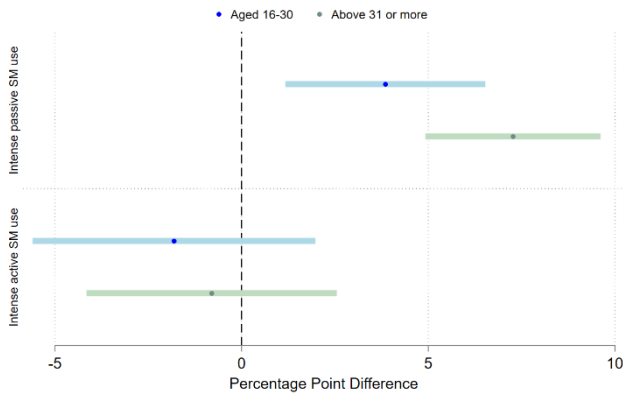


Note: EU-LS; Blue and green dots represent the size of the effects; Blue and green lines indicate the 95% confidence intervals; Estimates control for the socio-economic characteristics of respondents (education and gender). Country fixed effects are also included in all estimates.

As presented in the upper right hand side of **Figure 5**, spending 2 hours or more per day on SNS is associated with an 8.2 percentage point increase in loneliness among young respondents. A similar relationship is observed among older respondents, albeit with a lesser effect (6.9 percentage points). The findings support the displacement hypothesis, i.e. that intensive use of SNS may displace face-to-face connections. On the contrary, the bottom left hand side of the graph indicates that there is no substantial relationship between intensive IM use and feelings of loneliness.

Similarly, **Figure 6** displays the effect of intense passive and active social media use on loneliness.

Figure 6 – Effect of intense active and passive social media use on the probability of feeling lonely



Source: EU-LS. Intense passive social media use involves scrolling through feeds or watching videos 16 times or more per day. Intense active use of social media is defined as posting content or chatting with others 16 times or more per day. Blue and green dots represent the size of the effects. Blue and green lines indicate the 95% confidence interval. Estimates control for the socio economic characteristics of respondents (education and gender). Country fixed effects are also included in all estimates.

The reported point estimates suggest that intense passive use of social media correlates positively with loneliness and this is true for both age groups. The correlation between loneliness and passive use of social media does not differ significantly between age groups. On the contrary, intensive active use of social media is not significantly associated with loneliness.

These findings are consistent with previous research [6, 7] and suggest that *how* social media is used matters more than *how often social media* is used. Nonetheless, caution is required before making causal assertions for at least two reasons. First, individuals who spend 2 hours or more on SNS may be heavy users of digital tools in general. As a result, what is observed in Figures 4 and 5 may be the result of intensive use of digital technologies rather than the influence of social media *per se*. Second, lonely people may turn more to SNS since they have more leisure time and a smaller network than people who are not lonely.

Although not reported for brevity, the previous results hold true when accounting for quality and quantity of the respondents' networks (i.e. the number of close friends and relatives, the frequency of face-to-face meetings with friends and family members, the presence of a partner, and the self-reported evaluation of the quality of this relationship) as well as time spent on other digital tools (video games and TV streaming). In particular, intense use of SNS and intense passive use of social media are connected with an increase in loneliness, whereas intense use of IM tools or intense active intake of social media are not.

Conclusions

More than one-third of young people spend more than 2 hours per day on SNS and slightly less on IM technologies. Intense social media intake is significantly more common among this

age group, who grew up during the surge in smartphones and social media, than among older people. The fact that various generations use their time differently is not necessarily a cause for concern. Nonetheless, several studies have suggested that the increased use of digital tools and social media may explain the degradation of people's emotional states, especially those of young people [9].

The EU-LS and related analysis presented in this policy brief provide the first European-level analysis of the association between intensive use of social media and loneliness. The empirical findings indicate that intense use of SNS and intense passive use of social media may be connected with increased loneliness, whereas no such effect is identified for intense intake of IM tools or intense active use of social media. These findings, which are true for both respondents aged 16-30 and those aged 31 and older, suggest that it would be beneficial to promote a specific use of social media in which social ties are developed while also informing people about the possible harmful effects of heavy use of SNS. Indeed, when asked if they believe SNS might help people deal with loneliness, over 60% of survey participants said yes. These findings should contribute to support policy makers identify the drivers of loneliness and the ways to remedy it.

Before concluding, a word of caution: the findings in this policy brief are based on self-reported information on social media use (rather than actual social media use) [8]. Moreover, respondents are not tracked over time. Therefore, it is unclear whether loneliness precedes or follows excessive use of social media. Certainly, more research is required to ensure that the right conclusions are reached.

QUICK GUIDE -

Data used in this policy brief comes from the first ever EU-wide survey on loneliness (EU- LS) carried out as part of a European pilot project by the JRC in collaboration with the Directorate General for Employment, Social Affairs & Inclusion. The survey was conducted in November and December 2022 and targeted the general population aged 16 and over in all 27 EU Member States. Data were collected for a total of 25 646 respondents, recruited from established consumer panels, with approximately 1 000 respondents per country except for Cyprus, Luxembourg and Malta (503, 370 and 529 respondents, respectively).

Quotas based on the population of each Member State were used for sample selection from the online consumer panels. Quotas reflected the target population in terms of age, gender, educational attainment and NUTS region of residence based on available data from Eurostat. Moreover, ex-post weights were calculated to account for possible further underrepresentation of the above-mentioned socio-demographic groups. All figures report results using EU-27 weights.

Related work

This policy brief is part of a series of publications related to the European Parliament pilot project 'Monitoring Loneliness in Europe', initiated by the European Parliament and implemented jointly by the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL) and the Joint Research Centre (JRC). More information can be found [here](#).

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