Psychology, Society & Education (2023) 15(3), 10-18

Psychology, Society & Education

www.uco.es/ucopress/ojs/index.php/psye

Positive Internet use and online civic engagement versus active involvement in selected online risks – how are both connected in adolescents from six European countries?

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Keywords

Adolescents
Online risks
Online opportunities
Internet civic engagement
Online activities

Abstract

Usage of the Internet by young people has been historically analyzed through two main paradigms: the paradigm of risk, where the Internet has been viewed at large as a factor that endangers young people development; and the paradigm of opportunities, showing the Internet as a potentially positive factor supporting individual and social development. Those two dichotomous approaches are nowadays dismissed and replaced by more nuanced and holistic approach to online engagement of young generation. The article attempts to show critical relationships between engagement of young people in positive versus risk online behaviors. It uses the data from the second wave of large sample taking part in a longitudinal study on online skills in ySkills Horizon research project. The study uses Wave 2. convenient sample (N = 7,107) from six countries (Estonia, Finland, Germany, Italy, Poland, Portugal) aged 12-19 years (M = 15.37, SD = 1.36). The results generally show that three selected online risk behaviors (intended viewing cyberhate, intended viewing online harmful content, and incorrect health decisions based on information viewed online) are co-occurring with the level of online civic engagement and the number of online activities. It shows that positive online involvement not clearly protect young people from involvement in serious online risks. From practical perspective, this study results provide useful insights to the methodology of media education, particularly in terms of online risks prevention measures that should also include content concerning online opportunities.

Uso positivo de Internet y compromiso cívico en línea versus participación activa en riesgos en línea seleccionados: ¿cómo se conectan ambos en adolescentes de seis países europeos?

Palabras clave

Adolescentes
Riesgos en línea
Oportunidades en línea
Compromiso cívico en Internet
Actividades en línea

Resumen

El uso de Internet por parte de los jóvenes ha sido analizado históricamente a través de dos paradigmas: el paradigma de riesgo, en el que Internet se veía como un factor que pone en peligro su desarrollo; y el de oportunidades, que muestra Internet como un factor positivo que apoya el desarrollo individual y social. Hoy en día, esos enfoques dicotómicos se reemplazan por uno más matizado y holístico de la participación online de los jóvenes. El artículo muestra relaciones críticas entre la participación de los jóvenes en comportamientos *online* positivos versus de riesgo. Se usan los datos de la segunda ola de una muestra grande que forma parte de un estudio longitudinal sobre habilidades en línea en el proyecto de investigación ySkills Horizon, con una muestra conveniente (N = 7,107) de seis países (Estonia, Finlandia, Alemania, Italia, Polonia, Portugal) de 12 a 19 años (M = 15.37, SD = 1.36). Los resultados muestran que tres comportamientos de riesgo en línea (visualización intencionada de ciberodio, visualización intencionada de contenidos nocivos *online* y decisiones incorrectas sobre la salud basadas en información consultada *online*) coinciden con el nivel de compromiso cívico y la cantidad de actividades *online*. Esto demuestra que la participación positiva *online* no protege a los jóvenes de los riesgos graves. Desde una perspectiva práctica, los resultados de este estudio proporcionan información útil sobre la metodología de la educación en medios, particularmente sobre medidas de prevención de riesgos *online* que también deberían incluir contenido relacionado con las oportunidades.

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Cite this article as: Pyżalski, J. (2023). Positive Internet use and online civic engagement versus active involvement in selected online risks – how are both connected in adolescents from six European countries? *Psychology, Society & Education, 15*(3), 10-18. https://doi.org/10.21071/psye.v15i3.16093
Received: 17 May 2023. *First review*: 30 August 2023. *Accepted:* 13 October 2023.

ISSN 1989-709X

Usage of the Internet by young people has been historically analyzed by two main paradigms: the paradigm of risk, where the Internet has been treated as a strong factor that endangers young people development; and the paradigm of opportunities, viewing the Internet as a potentially positive factor supporting individual and social development. From a theoretical point of view, such a dichotomous approach is currently not valid in the light of empirical evidence and has been thoroughly criticized already two decades ago in theoretical work on media socialization and media literacy (e.g., Buckingham, 2007).

Despite strong criticism, it can be observed that risk topics are still prevalent in research concerning online activities of the young generation. Therefore, numerous projects focus exclusively on risks such as access to violent content, harmful content, or fake online information and many others (Bedrosova et al., 2023; Bozella et al., 2022; Kvardova et al., 2021; Smahel et al., 2020; Vannucci et al., 2020). Still, a more nuanced approach is needed to understand engagement in online risk, including holistic interactions between the risks and opportunities of young people's online presence (Livingstone et al., 2018).

The risk behaviors have been selected for analysis based on the potential serious harm they could cause. The three significantly dangerous risks selected were: viewing intentionally hate speech online content, viewing intentionally content concerning drugs/alcohol, and implementation of incorrect health, fitness, or diet decisions based on the inaccurate or manipulated information found online. Of course, these risks do not cover the whole spectrum of risks that a young person may experience as an Internet user. The most recent theoretical classification covers four types of risks online, namely: situations where a young person engages with and/or is exposed to potentially harmful content; experiences and/or is targeted by potentially harmful contact online; witnesses, participates in and/or is a victim of potentially harmful conduct; or is party to and/or exploited by a potentially harmful contract (for example, when private data is misused for commercial purposes) (Livingstone & Stoilova, 2021).

The first risk behavior analyzed is accessing and viewing cyberhate content, meaning texts, photos, or videos presenting attacks on particular groups or individuals based on their affiliation with a certain group (racial, national, religious, or sexual). Obviously, such content may vary when it comes to potential negative impact on viewers. Still, even viewing such content, particularly when intentional, can affect young people's attitudes and emotions, making them more indifferent or hostile against certain social groups. To the same extent such context may encourage individuals to engage in active violence against people belonging to the particular groups –e.g., in a form of racist aggression (Bedrosova et al., 2023; Pyżalski & Smith, 2022; Soral et al., 2018).

The second behavior in our focus is a view of harmful online content concerning drugs, alcohol, or other important health topics such as nutrition. This type of content (also present on other media than the Internet) may initiate or maintain the attitudes of young people that support their usage of legal/illegal psychoactive substances by normalizing it. It may also provide incorrect health information triggering poor decisions such as using substances in a certain way or adapting dangerous ways of weight control (Belenko et al., 2009; Custers & Van den Bulck, 2009; Nunez-Smith et al., 2010; Saul et al., 2022).

The third analyzed risk behavior is implementation of incorrect health, fitness, or diet decisions based on the inaccurate or sometimes deliberately manipulative content published online, such as listed above. From this perspective, we should underscore that this behavior is "one step beyond" when viewing harmful content translates into actual negative health behavior bringing a real risk to the physical and mental health of a young Internet user (Freeman et al., 2022).

It should be underscored that for all three risks analyzed in this article, the choice was on behaviors that require active intention and conduct of the young person (intentional search for content, active decisions on own health behaviors). This is an important remark since such behaviors are qualitatively different from those that are unintentional, e.g., when someone just comes across certain content online that was not deliberately searched for (e.g., Bedrosova et al., 2023).

Certainly, there are numerous justifications for the approach focusing on online risk behaviors that potentially bring harmful effects (in online and offline sphere) to young people. Still, focusing exclusively on the risks, particularly expressed in moral panic mode, may cloud our judgement on online engagement by the young generation. Therefore, well-designed contemporary research projects focus equally on both risks and opportunities of Internet usage in the same group of respondents. The representative example of this concept is the EU Kids Online project (Smahel et al., 2020). During the recent wave of this project (2019), researchers from 19 countries explored a wide range of content, conduct, and contact risks but, at the same time, a broad range of opportunities for development, social participation, and learning (Smahel et al., 2020).

Analyses conducted thus far show that risks and opportunities online are not separate and are in a close interactive relation that may be described by a sentence: the more online opportunities, the higher the risks (Livingstone et al., 2018; Stoilova et al., 2021). Thus, two potentially positive kinds of online involvement are analyzed in the current article. The first one is online civic engagement, that is the Internet extension of traditional societal activities of young people participation in political, social, and environmental issues. In this context, it covers a wide range of activities such as taking part in online activist groups, signing an online petition, etc. From the perspective of development it is an important positive factor since the children learn how to become active and engaged citizens (Jugert et al., 2013; Raynes-Goldie & Walker, 2008). The second positive dimension is connected to a rich variety of online activities that young people frequently undertake. This covers a wide range of activities that may be communication, learning, creating online content, or entertainment (as watching videos or playing games). All those activities provide potential grounds for positive cognitive, social, and emotional development. Of course, this potential may be triggered or inhibited by numerous individual and social factors (e.g., legislation, family envi-

ronment, mental health state) (Livingstone et al., 2018; Stoilova et al., 2021).

The current study focuses on the above-mentioned selected risk behaviors connected to the dangerous online content and decisions based on viewing it. It also focuses on the bright side of digital involvement –online civic engagement and online activities. However, it is essential to note that the analysis links those two dimensions, exploring their mutual interactions and discussing their impact. The texts additionally translates some academic conclusions into recommendations for media education in the field of prevention of online risk behaviors among adolescents.

Method

Participants

The results are the partial outcomes of the larger project ySkills that focuses on digital skills of young people across the European Union. The project is a longitudinal study (with waves in 2021, 2022, 2023) with young participants aged 12-19 from six countries representing different parts of Europe (Estonia, Finland, Germany, Italy, Poland, and Portugal).

The data gathered in the Wave 2 is used for analysis. It was collected in 2022 from 7,107 respondents and included all those who participated at this stage, no matter whether they took part in the Wave, that was particularly difficult to conduct due to COVID-19 pandemic restrictions (Kalmus et al., 2022). This approach was analytically justified, since in this paper no longitudinal data is used and the focus is on analyzing variables in a cross-sectional way.

Although the convenient sample has been used, roughly half of the schools in each participating country has been located in the low SES areas ensuring the variance of environments. The respondents' age was 12-19 years (M = 15.37, SD = 1.36). The percentage of young people who provided information on their gender were 49.5% boys, 47.6% girls, and 2.9% non-binary. A 0.3% of the students have not provided this information and were excluded from the analysis. In comparative analysis of gender groups, due to the small size of the sample of the non-binary subgroup, only boys and girls are compared.

Instruments

The whole study is based on the coherent theoretical model of ySkills project model (ySkills.eu) explaining short and medium term impact of information and communication technologies (ICT) on youth. The model is holistic and assumes multi-dimensional relationships among the variables involved. It consists of the following groups of variables: Sociodemographic variables (age, gender, SES, ethnicity); Individual characteristics (perceived discrimination, sensation seeking); Physical wellbeing (physical health, physical fitness); Psychological wellbeing (self-efficacy, life satisfaction); Social wellbeing (friend support, family support, class environment); Cognitive wellbeing (school performance); Civic engagement (online engagement); Parental mediation (restrictive mediation, enabling mediation, monitoring); Internet use (time online, access at home, devices, COVID-19 related access at home); Digital skills (technical and operational, information navigation and processing, communication and interaction, content creation and production, knowledge items); Online communication (SNS use, sharing); Online risks (cyberhate, harmful content, sexting, sexually explicit materials, misinformation and fake news, cyberaggression); Online activities (school and learning, social relationships, entertainment, content creation, Internet use for health and civil engagement).

The objectives of the current analysis focus on co-occurrence of selected online risks (intentional search and viewing of cyberhate, intentional search for online harmful content, incorrect decisions based on online information) and opportunities (online civic engagement and positive online activities) in respondents. Obviously, this method of analysis determined the choice of analysis only the results of the selected scales corresponding to the objectives.

The questionnaire used in the study was prepared by ySkills research team and standardized across all participating countries. The research tool in each country was a subject to cognitive testing and piloting according to the common protocol. In the cognitive testing, also the young people with a low SES have been involved, so the items after improvements are properly understood by the whole population of the students. The main version in English has been professionally translated and used in the proper language versions in all the six countries involved. The questionnaire has been prepared in several versions, since some questions have not been used in the particular countries. The present study analyzes only the questions that have been used in all the countries that collected the research material.

The following variables (and adequate measurement instruments) have been included in the current analysis:

The Online Civic Engagement Scale. The online civic engagement was measured by the 4-item instrument listing the activities that are indicators of online civic activity, namely (1) signing online petition, (2) sharing mews/music/videos with social or political content in private social networks, (3) discussing on the Internet social or political issues, and (4) participation in Internet-based protests or campaigns. The respondents referred to their activities during the last year on the scale 1 = *Never,* 2 = *Once*, 3 = *Twice, more than twice.* Based on their answers, the two indicators have been computed (described in the Procedure section).

The Online Activities Scale. The online activities were measured by the following items referring to one month before filling in the questionnaire: The scale consisted of 11 items including: (1) searching or following news on social, environmental or political issues; (2) learning new things online; (3) using the Internet to practice something; (4) communicating with friends; (5) communicating with parents/caregivers; (6) looking for new friends or contacts; (7) listening to music or watching music videos; (8) playing games; (9) creating or editing digital content; (10) searching online about physical health; (11) searching online about mental health or psychological wellbeing. The participants indicated in each case the frequency of each activity

during the previous month using the following list of answers: 1 = *Never*, 2 = *A few times*, 3 = *At least every week*, 4 = *Daily or almost daily*, 5 = *Several times each day*, 6 = *Almost all the time*. Out of the answers, the indicator of frequent activities was computed (described in the Procedure section).

Online risk behaviors

The participation in risk behaviors used the items that have been analyzed separately:

1. Intentional search for online hate content (*ON THE INTERNET, you may encounter content that attacks certain groups or individuals (e.g., because of their skin color, religion, nationality, gender, or sexuality). This could be, for example, Muslims, migrants, Jews, Roma, etc. This could be in the form of hateful, degrading, or racist messages, comments, images, or videos.). In the PAST YEAR, have you seen something like this online or on a phone?* Those participants have been asked a question: *And how often have you seen something like this when you INTENDED to see it?*

   The question applied to the past year and used the following scale: 1 = *Never*, 2 = *Once*, 3 = *A few times,* 4 = *At least every month*, 5 = *At least every week*, 6 = *Daily or almost daily.*
2. Intentional search for online hate content (*ON THE INTERNET, you may encounter content that attacks certain groups or individuals (e.g., because of their skin color, religion, nationality, gender, or sexuality). This could be, for example, Muslims, migrants, Jews, Roma, etc. This could be in the form of hateful, degrading, or racist messages, comments, images, or videos.). In the PAST YEAR, have you seen something like this online or on a phone?* Those participants have been asked a question: *And how often have you seen something like this when you INTENDED to see it?*
3. Intentional search for online hate content (*ON THE INTERNET, you may encounter content that attacks certain groups or individuals (e.g., because of their skin color, religion, nationality, gender, or sexuality). This could be, for example, Muslims, migrants, Jews, Roma, etc. This could be in the form of hateful, degrading, or racist messages, comments, images, or videos.). In the PAST YEAR, have you seen something like this online or on a phone?* Those participants have been asked a question: *And how often have you seen something like this when you INTENDED to see it?*

   The question applied to the past year and used the following scale: 1 = *Never*, 2 = *Once*, 3 = *A few times,* 4 = *At least every month*, 5 = *At least every week*, 6 = *Daily or almost daily.*

It should be noted that all three risks included in the analysis are content risks (as they refer to specific content viewed online) that ca have a negative influence on young Internet users. In the case of three content risks, only the active search for content (hate, harmful content) and the use of online information in real life (inaccurate online health information) were analyzed.

Procedure

Data were collected in collaboration with secondary schools from February to July 2020 and lasted five months (extended due to COVID-19 restrictions). The students filled in questionnaires individually during school classes (using online version) with the researcher present in the classroom. Informed consent was obtained from all respondents and their legal carers and the ethical committee positive decision was achieved in all the participating countries as well as centrally in the University of Leuven (the project coordinator) (decision no. G-2019-11-1813).

Students' participation was fully voluntary, and the respondents had the right to withdraw from the study at any time. All the parents/carers provided the informed consent. The confidentiality of the participants was provided by individual codes that made it possible to link the data from all the waves without the possibility to identify the individual respondents. Additionally, the data gathered from different schools has been anonymized before being included in the main database.

Before the final analysis, missing data were recoded recognizing technical missing values -99, -96 and -95, and user missing values were also recoded to -98 and -97. This allowed the exclusion of cases missing data from certain analyses. The answers for the specific scales were recoded into missing values according to the predefined number of missing items in the scale.

Indicators

Two main variables for this text are analyzed based on the following a-posteriori designed and computed indicators:

1. Online civic engagement indicator –a mean value from at least 3 items (out of 4) in the *Civic Engagement Scale*.
2. Dichotomous online civic engagement indicator – including those that engaged at least in one activity from the *Civic Engagement Scale*.
3. Daily online activity indicator –index counting the number of daily online activities (those that have been conducted by a person daily or more often), computed from at least 6 items (out of 11) from the *Online Activity Scale*.
4. For risk instruments, the positions of the raw frequency scales were used as in the questionnaire.

Analysis of the data

The analysis of the data was conducted in two stages. First, the main descriptive analysis of the variables included was calculated with their links to the sociodemographic variables (gender, age). The Welch test was used for mean comparisons (as the variances in groups were not equal) and Pearson correlations was also used.

In the second stage, young people were divided into groups according to their experience of three online risk behaviors,

namely intended viewing online hate content, intended viewing harmful content, and taking up incorrect health decision after using certain information or content online. In all cases, young people were divided into six groups according to the certain risk experience in the previous year (*Never*, *Once*, *A few times*, *At least every month*, *At least every week*, *Daily or almost daily*). Then the means of online civic engagement indicators and positive daily online activity have been compared among the groups. In that case, firstly the Welch test was calculated (as the variances among groups differed) and then the post-hoc Games-Howell tests were introduced to see which pairs of means display significant statistical differences.

It should be indicated that the subsamples analyzed are smaller in the case of some questions that do not apply to some participants or in the case of lacking data in specific questions. In each situation, the actual number of respondents is provided with the information as to why a certain group is smaller than the overall Wave 2 sample.

Results

Demographic characteristics and civic engagement/positive online activities

In the whole sample, 66.7% of respondents present the positive indicator of online civic engagement (involvement in at least one activity of this kind). Then 66.1% of boys and 67.3% of girls display the positive involvement indicator, with no significant between-groups differences ($N = 6{,}303$; non-binary students excluded from the analysis).

The mean number of daily online activities (that were undertaken daily or more frequent) in in the whole sample was 4.09 ($SD = 2.07$). Boys presented the higher mean of daily online activities: $M_{boys} = 4.15$ (2.15); $M_{girls} = 4$ (1.97); Welch $t = 2.88$; $p < .01$ ($N = 6{,}269$; non-binary students excluded).

Both civic engagement and daily activities presented weak positive correlations with students' age, respectively $r = .1$; $p < .001$ and $r = .1$; $p < .001$, meaning that older students tend to be involved in online civic engagement and online activities more than younger students.

Frequency of the risk behaviors

Table 1 shows the frequency of three selected online risk behaviors in the year prior to the data collection. It is clear that among those who have seen cyberhate and harmful online content, those who did so intentionally are in minority. The same refers to frequency of implementing incorrect health decisions after viewing certain content online –only about one-third of the sample reported engaging in such activity.

Intended view of online cyberhate content and online civic engagement and positive online activities

Nevertheless, it should be underscored that the selected behaviors as ones with a strong risk potential are undertaken frequently by the substantial proportion of respondents. About 7% of the respondents who have seen cyberhate viewed it intentionally at least every week or more often. The same refers to almost 8.5% of those who have seen harmful online content in the previous year. A 4.5% of study participants were taking incorrect health decisions based on the information seen online very frequently –once a week or more often.

Selected risk behaviors online and online civic engagement and positive online activities

The main analysis of this article focuses on checking relations between frequency of engagement in three selected online behaviors and online civic engagement and online activities. This was done by comparing the means of indicators of two latter variables among groups formed by the frequency of involvement in the selected online risk behaviors in a previous year.

Table 1

Frequency of involvement in the selected online risks in the previous year

	Previous year		
	Intentional view of online cyber content	Intentional view of harmful online content	Incorrect health decisions after viewing online content
	%	%	%
Never	67.9	61.5	68
Once	5	6	8.8
A few times	16.6	20.1	16
At least every month	3.2	3.9	2.8
At least every week	3.4	4.7	1.9
Daily of almost daily	3.9	3.7	2.6
	$n = 4{,}218$ only those who have seen cyberhate content	$n = 4{,}447$ only those who have seen harmful content	$n = 5{,}791$ the sample without missing data

Note. Percentages in this table refer to the subsample numbers indicated in the bottom line.

Table 2

Comparison of online civic engagement and positive online activities' frequency among groups of different involvement in intentional view of cyberhate content

Intentional view of cyberhate content		*n*	*M*	*SD*
Mean of online civic engagement Welch = 42,882 ; $p < .001$	1. Never (2, 3, 4, 5, 6)	2,752	1.66	0.75
	2. Once (1, 3, 6)	205	1.89	0.77
	3. A few times (1)	675	2.01	0.84
	4. At least every month (1, 2)	128	2.21	0.85
	5. At least every week (1)	136	2.11	0.84
	6. Daily or almost daily (1, 2)	158	2.23	0.97
	Total	4,054	1.78	0.8
Mean of daily online activities Welch = 18,626; $p < .001$	1. Never (3, 4, 5, 6)	2,741	3	1.92
	2. Once (6)	202	4.28	2.17
	3. A few times (1, 6)	676	4.53	1
	4. At least every month (1)	119	4.56	2.04
	5. At least every week (1)	130	4.95	2.19
	6. Daily or almost daily (1, 2, 3)	153	5.34	2.69
	Total	4,021	4.2	2

Note. Information in the brackets presents the numbers of groups that significantly differed from the group in the certain line (*Games-Howell post-hoc test,* $p < .01$). The cases with any missing data that are under analysis were excluded.

Table 3

Comparison of online civic engagement and positive online activities' frequency among groups of different involvement in intentional view of cyberhate content

Intentional view of online harmful content		*n*	*M*	*SD*
Mean of online civic engagement Welch = 53,096; $p < .001$	1. Never (2, 3, 4, 5, 6)	2,636	1.61	0.71
	2. Once (1, 6)	261	1.85	0.76
	3. A few times (1, 6)	855	2.01	0.85
	4. At least every month (1)	172	2.06	0.84
	5. At least every week (1, 6)	202	1.95	0.85
	6. Daily or almost daily (1, 2, 3, 5)	154	2.28	0.95
	Total	4,280	1.76	0.79
Mean of daily online activities Welch = 29,149; $p < ,001$	1. Never (3, 4, 5, 6)	2,617	3.94	1.89
	2. Once (6)	256	4.25	1.95
	3. A few times (1, 6)	858	4.53	2.06
	4. At least every month (1, 6)	164	4.55	2.26
	5. At least every week (1, 6)	197	4.76	2.14
	6. Daily or almost daily (1, 2, 3, 4, 5)	151	5.61	2.45
	Total	4,243	4.20	2.01

Note. Information in the brackets presents the numbers of groups that significantly differed from the group in the certain line (*Games-Howell post-hoc test,* $p < .01$). The cases with any missing data that are under analysis were excluded.

Table 4

Comparison of online civic engagement and positive online activities' frequency among groups of different involvement in taking incorrect health decisions based on online information

Incorrect health decisions after viewing online content		*n*	*M*	*SD*
Mean of online civic engagement Welch = 59,933 ; $p < .001$	1. Never (2, 3, 4, 5, 6)	3,769	1.6	0.72
	2. Once (1, 3, 4, 5, 6)	495	1.8	0.73
	3. A few times (1, 2, 4, 6)	888	1.97	0.83
	4. At least every month (1, 2, 3)	155	2.21	0.88
	5. At least every week (1, 2)	102	2.18	0.87
	6. Daily or almost daily (1, 2, 3)	139	2.22	0.89
	Total	5,548	1.72	0.77
Mean of daily online activities Welch = 35,769 ; $p < .001$	1. Never (3, 4, 5, 6)	3,780	3.88	1.91
	2. Once (3, 4, 5, 6)	492	3.93	2.04
	3. A few times (1, 2, 4, 5, 6)	896	4.39	2.08
	4. At least every month (1, 2)	153	5.28	2.33
	5. At least every week (1, 2, 3)	102	5.43	2.65
	6. Daily or almost daily (1, 2, 3)	139	5.50	2.34
	Total	5,562	4.07	2.03

Note. Information in the brackets presents the numbers of groups that significantly differed from the group in the certain line (*Games-Howell post-hoc test,* $p < .01$). The cases with any missing data that are under analysis were excluded.

Intended view of online cyberhate content and online civic engagement and positive online activities

Table 2 shows that there are differences between mean indicators among groups of different frequency of involvement in intended cyberhate material viewing (content that attacks certain groups or individuals, e.g., because of their skin color, religion, nationality, gender, or sexuality). This could be, for example, Muslims, migrants, Jews, Roma, etc. In general, those who more often view cyberhate intentionally report the higher level of civic engagement. After more profound analysis (using post-hoc tests), most of the differences concern groups that engage in cyberhate more frequently than those who do not or only sporadically.

Intended view of online harmful content and online civic engagement and positive online activities

Similar findings refer to viewing intentionally harmful material online (content about using drugs, alcohol, harmful and unhealthy diets or eating, or other behaviors which can be harmful to one's health) (Table 3). Again, those who view intentionally harmful content online present higher levels of online civic engagement and higher numbers of daily online activities. Again, most of the significant differences are observed between certain groups of the lower (or no) involvement and higher involvement in intentional search for online harmful content.

Taking incorrect health decisions after viewing certain Internet content/information and online civic engagement and positive online activities

The case of implementing incorrect health, fitness, or diet decisions after viewing information online follows similar patters to the two previous risk behaviors. In this case, too, those who engaged more frequently in this risk behavior present higher indicators of civic engagement and engage in a greater number of online activities (Table 4).

To conclude, the character of relations between all selected risk behaviors and online civic engagement and online activities was similar in each case. More frequent engagement with online risk behavior was accompanied by higher engagement with positive engagement –online civic engagement and daily online activities.

Discussion

The results shows clearly that the prevalence of the serious risk behaviors online (particularly conducted frequently) is an experience of the minority of young population. In this study, this finding refers to selected online risk behaviors –viewing intentionally online health content; intentional viewing of online harmful content and implementation of wrong health, diet, or fitness decisions based on information published online. Still, although a small proportion of young people involved in those risks frequently –once a week or more often–, it does not mean that one should be reassured. All those behaviors based on active involvement of young people (intended view, decision on imple-

mentation) may potentially bring negative impact on mental or physical health status of those involved. From this perspective, 7% of frequent intentional cyberhate viewers, 8.5% of frequent harmful online content viewers, and 4.5% of those who frequently implemented wrong health decisions based on information posted online, seem to be a significant proportion. However, even this scale of the problems causes a serious threat in the field of public health (Bedrosova et al., 2023; Smahel et al., 2020).

The main results suggest that positive and negative activities online are inevitably connected. This connection has been also established in the earlier studies (Livingstone et al., 2018; Stoilova et al., 2021), but still a lot of research projects analyze involvement in activities that are risks and opportunities separately.

The important aspect that should be reminded is the fact that the study focused on serious risk behaviors with the strong component of intention and active decision (Bedrosova, 2023). In case of all three risk behaviors, the respondents were inquired about their intentional behavior. From this perspective, it is important to say that intention seems to be the factor that provides potential for online action in both negative and positive sense. This is proved by the data showing that the less intentional involvement in risk behaviors, the less positive involvement in a form of online civic engagement and positive online activities. However, this finding should be interpreted with caution since it needs further research and exploration.

Practical implications

The data bring important insight on how young people use the Internet in the positive and negative ways. It shows that involvement, even in the serious online risk behaviors such as viewing cyberhate or harmful content, do not inhibit young people's positive involvement (online civic engagement, online activities). That means and all the prevention and media education programs should focus on both dimensions bringing a significant insight into not only a prevalence of certain positive or negative actions, but also their content and context. The latter two issues decide on the actual character of the impact of online involvement on young people.

Limitations of the study and future lines of research

The obvious thing of this is that the analyses are of cross-sectional character. That is why we discuss only a co-occurrence of the variables and not their potential casual impact.

In addition, the methodology of the study and the interpretation of the results have also some important limitations. Although involvement in risk behaviors and online civic engagement/online activities are treated as opposites, they may overlap to some extent. In this perspective, positive engagement measured in the way it was measured in ySkills project is only potentially positive in terms of young people's development. For instance, some online activities such as creating content may actually mean preparing content that is hostile (e.g., online hate). The same may refer to at least some part of civic engagement that could be connected to negative actions, such as online civic engagement in activities of radical parties. As the character of content and context of those activities has not been controlled, it is impossible to check how prevalent such overlap is. Anyway, this means that the results should be interpreted wisely because some link between risk and positive behavior may sometimes be attributed to the correlation with the civic engagement and online activities that are also risky. It should also be remembered that the sample analyzed is not representative, although it allows the study of relationships between variables, it does not provide credible descriptive indicators for the general population(s).

This study results also may advocate for exploring young people's online positive and negative involvement holistically in research projects, since those two spheres are interconnected and may impact each other in the interactive way.

For future research, it would be advisable to further operationalize the content of civic engagement as well as online activities to ensure that the engagement we measure is indeed of a positive dimension and has a beneficial impact on young people's development. Additionally, it seems wise to conduct longitudinal studies that provide research data on processual patterns of engagement in activities that present both opportunities and risks.

The main contribution of this study is the identification of the co-occurrence of serious online risk behaviors with the positive online involvement, which is in line with the trend of researching complicated links between online risks and opportunities among young people (Stoilova, et al., 2021).

Author contributions

Conceptualization: J.P.
Data curation: J.P.
Methodology: J.P.
Writing – original draft: J.P.
Writing – review & editing: J.P.

Funding

The study has been funded by European Union's Horizon 2020 Research & Innovation Programme under Grant Agreement (no. 870612) ySkills Project.

Acknowledgments

The author is grateful to the international scientific team of ySkills project for the work on data gathering as well as all schools and students that took part in the research.

Declaration of interests

The author declares that there is no conflict of interest.

Data availability statement

The data will be available soon in public repository (in review).

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Positive Internet use and online civic engagement versus active involvement in selected online risks - how are both connected in adolescents from six European countries?
Uso positivo de Internet y compromiso cívico en línea versus participación activa en riesgos en línea seleccionados: ¿cómo se conectan ambos en adolescentes de seis países europeos?

Psychology, Society & Education
vol. 15, no. 3, p. 10 - 18, 2023
Universidad de Córdoba,
ISSN: 2171-2085

DOI: https://doi.org/10.21071/psye.v15i3.16093