Adolescences

*Edited by Massimo Ingrassia
and Loredana Benedetto*

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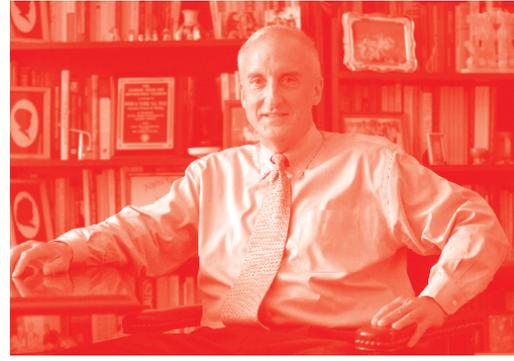
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Meet the editors

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Contents

Preface

The title chosen for the present book, *Adolescences*, introduces an unusual plural noun because the outcomes of the transitional trajectories from childhood to adulthood are indeed plural. A plural noun underlines also that the crossing paths of adolescence are multiple, according to the important theoretical legacy of Renzo Canestrari, a master of Italian psychology [1].

Ours is a rapidly changing world with new economic, technological, and ecological demands challenging adolescents' ability to adapt. Teenagers are committed to building their future in this reality: they appear as a positive generation civically engaged in making the world we live in better (cf. the *Fridays for Future statements* [2]). Indeed, they act as agents for social and developmental transformation into and with the microsystems in which they are embedded (families, schools, peers, communities). However, they are also a bridge generation continually challenged by the pitfalls of their fundamental development task: identity integration (cf. [3] and special issue *Dark Side of Identity*).

As Valkenburg and Peter [4] note, no other teen generation has had the same opportunities as the current one to "explore their identities with such a multiplicity of means and without the supervision of traditional socialization agents, such as parents and school" (p. 125). The adolescence transition, therefore, appears to be an age of extraordinary opportunities but is also more traditionally seen as an age of exposure to amplified risks.

The seven contributions collected in this book are a small sample of the above-mentioned plurality.

The current teen generation appears hyper-connected, engaged in its usual development tasks but endowed with new powerful means of socialization. Teens spend an increasing amount of time on digital screens, often engaged in media-multitasking activities. Their internet use through the smartphone "has become continuous and interstitial, filling up the intervals between daily activities" ([5], p. 22).

Chapter 1 by Ingrassia and colleagues, "Adolescents Suspended in the Space-Time: Problematic Use of Smartphone between Dissociative Symptoms and Flow Experiences", addresses the pervasive and continuous use of the smartphone by teens. Among the empirical data presented in the chapter, an important association emerges between prolonged exposure to smartphone screens and the manifestation of dissociative symptoms by smartphone users. Furthermore, the dissociative symptoms seemed related to the absorption and imaginative-involvement experiences (i.e., flow experiences), which could reinforce the overuse of devices, a potential risk factor for the development of addictive behaviors.

Chapter 2 by Hattingh, "The Dark Side of YouTube: A Systematic Review of Literature", highlights a very disturbing aspect of the use of digital platforms by adolescents: the possibility of accessing myriad videos with highly inappropriate content (smoking, promotion of alcohol use, bullying, self-harm/suicide, and so

on). The author refers to these experiences as the "dark side of YouTube", underlining their negative potential effect on the health and well-being of teenagers, especially the most vulnerable.

In Chapter 3, "From Connection to Disconnection for Teens", Lachance focuses on an important issue: how parent-child relationships are mediated by internet connection: "If adolescents are growing up in a connected world today, it is also because of the connection the parents are expecting from them" (p. 1). An interesting reflection on the "connection pact" between parents and children is proposed, whether the pact is imposed by a parent on the basis of their anxiety and fear of unpredictable dangers, or if it is negotiated by the child through forms of subtraction from the connection obligation. Today's world is organized around daily routines that are increasingly performed through a digital screen. Into such a structured world we are inserting our younger generations. This produces paradoxical consequences: surprised by their being perennially connected and interacting with digital screens, people tend to deny them the right to disconnect and to carry out activities away from ICTs. Therefore, a full awareness of this contextual situation is necessary to implement an educational policy genuinely aimed at the healthy use of ICTs.

During the last three years, teens have been a generation challenged by the COVID-19 pandemic, and also for many months a recluse generation. School closures, social distancing, and home quarantine have been the consequences of the government measures implemented to contain the pandemic.

Chapter 4 by Benedetto and colleagues, "Coping Strategies and Meta-Worry in Adolescents' Adjustment during COVID-19 Pandemic", asks whether the coping strategies and the meta-beliefs about worry are vulnerability factors associated with adolescents' anxiety during the months of the pandemic containment. The chapter highlights the need for effective intervention programs aimed at reducing the pathological anxiety experienced by teens and puts forward relevant suggestions.

In Chapter 5, "The HIV Positive Adolescent in a Pandemic Year: A Point of View", Manciuc and colleagues address the important issue of how pandemic restrictions have impacted the lives of teenagers suffering from serious illnesses such as HIV. A particularly fragile population (i.e., HIV teens) needs, and indeed requests, specific psychological interventions to reduce anxiety and anguish, during a pandemic, even if those interventions are provided remotely.

Chapter 6 by Hoare, "Adolescences Disrupted in Displacement: The Protective Effect of Friends as Proxy Family for Unaccompanied Adolescent Refugees Resettling in Ireland", deals with the issue of unaccompanied refugee minors receiving treatment after suffering the interruption of their development paths due to highly traumatic events: conflict, violence, and perilous journeys. This is perhaps one of the most difficult development itineraries, fraught with pitfalls and a harbinger of the most unfortunate outcomes in terms of adaptation, well-being, and discomfort. The author highlights how peer friendship can assume the role of a proxy family, taking on important protective functions such as psychological support and approval typically associated with family contexts. Thus, friendship appears as a fundamental element of resilience, protecting the development of the unaccompanied refugee minor.

Finally, Chapter 7 by Sánchez Romero and Crespo Molero, "Psychosocial Factors Linked to Severe Mental Disorders in a Convenience Sample of Teenage Students", deals with yet another adolescent development path: that of a specifically fragile population such as one affected by severe mental disorders (SMD). The authors use factorial analysis to identify psychosocial factors and discuss the social representations of SMD in an educational context.

The seven chapters show a generation that is fragile but also capable of drawing on personal and contextual resources to better face its developmental tasks. The authors discuss how these resources can act as protective factors for a healthy life: digital literacy, parental supervision and control, parental awareness of the children's right to disconnection, coping strategies, psychological interventions, even online, the psychological support and approval of friends as a proxy family, and knowledge of the psychosocial representations of SMD for their utilization in educational settings. In short, a plurality of factors whose origins are in the traditional contexts of teen socialization: family, school, and peers.

In conclusion, we would like to thank all the teenagers whose participation in the studies reported here have made this book possible.

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Adolescents Suspended in the Space-Time: Problematic Use of Smartphone between Dissociative Symptoms and Flow Experiences

Massimo Ingrassia, Gioele Cedro, Sharon Puccio and Loredana Benedetto

Abstract

Based on current digital culture, this chapter aims to provide an updated view of dissociative experiences as no-psychopathological symptoms of flow experiences. It has been hypothesized that prolonged exposures to smartphone screens could be a predictor of altered states of consciousness (flow) and that sometimes these prolonged exposures could degenerate into dissociative phenomena. Participants were 643 high school students aged between 13 and 23 years (M = 16.08; SD = 1.79). They were asked to answer four self-report questionnaires about the habits of smartphone usage, the perception of problematic smartphone use, and the assessment of dissociative symptoms and experiences (e.g., bizarre sensory experiences, absorption and imaginative involvement [AII], depersonalization and derealization). Gender differences emerged both in smartphone usage habits and some dissociative scales. Two gender-specific stepwise linear regressions showed that problematic smartphone use is one of the stronger predictors of dissociative symptoms. Results support the idea that in an adolescents' community sample prolonged exposition to smartphone screens plays a role in the manifestation of dissociative symptoms. This is closely connected with experiences of AII, which could reinforce the use of devices contributing significantly to establishing a causal circularity between smartphone prolonged usage and AII phenomena.

Keywords: smartphone overuse, flow experience, dissociative symptoms, digital habits, adolescents

1. Introduction

Typical images of our time show teenagers, side by side, with their eyes lost in their smartphones. Currently, the majority of children and teens prefer smartphones to connect online. The time spent online is difficult to estimate accurately, because with a smartphone always at hand "internet use has become continuous and interstitial, filling up the intervals between daily activities" ([1], p. 22).

Moreover, children and teens often do not perceive watching a series episode or a film by a subscription video on demand services (SVOD) as time spent online [1]. Nevertheless, it seems important to succeed in estimating the online spent time and the engaging activities to evaluate their psychological consequences too. It has been estimated that the time spent by Italian adolescents on social networks ranged from "less than an hour a day" (8%) to "I'm always connected" (4%), with a prevalence of "2/3 hours a day" (43%) [2]. If interacting through a social is a Bronfenbrenner's molar daily activity [3], it is also "a constraint on involvement in alternative activities" because time is finite ([4], p. 1188).

The smartphone is a device built to return immediate rewards during its use. Therefore, it is plausible to say that the various visual elements on the backlit screens function as "attentional facilitators" capable of helping the user to maintain an active, pleasant, and positive concentration on the action to the point of experiencing total absorption. Csíkszentmihályi [5, 6] defines as "flow experience" the total absorption in an activity, whereby a person loses the awareness of the surrounding space and its stimuli, including time and even physiological needs.

1.1 Flow experience

Flow is "the holistic sensation that people feel when they act with total involvement and the experience is so enjoyable that people will do it even at great cost, for the sake of doing it" ([5], p. 36). According to Csíkszentmihályi, the necessary condition for experiencing a state of flow is to perceive enjoyment and concentration. People who experience a state of flow will find an assuring pleasure in their activities that are perceived to be doing. The optimal experience is a flow of consciousness in which the person becomes one with the action he or she performs, is completely involved, and absorbed in the activity. This concept has been extensively studied and analyzed from different perspectives and in relation to many other factors, including time. Concentration is very intense, there is no time for problems or stimuli from the external environment. The sense of time becomes distorted, the experience is so satisfying that the person will do it just for the sake of it. The activity becomes so engaging that the person places him/herself in a condition of passivity toward time. It happens to everyone to be so immersed in reading or browsing online that they do not perceive the passage of time. This dynamic is very interesting if we think about how much flow can intervene in our daily commitments. Flow experiences sometimes occur by chance, other times they are actively sought by the person, they are sought because they are associated with a pleasant experience that provides satisfaction. Csíkszentmihályi [6] analyzed different types of activities to identify those that most frequently create an optimal experience condition. He found that the activities that give a sense of discovery, even if minimal, were the ones that put the person into a state of flow more frequently. Thus, the more interesting and stimulating the activity is, the more the likelihood that the person enters a state of flow increases. Boring activities or activities with a low creativity index limit the feeling of discovery in the person and therefore also the possibility of entering a state of flow. In this regard, we can remember that surfing online and social is very stimulating.

Surfing online, on social networks, or searching for information on Google allows us to always have an incentive to continue browsing, discover new things, and stay in the state of flow. Neuroscientific research has shown interesting data [7]: cortical activity decreases when people focus intensely on a task. Instead of increasing with effort, it seemed that the investment of attention decreased it. A different measurement also showed that people who focus intensely

on a specific task were more accurate in sustained attention tasks. This leads us to believe that flow contributes and influences concentration on the task. The more the individual focuses on browsing online, the more he/she has the feeling of being absorbed and external stimuli, including time, fade into the background (for a review see [7]).

Within the flow theory, concentration explains the individual's state of flow. One's addiction to smartphone usage requires a time-consuming flow where one spends full and unbroken concentration [8]. For an addiction to happen, one needs to acquire temporal and cognitive concentration on the task at hand. As the concentration intensifies, one can be said to be in a state of addiction [8]. Another term for concentration is "attention focus" [9]. It reflects users' immersion in doing something they prefer. Users may often concentrate on the smartphone which can lead to harmful consequences, especially on movement. When someone is focusing on using a smartphone in a dangerous place whereby right, they should focus on a task at hand such as in a subway or while driving, the use of smartphone is shifting their experience and attentional focus. Thus, the need to develop an in-depth analysis of concentration in smartphone addition is influential in understanding this addictive behavior [9].

In fact, we all experience flow on a daily basis and at many times of the day. We experience it while we are doing something that we know how to do very well or something we have learned so precisely and mechanically that we do not need to think while we do it. Flow can modify the perception of the passage of time and other individuals' emotional and cognitive processes. Sometimes prolonged exposures can degenerate into dissociative phenomena.

1.2 Visual display unit dissociative trance

The flow experience has some points in common with visual display unit (VDU) dissociative trance [10], a state that has been studied in people who experimented with a different state of consciousness while using computers for a prolonged time. In this case, it is referred to VDU dissociative trance as a clinical manifestation of compulsive use of technology that could lead to compromise people's daily lives.

However, some flow conditions seem non-pathological dissociative experiences, but they typically occur as moments of the day when you simply "go away" for a few seconds. Contrary to Caretti's views [10], we consider these VDU dissociative trances as a form of normative dissociation [11], which refers more specifically to the disconnection between the cognitive processes of thought, memory, sense of identity, and the rest of individual psychological systems.

Milton Erickson [12] was the first to realize that trance states are not extraordinary phenomena but are rather frequent events common to all people. The term "dissociation" means the separation of a part or group of mental processes from the rest of consciousness. The concept of "trance" describes an alteration of the state of consciousness like sleep, but with electroencephalographic waves like the waking state. During the trance state, people lose consciousness and contact with reality until they return to their normal conditions, often accompanied by amnesia. These alterations can be sudden or gradual, transitory, or chronic [13]. The state of trance implies dissociation. Thus, we speak of *non-pathological dissociation*, an alteration of the state of consciousness, which however is not part of a psychiatric disorder. Non-pathological dissociation typically involves the alteration or the temporary separation of normally integrated mental processes: these experiences include "daydreaming," the imagination and the absorption experienced in "normal" everyday experiences [14].

1.3 Aims and hypothesis of the study

This study aimed to explore the possible precursors of dissociative experiences associated with problematic smartphone usage.

It was hypothesized that: (a) extended exposures to smartphone screens could induce altered states of consciousness (flow) capable of modifying the perception of the passing time and other emotional and cognitive aspects of the individual; and (b) sometimes, if prolonged these altered states can degenerate into dissociative phenomena. Therefore, the hypothesis we tested with a community sample of adolescents are:

H1: Problematic use of smartphones is positively related to dissociative phenomena.

H2: The prolonged exposure to a smartphone's backlit screen is a predictor of different states of consciousness (flow).

2. Method

2.1 Participants

Participants were 643 students (337 males, 52.1%; 294 females, 46.0%; 12 undeclared-gender people, 1.9%) aged 13–23 years (M = 16.08; SD = 1.79). They were recruited in three public high schools in Messina (Italy): a random sampling of 24 first, third and fifth classes was carried out. Participants were presented with an informed consent form with the study aims and the authorization to detect personal data in accordance with Italian legislation. Underage participants were authorized by their parents.

2.2 Measures and procedure

A pen-and-paper self-report survey was applied. It consisted of:

a. A questionnaire (14 items) detecting participants' personal data (i.e., age and gender) and habits in smartphone usage. The items assessed through Likert point scales: (1) the frequency (1 = *never* to 4 = *always*) of some smartphone activities (i.e., social networking, playing a game, calling people, messaging, browsing, streaming, recording photos/videos, listening to music, shopping, and editing); and (2) other behavioral measures: (i) if in the past participants sometimes lied about the time they had spent online (1 = *never* to 4 = *always*); (ii) if they used their smartphone in bed before falling asleep (1 = *never* to 4 = *always*); (iii) if they have been constantly thinking about online activities even when they were not connected and were busy doing other things (1 = *never* to 4 = *always*); (iv) the time spent with smartphone and other devices (5 = *More than 5 h*, 4 = *Between 3 and 5 h*, 3 = *Between 1 and 3 h*, 2 = *Less than an hour*, and 1 = *Never*); (v) if in the last year the time spent on screen was: 3 = *increased*, 2 = *the same*, or 1 = *decreased*.

b. The *Smart_Q-R* [15], a questionnaire evaluating the perception of smartphone problematic use and the negative consequences experienced by respondents. The questionnaire lists 14 items with responses on a 4-points Likert scale (1 = *never* to 4 = *often*) and reports thoughts and ideas that guide adolescents' online behaviors and smartphone addiction. Indeed, some items investigate teenagers' impulse to connect, to check notifications, to use the smartphone to escape unpleasant thoughts; an item investigates the night-time

smartphone's usage, others items help to investigate adolescents' behavior in social decision making (e.g., choosing between meeting a friend *in vivo* or contacting him/her through the smartphone).

The scale is monofactorial. The score is obtained by adding the points of each item (range 14–56): The higher the score, the more intense the involvement in the use of the smartphone. In this study, the reliability of the scale was confirmed to be good (Cronbach's alpha = .80).

c. The Dissociation scale of the *Internet Use, Abuse, Addiction* (UADI) [16]. UADI is an Italian questionnaire composed of 75 items with responses on 5-points Likert scale (1 = *absolutely false* to 5 = *totally true*). The UADI consists of five different scales that allow to investigate the degree of impairment of adolescent behavior in relation to Internet use. For this research, only the 15-item Dissociation (Dis) subscale was used.

The DisUADI scale presents a list of items describing some dissociative symptoms such as bizarre sensory experiences, depersonalization, derealization, tendency to alienate or to escape from reality, that are thought to be associated with long exposure to Web surfing. In this study, the DisUADI scale has been modified from the original to make it more suitable for the modern use of internet access by smartphone. Very good the reliability in this study (Cronbach's alpha = .85).

d. The *Adolescent Dissociative Experience Scale* (A-DES), a 30-item questionnaire about the dissociative experiences that people can usually have in their everyday life [17]. The Italian version developed by Schimmenti [18] was used. Respondents were asked to answer (from 0 = *never* to 10 = *always*) about the frequency of the experiences they had had in specific situations. The A-DES total score is equal to the mean of all item scores. Four subscale scores can also be calculated in the following areas: *dissociative amnesia* (e.g., sense of loss during action executions, lack of memories of what has just been done, perceived past events as fragmentary, and so on), *absorption and imaginative involvement* (e.g., dissociative phenomena linked to the sense of time-related to the activities, the degree of attentional involvement experienced, and to confusion about the actions in progress, with a mixture of reality and imagination), *depersonalization and derealization* (e.g., mind-body-context dissociations, phenomena of "identity fluctuation," and a sense of estrangement from oneself), and *passive influence* (i.e., the passivity of the individual with regard to the actions performed by him/herself, as if actions did not depend on his/her will and therefore they were suffered) [19]. In this study, for all subscales reliability was acceptable (Cronbach's alpha = .77 for dissociative amnesia; .69 for absorption and imaginative involvement; .88 for depersonalization and derealization; .76 for passive influence), and excellent for A-DES total (alpha = .93).

After the principal's authorization, the questionnaires were collectively administered in every classroom under the supervision of two of the study authors.

2.3 Data analysis

First, distribution statistics for all measures were calculated and then group differences (males *vs.* females) were tested through *F* tests (ANOVAs and MANOVAs). Subsequently, measure associations by Pearson's *r* coefficients were

estimated. Finally, two stepwise linear regressions were calculated to identify predictor factors of DisUADI scores. Data were processed with IBM SPSS Statistics for Windows 19.0.

3. Results

3.1 Habits and time on the web

Only two out of 643 people (0.3%) did not have their own smartphones. What habits did the participants highlight? **Table 1** shows mean frequencies of males and females related to some typical behaviors with this device assessed by specific items of the smartphone-usage questionnaire.

Gender differences (m *vs.* f) were tested through a multivariate analysis of variance (MANOVA) with the 10 behavior frequencies as dependent variables. MANOVA revealed a significant multivariate test (Pillai's trace = 0.239, $p < 0.001$, < 0.001, $\eta_p^2 = 0.24$) and several significant effect tests (**Table 2**).

Overall, messaging, social networking, listening to music, and browsing were the preferred activities. Males play games and watch streaming videos significantly more than females; females attend social networks, send messages, record photos, and videos, and listen to music significantly more than males.

Behavior	Gender	Mean	*SD*
Social networking	Male	3.10	0.81
	Female	3.46	0.67
Playing a game	Male	2.44	0.84
	Female	1.87	0.68
Calling people	Male	2.59	0.74
	Female	2.66	0.66
Messaging	Male	3.37	0.71
	Female	3.63	0.54
Browsing	Male	3.04	1.30
	Female	3.02	0.72
Streaming	Male	2.99	0.78
	Female	2.76	0.81
Recording photos/videos	Male	2.17	0.72
	Female	2.69	0.79
Listening to music	Male	3.19	0.77
	Female	3.34	0.75
Shopping	Male	1.76	0.74
	Female	1.76	0.79
Editing (filters, meme, etc.)	Male	1.65	0.78
	Female	1.75	0.83

Table 1.
Estimated frequencies were rated through a Likert scale: 1 = never, 2 = sometimes, 3 = often, and 4 = always.

Source	Dependent variable	SS	df	MS	F	p	η_p^2
Gender	Social networking	20.780	1	20.780	37.033	**< 0.001**	0.057
	Playing a game	49.520	1	49.520	83.994	**< 0.001**	0.120
	Calling people	0.795	1	0.795	1.611	0.205	0.003
	Messaging	10.770	1	10.770	26.606	**< 0.001**	0.041
	Browsing	0.072	1	0.072	0.063	0.803	0.000
	Streaming	7.897	1	7.897	12.546	**< 0.001**	0.020
	Recording photos/videos	42.668	1	42.668	75.458	**< 0.001**	0.109
	Listening music	3.415	1	3.415	5.866	**0.016**	0.009
	Shopping	1.079×10^{-6}	1	1.079×10^{-6}	0.000	0.999	0.000
	Editing	1.388	1	1.388	2.168	0.141	0.003
Error	Social networking	346.775	618	0.561			
	Playing a game	364.357	618	0.590			
	Calling people	304.889	618	0.493			
	Messaging	250.151	618	0.405			
	Browsing	707.283	618	1.144			
	Streaming	388.973	618	0.629			
	Recording photos/videos	349.453	618	0.565			
	Listening music	359.777	618	0.582			
	Shopping	356.671	618	0.577			
	Editing	395.606	618	0.640			

SS = *sum of squares;* df = *degrees of freedom; and* MS = *mean of squares.*
Significant results are in boldface.

Table 2.
Statistics of between-subjects effect tests from the MANOVA males vs. *females with behavior frequencies as dependent variables (N = 620).*

On average, women always rated that they were more active than men in all other measures of the smartphone usage questionnaire, except gaming by a console. Some of these differences were highly significant (**Table 3**).

Males and females differed also for *Smart_Q-R* scores: M_m = 29.21, SD_m = 6.24, *vs.* M_f = 31.53, SD_f = 6.81, MS_e = 42.394, $F(1, 629)$ = 19.941, $p < 0.0001$, η_p^2 = 0.031. With a range of 14–56, women revealed greater involvement than men in smartphone use.

3.2 Dissociative phenomena

Some differences related to dissociative phenomena between men and women emerged too.

In relation to the DisUADI scale, over a range of points from 15 to 75, the group of participants averaged 32.98 (SD = 9.76, N = 625). Women scored significantly higher (**Tables 4** and **5**).

Differently with the A-DES – Total, which is a measure developed for adolescents (average score ranging between 1 and 10), this group of participants settled on an average score of 2.09 (SD = 1.59, N = 628), with no significant difference between males and females. Indeed, differences emerged for the AII and DD subscales, but not for DA and PI subscales (**Tables 4** and **5**).

Behavior	Gender	Mean	SD	N	F (df)	MS_e	p	η_p^2
Lying about the time spent online[1]	Male	1.50	0.70	335	0.22 (1, 626)	0.12	0.637	0.000
	Female	1.53	0.73	293				
Using smartphone in bed before falling asleep[1]	Male	3.12	0.93	335	7.44 (1, 626)	6.15	**0.007**	0.012
	Female	3.32	0.89	293				
Constantly thinking about online activities[1]	Male	1.91	0.71	335	1.57 (1, 626)	0.81	0.211	0.002
	Female	1.98	0.74	293				
Time spent on								
smartphone or tablet[2]	Male	2.70	0.87	334	19.81 (1, 624)	0.79	**< 0.0001**	0.031
	Female	3.01	0.91	292				
messaging[2]	Male	2.83	1.03	334	27.95 (1, 624)	0.94	**< 0.0001**	0.043
	Female	3.24	0.89	292				
gaming by console (PlayStation, etc.)[2]	Male	2.70	1.29	336	318.12 (1, 627)	1.04	**< 0.0001**	0.337
	Female	1.25	0.57	293				
in front of a computer each day[2]	Male	2.20	1.09	336	1.07 (1, 626)	1.02	0.301	0.002
	Female	2.11	0.90	292				
In the last year, time spent on screen[3]	Male	2.00	0.75	331	9.82 (1, 622)	0.56	**0.002**	0.016
	Female	2.19	0.74	293				

df = *degrees of freedom; and* MS_e = *error mean of squares.*
Significant results are in boldface.

Table 3.
Descriptive (means and standard deviations) and inferential statistics (univariate ANOVAs – Males vs. females) of other smartphone usage measures estimated by participants: [1]*frequencies were expressed through four points (1 = never, 2 = sometimes, 3 = often, 4 = always);* [2]*time was estimated through five points (5 = more than 5 h, 4 = between 3 and 5 h, 3 = between 1 and 3 h, 2 = less than an hour, and 1 = never);* [3]*duration was estimated through three points (3 = increased, 2 = same, 1 = decreased).*

Dissociative measures	Gender	Mean	SD
DisUADI	Male	31.54	9.13
	Female	34.60	10.21
A-DES – DA	Male	1.81	1.67
	Female	1.82	1.80
A-DES – AII	Male	2.16	1.62
	Female	2.53	1.78
A-DES – DD	Male	1.67	1.60
	Female	1.94	1.87
A-DES – PI	Male	2.33	1.92
	Female	2.49	2.14
A-DES – Total	Male	1.99	1.50
	Female	2.19	1.68

DisUADI = dissociation scale of internet use, abuse, addiction questionnaire; A-DES = adolescent dissociative experience scale; DA = dissociative amnesia; AII = absorption and imaginative involvement; DD = depersonalization and derealization; and PI = passive influence.

Table 4.
Means and standard deviations of dissociative measures (males = 332 for DisUADI, 334 for A-DES; females = 293 for DisUADI, 294 for A-DES).

Source	Dependent variable	SS	df	MS	F	p	η_p^2
Gender	DisUADI	1459.202	1	1459.202	15.674	**< 0.0001**	0.025
	A-DES – Total	6.400	1	6.400	2.535	0.112	0.004
	A-DES – DA	0.014	1	0.014	0.005	0.945	0.000
	A-DES – AII	21.377	1	21.377	7.460	**0.006**	0.012
	A-DES – DD	11.408	1	11.408	3.813	**0.051**	0.006
	A-DES – PI	3.993	1	3.993	0.978	0.323	0.002
Error	DisUADI	57998.485	623	93.095			
	A-DES – Total	1562.707	626	2.496			
	A-DES – DA	1877.722	626	3.000			
	A-DES – AII	1793.715	626	2.865			
	A-DES – DD	1872.794	626	2.992			
	A-DES – PI	2556.366	626	4.084			

DisUADI = dissociation scale of internet use, abuse, addiction questionnaire; A-DES = adolescent dissociative experience scale; DA = dissociative amnesia; AII = absorption and imaginative involvement; DD = depersonalization and derealization; PI = passive influence; SS = sum of squares; df = degrees of freedom; and MS = mean of squares. Significant results are in boldface.

Table 5.
Statistics of between-subjects effect tests (males vs. females) from ANOVAs for DisUADI (N = 625) and A-DES Total (N = 628) measures, and from the MANOVA for A-DES subscales (multivariate test: Pillai's trace = 0.031, p = 0.001, η_p^2 = 0.03).

If the group means scores are relatively low, the large variability around the means reveals that several dissociative phenomena occurred. The A-DES standards state that a score of 4 can be considered the cut-off value for a presence of dissociative phenomena out the normality [17]. In the A-DES total score, 48 men (14.37%) and 59 women (20.02%) achieved scores of 4 or higher; the highest score was 9 from a single male participant. By dichotomizing the groups into participants who have A-DES scores less than 4 or equal/greater than 4, a two-by-two contingency table revealed the non-independence of two factors: $\chi^2(1, N = 628) = 4.01$, $p = 0.045$, two-ways.

3.3 Regression analysis

The next step of the analysis was the estimate of the associations between all the measures, differentiating males from females, since the two groups showed significantly different percentages of dissociative experiences.

The analysis of the associations revealed numerous and interesting correlations between smartphone behavioral habits, the *Smart_Q-R* scores, and the dissociation scales. These results are reported in **Tables 6–10**.

Two separate stepwise linear regressions (for male and female groups), with DisUADI measures as dependent variables and smartphone usage behaviors, *Smart-Q-R* indexes, and A-DES subscale and total scores as predictors were performed. The analysis revealed that the strongest predictors were A-DES total score for men and *Smart_Q-R* index for women, respectively (**Table 11**).

4. Discussion

Analysis revealed several differences in smartphone preferred activities as a function of users' gender. Some of these differences were expected: women more

Male behaviors		Smart_Q-R	DisUADI	A-DES – DA	A-DES – AII	A-DES – DD	A-DES – PI	A-DES – Tot
Social networking	*r*	0.216	−0.014	−0.010	−0.013	−0.012	−0.020	−0.015
	p	<0.001	0.801	0.854	0.811	0.827	0.711	0.791
	N	335	330	332	332	332	332	332
Playing a game	*r*	0.170	0.185	0.157	0.203	0.096	0.090	0.146
	p	0.002	0.001	0.004	<0.001	0.079	0.101	0.008
	N	336	331	333	333	333	333	333
Calling people	*r*	0.090	0.048	0.064	0.047	0.027	0.058	0.051
	p	0.100	0.380	0.243	0.390	0.621	0.288	0.356
	N	335	330	332	332	332	332	332
Messaging	*r*	0.210	−0.042	0.053	0.078	0.041	0.032	0.055
	p	<0.001	0.449	0.331	0.155	0.451	0.566	0.316
	N	336	331	333	333	333	333	333
Browsing	*r*	0.216	0.132	0.058	0.130	0.085	0.042	0.089
	p	<0.001	0.016	0.289	0.018	0.123	0.441	0.105
	N	335	330	332	332	332	332	332
Streaming	*r*	0.151	0.157	0.103	0.148	0.093	0.013	0.101
	p	0.005	0.004	0.060	0.007	0.090	0.813	0.064
	N	336	331	333	333	333	333	333
Recording photos/videos	*r*	0.072	−0.055	−0.008	−0.043	−0.038	−0.025	−0.033
	p	0.188	0.322	0.889	0.437	0.489	0.656	0.547
	N	335	330	332	332	332	332	332
Listening to music	*r*	0.025	0.035	0.087	0.115	0.127	0.102	0.123
	p	0.649	0.523	0.115	0.037	0.021	0.064	0.025
	N	335	330	332	332	332	332	332
Shopping	*r*	0.051	0.020	0.031	0.010	0.044	0.010	0.032
	p	0.350	0.723	0.570	0.861	0.419	0.853	0.564
	N	335	330	332	332	332	332	332
Editing (filters. Meme. etc.)	*r*	0.156	0.126	0.141	0.141	0.125	0.119	0.147
	p	0.004	0.022	0.010	0.010	0.023	0.031	0.007
	N	335	330	332	332	332	332	332

Table 6.
Pearson's r *coefficients between typical smartphone habits and* Smart_Q-R *and dissociation measures of male group. Significance (*p*) levels and Ns are reported too.*

attended socials and were more engaged in relational behaviors than men; instead, men resulted more engaged in playing games and watching videos by streaming than women. These results are literature confirmations [20].

However, more interesting were the gender differences related to the measures of smartphone overuse and dissociative phenomena. Indeed, women estimated more frequent smartphone usage than men. Women also reported more dissociative phenomena. This gender difference results from both when the mean group scores on the DisUADI are considered, and when percentages of scores equal to/above the

Female behaviors		Smart_Q-R	DisUADI	A-DES – DA	A-DES – AII	A-DES – DD	A-DES – PI	A-DES – Tot
Social networking	*r*	0.274	0.101	0.045	0.057	−0.030	0.044	0.019
	p	<0.001	0.083	0.445	0.331	0.611	0.448	0.740
	N	293	292	293	293	293	293	293
Playing a game	*r*	0.057	0.093	0.106	0.146	−0.003	−0.011	0.054
	p	0.329	0.114	0.072	0.012	0.961	0.850	0.357
	N	292	291	292	292	292	292	292
Calling people	*r*	−0.109	−0.113	−0.047	−0.018	−0.057	−0.055	−0.052
	p	0.064	0.054	0.427	0.758	0.334	0.352	0.375
	N	291	290	291	291	291	291	291
Messaging	*r*	0.196	0.010	0.019	0.085	0.034	0.037	0.046
	p	0.001	0.868	0.752	0.148	0.564	0.528	0.437
	N	294	293	294	294	294	294	294
Browsing	*r*	0.203	0.134	0.017	0.009	−0.011	−0.004	0.001
	p	<0.001	0.022	0.766	0.882	0.857	0.950	0.987
	N	293	292	293	293	293	293	293
Streaming	*r*	0.311	0.278	0.145	0.180	0.115	0.129	0.153
	p	<0.001	<0.001	0.013	0.002	0.050	0.027	0.009
	N	293	292	293	293	293	293	293
Recording photos/videos	*r*	0.115	0.034	0.085	0.082	0.088	0.077	0.094
	p	0.050	0.565	0.149	0.160	0.131	0.188	0.108
	N	292	291	292	292	292	292	292
Listening to music	*r*	0.177	0.132	0.133	0.173	0.171	0.167	0.182
	p	0.002	0.024	0.023	0.003	0.003	0.004	0.002
	N	292	291	292	292	292	292	292
Shopping	*r*	0.175	0.016	−0.021	−0.149	−0.041	−0.075	−0.071
	p	0.003	0.786	0.724	0.011	0.487	0.200	0.228
	N	292	291	292	292	292	292	292
Editing (filters. Meme. etc.)	*r*	0.242	0.190	0.101	0.138	0.119	0.118	0.132
	p	<0.001	0.001	0.086	0.018	0.043	0.043	0.024
	N	292	291	292	292	292	292	292

Table 7.
Pearson's r *coefficients between smartphone habits and* Smart_Q-R *and dissociation measures of female group. Significance (*p*) levels and Ns are reported too.*

4-point cutoff in A-DES are compared. Women showed higher scores than men in *absorption and imaginative involvement* and *depersonalization and derealization* subscales of A-DES too.

These differences suggested to analyze separately women and men associations between study variables. Numerous significant associations were found for both groups. Several associations resulted weak (*r* indices less than 0.30): both genders highlighted dissociative measures correlating with perceived daily time spent with the smartphone, in messaging, and in front of a computer, with the feeling that

Male behaviors		Smart_Q-R	DisUADI	A-DES – DA	A-DES – AII	A-DES – DD	A-DES – PI	A-DES – Tot
Lying about the time spent online	*r*	0.311	0.353	0.248	0.204	0.234	0.153	0.243
	p	<0.001	<0.001	<0.001	<0.001	<0.001	0.005	<0.001
	N	335	330	332	332	332	332	332
Using smartphone in bed before falling asleep	*r*	0.335	0.139	0.175	0.135	0.145	0.194	0.179
	p	<0.001	0.011	0.001	0.014	0.008	<0.001	0.001
	N	335	330	332	332	332	332	332
Constantly thinking about online activities	*r*	0.432	0.374	0.229	0.206	0.168	0.144	0.208
	p	<0.001	<0.001	<0.001	<0.001	0.002	0.008	<0.001
	N	335	330	332	332	332	332	332
Time spent on: smartphone or tablet	*r*	0.353	0.191	0.192	0.078	0.140	0.107	0.150
	p	<0.001	<0.001	<0.001	0.156	0.011	0.051	0.006
	N	334	329	331	331	331	331	331
messaging	*r*	0.236	0.072	0.119	0.021	0.083	0.013	0.074
	p	<0.001	0.190	0.030	0.702	0.131	0.810	0.179
	N	334	329	331	331	331	331	331
gaming by console (PlayStation, etc.)	*r*	0.055	0.054	0.122	0.143	0.074	0.002	0.095
	p	0.315	0.328	0.026	0.009	0.180	0.970	0.084
	N	336	331	333	333	333	333	333
in front of a computer each day	*r*	0.120	0.173	0.167	0.112	0.170	0.116	0.166
	p	0.028	0.002	0.002	0.040	0.002	0.034	0.002
	N	336	331	333	333	333	333	333
In the last year, time spent on screen	*r*	0.242	0.134	0.116	0.151	0.087	0.076	0.118
	p	<0.001	0.015	0.036	0.006	0.114	0.171	0.033
	N	331	326	328	328	328	328	328

Table 8.
Pearson's r *coefficients between other smartphone habits and* Smart_Q-R *and dissociation measures of male group. Significance (*p*) levels and Ns are reported too.*

annual time spent on-screen increased, and with more frequent use of smartphone before falling asleep.

However, stronger indices ((r > 0.30) emerged between DisUADI scores and the estimates of two specific behaviors: *overthinking* (i.e., constantly thinking about online activities even when he/she was not connected and was busy doing other things) and *lying* (i.e., if in the past he/she sometimes lied about the time he/she had spent online). Similarly, *Smart_Q-R* scores resulted strongly associated with all dissociative scales in both groups, particularly to DisUADI scores.

In both genders DisUADI scale resulted strongly associated also with the A-DES scale and subscales: this is a proof of concurrent validity.

Therefore, at this point, we wondered which was the best predictor of the DisUADI index and if predictors would have been different for men and women. Some differences emerged again. In both male and female groups, A-DES total score and *Smart_Q-R* emerged as the strongest predictors, but in reverse order: for men, A-DES total was the strongest one, for women the *Smart_Q-R*. These two measures

Female behaviors		Smart_Q-R	DisUADI	A-DES – DA	A-DES – AII	A-DES – DD	A-DES – PI	A-DES – Tot
Lying about the time spent online	r	0.450	0.455	0.242	0.289	0.286	0.281	0.309
	p	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	N	293	292	293	293	293	293	293
Using smartphone in bed before falling asleep	r	0.367	0.209	0.128	0.124	0.150	0.105	0.147
	p	<0.001	<0.001	0.029	0.034	0.010	0.072	0.012
	N	293	292	293	293	293	293	293
Constantly thinking about online activities	r	0.547	0.467	0.208	0.230	0.232	0.247	0.257
	p	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	N	293	292	293	293	293	293	293
Time spent on: smartphone or tablet	r	0.384	0.222	0.088	0.088	0.118	0.145	0.124
	p	<0.001	<0.001	0.133	0.133	0.044	0.013	0.034
	N	292	291	292	292	292	292	292
messaging	r	0.252	0.071	0.030	−0.009	0.030	0.052	0.030
	p	<0.001	0.226	0.608	0.882	0.613	0.375	0.609
	N	292	291	292	292	292	292	292
gaming by console (PlayStation, etc.)	r	0.094	0.161	0.111	0.103	0.103	0.073	0.111
	p	0.108	0.006	0.057	0.078	0.080	0.212	0.058
	N	293	292	293	293	293	293	293
in front of a computer each day	r	0.195	0.260	0.151	0.145	0.137	0.059	0.142
	p	0.001	<0.001	0.010	0.013	0.019	0.311	0.015
	N	292	291	292	292	292	292	292
In the last year, time spent on screen	r	0.297	0.214	0.015	0.085	0.018	0.023	0.035
	p	<0.001	<0.001	0.803	0.148	0.755	0.696	0.553
	N	293	292	293	293	293	293	293

Table 9.
Pearson's r *coefficients between other smartphone habits and* Smart_Q-R *and dissociation measures of the female group. Significance (*p*) levels and Ns are reported too.*

alone accounted for 41% and 53% of the variance by male and female group, respectively. The two measures together accounted for 51% and 63% of the variance by male and female group, respectively.

If we look at the other variables entered the models, in the male group three variables emerged that explained another 0.04% of the variance; in the female group, five variables emerged that explained another 0.03% of the variance: a negligible contribution for both groups, even if some of these variables (such as overthinking) had shown a strong positive correlation index.

These results suggest taking into consideration the *Smart_Q-R* index above all to explain the dissociative phenomena measured with the DisUADI. The *Smart_Q-R* index summarizes an estimate of the intensity of 14 behaviors (e.g., frequency of connections, positive mood and facilitation of social relationships, and so on) foreshadowing an unhealthy overuse of the smartphone if it is high [21]. Some of the *Smart_Q-R* behaviors are typical behaviors referred to flow (e.g., lack of perception of passing time) or to dissociative experiences (e.g., sense of alienation when connected). Therefore, the strict associations that emerged between

Scales		Smart_Q-R	DisUADI	A-DES – DA	A-DES – AII	A-DES – DD	A-DES – PI	A-DES – Tot
Smart_Q-R	*r*	—	0.733	0.401	0.369	0.417	0.384	0.445
	p		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	N		293	294	294	294	294	294
DisUADI	*r*	0.601	—	0.585	0.548	0.556	0.506	0.618
	p	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001
	N	332		293	293	293	293	293
A-DES – DA	*r*	0.465	0.578	—	0.756	0.750	0.718	0.897
	p	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001
	N	334	331		294	294	294	294
A-DES – AII	*r*	0.440	0.568	0.718	—	0.645	0.640	0.824
	p	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001
	N	334	331	334		294	294	294
A-DES – DD	*r*	0.396	0.609	0.733	0.700	—	0.780	0.934
	p	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001
	N	334	331	334	334		294	294
A-DES – PI	*r*	0.323	0.504	0.667	0.681	0.763	—	0.874
	p	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001
	N	334	331	334	334	334		294
A-DES – Tot	*r*	0.457	0.643	0.874	0.851	0.936	0.864	—
	p	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	N	334	331	334	334	334	334	

Table 10.
Pearson's r *coefficients between* Smart_Q-R *and dissociation measures of male (below the diagonal) and female (above the diagonal) groups. Significance* (p) *levels and* Ns *are reported too.*

Smart_Q-R, DisUADI and A-DES scores in both regressions supported the idea that smartphone overuse can induce flow and dissociative experiences, especially in the female gender.

Why did women seem more vulnerable than men? The results of this study say that female participants were above all more intense smartphone users than men. An aim for future research is to find out which model of smartphone using is more likely to activate dissociative phenomena: this study suggests various potential behaviors (e.g., overthinking, streaming, playing games, etc.) but without one more strongly emerging.

5. Conclusions

Currently, the demand for the use of mobile devices to communicate, have fun and relax, read and study, search for information, etc., is so intense that it is impossible to escape it. Particularly, adolescents need to stay connected through their devices to be updated on the activities of the group and peers and to extend the

Gender	Model	Predictor	B	SE B	β	t	R_c^2	F per ΔR^2
Male	Step 1	A-DES – Tot	3.91	0.26	0.64	15.191***	0.406	230.78***
	Step 2	A-DES – Tot	2.92	0.26	0.48	11.278***	0.514	75.51***
		Smart_Q-R	0.53	0.61	0.37	8.690***		
	Step 3	A-DES – Tot	2.88	0.25	0.47	11.347***	0.535	15.77***
		Smart_Q-R	0.58	0.06	0.40	9.507***		
		Messaging	−1.94	0.49	−0.15	−3.971***		
	Step 4	A-DES – Tot	2.86	0.25	0.47	11.446***	0.548	11.09***
		Smart_Q-R	0.50	0.07	0.35	7.651***		
		Messaging	−1.90	0.48	−0.15	−3.952***		
		Constantly thinking a. online activities	1.74	0.52	0.14	3.330***		
	Step 5	A-DES – Tot	2.79	0.25	0.48	11.176***	0.554	5.14*
		Smart_Q-R	0.48	0.07	0.33	7.249***		
		Messaging	−1.75	0.48	−0.14	−3.629***		
		Constantly thinking a. online activities	1.45	0.54	0.11	2.707**		
		Lying a. time spent online	1.17	0.52	0.09	2.266*		
Female	Step 1	Smart_Q-R	1.09	0.06	0.73	19.052***	0.526	325.874***
	Step 2	Smart_Q-R	0.84	0.06	0.56	14.234***	0.632	85.055***
		A-DES – Tot	2.22	0.24	0.37	9.223***		
	Step 3	Smart_Q-R	0.88	0.06	0.59	14.895***	0.645	11.927***
		A-DES – Tot	2.18	0.24	0.36	8.218***		
		Messaging	−2.30	0.67	−0.12	−3.454***		
	Step 4	Smart_Q-R	0.82	0.06	0.55	12.991***	0.653	7.255**
		A-DES – Tot	2.09	0.24	0.35	8.878***		
		Messaging	−2.21	0.67	−0.12	−3.343***		
		Lying a. time spent online	1.46	0.54	0.11	2.694**		
	Step 5	Smart_Q-R	0.79	0.06	0.53	12.409***	0.662	9.044**
		A-DES – Tot	2.04	0.23	0.34	8.758***		
		Messaging	−2.08	0.65	−0.11	−3.194**		
		Lying a. time spent online	1.62	0.54	0.12	3.010**		
		Time spent at computer	1.19	0.40	0.11	3.007**		
	Step 6	Smart_Q-R	0.78	0.06	0.52	12.389***	0.666	4.219*
		A-DES – Tot	1.18	0.48	0.20	2.469*		
		Messaging	−2.01	0.65	−0.12	−3.095**		
		Lying a. time spent online	1.72	0.54	0.12	3.196**		
		Time spent at computer	1.16	0.40	0.10	2.936**		
		A-DES – DD	0.89	0.43	0.16	2.054*		
	Step 7	Smart_Q-R	0.71	0.07	0.48	10.128***	0.670	4.683*
		A-DES – Tot	1.12	0.48	0.19	2.356*		
		Messaging	−1.99	0.65	−0.11	−3.074**		
		Lying a. time spent online	1.68	0.53	0.12	3.150**		
		Time spent at computer	1.15	0.39	0.10	2.916**		
		A-DES – DD	0.95	0.43	0.17	2.194*		
		Constantly thinking a. online activities	1.21	0.56	0.09	2.164*		

*p ≤ 0.05.
**p ≤ 0.01.
***p ≤ 0.001.

Table 11.
Stepwise-linear regression analysis for the male and female groups: Dependent variable DisUADI.

school time of interactions. The time to devote to all these societal demands is increasing, so they are needed to always remain connected.

In this digital cultural context, the time that teenagers have to dedicate to viewing their smartphone backlit screens is enormously dilated. In this context, the outcome of compulsive and problematic smartphone use becomes highly probable [22, 23]. If this happens, it is not uncommon to experience a complete absorption in the activity that is taking place with the smartphone, encountering flow experiences [24, 25].

The study presented in this chapter finds precisely the prolonged use of the smartphone as an important precursor of the dissociative experiences declared by a convenience sample of adolescents. Experiencing complete absorption in the activity that is taking place can reinforce the activity itself and thus initiate a circular causality loop that reinforces the problematic use of the device and leads to dissociative experiences.

The study has some limitations: the individual characteristics (e.g., extroversion, sensation seeking, or sensitivity to rewards) were not investigated. Some personal characteristics could shed light on different dispositions/risk factors regarding problematic smartphone use [26] and therefore the predisposition to dissociation. Furthermore, the data do not show a clear direction of causality between problematic smartphone use and levels of dissociation, but an evident concomitance that represents a start for the study of dissociative phenomena connected to the overuse of backlit screens. This research line could serve to redefine the concept of VDU dissociative trance in terms of cognition and flow experiences. Understanding the nature of these processes will help to understand the "suspensive" and dissociated risk of the digital mind and to prevent psychopathological problems through the correct use of digital technology while respecting human neurodevelopment.

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Chapter 2

The Dark Side of YouTube: A Systematic Review of Literature

Marie Hattingh

Abstract

The prolific use of social media platforms, such as YouTube, has paved the way for the potential consumption of inappropriate content that targets the vulnerable, especially impressionable adolescents. The systematic review of literature has identified 24 papers that focused on the "dark side" of YouTube for adolescent users. The analysis showed that eight themes emerged: the glamorization of smoking, the promotion of alcohol use, videos that focused on body image/health, videos on bullying, self-harm/suicide, advertising, drugs and general vulnerabilities. The results revealed that videos that contain smoking and alcohol frequently feature sexualized imagery. Smoking videos also frequently feature violence. Smoking and alcohol are also often featured in music videos. The analysis also showed that researchers call for awareness, more strict advertising guidelines and promotion of health messages especially in terms of body image/health, self-harm/suicide and bullying. It is recommended that parents regulate the YouTube consumption of their younger adolescent children, as children do not always understand the risks associated with the content consumed, or might get desensitized against the risks associated with the content.

Keywords: YouTube, Adolescents, Teenagers, Risk, Vulnerabilities, Tobacco, Alcohol, Self-harm

1. Introduction

In [1] it was reported that the main reasons adolescent use social media is for information sharing, alleviating boredom, escapism, to interact socially with peers, building social capital and to receive feedback on their appearances. Therefore, adolescents' participation in social media platforms is an important aspect for "social participation" [1–4]. However, research has also shown that social media use can have an impact on the emotional state of the adolescent and the extent to which they can be influenced by peers [5]. Although, research on adolescents' use of social media is widely reported, this research is focusing on one social media platform, YouTube. YouTube is a video sharing platform that allows content creators to share videos easily, and viewers can view most videos without subscription, registration or restriction.

According to [6] 80% of parents survey in the United States of America (USA) indicate that their children younger than 11 years of age watches videos on YouTube. According to [7] 85% of USA boys and 70% of USA girls between the ages 13 and 17 years of age use YouTube on a daily basis.

In [3] it was shown that adolescents develop a familiarity with the YouTubers (both as content creators and viewers) as they can identify with what they represent. This prolific use of YouTube by adolescents, and even pre-adolescent children, expose children to a variety of content: good and bad. Although it has been reported that adolescent do access YouTube content "for good" such as incidental learning [8], informal learning [9], dealing with anxiety [10], practicing safe sexual health [11] and to obtain information regarding medical procedures [12] to name a few, unfortunately a number of studies have reported on using YouTube "for bad".

This chapter reports on a systematic review of literature on the negative aspects associated with YouTube, specifically concerning adolescents.

The chapter is structured as follows: Section 2 provides a description of the research methodology, Section 3 provides the data analysis and results. The results are discussed in Section 4 and the chapter is concluded in Section 5.

2. Research methodology

This study employed a systematic review of literature as the methodology. Two research platforms (ProQuest and Ebscohost) were used to access scholarly articles. The ProQuest platform included 12 databases (including ProQuest Central, Health & medical Collection, healthcare Administration database, Nursing and Allied Heath Database and Psychology Database) and the Ebscohost platform included multiple databases (including APA PscyArticles, APA PsycInfo, Family and Society Studies Worldwide, Health Source – consumer edition, Health source: Nursing/ academic edition, humanities source, MEDLINE,) In both instances the search terms used were "YouTube" AND "(adolescents or teenagers)". In both instances "YouTube" had to appear in the title of the paper and "adolescents/teenagers" needed to appear in the abstract of the paper. This search criteria ensured that the search was focused on the YouTube social media platform, with the user segment of adolescents or teenagers. The only filtered aspect was that only peer reviewed scholarly articles should be included.

The initial search with the keywords revealed 99 papers. 76 papers were excluded based on the following criteria:

- Duplicate paper

- Not written in English

- Not focusing on "dark side" aspects

Table 1 illustrates that the final results obtained was a review of 24 papers. These 24 papers.

Thematic Analysis [13] was employed to analyze the content of each of the 24 papers. Phase one is concerned with the researcher familiarizing herself with the data. This was accomplished by reviewing the articles obtained in the search and applying the exclusion criteria. Phases two to five almost occurred in parallel. Phase two was concerned with coding which involves the identification of the theme addressed by the paper. Eight main themes were identified and is illustrated in **Table 2**. The third phase was concerned with sub-themes. For example, it emerged that YouTube videos featuring smoking also features violence and sexualized imagery. Phase four was concerned with reviewing the themes. This phase involved identifying links between sub-themes, for example it emerged that YouTube videos featuring alcohol also featured sexualized content. This is illustrated in **Figure 1**.

| Platform	Initial results	Final results
ProQuest	44	6
EbscoHost	58	18
Final Total	**99**	**24**

Table 1.
Search results.
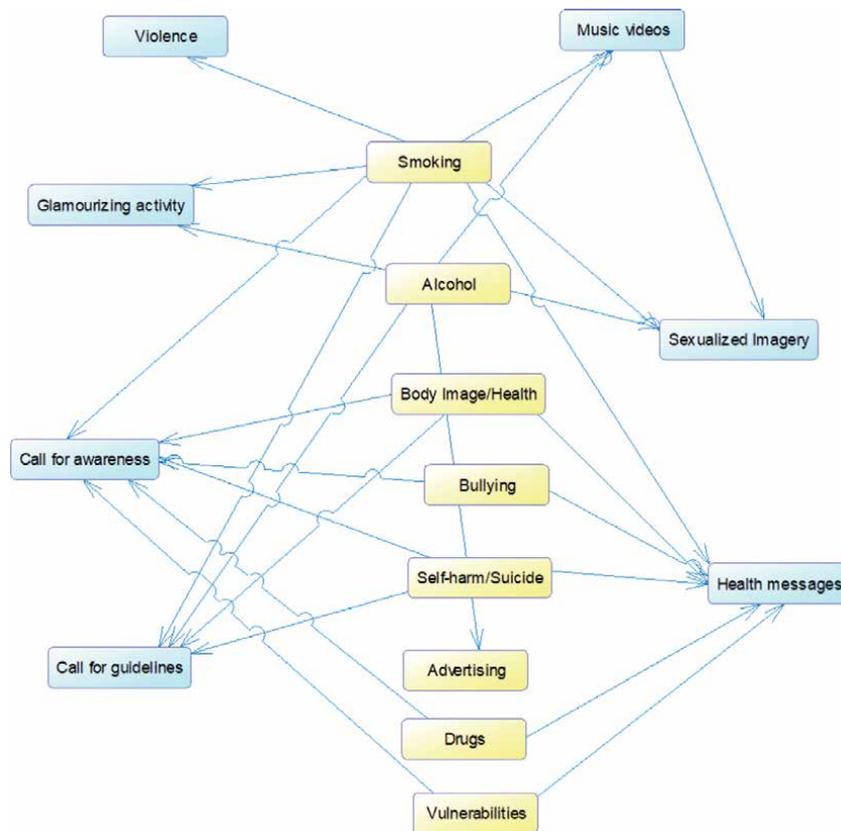
Figure 1.
Themes and sub-themes.

Phase five was self-evident, as the eight themes that emerged was very well-defined in terms of the context in which it was presented. Phase six is concerned with the write up of the data. This was done in two phases, first by providing a short description on each of the studies and then discussing the results in Section 6.

3. Data analysis and result

Thematic analysis uncovered eight major themes. The themes that were uncovered are detailed in **Table 2**.

Figure 1 illustrate how the themes (in yellow) are connected with the sub themes (in blue). The themes and sub themes have emerged from the literature where the authors discussed the theme in terms of the sub themes. For example, Kim et al. [14] conducted a content analysis of smoking fetish videos on YouTube

Theme	Source	Year of study
Smoking	[14–17]	2010, 2016, 2017, 2013
Alcohol	[15, 18–20]	2016, 2017, 2015, 2017
Body Image/Health	[21–23]	2020, 2013, 2017
Bullying	[2, 24, 25]	2018, 2017, 2017
Self-Harm/Suicide	[26–28]	2020, 2011, 2010
Advertising	[19, 29]	2015, 2020
Drugs	[2, 30]	2018, 2010
Vulnerabilities	[2, 31]	2018, 2017

Table 2.
Themes identified from paper.

and discovered videos containing smoking glamourizes the activity and it also contains a lot of sexualized imagery and violence. They call for guidelines to manage videos as young children have access to videos that should have parental guidance (PG) ratings.

Likewise, YouTube videos featuring alcohol, also contained sexualized imagery, were present in a number of music videos [18] where the use of alcohol was glamourized [20] and advertised [19].

Each of these themes will be discussed below.

3.1 Smoking

Four of the twenty four articles discussed the promotion and "eroticized" nature [14] of smoking. In [14] 200 videos were sampled from 2300 videos obtained by using the search words "smoking fetish" and "smoking fetishism". Their analysis revealed (at 4 November 2007) 2220 smoking fetish videos. Using the same search term ("smoking fetch") it was observed by looking at the playlists only, that there are over 7000 smoking fetish videos now[1]. Their analysis further showed that although some content was not available for under 18-year old's, 85.1% of the content was available to everybody. Their study further found that almost 60% of the smoking fetish videos were sexually charged with scantily clad women. They also recommended stronger rating for the videos as it contained sexuality and violence.

In [16] it was tested whether health messages that informs adolescents of the risks of smoking had an impact on their perception of smoking. Their research showed that smoking exposure to adolescents on YouTube correlates with an apparent increased prevalence of smoking.

In [15] it was investigated how tobacco was presented in music videos. The results showed that, at that time (2015), the music videos contained 203 million representations of tobacco products where adolescents were exposed four times more than adults to tobacco products per head of the UK population. The research also showed that for both alcohol and tobacco girls were more.

In [17] it was explained that adolescents perceive cigars to be less harmful than cigarettes. As a consequence, smokers remove the tobacco binder through a process known as "freaking". The results of their multi-study indicated that adolescents participate in freaking because they believe it 'Easier to smoke' (54%), 'Beliefs in reduction of health risks' (31%), 'Changing the burn rate' (15%) and 'Taste

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[1] 30 May 2021

enhancement' (12%). Study 2, which concentrated on the comments of freaking videos, indicated that adolescents were unaware or not understanding the risks associated with smoking.

3.2 Alcohol

The alcohol theme is associated with the presence or consumption of alcohol in YouTube videos. Four papers reported on the extent to which alcohol was present in YouTube videos.

Further to what was reported above, [15] also investigated how the presence of alcohol was presented in music videos. The results showed that, at that time (2015), the music videos contained 1006 million representations of alcohol products where adolescents were exposed five times higher for alcohol than for tobacco and four times higher than adults for alcohol representations per head of the UK population. Exposed than boys.

In a further study of Cranwell et al. [18] analyzed "lyrics and visual imagery" of "49 UK Top 40 songs and music videos". They found that the presence of alcohol in music videos were often accompanied with sexualized imagery or the objectification of women., that the use of alcohol was part of the image, lifestyle and sociability of the video actors and finally the videos promoted excessive drinking with no regards to consequences. Their study concluded, with a caution to the role of advertisers play in the promotion of music video product placements. The placement of alcohol in the videos are often not in line with the "advertising codes of practice".

Managing the advertising content on social media, has received some attention. In [19] it was investigated whether organizations conform to their digital marketing standards, even on social media. Specifically, the study focused on the extent alcohol is advertised/promoted on YouTube to viewers that are under the legal drinking age. The also, found that alcohol companies' digital marketing is not sufficient to protect underage viewers from viewing advertisements that promotes the consumption of alcoholic beverages.

In [20] it was further reported that alcohol use was presented as a fun, social activity with underage drinkers. A content analysis on 137 YouTube videos were conducted and concluded that YouTube is an effective platform to advertise alcohol use to adolescents.

3.3 Body image/health

The body image/health theme is concerned with the way body image/health information is communicate and perceived on YouTube. Three papers reported on the dissemination of body image/health data on YouTube.

In [21] an experimental study was conducted to examine the effects of health advice on "adolescent girls' state of self-objectification, appearance anxiety and preference on products that can be used to enhance appearance". The study used YouTube videos to inform adolescent girls on healthy behaviors. The results from 154 adolescent girls showed that younger girls tend to self-objectify more. Furthermore, the younger adolescent girls' self-objectification mediated the effects on appearance anxiety and the use of products to improve their appearance.

In [22] misinformation spread on YouTube regarding anorexia was investigated. Three doctors analyzed 140 videos on YouTube regarding anorexia. They classified content as "informative, pro-anorexia, or other". It was found there were less pro-anorexia videos than informational videos creating awareness on anorexia, but pro-anorexia videos were more liked by the viewers. The researchers advocated for more awareness on truthfulness of YouTube videos, especially concerning beauty

and lifestyle advice. They recommended that celebrities should be employed to create awareness of anorexia.

In [23] it was reported on adolescents accessing YouTube videos to learn about weight loss. They reported that adolescents showed negative feelings regarding body image. The exploratory research analyzed 50 videos that were identified by searching with the key word "diet". Their analysis concluded that the videos did not show appropriate guidelines to safely lose weight as it was made by non-qualified people. They recommended that policies by government should be in place, or at least be present on the YouTube platform to guide the information being made available on YouTube.

3.4 Bullying

Bullying is concerned with the actions to cause physical or emotional harm to another party. Four papers reported on the extent of bullying content visible in YouTube videos. In [2, 31] it was identified as a common theme as part of digital vulnerabilities of adolescents. However, two papers focused exclusively on bullying.

In [24] investigated the degree to which bullying content is present on YouTube. They found that 89 videos showed violence, 38 videos presented content related to suicide. Only 56 videos were promulgating positive messages related to finding help. They concluded that professional agencies should work towards spreading messages to stop bullying behavior.

In [25] it was reported that YouTube is the most popular social networking platform among Canadian adolescents. This research reported on the analysis of 55 video logs (vlogs) about bullying. They recommended that YouTube can be used as a platform to disseminate and discuss bully behavior.

3.5 Self-harm/suicide

Self-harm/suicide theme is associated with activity to inflict injuries on themselves, or in extreme cases take their own lives. Four papers reported on these types of activities. In [32] research on the "blue whale challenge" was reported. The "blue whale challenge" encouraged adolescents to self-harm and eventually kill themselves. Through a thematic analysis of comments on 60 publicly posted YouTube videos, they learnt that although the comments were focused on raising awareness of the risks of the challenge, it might encourage vulnerable individuals to partake in the challenge. They advocated for "safe messaging guidelines" to create awareness to social media users on the risks associated with content that promote self-harm/suicide.

In [26] reference is made to another challenge, namely Tide pod, which encourages non-suicidal self-harm. The analysis of 413 YouTube videos that featured content on self-harm/suicide revealed that 80% of the videos promoted awareness regarding the risks. Other results indicated that an anlysis of the comments revealed that 2.9% of the comments encouraged suicide, 2.1% of the comments were on how to fight suicidal thoughts, 5.4% of the comments were related to the poster wanting to commit suicide and 5.8% of the comments were negative. They concluded that further research is needed to investigate the negative impact social media platforms can have on the mental health of adolescents.

In [27] the 50 most popular videos depicting self-harm was analyzed. It was revealed that 58% of the videos did not warn viewers of the potential sensitive content to be displayed. The analysis showed that 42% of the videos were portraying a neutral message with regards to self-harm, 27% of the videos discouraged self-harm. However, 23% of the videos provided "mixed messages" regarding self-harm

and 7% of the videos encouraged self-harm. They concluded their research by recommending that teachers and parents need to be made aware of self-harm content on YouTube to which vulnerable adolescents can be exposed to.

In [28] 65 videos that demonstrated the asphyxiation game was analyzed. Results showed that 90% of the videos featured males. The videos demonstrated different asphyxiation techniques, including hypoxic seizures (55%) and the sleeper hold (88%). The researchers concluded that YouTube provides a platform for adolescents to view videos on choking and that continued exposure to such videos might normalize the act of choking. They advocated for increased awareness of this to alert youths to the risks associated with the choking games.

3.6 Advertising

Product advertisement on YouTube, is not always regulated by the same digital marketing guidelines as formal digital marketing platforms. Two papers spoke directly about the advertisement of products in YouTube videos.

Further to the promotion of alcohol in [19] to underage drinkers, as reported above, another paper investigated the presence of product placement in microcelebrities' YouTube videos.

In [29] 1961 comments were analyzed and it revealed that the followers of the specific YouTube channel accepted the commercial content promoted by the star of the YouTube channel. However, they cautioned that viewers are not always aware of product placement, due to lack of transparency, and that viewers might have a skewed view of the life of microcelebrities and the extent to which their lifestyles are supported by industry.

3.7 Drugs

Three papers, [2, 30, 31] reference drugs as being a theme in YouTube videos. Although [2, 31] referenced the presence of drugs as a general theme, [30] explained in detail the effect of Salvia, a short-acting hallucinogenic drug that adolescents in the United States used. The research focused on the analysis of self-taped videos of the use of Salvia. It was reported that the onset of the drugs' effects was quick, within 30 seconds and lasted for approximately 8 minutes. The research concluded that YouTube was an effective medium to showcase the effect of drug use.

3.8 Vulnerabilities

Through content analysis [2, 31] found that YouTube content creators focused on four major themes of: sex, bullying, pregnancy and drugs. These four themes presented the vulnerabilities adolescents are exposed through YouTube content. They concluded that the language used in the YouTube content was aimed at adolescents. Furthermore, they found that the videos that adolescents made themselves, were more often watched by other adolescents. Videos that were made by institutions to promote a certain "positive" message, were not well watched, or distributed.

4. Discussion

The analysis of the 24 articles provided eight "dark side" themes associated with YouTube content that adolescents engage with. These "dark side" themes

describe the typical dangers that adolescent can be exposed to when viewing YouTube videos.

It was apparent that a number of videos featured sexualized imagery, in addition to the promotion of smoking and alcohol consumption [14, 18]. The promotion of alcohol to underage drinkers were also revealed [19, 20].

It was quite interesting to observe that the context in which smoking and alcohol was promoted was through music videos. Often in the music videos, smoking and the consumption of alcohol was perceived as fun, and socializing activities [18].

A number of papers reported that certain YouTube videos do attempt to create awareness of the risks and dangers associated with some activities promoted on YouTube [26, 32]. However, the research reported mixed results. For example, in [22] it was reported that there are fewer pro-anorexia videos observed from the sample than informational videos that caution against anorexia, however the pro-anorexia videos were more "liked" than the informational videos.

A common theme that emerged from the research was: "regulation". In [14] it was stated that the regulation of smoking advertisements, and smoking fetishism is not sufficient. Strong regulations on advertising was also mentioned in [19]. Advertising Agencies need to be made aware, or realize that the viewers of YouTube content are becoming younger [6], and potentially more vulnerable due to the desensitizing effect of over consumption of YouTube content. The promotion of inappropriate products, such underage drinking and smoking, and the potential unawareness of a young viewer of intentional product placement [29] need to be more effectively regulated. Adolescents are greatly influenced by social media influencers [33] or microcelebrities [29] and although the intention of these influencers or microcelebrities are not always negative, they might unintentionally promote negative behavior. Furthermore, the use of "corrective messages" [16] to counteract the effect of making smoking socially acceptable. This was also advocated by [24] who argued that governmental institutions or professional organizations invest in the promulgation of "positive messages" to prevent bullying and assist adolescents who are/have been bullied.

Parents need to be aware of the availability of potentially harmful content on YouTube (also other video sharing platforms such as Tic Toc). Often, the harmful videos do not limit underage or vulnerable viewers to access the content. Although it was shown that some videos to promulgate health messages, parents need to ensure that their children do not get desensitized due to the over consumption of content. Children often do not understand the risks associated with certain "fun" activities such as freaking [17] or games [26, 32].

Adolescents' motivation of social media use in general can provide the explanation of the impact it can have on adolescent well-being. In [1] it was shown that motivation for social media use which include passing the time or escapism are inversely related to well-being and body satisfaction and well-being respectively. Therefore, apart from the "negative message" received on social media, such as YouTube, the reason for "escaping" or "passing the time" using social media can further have a detrimental effect on adolescent well-being.

5. Conclusions

YouTube (and similar video sharing platforms) is a popular social media platform for adolescents. Although not all the content on YouTube is problematic, this research has shown that there is truly worrisome content on YouTube which adolescents, especially young adolescents have free access to. Although social media use in general need to be regulated, parents need to regulate the content that their

younger adolescents consume of YouTube as the do not always understand the risks associated with the content presented. Also, due to the presentation of some content as "fun" and "sociable", it can normalize viewers into believing that it is acceptable to partake in illustrated activities.

Apart from "being aware" of potential harmful content on YouTube which can have a detrimental impact on the well-being of adolescents, regulating authorities need to capitalize on the prolific viewership of YouTube by promoting "positive messages" on YouTube.

Furthermore, although the focus of the study was on uncovering the themes that can promulgate "negative messages", parents, users and regulators need to be aware that the motivations of adolescents' YouTube use might in itself be harmful to their well-being.

Due to the limited number of empirical studies conducted on the "dark themes of YouTube", future research can be dedicated to uncovering the impact these dark themes have on the well-being of adolescents.

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Chapter 3

From Connection to Disconnection for Teens

Jocelyn Lachance

Abstract

We propose here to reflect both on the role of parents in connecting adolescents and on the desire for disconnection for teens. It appears that while we are inclined to notice teens when they go online, we less often perceive their resistance and their attempt to disconnect. Returning to several examples, we will see that the hypothesis of the existence of these attempts is realistic, and that it is possible to support them in order to help the youngest to better manage their uses.

Keywords: connection, disconnection, smartphone, parents, ritual

1. Introduction

In a few years, the exceptionality of the situation of an individual who could be reached at any time and at any time was replaced by the normality of instantly hearing the voice or immediately seeing the face of the person. This participates in the transformation of our representations of time and space, which gives rise to new expectations. Expectations that parent formulate more or less clearly to their children. The obligation to remain reachable seems to be asserting itself as a general norm which, having imposed itself on adults, now extends to the youngest. In the case of parents and their children, the rationale for this ongoing connection is not always based on actual and imminent dangers [1]. It is the potential for dangerous events that underpins the indisputable argument for the importance of remaining reachable. It is the contingent nature of the risks that imposes itself on these young people as an argument of authority. By entering this connected world, the younger generations also end up adhering in many cases to this reassuring standard of connection. Many teenagers in ours researches nonetheless firmly believe that their freedom of movement is subject to the obligation to carry their smartphone with them. In this way, a connection "pact" is generally established, concluded under pressure, which implies first and foremost that contact be possible at any time, hence the importance of keeping it within reach, and often of "be attentive to calls and texts sent by parents, at the risk of losing a recently acquired freedom. In this context, if adolescents are growing up in a connected world today, it is also because of the connection the parents are expecting from them. In this chapter, by evoking a few situations reported by teenagers and parents of teenagers during our surveys, we propose to think about the role of the parents in making their child connected, and about the desire of the disconnection of the teens...

2. The obligation to be connected...

> *"When I am with friends," says Yann, 16, my parents like me to send them a message to say "I arrived well" or "I'm going to sleep" I feel obligated to answer, but I don't always do it, because sometimes I get drunk. But in real life, I have to answer because afterwards they worry. Afterwards, they won't let me go out anymore".*

This self-imposed standard sometimes seems to cause situations with high anxiety-inducing potential. This is the case for Yann, 17. Knowing that he was geolocated, a dead phone meant for him that he would, once again and in spite of himself, escape his father's surveillance. A situation that he fears, that he does not want to relive, given the reproaches he has already been subjected to in the past:

> *Last week, he reports, I ran out of battery. So no more smartphones. He died. My dad didn't know where I was anymore and it made a big deal when I got home when this time I was being honest. I really had more drums. I thought he could locate me with the GPS or some other means, but in fact, no, when I run out of battery it really cuts everything apparently (...) You see, I "screwed up" once and it went badly so I don't want to start over.*

The connection "pact" is sometimes respected under the sign of fear [2]. As with Yann, this obligation which binds Leo to his parents encourages him to remain reachable at all times. A silence on his part that can provoke conflicts that he prefers to avoid: "In fact," he sums up, "I do not think it has ever happened to be unreachable. It's happened before, but there were times when I really did not hear the cell phone. And when I realized it I called them back to right the wrong. I really do not want to create a hostile climate, so I'm making an effort, once again."

Of course, not all adolescents experience this need to stay connected with the same intensity. Some even seem to lend themselves to this little game of giving news to their parents with indifference, like Yoan, 18, for whom it is only a trivial formality:

> *"In general I tell them everything. time what I do, so for me, it's not monitoring, it's more to reassure them than anything else. Afterwards, when I'm at home, they don't watch me".*

Others admit to doing it half-heartedly, and are sometimes tempted to deviate from the rule. But all agree on one point: not answering a call, ignoring a message, not giving a sign of life when it was apparently expected from their parents are always signs of transgression in a world where the norm is to stay connected. A form of mistrust towards parents which introduces a form of negotiation with them, and which transforms the apparent pact of connection, the terms of which have not always been decided by the adolescent, into a real negotiated pact.

This standard of connection also appears in the form of the urgency to respond: "Every time my mother sends me a message," Yann, 16, tells us, "I have to answer in ten minutes. Like many adolescents, Yann accepts the conditions of the connection pact so as not to frighten his mother or father. In a connected world, young people are revealed anxious to reassure their worried parents, no matter what space they occupy and what time they live. Parents sometimes no longer have to make a request, as teens who have internalized their fears anticipate these times when they must contact them.

Sending a small message is perceived as a micro-signal that most see as a compromise that does not require real sacrifice. Discreet, quick and easy; texting reassures without necessarily disrupting the course of an activity with friends, which some parents will be content with over time:

> *I said it wasn't necessarily to track them, says Laurent, 48 (father of 14-year-old). It's just that the connection with the phone is that today we have to hear more from them than we had from our parents. So it's a feeling of being closer. The times spent with us may be stronger than with our parents or different but I say yes, I feel like I relate more to my daughter. And it's not necessarily to track her down or ask her questions.*

In any case, adds Liliane, 50 (mother of an 18-year-old girl and a 16-year-old boy), my son, he is absolutely not asking for this kind of telephone relationship with his mother, on the contrary, if I do not call him every now and then, I think he would not call me at all, and he makes it clear to me. When I call him, he answers yes or no. His texts are minimalist, either yes or no.

The micro-signal then embodies a form of resistance. It is as if the advance of adolescence corresponded to a progressive claim for a right to temporary disconnection. It is precisely the intrusive permanence of the connection, the standard of being reachable, the imperative that is generally imposed on the origins of the acquisition of the smartphone that are then called into question. In other words, the connection pact that takes hold in the first few months or years usually goes through episodes of temporary disconnection. Having obediently responded to her parents' requests for years, Corinne, 17, admits having deliberately changed her attitude in recent months: "Now, from time to time, I do not answer," she said. For example, I refuse to answer texts or calls from my mother, things like that! Like last Saturday, my mom called me to find out when I was coming home and I wasn't answering!".

These episodes of disconnection, however, are not only signs of a willingness to resist parents. They also testify to a demand to be able to judge, for oneself, the interest of an exchange in real time, on the moment, according to the situation. When Alexi, 15, recounts this evening when he did not pick up despite repeated calls from his father, he insisted on the evidence that he was in good company, in safety, and that his father knew it very well at the deep down:

> *"I find it a bit normal for them to call me, he explains, but I find that sometimes they do too much and I tell them. During a party a few weeks ago, I refused to let my father call me because he knows the friends I go to very well. Also, there were relatives present so I didn't see fit for him to try to reach me or watch me."*

Self-assertion is not only manifested through a form of opposition expressed by a punctual disconnection: it mainly depends on the adolescent's ability to justify this choice to parents, which is also reflected in the story of Dorian, 17 years old:

> *I answer them often, he said, but I do answer them later. Because I don't necessarily want to talk to them all evening. The last time was at a party at a friend's house where my parents called me late at night and I wondered why they called me so late (...). At another party where it was still early in the evening that had only just started, I told myself that it was not important because they were friends that I had not seen for a long time.*

Knowing how to justify one's priorities, and how to make one's arguments heard by one's parents: episodes of disconnection are not only an opportunity to take action, but also to subsequently engage in a discussion on the subject [3]. In other words, disconnecting leads to discussions about those times they seek to preserve. Because if the voluntary and punctual disconnection is often followed by remonstrances on the part of the parents, it also leads to exchanges, the teenager having to explain why he suddenly disappeared from parental radars. However, because the decision to temporarily disconnect makes sense to him, the young person is generally ready to argue when he faces his parents. On the other hand, the episodes of involuntary disconnection rather provoke a need for the teenager to justify himself when he had not wanted the situation. The latter then tries to "repair", which is not without revealing in some of them a feeling of guilt:

> *I was in the evening, tells us Hector, 16 years old. I had gone to Strasbourg to have an evening with a friend and when I left, my mother was a little ill and then I was in Strasbourg at my friend's house, we stayed 5 to 10 minutes on the smartphone afterwards, I ran out of battery, she got a little worried but as soon as I managed to charge my smartphone, I saw that she was worried so I sent her a message and called her right after.*

Since the norm is to be connected, the episode of disconnection leads to the need for justification. The adolescent who has not been contacted must provide explanations, the validity of which is subsequently judged by the parents:

> *It must have been an evening when I had no more drums, says Theo, 17 years old and that I had answered them the next morning. They were upset, they were a little stressed, but after when I explained to them, it was okay. I just told them I had more drums and then it was okay. They were stressed out that I wasn't responding to their message and everything, logically, so I respond well. So all of a sudden they asked what was there and everything, but then they were reassured.*

The terms of the connection pact are therefore called into question in the tension between the desire to protect the parents from the worry that temporary silence may arouse and the desire to assert one's capacity to judge the urgency of an exchange. In the background, the perception that teens have of their parents' feeling of insecurity sometimes dampens the urge they feel to surrender to the present day of their activities by bracketing incoming calls and received messages.

If the link is maintained at a distance in a connected world, a phone call or a text message has little to do with an actual presence of parents with their children. The co-presence effect of remote communication is in no way equal to the experience of live presence. It is hard to imagine a father or mother sitting patiently in a corner of a living room or a cellar watching his teenager feasting with his friends without this causing a certain discomfort or at least limiting them. Still, it's easy to imagine a teenager texting his parents "to reassure them" while a friend serves him drinks at a party night. The constant gaze on the child when the parents share the same physical space with them imposes the permanent possibility of reaching him when the distance separates them. However, for this possibility to be reassuring in the eyes of parents, it is important to regularly reactivate the suspended link when the children are absent. In other words, sometimes it's not the information you get from a call or text message that matters. It is the confirmation that the adolescent is reachable that becomes the most meaningful and ultimately reassures.

Is it getting news from your child or receiving a sign of life from him? One thing is certain, however: the exchange of relatively trivial news between parents and

children who communicate regularly with each other shows that it is not always the content that counts but the contact that is reassuring [4]. So the simple fact of taking the time to phone or text can even play this function of comforting parents. Because the maintenance of the link is checked again. It is always possible. It is effective:

> When I'm not at home, admits Estelle, 15, I call them every evening or send a message to reassure them. So I basically tell them what I did that day. Anyway, I know that if I don't I would have some complaints after like "we haven't heard from we told you to call" and I'm not sure I'll be able to leave next time. So every night I call or send a message. Afterwards, it's a bit normal for them to worry but afterwards when I'm at a friend's house, her parents are at her place so things aren't going to happen to me, it's not like I'm going out in town on my own one evening I mean there is no reason I think. But hey they want to know how I'm doing and in return I have the right to go to my friends so it's okay for me.

Since the feeling of being reassured is nourished by the very fact of keeping the bond alive despite the distance, the sometimes pressing request from parents to "wave" is justified, even when their teenagers are not in particularly difficult situations. Risk. It is in this context that many parents do not just text or call their children to make a decision they think is important. Several prefer to go there, in the presence, when it comes to obtaining reliable information about their children, as Estelle once again evokes:

> "I was able to go to my friend's house the following day," says - she, and on the spot she offered me to sleep at her place so I asked my father by SMS and he didn't want to. My mother had to come and pick me up in the evening, but when she got there she saw that it was really cool and that her parents were nice".

The need to reactivate the link has also disrupted the school time formerly devoted entirely to those present in the college or high school. In fact, few teens go without texts, or even calls, during the day, even when they are in class. Admittedly, as mentioned by Patrick, 14, this communication most often fulfills an organizational function: "During recess, he mentions, they ask me at what time I finish, whether to come and get me. During class, they do not send me a message. "Ditto for the young Marion, 17, who occasionally receives messages and calls when she is in high school: "from time to time, she said, between noon and two when they need information", a situation that Emilie, 16, also experiences:

> I answer my mother, she admits, well it depends, sometimes she calls me but I tell her stop calling me because here I am in class so either I do not answer because I am in class or so you will have to come and get me during the day. And if not, she sends me messages. And a lot of times it's for stuff yeah there I go do you want me to take you? It doesn't matter if you answer if you are in class or if you are not.

Just like Ellie, 16, who admits that this type of exchange is frequent with her mother: "With my mother," she confirms, "we often send each other messages or even call each other during the hour. Midday. Otherwise, between lessons, at the 10 hour break".

But to this practical dimension seems to be added most often the phatic function of making contact according to several teenagers who, like Eric, 15, are telephoned: "for everything and nothing". Thus, in the opinion of Pierrette, 14, it is the need for reassurance that motivates her parents who have already contacted her on several

occasions while she was at school, with her teachers and her parents. Classmates: "Well at noon," she said, "it happened several times, they contacted me. They checked that everything was fine". The relevance of these exchanges during the day is then questioned by young people who, once again, resist the temptation to respond, defeating attempts at contact on the part of their parents:

> *"It depends," says us. Eric, 15 years old. I don't always answer. If it is important or not because sometimes frankly (…). She contacts me for anything, something about information that she could very well tell me in the evening. In fact, if it's urgent, yes, I find it normal to send me a message but if not, frankly, it is of no interest".*

However, some teens do not wait for their parents to call or text them when they are in school. Because they have already gotten into the habit of spending part of their break time communicating with them: "It's me," says Ketty, 15, from time to time, who sends them a message. It's often noon to tell them that everything is fine, if I got any notes or whatever. It's to keep them informed".

Moreover, whether the origin of the exchange is attributable to a request from the parents or caused by an initiative of the child, whether the relevance of the telephone or text messages is or is not validated by the teenagers, It is clear that break times are no longer fully experienced at school in the same way in a connected world. These interstitial times, punctuating school days, are for some teenagers more and more often devoted, in part at least, to exchanges with their father and mother, as Corrine, 17, recounts:

> *They text me sometimes during class, she said, but they don't know I'm in class, well, they text me but they don't know if I'm in class and I answer in class or if I am on a break or between two lessons. But yes they send me messages because, in any case, they say to themselves that I will answer when I have a break.*

To resolve the tension between the parents 'desire to keep the bond alive through regular contact and the teenagers' desire to preserve time spent away from parental gaze, the micro-signal that is texting is again revealed as a solution that satisfies parents and children. Parents then obtain confirmation that the link can be reactivated, that their children are still within the security perimeter of the connection, while the latter fulfill their part of the "pact" by reassuring their parents, without ever questioning the progress. Activities to which they lend themselves. But the use of the micro-signal is only a temporary resolution of this tension. Because over time, and therefore the transformation of the expectations of parents who gain confidence or who are more suspicious of their growing children, the connection pact is broken or renegotiated, at the very moment when teenagers wanting to signify their independence take the path of occasional disconnection to assert themselves.

The desire for disconnection, partial and temporary, emerges in filigree even among young children, beyond the apparent desire for hyperconnection that would characterize the relationship of the youngest to ICTs. A desire which, as we will see, sometimes turns into an attempt to disconnect, even into concrete experiences of disconnection, which is hardly surprising: the first individuals to be interested in the disconnection of ICTs in their lives were, there are already more than ten years, those who had already experienced hyperconnection, that is to say discomforts felt subjectively and which they attributed to the fact of being connected "permanently" [5]. The disconnection attempts first appeared in the form of desire, of attempt, then in the establishment of a temporary and partial disconnection strategy, a way of regaining the feeling of mastering the use of tools which, previously, precipitated their discomfort. The impression of being subject to the schedules

of others and of being literally invaded by requests from outside. However, these attempts at partial and temporary disconnection among the youngest often manifest themselves in a subtle way. And some adolescents even consider that their own parents do not notice these efforts they express, these attempts to resist the pull of the permanent connection:

> *I know, Jennifer, 15, confides to us that my parents are right and that I spend too much time on it, sometimes I make a good resolution I tell myself that I will go less, I go basketball or cycling and I answer my messages an hour later but I have the impression that the hour when I don't have my smartphone lasts a really long time and I'm happy to finally see who spoke to me when I get home. And when I make an effort like that, it doesn't last long but my parents don't encourage me, they say that nothing has changed because as soon as I come home I run into it. So they don't see that I'm using a little less.*

The desire to disconnect, even concrete attempts to partially and temporarily distance ICTs, seems to exist. But their visibility is sometimes blurred, the actions of disconnection not always being perceived beyond these numerous moments, when adults see, again and again, adolescents in front of screens. This invisibility of a sometimes manifest desire to disconnect has consequences, because it is the very possibility of supporting these young people in a world less and less connected that adults will then question. Yet, like their elders, the younger generations seem to have an ambivalent relationship to technology. Fascination does not always gain the upper hand, as the limits of ICTs have often been experienced in adolescence. Thus, Fanny, 20, sums up this relationship fairly well with technologies that have their advantages and also have limits: "I am quite reluctant," she says, "with regard to the very strong evolution that there has been compared to all this technology, I'm afraid it will break human links. It has its uses but I think you have to know how to detach yourself from it ". Partial and temporary disconnection from ICTs is therefore not a utopia. She was born among young people who had known the "normality" of the connected world. Among a generation of which some members dream of moments of respite from an early age. And if this desire for disconnection embodied silently through punctual attempts at disconnection is not always noticeable, it is precisely because this desire and these attempts arise at the very moment when the hyperconnection is felt its effects on a generation. a young person whose members are undoubtedly more and more numerous to feel the discomforts which are attributable to him. Thus, attempts to disconnect arise in the tumult caused by this norm of being permanently connected, a norm which is more and more obvious in part because, henceforth, it is within families that it has become commonplace and reinforced.

3. ...to the right to experience voluntary disconnection

We could define experiences of temporary and partial disconnection as experiencing times and spaces stripped of the presence of information and communication technologies and all screens. Provisional in the sense that they are parentheses in a context where the norm of being connected is generally imposed. Partial because limited, that is to say that requests from the outside are not always perfectly blocked, but simply filtered. These experiences can then take different forms that parents are already experimenting with at home: prohibiting smartphones, children and parents alike, during meal times, refusing to introduce screens in a chosen room, using only one connected device for the whole family during the holidays...

When times and spaces are arranged in order to live such experiences, then we can speak of rituals of disconnection. When they occur with the family, then we speak of family rituals of disconnection. The goal here is not for children and teens to simply realize the benefits of spending time without being connected. But above all to make them understand that it is possible, conceivable, achievable and enjoyable to have such experiences. The standard is then readjusted: it is no longer a question of being permanently connected and reachable. The norm is to know how to pass from these times and these connected spaces to times and spaces of disconnection. It is therefore not enough to dwell on what is experienced in such moments. But to emphasize that everyone can possibly escape, if they wish, from this continuity that is imposed on him or her.

Collective initiatives are already numerous in terms of partial and temporary disconnection. The example of the day without a screen is in this sense representative of the efforts being made to make young people aware of the risks of hyperconnection. However, the experiences of temporary disconnection cannot wait until a certain age is reached and one can doubt the effectiveness in the duration of the annual ritual of this very laudable initiative. Temporary and one-off disconnection should no longer be presented to younger generations as an exceptional time in the continuity of a society which most often abandons individuals to the temptation to constantly reconnect. Of course, the right to disconnect at work also testifies to this generalized attention to the problem of hyperconnection and the importance of providing solutions, of supporting individuals in their quest for space and time for respite. But the battle is hardly won because the disconnection in these cases never appears to be obvious to those who lend themselves to the game of the day without a screen or who are imposed disconnection times which in their eyes contravene their way of managing their working time. The disconnection experience must be put to the service of the individual, who can then put it to good use.

The irruption of ICTs in everyday life has shaken up individual existence and many people have been swept away by these cultural and social transformations, which have imposed a different way of living in space and time. We have been victims, and the time has undoubtedly come to help the youngest to once again become actors of this culture in a connected world. Knowing how to arrange times and spaces for disconnection does not mean renouncing the advantages provided by information and communication technologies. Rather, it is to show the youngest that the choice is possible to give up, to delay, to isolate oneself, to cut oneself momentarily in order to breathe and find oneself. So few will be those who will say that there is little benefit in temporarily disconnecting from ICTs. Engage in sports, devote yourself to creation, to observing the world; give back to the present its primacy over the countless possibilities offered by connection, dreaming and, also, being bored. Relearn how to waste time, and understand all that it can bring in. However, there is hardly a magic formula to teach this possibility of disconnection in their life. But no doubt some conditions are imposed on us when we want to participate in depth in the advent of a culture of connection under the sign of a more serene relationship, better control, and which respects the need to find ourselves alone with oneself.

3.1 Believe in the disconnection potential of children and adolescents

Some adults refuse to believe that this is possible. The observation for them has been made: because they are surrounded by young people whom they see bending over their screens most often, because they have witnessed violent crises on the part of teenagers who have had their phones taken away. Portable or let themselves be impressed by the Japanese phenomenon of Hikikomoris, the hypothesis of a

generation that would grow up with the idea of being able to partially and temporarily disconnect seems absurd to them. In fact, the trend towards hyperconnection is paradoxically not opposed to the desire for disconnection. It is even the opposite phenomenon that we have observed for a long time, the first attempts to distance themselves from technological tools having been observed among senior executives after having experienced great discomfort due to a prolonged and forced connection. So we may think that people, including young people, who have experienced this hyperconnection, will be particularly sensitive to the benefits of a partial and temporary disconnection.

The trend towards hyperconnection is therefore not just a juvenile affair. It does not concern, first and foremost, the younger generations. But rather the adults that we are, who have legitimized, with or without pleasure, this society where the norm to be connected now reigns. Thus children and adolescents grow up in labyrinths of which we have built the walls and marked out the routes. Not believing in the disconnection potential of children and adolescents also means believing that the world we have invented for them is taking hold of nature. Whereas on the contrary we live in a context that we have built. Perhaps it is undoubtedly difficult to curb the momentum taken by the development of information and communication technologies. It is undoubtedly complicated, at the individual level, to prevent the great leaders of social networks and telecommunications from further expanding. But it is undoubtedly possible to transform our relationship with this connected world, on a more human scale, ours, that of our families, those around us, in company and for the good of our loved ones.

But to establish times of disconnection as new evidence in the minds of the youngest, it must be understood that the desire for disconnection does indeed exist among them. And that some have even already established in their life these moments of rest, which have become necessary:

> *Interviewer: Do you disconnect from your iPhone when you want to be alone?*
> *Florian, 18 years old: Ah, yes. It's rare, but it happens to me.*
> *When does this happen to you?*
> *When I need to be alone. When I want to clear my head, I sometimes talk to no one, yes. Because when I get messages I say to myself "yes that's good, two minutes" and I respond later.*
> *And to be alone in these cases, what exactly do you do?*
> *When I really want to be alone and isolate it I run a playlist for example, I put my iPhone on silent and I turn it over so I can't see what's going on.*

To allow these good intentions to take the form of good habits, it is undoubtedly necessary to act with children from an early age. Allow them to grow up in contexts where episodes of disconnection are as "normal" as evenings spent watching series and those long drives in the car with their eyes riveted on the screen of a smartphone or tablet.

3.2 Question your own digital practices

It goes without saying that adhering to rituals of disconnection implies that its participants share their meaning, because the interpretation is often a problem between family members [6]. It is not enough to prohibit the use of screens for children of such and such ages, but to arrange times when the use of ICTs is prohibited for everyone, children and parents. If we make a clear distinction between, on the one hand, children with a limited connection, and, on the other hand, adults who are constantly connecting, we risk to imply in the representations of the youngest

that hyperconnection is indeed a marker of becoming an adult. While it is important to point out that adults are characterized precisely by their ability to manage, to master their use of ICTs by planning disconnection times in their daily lives [7–10].

A ritual of disconnection can only take such a name on the condition that the practices are shared, that the meaning of this experimentation is common and that it leads to a time for "self" or for "us". One of the enemies of the effective ritual of family disconnection is the inconsistency or awkwardness with which they may eventually be presented to the child or adolescent. One of the first rules to follow in this area is to be an example to follow as an adult. For a young person to believe in the benefits of episodes of temporary or partial disconnection, it is still necessary to be able to show him that these benefits are also effective in the lives of older people.

In fact, disconnection rituals do not have to be rigidly imposed to ensure their effectiveness. Take the example of a family legitimately defending meal times. No one around the table brings their smartphone. We even agree to keep them at bay or turn them off. But now a family member, father, mother, young adult or teenager is exceptionally waiting on a weekday evening for an important call. Whatever the reason, flexibility is in order as the establishment of the ritual of disconnection should lead the person concerned to ask permission from the family, and therefore to justify the importance of this call. In this sense, it is not a question of contravening the ritual in place, but, in a way, of reaffirming through an exceptional case the norm that is generally imposed. This is also in line with the primary objective of the disconnection rituals: beyond the immediate benefits (respite from possible solicitations, preservation of time spent together, etc.), it underlines the meaning of this pact that binds the members of the family. It is no longer the pact of connection, which binds each of these family members to distant people in space that disrupts the present. It is the pact of temporary disconnection that prevails in the face of the norm of being permanently connected.

In the example just mentioned, it goes without saying that all requests for exemption from a family member require him to question the meaning of his request, and implicitly to question the degree of urgency of this call and to weigh it against the importance he attaches to family time. Discussing it as a family can allow everyone to express their views on the meaning given by the first concerned, and promote discussion around what it means to be present and available to others. In all cases, an exchange in this context with the members of the family will promote both the reflexivity of the individual having to make a request (whether child or parent) and the participation of others in a situation that concerns them. In a nutshell, it's about reintroducing a little bit of the other into decisions to go on or off which, very often, seem to be established on an individual basis.

To participate in the advent of a new culture, where individuals wishing to protect themselves from temptations in a connected world are supported and encouraged in their quest, it is therefore important first and foremost to question one's own digital practices as than an adult. And on his ability to arrange for himself and for those close to him times and spaces of disconnection. Because nothing will be more problematic than the imposition of meaningless rules for children and adolescents who may then perceive a great inequality, even a form of injustice, in what will be proposed. This does not mean that perfect symmetry should be observed between parents and children when it comes to the use of ICTs. Prohibitions also find their place and meaning here. But that the rituals of disconnection constitute precisely times and spaces where a provisional equality appears between the members of the family in this area. In the name of the common desire to share quality time, in a space protected from chatty screens and the distraction of the world hanging on the other end of the phone.

3.3 Ritualize the purchase of digital tools

The sooner these rituals of family disconnection are established, the more we can hope for their effectiveness in the medium and long term. However, it all starts with the initiation of children to ICTs, that is to say at the time of their first contact with the connected world and the world of screens, in particular when acquiring a personal communication device, such as a tablet, computer or phone for yourself. For now, it is as if, every year, millions of technological tools are given to children in the same way as ordinary games. But these technologies are not trivial. A lag often appears in this first contact with tools which, behind the appearance of being nothing more than simple objects, make you forget the extent of the skills necessary to use them intelligently. The rights that these tools give to children and adolescents cannot, however, be experienced without a reflection on the duties they imply de facto. Thus, the entry into the connected world, which occurs more and more often through the purchase of a tablet at a young age, is carried out in the continuity of the acquisition of multiple consumer objects. As with 9-year-old Wendy: "It was 2015, we celebrated Christmas, and my godfather told me that if I did not eat well, I would not get my present. So I forced myself, he gave me my gift".

If entry into the connected world was most often made by accessing a computer in your room and by acquiring a personal mobile phone a few years ago, today it is the tablet. Which becomes the symbol par excellence of a personalization of the relationship with the connected world. A tablet for yourself, or one that you use more than other family members, but the possibilities of which children do not always suspect. We can also wonder if the purchase of a tablet, a computer or a smartphone is always accompanied by advice on use or, at least, an invitation made by the adult to the child about the symbol of having a tool to facilitate a search for information and communication with many potential interlocutors.

In other words, in the absence of a ritual, the link between the child and the digital tool can become stronger in the register of emotion; if adult speech is absent, it thus leaves all the room to the authority of the experiences made by the child from which the adult is excluded. Hence the importance of ritualizing these moments when digital tools are given as other objects are acquired. Ritualize, which involves staging this gift in a way that signals the importance of the moment to the child. And to signify it again periodically. To make him aware, again, of the fact that he is entering a space and a time requiring a responsible attitude. This first, initial contact is fundamental. Because the absence of words or of a gesture giving meaning to the event can favor the exclusion of parents from this relationship that the child develops with technological tools and this, from the origins of the little story that takes place. Will weave between the child and the connected world.

3.4 Clarify the temporal and spatial boundaries

All the rituals take place in specific spaces and times. All disconnection rituals must therefore have a beginning and an end, which should be clarified in the eyes of its participants. Because the agreed time has run out or because a space is vacated, the right to connect legitimately belongs to each member of the family. Sometimes it is spatial delineations that clarify the boundaries of the ritual of disconnection: in this case, a room in the house becomes the sanctuary of silence. No screen or smartphone is tolerated at all times. If a family member comes into this room, they agree to leave their smartphone outside. Here, no computer, no television. No external solicitation comes to test those who find themselves there. But, in other situations, it is time boundaries that set the framework for the ritual. These are events, with a beginning and an end, that are essential: when visiting such and such

a person, during a trip by car or an afternoon at the swimming pool, the decision is made. to each give up their smartphone. During meal time, no one is calling or texting around the table, but once their hour is over, you may be able to bring your laptop back to work.

Of course, these collective rituals must not remove the limits imposed on children, for example at night in order to protect their time asleep. In fact, family disconnection rituals should not be confused with the intimate rituals that each family member is free to perform in his or her personal life. These intimate rituals of disconnection are times and spaces stripped of the presence of ICTs and screens at the initiative of the individual who benefits from them. It is therefore a personal gesture, a kind of self-discipline that manifests itself in the intimate ritual of disconnection. While setting limits in terms of the use of ICTs can certainly contribute in the medium term to the establishment of these intimate rituals by young people themselves, collective disconnection rituals also promote their appearance, but in a way "More positive". It is no longer the constraint that should be lived mainly, but the advantage of a common time that should be praised by everyone.

3.5 Accept the evolution of the connection pact

Adherence to collective disconnection rituals is never permanent, and its evolution is to be considered, especially according to the age of the children. It is undoubtedly preferable to involve more and more, over time, adolescents in the establishment of new rituals. In other words, that they also become the actors clarifying the spatial and temporal boundaries of these. Because it is above all the way in which its participants will be brought to talk about these rituals, to push their boundaries, that makes sense, a way of discussing what is happening there, what we are trying to defend as a family.

The sustainability of disconnection rituals is possible if we consider that the main thing lies in the possibility offered by them to discuss together, as a family, about their meaning. One can imagine that family disconnection rituals persist for a long time in a definite form. But, at the same time, from childhood to adolescence, from adolescence to adulthood, the younger ones may force a renegotiation of the forms taken by these rituals. This should be seen as an opportunity to exchange views, an opportunity for speaking out, and never as unwelcome opposition. However, another concern may arise: since the family disconnection rituals are invitations to bring intimate disconnection rituals into one's life, the latter will risk coming into conflict with the parents' insistence on reactivating the bond despite the distance. This is why the effectiveness of family disconnection rituals goes hand in hand with the need, sooner or later, to change the connection pact that binds parents to their children.

Over time, parents will have to revisit the terms of this pact, this contract, which many of them are already doing elsewhere. But, by linking rituals of disconnection and the pact of connection, it is possible to seek the balance between accepting that children separate when physical spaces separate them and preserving quality time when they share together. Time. In other words, revisiting the terms of the Connection Pact does not mean abandoning family disconnection rituals. On the contrary, one can easily imagine parents who refrain from imposing on their young adults to reassure them permanently by calls or texts, but who, in the evening, insist that the telephones be switched off, time to rest. Reunite with family. Accepting the evolution of the connection pact can, however, provide adolescents or young adults with the feeling of an unprecedented but expected freedom, while encouraging them to take things into account: family disconnection rituals are not opposed. Not to this progressive access to the right to personal, partial and temporary

disconnection, when activities separate him from his parents. The quantity of small reassuring contacts then gives way, slowly but surely, to the quality of these great moments of family gathering.

4. Conclusion

Imagine a world in which to have fun, read the newspaper, listen to the radio, watch television; call, write, listen to music or watch movies; subscribe, work, exhibit, play, plan, organize; a world where to escape the daily routine, find old friends, send (digital) postcards, prepare a trip, buy train or plane tickets, book a hotel room, it is increasingly important more often to connect. A world in which to study, translate, correct a text, check your bank accounts, make a transfer, buy gifts, get a book, a record or a piece of furniture; to consult the sales, to have a parcel delivered, to receive coffee capsules, ink for the printer, a tablet or a table at home, it is necessary for us to consult a screen. A world in which to build your CV or expand your professional network, to sleep abroad for free, rent your apartment to tourists, find a taxi, a carpooler or a job; to complete administrative procedures, produce photos, follow the news of sports, cinema or politics; to edit films, create posters, flirt, learn a language or the words of a song, we are drawn to a computer, a tablet, a smartphone. A world in which, in order to interact, exchange, exist, we are forced to return to these technologies that intervene between us and the world. Technologies that mediate our relationships, including those parents have with their children.

This world is the one we bequeath to the younger generations. It is certainly full of promises, but it also reveals new challenges to be taken up in our duty of transmissions. We understand with this chapter that supporting the youngest in our connected societies can never do without questions to be renewed. Where do our concerns come from? Do we provoke new fears in our children and in our own lives when we paradoxically try to reassure ourselves? Do digital traces distract us from the essential? Are we aware of the sometimes unexpected effects of the connected world, which gives us the impression of maintaining the link despite the distance? Do we know how to recognize and respect the desire for disconnection of our children and our adolescents? Of course, it is actually hard to evaluate how strong is this desire of disconnection, and we can also question if this intention to disconnected sometimes from the ICTs takes his meaning only in the relation with their parents: maybe teens try sometimes to also escape from the solicitations produced by their peers? It can be interesting in future researches to explore those dimensions of disconnection among teens, as it can be useful to question how parents can take action in this try to get away from the connected world, sometimes, for a while. Actually in France is there no research who evaluate the role of ritual of disconnection in the day-to-day life of the family with children and teens. So many questions that should accompany this search for "the right distance" that drives parents. Because, in the end, it is not just a question of questioning the digital practices of teens and the actions of parents. But to question what we offer as role models to the youngest in a connected world. In this article, we have insisted on the relationship between parents and their children in the digital age, but it goes without saying that a large research project is opening up here, because it is also the relationships between brothers. and the sisters, with the grandparents and the extended family which will need to be analyzed in more depth.

In any case, we understand that it is important not to dramatize the use of ICTs, but, by wanting to use them in the perspective of prevention and intervention, we also participate, more or less consciously, in a strengthening of this standard to be

connected. When we invite children or teenagers to connect to find information, to contact a professional, to produce a prevention film in class, the initiative is laudable, and even necessary, but it does not always take the issue into consideration. Connection that we have discussed in this book. In other words, by legitimately working to renew the relationship of the youngest to screens, we forget that the problems posed by the current context also lie on the side of external solicitation, of this possibility of the permanent link which reassures and fears. It is no longer enough to work with young people to ensure that they develop a better relationship with the screens. It is important to also work with them the possibility of living outside the perimeter of the connection, which does not only mean "doing a screen fast", but also learning to temporarily and partially disconnect from the perimeter. Reassuring that traces the possession of a smartphone. Because promoting "good uses" of ICTs among younger people, by encouraging them to use them prudently and positively, is also, sometimes and paradoxically, to encourage them to connect, again and again… Keep this in mind. Allows us to avoid the trap of technophilia, just as unproductive as that of technophobia: many answers to our questions are not found in the examination or use of ICTs.

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Coping Strategies and Meta-Worry in Adolescents' Adjustment during COVID-19 Pandemic

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Abstract

With the beginning of the COVID-19 pandemic, several limitations and stressful changes have been introduced in adolescent's daily life. Particularly, Italian teenagers were the first among western populations to experience fears of infection, home confinement, and social restrictions due to a long lockdown period (10 weeks). This study explores the role of coping strategies (task-oriented, emotion-oriented, and avoidance coping) and meta-beliefs about worry as vulnerability factors associated with adolescents' anxiety. A community sample of adolescents (N = 284, aged 16–18 y.o.) answered questionnaires assessing anxiety symptoms (RCMAS-2), meta-cognitive beliefs and processes about worry (MCQ-C), and coping strategies (CISS). Results show that 37% of participants report clinically elevated anxiety. Emotion-centered coping predicted higher anxiety, whereas task-centered coping resulted associated with decreased anxiety. Cognitive monitoring about their own worry contributes, but to a lesser extent, to higher levels of anxiety. The implications for the intervention are discussed, especially the need to enhance the coping skills of adolescents and mitigate the stress of the COVID-19 pandemic, which could last for a long time.

Keywords: COVID-19, adolescents, coping, anxiety, meta-worry

1. Introduction

The world population has begun to hear about COVID-19 (Coronavirus Disease-2019) in December 2019, when a severe form of viral infection (SARS-CoV-2) was identified in Wuhan District, China. A few months later (March, 2020) the virus had spread to 114 countries with more than 118.000 cases and 4.291 deaths: On March 11th, 2020, pandemic status was declared [1]. Currently, as we are writing (December 15, 2021), the weekly epidemiological update of the virus shows 268 934 575 people infected and 5 297 850 persons lost their lives [2]. The pandemic strongly impacts the quality of life and mental health of populations worldwide, with psychological distress and increased anxiety symptoms both in adults [3] and adolescents [4–6].

First, studies on the consequences of COVID-19 in children have been conducted in China. Leilei et al. [7] observed that nearly 40% of adolescents had experienced a

condition of psychological distress. Jiao et al. [8] found that children and adolescents (aged between 3–18 y.o.) showed anxious manifestations and looked for the proximity of others, were distracted, irritable, and afraid to ask about the pandemic.

Similar consequences in the child population were tracked in other parts of the world. A review [9] of studies from the United States, China, Europe, Australia, India, Malaysia, Korea, Thailand, Israel, Iran, and Russia shows that conditions of social distancing and loneliness—particularly when total lockdown was imposed—strongly impact adolescents' mental health. Data globally confirm an increase in symptoms of anxiety and depression during the quarantine period [9].

From the beginning of the COVID-19 pandemic, parents to have observed internalizing and externalizing symptoms in their children. A Spanish/Italian study [10] indicates that nearly 85% of parents perceived changes in the emotional and behavioral state of their children (aged between 3–18 y.o.). The most frequent symptoms were difficulty concentrating (76,6%), boredom (52%), irritability (39%), restlessness (38,8%), nervousness (38%), feelings of loneliness (31,3%), unquietness (30,4%), and worry (30,1%). Spanish parents declared more symptoms than Italians (differences probably due to stricter restrictive measures). Necessarily having to remain in the (limited) space of one's home and the prohibition to go out seemed to increase anxiety levels and other related problems, such as sleep disorders and worry. Moreover, children's symptoms resulted positively related to parental well-being, particularly with the level of parents' distress for imposed modifications in daily life. In Italy—where the "stay at home" period lasted from early March to May 2020—parents reported increased distress for fears of contagion, working difficulties, and the need to schedule daily routine for children, including school homework and "distance learning" [11, 12]. This increased distress, in turn, escalated the children's problems with a bidirectional influence on the parent's and children's psychological adjustment [13]. Data from Hawes et al. [14] show also a link between worry about contracting the virus, school-related problems, and symptoms, such as depression, generalized anxiety, and panic/somatic symptoms in adolescents and young adults (12–22 y.o.).

Developmental and clinical literature show that children and adolescents with anxiety symptoms suffer more intense worries and have repetitive thoughts and "thinking about worry" ("meta-worry" [15, 16]). Worry is a chain of repetitive and verbal thoughts about potentially dangerous consequences of events. According to Wells' model [17], it is not the content of the thoughts or the intensity of the worries to characterize people with emotional disorders, but meta-cognitive beliefs about worries. Meta-beliefs are intrusive and disturbing thoughts where the focus is worry itself and the functioning of one's mind. The positive beliefs are based on the advantages or benefits of worrying as a coping strategy (e.g., "Worrying helps me to avoid problems in the future"). The negative beliefs include the thoughts of uncontrollability and the dangerousness of worry (e.g., "If I worry a lot, I could make myself sick"). Positive beliefs lead to increased worry, and when levels of worry get excessive, people become to be worried about the negative consequences of thinking, monitor their thinking, or active attempts to suppress dangerous thoughts. These cognitive experiences are associated with negative emotions and distress [17].

As with adults [17, 18], worry intensity and negative meta-beliefs about worry (dangerousness and uncontrollability) resulted positively linked with anxiety symptoms in children [19, 20] and adolescents [21]. Particularly, negative meta-cognitive beliefs are more frequent in children with clinical anxiety disorders compared to nonclinical groups [22–24]. Similarly, Natalucci et al. [25] found an association between cognitive monitoring (i.e., the tendency to be aware of one's own thoughts), negative meta-cognitive beliefs, and internalizing disorders. These data

globally support the link between frequent worry, meta-worry, and increased anxiety symptoms in children. Therefore, we can suppose that, in the context of the COVID-19 pandemic and related worries, in children with a tendency to worry and to monitor their internal states (meta-worry) the risk of developing anxious symptoms may increase. In agreement with Wells's model [17, 18], meta-beliefs about worry could play an additional role in feeding and maintaining children's anxiety symptoms.

Orgilés et al. [10] noted that more than 30% of parents observed an increase in worry in their children, especially when one of the parents left the home. Zhou et al. [26] report that approximately 40% of adolescents (aged 12–18 y.o.) declared they worried about a variety of things and were unable to control their worries. A survey [27] with an extensive sample (age range 18–70 y.o.) shows that worries about the possibility of contracting COVID-19 is present primarily in individuals with state anxiety. Among respondents with state anxiety, 33.3% were "very worried" about being infected with COVID-19, whereas only 2.2% were "not worried at all."

When facing stressful situations, people active intentional responses to demands and emotions, also known as coping strategies [28]. Studies on coping in children and adolescents for a long time have been based on the theoretical model developed by Lazarus and Folkman [29] with adults. Authors define coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" ([29], p. 141). The most common strategies in children and adolescents are family support seeking, problem-solving, escape, and distraction. Younger children seem to prefer escape, support-seeking, and distraction, whereas adolescents adopt internal dialogue and problem-solving thanks to the development of logical-formal thinking, the ability to control their behavior, and emotion regulation [30]. Recent studies have been conducted with the aim to establish the ways adolescents cope with pandemic-related psychological distress. Studies with adolescents (e.g., [31]) highlight that adolescents' active coping— based on doing something to reduce stress, such as thinking positively, distancing oneself from sources of stress, problem-solving, and asking for help is a protective factor to depression, anxiety, and stress development. Conversely, dysfunctional coping, such as avoidance behaviors, keeping feelings to oneself, and not seeking support resulted in a risk factor for distress and internalizing disorders [30]. Similar results emerge from the research by Türk et al. [32]. During the pandemic crisis, children who used dysfunctional coping strategies (e.g., avoidance coping) had higher anxiety levels; contrarily, children who adopted positive strategies, such as trying to lead a healthy lifestyle, experienced lower levels of anxiety. Furthermore, dysfunctional coping results are also associated with adolescent's risk behaviors, such as internet addiction, alcohol, and other substance abuse [33].

1.1 Aim of the study

The main scope of the study was:

a. To evaluate the incidence of anxiety conditions in an adolescents' community sample in the context of the health emergency for COVID-19;

b. To analyze the associations between anxiety symptoms, meta-cognitive beliefs (meta-worry), and adolescents' coping strategies.

The hypothesis to test were:

1. Adolescents with elevated anxiety report higher meta-cognitive beliefs, particularly cognitive monitoring of worrying and beliefs about damage and uncontrollability of one's worry (negative meta-worry; cf. [22]);

2. Adolescents with high levels of anxiety show less frequent use of adaptive coping strategies (task-oriented) and more frequent use of maladaptive coping strategies (i.e., emotion-oriented and avoidance coping).

As far as we know, there are currently no studies that have investigated the role of meta-beliefs about worry as a vulnerability factor associated with adolescents' anxiety in the context of COVID-19. Therefore, the purpose of the study was also

c. To estimate which factors between dysfunctional coping strategies and/or meta-worry beliefs predict elevated levels of adolescents' anxiety.

2. Method

2.1 Participants and procedure

The study was conducted at the beginning of the COVID-19 pandemic during the months of the total lockdown in Italy (2020, March-April), when the Italian government imposed severe measures to contain the transmission of infection among the population (home-confinement, teleworking, closure of schools/university, nonessential shops, and recreational places, such as gyms or cinemas, cf. [34]).

Participants were involved in the study via online sampling. An invitation to participate in the study as volunteers was diffused through some common social media networks (i.e., WhatsApp, Facebook, and Instagram). In total, 284 adolescents aged between 16 and 18 y.o. participated in the study: 201 girls (M_g = 16.91 y.o., SD_g = 0.78) and 83 boys (M_b = 16.94 y.o., SD_b = 0.86). Before filling in the questionnaires anonymously, participants were asked to sign their informed consent; for minors, their parents signed consent for participation.

2.2 Measures

Participants filled out the following self-report questionnaires:

a. *Revised Children's Manifest Anxiety Scale((RCMAS-2; [35]):* It is a questionnaire (49 items) with three anxiety subscales measuring the degree and quality of anxiety experienced by children and adolescents. The subscales (with yes/no response) are:

- *Physiological anxiety*: Assesses somatic concerns, such as nausea, headache, sleep problems, and fatigue (e.g., "I get mad easily").

- *Worry/oversensitivity*: Estimates if and how much the child is nervous, frightened, and hypersensitive to the pressures of the environment (e.g., "I worry about what other people will think of me").

- *Social anxiety*: 16 items measuring thoughts and fears that have a social or interpersonal nature, particularly performance anxiety experienced in the school and social setting (e.g., "Others seem to do things easier than I can").

The anxiety total score is obtained by summing the three subscale scores. Higher scores indicate higher anxiety levels.

For the purpose of the present study, we used the anxiety total score (Cronbach's alpha = 0.89). As reported in Sozzari et al. [35], a cut-off of 60 *T*-points is assumed to identify children experiencing clinically-significant levels of anxiety.

b. *Meta-cognitions Questionnaire for Children (MCQ-C;* [19, 36]*):* It is a self-report measure assessing the meta-cognitive beliefs about worry based on Wells' theoretical model [17]. The MCQ-C was developed in order to extend the application of the questionnaire from adolescents to children (7–17 years). The existing version for adolescents (MCQ-A [37]) has been adapted and the statements of some items have been simplified so that they can also be understood by younger children.

The MCQ-C is composed of 24 items presenting a series of meta-cognitive beliefs about worry and the tendency of intrusive thinking. The subscales are: (1) *Positive Meta-worry* (e.g., "If I worry about things now, I will have fewer problems in the future"); (2) *Negative Meta-worry*, that is, beliefs about uncontrollability and danger of worry (e.g., "If I worry a lot, I could make myself sick"); (3) *Cognitive Monitoring*, assessing the awareness of one's own thought processes (e.g., "I play a lot of attention to the way that I think"); and (4) *Superstition, Punishment and Responsibility* (SPR) subscale (e.g., "If I can't stop my thoughts, bad things will happen"). Responses are expressed according to agreement on a 4-point Likert scale (from 1 "*do not agree*" to 4 "*agree very much*"). Scores range from 24 to 94, and the higher the score, the greater the meta-cognitive activity. The internal consistency (Cronbach's alphas) of the Italian MCQ-C resulted in adequate with adolescents' samples [23] in all subscales (from 0.73 for cognitive monitoring to 0.83 for negative meta-worry), but inadequate for SPR subscale (0.46). However, similar results for SPR subscale were found by Smith and Hudson [38] who suppose that the heterogeneous content of items could explain the low internal consistency of this subscale.

c. *Coping Inventory for Stressful Situations (CISS;* [39, 40]*):* It is a self-report measure that evaluates three stress coping strategies: *Emotion-oriented*, *Task-oriented*, and *Avoidance Coping*. The respondent rates each item on a 5-point Likert scale (1 = "*not at all*" to 5 = "*very much*") to determine the preferred coping strategy he/she uses for different stressful situations. Each scale comprises 16 items.

1. *Task-oriented coping*: The individual faces a stressful situation as a problem to be solved, focuses on the task or the efforts to manage the stressful situation (e.g., "Analyze my problem before reacting").

2. *Emotion-oriented coping*: describes emotional reactions aimed at mitigating the stress (e.g., "Blame myself for being too emotional about the situation").

3. *Avoidance Coping*, with two dimensions: *Distraction*, that is, avoiding a stressful circumstance with other situations (activity orientation, e.g., "Buy myself something"); *Social Diversion*, avoiding the stressful situation through social diversion (orientation toward the person, e.g., "Phone a friend").

The Italian questionnaire has a good internal consistency, with Cronbach's alphas ranging from 0.84 (task-oriented and avoidance coping) to 0.86 (emotion-oriented coping).

2.3 Statistical analysis

The data were analyzed using *IBM Statistical Package for Social Sciences* (SPSS) 19.0 for Windows. First, based on RCMAS-2 total scores (T points), the sample was subdivided into two subsamples considering as grouping variable the anxiety levels: normal level ($T < 60$) or clinical range ($T \geq 60$). Descriptive statistics (means and standard deviations) were calculated for MCQ-C (meta-cognition) and CISS (coping) scores. Gender differences in anxiety levels were then tested by one-way ANOVA (for RCMAS-2 total scores). Two separate MANOVAs 2 (anxiety level: normal *vs.* clinical range) x 2 (gender) were then applied to compare MCQ-C and CISS means. For both questionnaires, the scores on all subscales were considered as dependent variables. A $p \leq 0.05$ significance level was allocated in all tests.

Finally, to test the hypothesis on the associations among meta-cognitive beliefs (MCQ-C), coping strategies (CISS), and adolescent anxiety (RCMAS-2), the correlations between all measures were calculated using Pearson's r coefficient. A linear regression analysis (stepwise method) was then calculated to estimate which factors associated with adolescents' anxiety, that is, meta-cognitive beliefs (MCQ-C) and/or coping strategies (CISS) significantly predict RCMAS-2 scores.

3. Results

3.1 Anxiety

Separate RCMAS-2 total score (T points) statistics were calculated for boys ($M_b = 51.13$, $SD_b = 11.64$) and girls ($M_g = 56.59$, $SD_g = 10.91$). The comparison by ANOVA revealed significantly higher scores in females: $F(1, 282) = 14.11$, $MS_e = 123.85$, $p < 0.001$, $\eta_p^2 = 0.05$.

MCQ-C scale	Anxiety	Gender	*M*	*SD*
Positive meta-worry	Normal	Boys	10.15	2.96
		Girls	9.69	2.74
	Clinical range	Boys	11.04	3.29
		Girls	9.83	2.74
	Total	Boys	10.41	3.07
		Girls	9.75	2.73
Negative meta-worry	Normal	Boys	7.24	2.47
		Girls	8.61	3.27
	Clinical range	Boys	9.75	3.04
		Girls	11.48	3.24
	Total	Boys	7.96	2.87
		Girls	9.77	3.54

MCQ-C scale	Anxiety	Gender	*M*	*SD*
Cognitive monitoring	Normal	Boys	17.73	3.24
		Girls	18.70	3.99
	Clinical range	Boys	20.83	3.68
		Girls	20.80	3.88
	Total	Boys	18.63	3.64
		Girls	19.55	4.07
SPR	Normal	Boys	11.03	3.66
		Girls	12.57	3.46
	Clinical range	Boys	15.13	3.89
		Girls	16.12	4.26
	Total	Boys	12.22	4.15
		Girls	14.00	4.17

MCQ-C = meta-cognitions questionnaire for children; and SPR = superstition, punishment, and responsibility.

Table 1.
Means and standard deviations of MCQ-C scores as a function of participants' anxiety level and gender.

Based on total anxiety scores, the number of participants with anxiety symptoms in the clinical range ($T \geq 60$) was quantified. Adolescents with clinically elevated anxiety symptoms resulted in 37% of the overall sample, with not-significantly ($p > 0.05$) different rates for boys (24/83, 28.9%) and girls (81/201, 40.3%). The overall rate resulted over three and a half times superior to the rate (10.32%) of another Benedetto and colleagues' study observed with analog participants some years ago [19].

3.2 Anxiety and meta-worry

Statistics (M and DS) for meta-worry beliefs (MCQ-C subscales) as a function of adolescents' anxiety and gender are presented in **Table 1**. By the MANOVA it emerges that adolescents with clinical anxiety obtain higher scores in all scales of the MCQ-C, with the exception of the positive meta-worry; in addition, differences emerge for gender factors, with girls reporting higher scores in positive meta-worry, negative meta-worry, and SPR subscales (see **Table 2**).

3.3 Anxiety and coping

Tables 3 and **4** report distribution and inferential statistics, respectively, referred to the CISS scale as a function of anxiety level (normal *vs.* clinical range) and gender (boys *vs.* girls). Participants with anxiety clinical range scored lower on task-oriented coping and higher emotion-oriented coping than participants with normal anxiety levels. Furthermore, girls scored higher on emotion-oriented coping than boys.

3.4 Regression analysis

Pearson's *r* coefficients (**Table 5**) indicate highly significant associations ($p < 0.001$) between negative meta-worry, cognitive monitoring, SPR beliefs, and

Source	Measure	SS	Df	MS	F	p	η_p^2
Anxiety level	Positive meta-worry	13.240	1	13.240	1.646	0.20	0.006
	Negative meta-worry	365.818	1	365.818	38.220	**<0.001**	0.120
	Cognitive monitoring	341.923	1	341.923	23.833	**<0.001**	0.078
	SPR	736.023	1	736.023	51.488	**<0.001**	0.155
Gender	Positive meta-worry	35.398	1	35.398	4.402	**0.037**	0.015
	Negative meta-worry	121.391	1	121.391	12.683	**<0.001**	0.043
	Cognitive monitoring	11.151	1	11.151	0.777	0.379	0.003
	SPR	81.334	1	81.334	5.690	**0.018**	0.020
Anxiety level * Gender	Positive meta-worry	7.163	1	7.163	0.891	0.346	0.003
	Negative meta-worry	1.638	1	1.638	0.171	0.679	0.001
	Cognitive monitoring	12.663	1	12.663	0.883	0.348	0.003
	SPR	3.714	1	3.714	0.260	0.611	0.001
Error	Positive meta-worry	2251.757	280	8.042			
	Negative meta-worry	2679.992	280	9.571			
	Cognitive monitoring	4017.034	280	14.347			
	SPR	4002.648	280	14.295			

SPR = Superstition, punishment, and responsibility; SS = sum of squares; df = degrees of freedom; and MS = mean of squares.
Significant results are in boldface.

Table 2.
Statistics of between subjects effect tests from the MANOVA 2 (Anxiety level: normal vs. clinical range) × 2 (Gender: boys vs. girls) with MCQ-C subscale scores as dependent variables (N = 284).

CISS scale	Anxiety	Gender	M	SD
Task-oriented coping	Normal	Boys	58.88	8.30
		Girls	57.72	10.46
	Clinical range	Boys	52.21	13.17
		Girls	55.11	10.97
	Total	Boys	56.95	10.33
		Girls	56.67	10.72
Emotion-oriented coping	Normal	Boys	40.81	12.46
		Girls	45.07	10.71
	Clinical range	Boys	54.00	10.41
		Girls	60.64	9.75
	Total	Boys	44.63	13.29
		Girls	51.34	12.84
Avoidance coping	Normal	Boys	50.73	13.30
		Girls	53.25	13.22
	Clinical range	Boys	54.13	12.01
		Girls	52.40	11.93
	Total	Boys	51.71	12.96
		Girls	52.91	12.69

CISS scale	Anxiety	Gender	M	SD
Distraction	Normal	Boys	24.34	6.39
		Girls	24.27	6.73
	Clinical range	Boys	25.21	6.66
		Girls	24.88	6.95
	Total	Boys	24.59	6.44
		Girls	24.51	6.81
Social Diversion	Normal	Boys	33.61	17.41
		Girls	41.36	19.80
	Clinical range	Boys	33.79	15.23
		Girls	36.80	19.45
	Total	Boys	33.66	16.71
		Girls	39.52	19.74

CISS = Coping inventory for stressful situations.

Table 3.
Means and standard deviations of CISS scores as a function of participants' anxiety level and gender.

Source	CISS scale	SS	df	MS	F	p	η_p^2
Anxiety level	Task-oriented coping	1087.671	1	1087.671	9.940	**0.002**	0.034
	Emotion-oriented coping	10432.436	1	10432.436	89.147	**<0.001**	0.241
	Avoidance coping	81.442	1	81.442	0.498	0.481	0.002
	Distraction	27.595	1	27.595	0.611	0.435	0.002
	Social diversion	241.316	1	241.316	0.677	0.411	0.002
Gender	Task-oriented coping	38.464	1	38.464	0.352	0.554	0.001
	Emotion-oriented coping	1496.981	1	1496.981	12.792	**<0.001**	0.044
	Avoidance coping	7.896	1	7.896	0.048	0.826	0.000
	Distraction	2.059	1	2.059	0.046	0.831	0.000
	Social diversion	1459.810	1	1459.810	4.095	**0.044**	0.014
Anxiety level × Gender (interaction)	Task-oriented coping	207.789	1	207.789	1.899	0.169	0.007
	Emotion-oriented coping	71.968	1	71.968	0.615	0.434	0.002
	Avoidance coping	227.910	1	227.910	1.395	0.239	0.005
	Distraction	0.849	1	0.849	0.019	0.891	0.000
	Social diversion	283.027	1	283.027	0.794	0.374	0.003
Error	Task-oriented coping	30638.053	280	109.422			
	Emotion-oriented coping	32767.033	280	117.025			
	Avoidance coping	45750.144	280	163.393			
	Distraction	12647.411	280	45.169			
	Social diversion	99814.423	280	356.480			

Table 4.
Statistics of between subjects effect tests from the MANOVA 2 (Anxiety level: normal vs. clinical range) × 2 (Gender: boys vs. girls) with CISS scale scores as dependent variables (N = 284).

Scale	RCMAS-2	MCQ-C					Coping		
	1.	2.	3.	4.	5.	6.	7.	8.
1. RCMAS-2 Anxiety	1							
2. MCQ-C – Positive meta-worry	0.07	1						
3. MCQ-C – Negative meta-worry	0.58**	0.27**	1					
4. MCQ-C – Cognitive monitoring	0.40**	0.35**	0.50**	1				
5. MCQ-C – SPR	0.55**	0.20**	0.64**	0.54**	1			
6. Task-oriented coping	−0.20**	0.37**	0.01	0.24**	0.05	1		
7. Emotion-oriented coping	0.73**	0.15**	0.69**	0.43**	0.63**	0.05	1	
8. Avoidance coping	−0.01	0.06	0.00	0.12*	0.12	0.40**	0.21**	1

RCMAS-2 = Revised children's manifest anxiety scale-2; MCQ-C = meta-cognitions questionnaire for children; and SPR = superstition, punishment, and responsibility.
*Correlation is significant at the 0.05 level (two-tailed).
**Correlation is significant at the 0.01 level (two-tailed).

Table 5.
Pearson's r coefficients between RCMAS-2, MCQ-C, and CISS scale (N = 284).

Model	Predictor	B	SE B	β	t	R_c^2	F per ΔR^2
Step 1	Emotion-oriented coping	0.63	0.04	0.73	18.117*	0.536	328.24*
Step 2	Emotion-oriented coping	0.64	0.03	0.74	19.539*	0.590	38.23*
	Task-oriented coping	−0.25	0.04	−0.24	−6.183*		
Step 3	Emotion-oriented coping	0.57	0.04	0.67	16.255*	0.613	17.65*
	Task-oriented coping	−0.30	0.04	−0.28	−7.209*		
	Cognitive monitoring	0.51	0.12	0.18	4.201*		

$^{*}p \leq 0.001.$

Table 6.
Summary of stepwise regression analysis for variables predicting anxiety levels (RCMAS-2 scores).

more elevated anxiety levels. Furthermore, anxiety resulted positively associated with emotion-oriented coping ($p <0.001$) and negatively correlated with task-oriented coping ($p < 0.001$). Finally, avoidance coping resulted positively associated with cognitive monitoring ($p <0.05$).

A linear regression analysis (stepwise method) considering the anxiety levels (RCMAS-2 total) as the criterion variable and meta-worry beliefs (MCQ-C subscales) and coping strategies (CISS subscales) as predictors were carried out. Results are displayed in **Table 6**.

A three-factor model explains the greater proportion of variance [i.e., R_c^2 = 0.61, $F(3, 280)$ = 150.58, $p < 0.001$]: Emotion-focused Coping resulted the stronger positive predictor of anxiety, followed by task-oriented coping but with a negative direction. Furthermore, cognitive monitoring entered in the 3rd model explaining a positive direction with a smaller but significant variance portion of anxiety scores.

4. Discussion

The aim of the present study was to explore the psychological impact of COVID-19 on Italian adolescents, a population of young people among the most affected by

the pandemic, and the restrictions on daily life due to the long lockdown among western countries. Fear of contagion and death, home confinement, the lack of direct contact with peers, and the interruption of recreational and school activities abruptly changed the daily life of teenagers, with immediate effects on perceived stress and psychopathological symptoms whose long-term maintenance is currently unknown [41]. Particularly, this study investigated the relative contribution of meta-cognitive beliefs about worries and coping styles in predicting adolescents' anxiety symptoms. In fact, while there are several studies on the role of coping in reacting to COVID-19-related distress [6, 31, 32], no research as far as we know has explored how meta-worry beliefs contribute to anxiety. According to Wells's [17] meta-cognitive model, people who are aware of their worries and who try to control them experience higher levels of anxiety, which tend to be maintained over time.

First, the participants were subdivided into two subsamples with/without clinical anxiety symptoms, according to RCMAS-2 (*Revised Children's Manifest Anxiety Scale-2)* measures [35]. Data indicate that 37% of participants fall within the clinical range. This estimated incidence is higher than the worldwide prevalence of clinically elevated anxiety among adolescents prior to the COVID-19 pandemic (11.6% as reported by Racine et al. [42]). Moreover, this 37% rate of Italian adolescents with clinically elevated anxiety is markedly higher than the percentage (10.32%) reported by Benedetto et al. [19] with the same anxiety measures (RCMAS-2) in a community sample of adolescents before the outbreak of the pandemic.

Data from the present study also agree with gender differences observed in studies prior to COVID-19 [23, 43] and during the pandemic [14, 26, 44], with girls reporting more anxiety symptoms than boys.

In line with the hypotheses, participants with elevated anxiety report higher scores in meta-cognitive processes, with the only exception of positive meta-worry. In other words, in this study, anxious adolescents perceived their worries as most dangerous and uncontrollable (e.g., "I can't control my worries"), they spent more time to monitor their thoughts ("I must stop worrying"), or they seemed more superstitious about the influence of their thoughts on reality ("If I keep worrying something bad will happen"). Otherwise, the positive beliefs—thinking about worry's usefulness—seem to have a subordinate role in participants' anxiety. Unlike adults [17], the role of positive meta-worry in the genesis and maintenance of children's internalizing disorders has not always been confirmed [e.g., 45, 46]. Instead, data from the present study are to be added to the more consistent ones about the link between negative meta-beliefs (dangerousness/uncontrollability of worry) and the intensity of children's worry (e.g., [16, 47]).

The present study aimed also to explore the association between adolescents' anxiety and coping strategies to mitigate stress during the period of total lockdown. Supporting the starting hypothesis, we found that adolescents with low anxiety levels use more often active coping (e.g., use problem-solving skills) compared with anxious adolescents. Conversely, participants with clinical levels of anxiety declared a more intense use of emotion-focused coping (e.g., altering one's feelings and thoughts about events) in trying to reduce the emotional reactivity derived from the stressful experience. In addition, emotion-oriented coping was engaged more frequently in girls than boys. Avoidance coping (e.g., withdrawing or distracting oneself from the awareness of the problem) result positively related with cognitive monitoring, that is, the tendency to engage in meta-cognitive self-reflection and active control of one's feelings and thoughts. However, this task-irrelevant thinking maintained by cognitive monitoring may increase opportunities for negative appraisals of intrusive thoughts, increasing anxiety symptoms [48]. Therefore, avoidance and emotion-focused coping, together with maladaptive cognitive processes, intensify rather than attenuate anxiety. In addition, maladaptive coping

strategies, as a preferred coping strategy, distract attention from the external environment and from the search for more effective solutions (such as changing the situation through active action; cf. [48]). In confirmation of this, in the present study, adolescent's anxiety symptoms resulted linked with increased use of maladaptive coping strategies for managing emotions and/or avoiding stressful events, but decreased activation of task-oriented coping.

A stepwise regression was conducted to assess which factors among meta-worry beliefs and coping strategies predicted adolescents' anxiety. It was found that emotion-focused coping is the strongest predictor of anxiety, followed by task-oriented coping with a reverse negative direction. Cognitive monitoring, with a positive direction, added a small but significant amount of variance in anxiety levels. Therefore, it would seem that emotion-based coping is a risk factor for elevated anxiety symptoms, while task-oriented coping seems to act as a protective factor. Cognitive monitoring influences anxious expression, but to a lesser extent if compared to coping strategies.

In sum, our data, together with findings by Zhang et al. [31] and Türk et al. [32], suggest that an emphasis on emotion-focused coping and avoidance coping may have accentuated anxiety symptoms in teenagers. Our findings are also consistent with Hussong et al. [49], who underline cumulative stress associated with teenagers' experience with the COVID-19 pandemic: In fact, while initially, the restrictions due to the pandemic might seem short-lived (such as a temporary closure of schools and distancing from friends), uncertainty has increased over the weeks. In their longitudinal study (May–July 2020), authors found that increased symptoms (both internalizing/ externalizing) were mitigated in teenagers with problem-focused coping and greater self-efficacy (a greater sense of agency and positive affect), but were exacerbated in teenagers with an emotion-focused coping style.

This study has certainly some limitations to be addressed. First, the cross-sectional research design cannot provide a causal relationship between the health and social crisis due to COVID-19 and the increased anxiety symptoms in adolescents. Only for descriptive purposes, we compare the results of the present study with those of our quite similar study for design (community sample) and anxiety measures [23]. Although this previous study is not strictly comparable to a pre-COVID-19 baseline—as there are no within-subject repeated measures— some considerations are plausible. We note that in the current sample the adolescents with clinical symptoms resulted more than triple (37%) of those observed in the previous study (11.6%). Future studies could examine with longitudinal design the changes not only in anxiety symptoms but also in the strategies with which children and adolescents can cope with COVID-19 worries and restrictions on daily life. A longitudinal approach will be needed in future research as the health and social crisis due to COVID-19 is persisting around the world and the long-term psychological impact on the population is unknown [50].

A second limit is the sample composition, predominantly female and numerically small. The research was conducted in Italy, the first of the European countries to be involved in the acute phases of the COVID-19 outbreak and to experience a long total lockdown (10 weeks, March–May 2020; [34, 51]. Home confinement, social distancing from family and peers, fears, and worries experienced by the Italian youths have affected their psychological distress [11–13], but these conditions cannot be generalized to other groups for different detrimental impacts across countries. Other studies evidence that poverty and socioeconomic disadvantage, living in rural rather than urban areas, high local prevalence of COVID-19 infection, loss of a loved person for COVID-19, and exposure to social media disseminating fears are all contextual factors associated with higher distress and internalizing disorders [52]. Finally, the study measures are self-reported and the questionnaires

were disseminated through the web. This online sampling strategy was necessary as the research was conducted during the period of the total lockdown, but self-selection among the participants cannot be excluded. Similarly, preexisting physical or psychopathological conditions that may have increased participants' vulnerability to anxiety have not been evaluated (cf. [50]).

Despite these limitations, the findings of present study evidence maladaptive coping and cognitive factors associated with adolescents' anxiety. Particularly, emotion-focused seem to affect anxiety symptoms to a greater extent than meta-cognitive beliefs, whereas task-oriented coping predicted lower anxiety. Findings highlight the need for active interventions aimed to enhance adolescents' psychological resources to cope with daily pandemic-related stress.

5. Conclusions

The development of interventions aimed to increase adolescents' resilience to COVID-19 related stress is a priority for both researchers and health professionals, particularly in the perspective that the crisis due to COVID-19 disease may persist for a long time negatively affecting daily life and well-being of young populations. Anxiety symptoms exhibit some continuity over time, leading to the need for early intervention. Cognitive-behavioral therapies, together with the most recent procedures that include meta-cognitive components, are the recommended approaches for adolescents [53, 54]. Particularly, addressing meta-cognitive beliefs about worry is an effective and promising approach for children's anxiety treatment [55].

Intervention programs that enhance effective coping strategies should be promoted by services and health professionals to ensure adequate psychological support to youths. The effectiveness of coping-centered programs is well known: For example, Essau et al. [56] have demonstrated that 10 weeks of training on coping skills (e.g., problem solving, self-reward for trying, and achieving goals), identifying and modifying anxiety-related thoughts, reduced anxiety and depression symptoms in children and adolescents. More recently, Orgilés et al. [57] have developed a program aimed to enhance coping skills and resilience to deal with the COVID-19 pandemic. Results show that children in the intervention group reported less symptoms of anxiety, unstable mood, sleep problems, and cognitive impairments during home confinement than children who did not receive the intervention. In this control group, children continued to use more likely emotionally oriented strategies. which were associated with greater psychological distress. Having more family/social support and having the opportunity to engage in physical activity are also protective factors associated with reduced anxiety [58]. Since the emergency for COVID-19 is far from over, the challenge for scholars and professionals will be to disseminate effective programs also use innovative strategies (such as school-based or app-based support; cf. [59]) in order to reach a larger population of young people.

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Chapter 5

The HIV Positive Adolescent in a Pandemic Year: A Point of View

Doina-Carmen Manciuc, Cristina Sapaniuc,
Alexandra Largu and Georgiana Alexandra Lacatusu

Abstract

In the HIV/AIDS Regional Center from Iasi, Romania, over 1440 patients are closely followed-up. A small percent <1% (12 patients) of cases are represented by adolescences between 14 and 18 years old. The majority of those (10 cases) are adherent and compliant with the treatment. None of the patients is a drug abuser and one patient acquired the infection through vertical transmission. The COVID-19 pandemic, paradoxically, increased the adherence and compliance to treatment, mainly because it seems that the HIV infected adolescent acknowledge the fact that good health can shield them from an unknown enemy. In these pandemic times, they experienced anxiety and depression, but they kept a closer contact through telemedicine with their physician, and most importantly, they required a sustained session, also through telemedicine, with the psychologist. The red thread of their discussion was focused on their fear, insecurities, and lack of control and the fact that they experienced the feeling of abandonment caused by the absence of inter-personal interaction with their support group.

Keywords: HIV, adolescent, psycho-emotional support, pandemic, COVID-19

1. Introduction

The Joint United Nations Programme on HIV/AIDS (UNAIDS) recently reported that in 2020 there were 1.5 million new human immunodeficiency virus (HIV) infections globally, with approximately 700,000 AIDS-related deaths. In 2020, there were 37.7 million people living with HIV. More than 27 million people with HIV were receiving antiretroviral therapy (ART), which has substantially reduced the burden of HIV disease [1].

2. Adolescence and HIV

Adolescence is one of life's critical transitions. The biological and psychosocial changes that take place during this period affect every aspect of adolescents' lives.

In 2020, about 1.75 million adolescents between the ages of 10 and 19 were living with HIV worldwide. Adolescents account for about 5 percent of all people living with HIV and about 11% of new adult HIV infections [2].

All over the world, adolescents that represent the key population groups (including gay and bisexual boys, transgender adolescents, adolescents who sell sex, and

adolescents who inject drugs) have an increased risk of contracting HIV infection. These marginalized groups face discrimination and human rights violations, and they often are excluded from services.

The epidemic among adolescents in key populations conducted the associations that were addressing them, to really understand their different life experiences and making sure that they grow up protected from discrimination and violence. Another key part is represented by the access to HIV testing, prevention, and treatment programs, and also sexual and reproductive health care services. All of this will help them to realize their rights to life and health and to freedom from discrimination [3].

All adolescents have the right to be educated about HIV and to have access to services that will enable them to protect themselves against the infection. All HIV-positive adolescents that acquired the infection whether passed from their mother or during adolescence, have unique requirements and risks. These particular patients have the same entitlement to HIV treatment and care as everyone else. HIV testing and counseling, as well as adolescent sexual and reproductive health services, remain key entry points into the continuum of HIV prevention, treatment, and care for adolescents living with HIV. Adolescents (ages 14–18) living with HIV are a vulnerable group, that statistically have a higher loss to follow-up, an increased possibility to have a virologic failure and higher mortality than adults already diagnosed with HIV/AIDS [4].

In the treatment of HIV, UNAIDS has a clear strategy in the battle against HIV/AIDS in the United States and the United Kingdom. The 90-90-90 plan included the following objectives:

- By 2020, 90 percent of all people living with HIV will be aware of their HIV status;

- By 2020, 90 percent of all people with HIV infection will be receiving long-term antiretroviral medication;

By 2020, 90 percent of individuals on antiretroviral medication will be virally suppressed.

This strategy seeks to diagnose HIV infection as quickly as is possible once it is acquired, and also to as well as to provide immediate access to HIV treatment. The most crucial thing is that the medication is properly picked and that it protects the HIV-positive patient from complications such as opportunistic infection and the development of cancers [5, 6].

In 2020, 84% of people living with HIV knew their HIV status. Among people who knew their status, 87% were accessing treatment, and among people accessing treatment, 90% were virally suppressed. Of all people living with HIV, 84% knew their status, 73% were accessing treatment [1].

Within the WHO, a dedicated department has been developed–the Department of Maternal, Newborn, Child, and Adolescent Health–that has a solid connection with the HIV lucrative section, and they work together to create guidelines and standards for each country, based on their individual needs. Access to HIV testing services, as well as socio-psychological and professional treatment for those who have been diagnosed with the disease, is necessary for young people is mandatory.

These organizations' reports contain evidence-based recommendations, as well as principles for management, health policies, and programs, in order to accomplish the UN's (United Nations) goals for the HIV pandemic and youth.

They seek to detect and identify vulnerability in the young population, expand access to services and information, and supervise intervention initiatives in schools,

health services, and media, among other things. Those in charge of conducting and carrying out these intervention initiatives work as follows:

- Steady—no programs have yet been implemented; more time to evaluate is required;

- Ready—cautious implementation;

- Go—large-scale implementation.

Johns Hopkins University as well as other world-renowned universities have been active in the support program for low-income states (such as Uganda), where there are significant communities of HIV-positive young people [7].

"The UNAIDS 2011–2015 Strategy: Getting to Zero, the UNAIDS Joint Action for Results: Outcome Framework 2009–2011, and the UNAIDS Business Case 2009–2011 for the priority area on young people present an opportunity to focus on and scale up effective programs for young people, and to create links between partners involved in the response" [7].

Over time, health policies and the implementation of programs, for a long period of time, appeared to have paid off, with UNAIDS reporting a decline in the prevalence of HIV infection among young people and adolescents in low-income countries.

"A trend analysis in HIV prevalence among young people in 2008 revealed that HIV prevalence declined in 15 of the 21 countries most affected by the HIV epidemic. Ten countries showed a statistically significant decline of 25% or more in HIV prevalence that occurred among young pregnant women or men in either urban or rural areas or both" [8].

3. The two pandemics–HIV and COVID-19

Although there is a significant accomplishment, programs from global to local levels are now confronting a new and unexpected challenge: the coronavirus disease 2019 (COVID-19) pandemic, which is caused by the severe acute respiratory syndrome coronavirus 2. (SARS-CoV-2). The coexistence of the HIV and COVID-19 pandemics has had an indirect impact on people living with HIV by interfering with key services and a direct impact by introducing another possibly lethal risk to the individual's health. Public health measures required to control the spread of SARS-CoV-2 have led to social restrictions and social distancing that have negatively impacted different sectors and also have limited access to routine healthcare. In particular, the COVID-19 pandemic has had a negative impact on HIV testing, linkage to care, and treatment access for those living with or at risk of HIV [9]. Discontinuation of these in association with impeded access to other HIV-related medical services, such as accessibility to pre-exposure prophylaxis (PrEP), HIV testing and treatment of opportunistic infections, and other HIV control methods, has most certainly already resulted in higher HIV incidence, morbidity, and mortality [10]. Disruptions in ART access, resulting in poor virologic control of HIV during the COVID-19 pandemic, suggest that strategies such as giving a multiple moth supply of ART could be helpful [11].

The likelihood of HIV-positive patients contracting CoV-2 infection and vaccination against the novel coronavirus

When the SARS COV-2 pandemic hit, no one knew how HIV-positive patients were exposed to and vulnerable to infection with this new virus, or whether

they will react differently from the general population. With the world's medical research attention focused on SARS CoV-2 infection, there are data that suggests the fact that this second viral infection in HIV-positive individuals with detectable viral load and low CD4 count may have a poor prognosis.

Blanco conducted one of the first research in the UK on the mortality of HIV-positive subjects that were also infected with SARS CoV-2. The compiled data revealed that the mortality rate of immunosuppressed seropositive patients was higher compared to that of the general population [12]. Another study, that has taken gender, age, and comorbidities into account and also the presence of certain addictions, like smoking, concluded that most HIV-positive patients who died had significant associated pathologies and vices (obesity and smoked). The patient cohort was modest, with only 33 participants. According to the study's findings, more information on these concerns is required [13].

Bhaskaran and Tesariero showed that people with HIV and comorbidities have a higher risk of mortality than the general population [14, 15]. "People living with HIV had a higher risk of COVID-19 death than those without HIV after adjusting for age and sex" [14] "PLWDH experienced poorer COVID-related outcomes relative to non-PLWDH (people living with diagnosed HIV), with 1-in-522 PLWDH dying with COVID-19, seemingly driven by higher rates of severe disease requiring hospitalization" [15].

4. The impact of COVID-19 pandemic on adolescences

The COVID-19 pandemic created disruptions in social contact and health service delivery that negatively affect psychosocial and clinical outcomes [16]. Understanding the effects of the COVID-19 pandemic on adolescents that live with HIV, is crucial for their adherence and compliance to treatment.

Mental health and psychosocial issues usually start throughout adolescence and remain into adulthood if not treated adequately [17], with 10–20% of children and adolescents developing diagnosable mental health conditions [18]. Suicide rates are rising, with young people currently being the demographic category that has increased the risk of suicide in one-third of nations, both developed and developing [17–20]. Depression is one of the top three causes of illness and disability in teenagers, and suicide is the third major cause of death in adolescents between 15 and 19 years. Mental health and psychosocial impairment, apart from morbidity and mortality, has multiple other detrimental implications such as substance abuse, poor reproductive and sexual health, violence, and lower educational achievements.

If untreated, mental health issues that begin before maturity are predicted to cost the health system 10 times more than those that appear later in adult life [21].

Adolescent mental health during the COVID-19 pandemic should not be neglected as adolescents often face disproportionate risks and impacts in this area. Providing responsive psychosocial support and coping strategies for ALHIV (adolescents living with HIV) during this pandemic is critical since the emotional pressures they frequently face may be exacerbated by movement restrictions and isolation, as well as difficulties acquiring food, clothing, housing, and psychosocial support. Peers' contributions to face-to-face and psychosocial and group mental health support have been thoroughly established. Group gatherings are limited or canceled under the existing COVID-19 rules. To maintain communication and support for ALHIV, online and other communications means should be used whenever available.

A multitude of instruments can be used to maintain a balance in the psychological and mental health of ALHIV. It all starts from the household and family

members, continues with virtual and interactive online platforms on which ALHIV can have social interaction with peers their age. ALHIV's privacy and confidentiality are crucial, and they should be advised about how and who to contact for extra care if they are feeling ill or mentally upset.

ALHIV are a priority group, and their health and well-being should not be an afterthought within the COVID-19 pandemic response. It is important to ensure that critical services are planned for and delivered during this time.

ALHIV are a key population, and their well-being should not be overlooked as part of the COVID-19 pandemic response. It is crucial that key services are prepared for and supplied throughout this period. While considerable progress has been achieved, ALHIV has had poorer outcomes and is currently falling behind in terms of universal ART coverage. Those accomplishments are at risk of being lost unless we take immediate, aggressive actions to protect their interests and secure their health and survival. We must take action to guarantee that friendly messaging that is targeted to their age group and relevant information on COVID-19 are sent to ALHIV on time. We must ensure that ART is administered with age-appropriate adherence messages given using proven and tested virtual platforms and telecommunications channels. Contraception is part of a comprehensive set of services provided to teenagers who require it during this period. A lot of these services can also be effectively provided by youth-led and directed community-based and non-governmental groups. These civil society resources may be used while complying with all safety precautions and other infection control methods, particularly at this time, when health care systems are overwhelmed by COVID-19 requirements [22].

5. HIV adolescences in a pandemic year in our clinic

In the HIV/AIDS Regional Center from Iasi, Romania, over 1440 patients from 5 counties that are in the Moldavian region are closely monitored. Twelve patients are represented by adolescences between 14 and 18 years old. The majority of those (10 cases) are adherent and compliant to treatment. None of the patients is a drug abuser and one patient acquired the infection through vertical transmission.

On March 4th, 2020, "Sf. Parascheva" Clinical Hospital of Infectious Diseases from Iasi, Romania, admitted the first COVID-19 positive patient. From there, step by step the whole hospital became the first line SARS CoV-2 hospital from Iasi, and admitted only SARS CoV-2, infected patients. Alongside this, the main downside for the HIV-positive patients was that they did not have the same condition to be evaluated as before. Of course, the monitoring of these patients was continued with the strict following of the public health measures that were imposed at that time.

Regarding the adolescences that were followed up in our clinic, we observed an increased adherence and compliance to treatment, mainly because it seems that the HIV-infected adolescent acknowledges the fact that good health can shield them from an unknown enemy.

Considering that HIV-positive patients are already a vulnerable group, we observed that in these pandemic times, they experienced higher levels of anxiety, depression, and an increased level of fear regarding their health. On a daily basis, the HIV-positive adolescents had support groups and required interpersonal interaction with their friends (seropositive or seronegative). The public health care measures limited the possibility of all of these support systems. All of the restrictions made the HIV-positive patient to keep closer contact through telemedicine with their physician and most importantly, they required a sustained session, also through telemedicine, with the psychologist.

The red thread of their discussion was focused on their fear, insecurities, and lack of control and the fact that they experienced the feeling of abandonment caused by the absence of interpersonal interaction with their support group.

Fortunately, all of these teenagers come from supportive homes, have had a solid social insertion, and have a fair economic standard. All of them were defining characteristics that contributed to the young patients' commitment and compliance to therapy, as well as the adolescent's immediate psychological support.

6. Conclusions

Adolescents, and in particular the HIV-positive adolescents, are fragile individuals that require sustained psycho-emotional support and that feel the burden of the disease in a special way. At that age, critical transitions are happening which are doubled by the fact that they have to understand the medical problems that come from the seropositive status for the rest of their life and the importance of a perfect adherence and compliance to a medication that should never be interrupted.

The social aspects from the developing or low-income countries add doubles and complicate the existence of ALWH. Therefore, WHO, the governments, and the decision-makers of every county should create mechanisms and special organizations for this particular category of HIV-infected patients. Even though WHO created these dedicated departments for ALHIV, in the future, this side of medical assistance should also be developed all over the world and provide complete material and human resources.

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Adolescences Disrupted in Displacement: The Protective Effect of Friends as Proxy Family for Unaccompanied Adolescent Refugees Resettling in Ireland

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Abstract

It has become very clear throughout my psychotherapy work with unaccompanied and separated adolescents (UASA) in Ireland, that friendships often provide a critical source of protective psychosocial support within adolescences frequently interrupted by conflict, violence and perilous journeys. Although the increasing importance of friendships in adolescence and more specifically during times of adolescent stress, is well-documented, friendships are likely to be brought into even sharper focus during unaccompanied adolescent displacement, as they typically take on functions more traditionally associated with the absent family. This qualitative exploration of the protective effect of friendships for UASA uses reflexive thematic analysis to analyse composite clinical case material and composite eco-maps to capture the lived friendship experiences of UASA. The data clearly illustrates that UASA friendships provide a safe, accepting, protective space and enabling context in which they can gain psychological and practical peer support and approval.

Keywords: unaccompanied minors, adolescence, friendships, composite case material, reflexive thematic analysis, proxy family

1. Introduction

Central to this chapter is an understanding of adolescence as a life stage that whilst variable in its boundaries, expectations and lived experience, is perceived cross-culturally as an important period of transition from childhood to adulthood [1]. The adolescences experienced by those who are forcibly displaced are frequently disrupted by conflict, violence and perilous journeys, which together with the associated experiences of profound loss (of home, identity, relationships, trust, and life as it was), all have a critical impact on adolescent development [2, 3]. During the course of the author's work as a humanistic and integrative expressive arts psychotherapist working with unaccompanied adolescents seeking asylum (UASA) in Ireland, it has become very clear that one of the ways in which the impact of these disruptions is alleviated is through friendships, which can provide a

crucial source of psychosocial support. This support can help to compensate for the abrupt loss of family life experienced by these young people.

Friendships are likely to be brought into sharper focus for UASA than for adolescents who flee with family members, and tend to take on functions more traditionally associated with families given the absence of their physical presence and support [4, 5]. Taking into account both physical and virtual family presence, the latter being facilitated by digital media as illustrated by [6], there is a clear blurring of boundaries between conventional friendships and family roles for these young people. This can be conceptualised using Spencer and Pahl's 'patterns of suffusion' model [7, 8], which inspires a culturally sensitive re-imagining of personal relationships through the grounding of people in flexible and supportive personal communities. A systematic search of all relevant journal databases for research on disruptions to adolescence for these young people suggests that conceptualising UASA friends as proxy family and exploring their protective effects during this critical developmental stage, remains largely unexplored, although notable exceptions include a study on the nature and importance of UASA friendships within residential group settings in Ireland [4], and research into social networks among unaccompanied minors in Sweden [9] , which both provide important contributions to the field. Instead, the focus has typically been on the impact of lost educational opportunities [10–12], and changes in family relationships and gender roles [2].

This chapter therefore attempts to redress this imbalance by contributing to the literature on UASA friendships in two distinctive ways: firstly through its specific focus on the protective effects of friends as proxy family for UASA and secondly through its innovative use of the author's complementary reflective clinical journal (RCJ) and eco-maps with accompanying narratives (EMN) to develop composite first person narrative case material, in order to capture the lived friendship experiences of UASA. The conceptual framework for the narrative case material was provided by the reflective lifeworld approach (RLA) [13], which has principally been used in health-care settings to explore the complexities of lived experiences [14]. Reflexive thematic analysis (Reflexive TA; [15, 16]) and Polytextual thematic analysis (Polytextual TA; [17]), were used to analyse the RCJ and EMN composite data respectively.

2. Unaccompanied refugee minors in Ireland

In 2020, approximately 10,300 of the 16,700 children arriving in member states of the European Union, were considered to be unaccompanied minors (UM); young people below the age of 18 who were not in the care of, or accompanied by, a responsible adult [18]. The vast majority (83%) of these young people were aged between 15 and 17 years and fleeing from regions of the Middle East, South Asia and Africa [19]. UM began arriving in Ireland in the mid 1990's and although the number of UM recorded in Ireland is low compared to other EU Member States, this number steadily increased from 97 referrals to the Social Work Team for Separated Children Seeking Asylum in 2014 to 184 referrals in 2020, an increase consistent with international trends. In Ireland, newly arrived UM under 12 years of age are found a foster care placement and those who are 12 years or over are usually placed in a residential intake unit (RIU) which is registered as a children's home. A multidisciplinary social work risk and needs assessment is carried out, which includes child protection, medical, psychological, educational and language assessments [20]. Following the latter, the young person will typically be placed in a transition programme to prepare them for mainstream secondary educational or other training options [21].

3. The impact of trauma and loss on unaccompanied adolescents and the importance of friendships

The diverse lived experiences of UM have typically been conceptualised in terms of the three stages of pre-migration, the migration journey and post-migration [22]. The witnessing or experiencing by UM of terrifying events during the first two stages together with experiences of deep loss, have been shown to increase the risk of psychological trauma [23], especially as the loss of home includes a myriad of emotional associations and experiences in addition to the physical space [22]. Research also indicates that dislocation from family places UM at a significantly higher risk for the development of psychopathology than refugee children living with a family member [24, 25], thereby highlighting the context of extreme disadvantage in which they are operating [9]. Furthermore, the asylum-seeking process in the host country often results in increased stress and further disempowerment [26].

It is, however, important to remember that although the shared refugee experience is frequently associated with trauma, such experiences can have varying impacts on mental health, depending on the temperament, resilience, attachment to the primary caregiver (s), and adaptive coping skills of the individual as well as the social supports available [27], with some refugees developing psychological difficulties, and others being able to cope, adapt and thrive [28]. Given the variability of trauma responses, it may be more helpful to consider the refugee experience in terms of the universal experience of loss, and to recognise that the loss of friends as well as family in the home country during adolescence, the developmental stage when friendships are typically assuming a greater importance in the developing identity of the young person, can also have a negative impact on UASA.

Establishing new friendships during and after the migration journey is therefore of critical importance for positive identity development experienced in adolescence as a sense of mattering and belonging and the ability to adjust to change [1]. The importance of friendships for adolescent well-being has been demonstrated by the role they play in protecting against the harmful effects of experiencing low self-esteem and depression during this life-stage [29, 30], in developing coping and resilience [31, 32] and in identifying the role of positive peer support-seeking experiences in buffering the impact of daily worries and anxiety [33].

4. UASA adolescent friendships as a potentially reparative coping resource

The rupture and repair cycle is at the heart of the attachment relationship between parent and child. It forms the core of emotional security and self-confidence and is established during a child's early life [34, 35]. This fundamental dimension of psychological development is mirrored in the rupture caused by the abrupt loss of family life through forced displacement for UASA and the potential reparative effect of friendships. Although the enforced absence of family support means that friendships during the migration journey are likely to take on a greater significance for UASA than for young people accompanied by their families, the description of UASA as 'unaccompanied' may be somewhat misleading, as although UASA may arrive in the host country without an accompanying adult, they usually arrive in the company of other young people, with whom close friendships often develop based on shared experiences [4].

Ethnic, national and religious connections have been shown to provide potential channels through which social bonds can be formed between refugee

young people [36]. Evidence has also been found of the enduring nature of friendships developed during the migration journey due to the profundity of the shared experiences, with UASA seeking to maintain or re-establish contact upon arrival in the host country [37]. The importance of the assistance and support provided by UASA friends during the migration journey to Australia as well as the comfort experienced when travelling with young people who speak the same language has also been highlighted [38]. In addition, UASA experiences of camaraderie on the journey, which include collaborative tent building using abandoned materials have been documented [39]. However, barriers to developing deep friendships have also been reported. The often-fleeting nature of friendships made by UASA during the flight stage due to its unpredictable and transitory nature have been highlighted [38], and a protective position of mistrust amongst UASA has been identified [25]. Furthermore, the strategy by people smugglers of repeatedly splitting up UASA friendship groups to prevent them from building trust and developing inter-personal ways of coping, which implicitly recognises the potential power of these aspects of adolescent friendships, has also been documented [40].

The importance of developing adolescent friendships for coping is reflected in theoretical models, clinical assessment tools and therapeutic interventions [41]. Within its interacting layers, Bronfenbrenner's [42] ecological systems model recognises the potential inter- and intra-personal support and enrichment derived from developmentally appropriate levels of friendship [41]. Social connections are also conceptualised as a key coping resource in Lahad et al.'s *Basic Ph* model [42], which has been used as an effective resiliency assessment, intervention and recovery model in many different disaster contexts where forced displacement is a direct consequence, including the second Lebanon War [43], the Yugoslav war [44] and post-hurricane Katrina [45].

5. Mitigating challenges of post-migration through the creation of community and proxy families

The specific challenges of the 'post-migration' or resettlement phase for UASA have also been widely documented [9, 46]. Instead of the safety and security which they were seeking, UASA everyday lives are often over-shadowed by the horror of the past, challenges of the present and uncertainty about the future [22, 23]. Coping with bureaucratic and insensitive support systems alone can be overwhelming [25, 47] and language barriers and navigating complex social services and legal institutions, frequently without adequate support, often increase the experiences of vulnerability and despondency [3]. In these circumstances, it is natural for UASA to turn to other UASA to whom they can relate through shared experiences of the past and the present. Furthermore, as UASA have lost the community of their homeland and often come from societies where life is experienced and decisions are made collectively, friendship networks can recreate supportive communities in which traditions, cultures and belief systems can be shared and expressed [47].

Participants in research which explores UASA social networks, have been found to attribute 'family-like' properties to their friendships by referring to friends, and particularly 'like-ethnic' friends, as their 'new family' [9]. Social networks in this context have also been described as 'proxy families' [48], a phenomenon which is reinforced by the particular form of 'collective' living experienced in group homes for UASA and refugee reception centres for accompanied young people [4]. For example, an exploration in the German host context found that child and adolescent friendships were forged across linguistic and cultural boundaries in the corridors

and play areas of reception centres where German was often used as a lingua franca, thereby improving linguistic skills and often encouraging parental friendships [49]. However, it is important to note that the transitory nature of displaced lives in these spaces can also compromise any meaningful investment in friendships. Eritrean females living in Norweigan reception centres reported experiencing significant emotional distress when friends were moved to different centres [5].

6. Methodology

6.1 Capturing the lifeworld through reflexive clinical journaling and eco-maps

Developing a deep understanding of UASA perceptions of friendships and their contribution to managing life challenges requires access to their lifeworlds. The phenomenological philosophical concept of lifeworld, developed by philosopher Edmund Husserl [50], has been transformed into an empirical research approach, the overall aim of which is to describe and elucidate the lived world in order to increase our understanding of human experience [13]. This forms the guiding principle for the current research which identified the importance of UASA friendships through the author's documentation and interpretation of clinical psychotherapy sessions with UASA, as captured in the RCJ and EMN. Although the RCJ was originally engaged in by the author as a self-supervisory process to increase practice awareness, and the ecomaps were introduced to map out UASA pictures of social supports and identify connections (both present and absent), to explore with them, it soon became apparent that the reflections contained therein offered rich accounts of lived experiences, which would be of interest to researchers and clinicians. There followed a process of considerable reflection by the author on the most ethical ways to document insights from the data whilst protecting UASA identities.

6.2 Ethical and professional considerations in writing about psychotherapy clients

Psychotherapy codes of ethics obligate clinicians who write about their casework to protect client confidentiality and privacy by requiring *either* the consent of the client *or* adequate disguise of the case material [51]. Although obtaining consent may seem like the safest option for meeting these requirements, scholars have questioned the possibility of obtaining truly informed consent in this context [52]. This has been described as 'a highly charged interpersonal act' [53], and the power differential between psychotherapist and UASA has been identified, highlighting the negative impact which this intrusion into the therapeutic space could have on the therapeutic relationship and outcomes [54].

Nevertheless, it is also important to draw attention to examples of case studies of therapeutic work with refugees in which clinical case material has been used collaboratively by client and therapist in an insightful and intuitive way. Notably, a sensitive exploration carried out with a former young refugee client of the potential impact of using their chosen clinical material, before a collaboration with him to explore his own experiences of the therapy process [55]. This young person was keen for this piece of work to inform future therapeutic work.

As the requirement to take adequate steps to disguise client identity is rarely elucidated by psychotherapy professional bodies, the nature of this disguise is generally left to the judgement of the clinician-researcher [56]. The construction of composite cases where clinical material from two or more client case sources is blended and presented as a single case, removes the consent requirement and avoids

the risk of developing single case disguise with too little or too much disguising detail [53]. Three composites were therefore developed for the current study and ethical approval was granted by the Faculty of Arts, Humanities and Social Sciences Research Ethics Board in Trinity College, Dublin, Ireland.

6.3 Clinical reflections and eco-maps in the therapeutic process

Textual records of psychotherapy sessions can range from brief factual accounts to more subjective descriptions which document the emotional aspects of therapeutic engagement [57]. This more subjective writing can be characterised as 'associative jottings', which can provide an important source of information for post-session self-reflection by capturing the intersubjectivity of the therapist-client encounter. The combination of subjective writings with brief essential factual information, an approach which situates UASA at the very heart of the process, emerged naturally for the author, being consistent with her humanistic way of working. Eco-maps were frequently created by the UASA during different stages of therapy. Originally conceptualised by Ann Hartman, their creation allows professionals to engage clients in conversations about family, relationships, sources of social support and inclusion in wider social networks, which are then illustrated in a one-page graphic representation [58, 59]. Eco-maps typically use coding conventions of circles to represent people, which are linked by different types of line to depict the nature of their interactions. These include relationship strength, interaction frequency, and support type and are often used by social workers as a way of learning about individual and family support systems [60]. The author adapted the eco-map in the therapy setting with UASA, by using miniature physical objects as symbols to represent people and other important relationships and belief systems [61]. Psychotherapy work with symbols was originally conceptualised by Carl Jung, [62, 63], who used symbols with clients to allow unconscious material to be brought into conscious thinking. This approach is particularly useful when working with adolescents, as the process of adolescent individuation and self-awareness development involves an interaction between the unconscious and conscious self [64].

During therapy sessions, UASA were invited to select symbols to represent all important sources of support in their lives and to arrange all of the symbols on a large wooden tray to form a 3D multi-dimensional eco-map. This visual tool allowed the UASA to project ideas from their family, peer group, belief systems and other social and cultural systems onto the symbols. The author explored the various configurations of closeness and distance between the symbols with the UASA to help them to reflect on alliances, alignments, absences and hierarchical structures. This provided an empathetic setting for UASA to access conscious and unconscious material on friendships and social connections within the therapeutic process.

6.4 Developing composite first-person narrative case material for reflexive and polytextual TA

The composite first person narrative provides a reflective story with which readers can personally connect and use of the personal pronoun 'I' ensures that the composite UASA is characterised as someone who typifies the general experience within a living and situated context. Drawing on an existing methodological approach and reflections on research rigour [65], the author developed and implemented a five-stage process to build the composites and identify relevant themes. The clinical reflections in the RCJ and EMN took the form of brief notes (one to two paragraphs) and eco-map photographs, taken after every UASA psychotherapy session during the period 2016–2020. The author worked with a total of thirty-three UASA during this period

and each young person attended between six and forty-five psychotherapy sessions, with an average of sixteen sessions.

Table 1 documents this process for transparency and demonstrate that narratives are derived directly from the original data:

The same compilation process was adopted for both data sets to ensure consistency of approach. Each composite narrative was formed from 14–20 RCJ entries and 4–7 EMN, with the latter providing the content for the eco-map composites which were (re)-constructed from 22 individual eco-map photographs integrated by the author into the RCJ. The author constructed five, living-arrangement-aligned, eco-map composites from the individual eco-maps which were photographed and incorporated into the composite narratives (see **Figures 1–4**). The author's first-person narrative descriptions of UASA clinical process and experiences within the RCJ and EMN, were then reflected in the re-presenting of their experiences and opinions in the composite narratives. Although relatively uncommon, the composite narrative approach has been used when researching complex issues where anonymity is critical, such as teacher-pupil relationships [66]; British politician's views [67] and military mother's experiences [68].

As the nature of the relationship between the author and the UASA prevented the co-creation of composite pseudonyms, the author endeavoured to balance the tension between protecting UASA identity whilst preserving the richness of the data and reflecting their countries of origin [69], by selecting the

Stage	Task	Outcome
1	Preliminary screening and coding of the RCJ and EMN material for overall composite formulation.	Identification of the connection between experiencing different UASA living arrangements and being exposed to different friendship opportunities and experiences
2	Organisation of material for composites, including eco-map images, based on the current UASA living arrangements.	Three UASA living arrangements identified and data organised accordingly: • foster family • residential intake units (RIU) • recently transferred to a Direct Provision Centre (DPC).[a]
3	Removal of all names and other potentially identifying information from the composite narrative material (only possible after identifying living circumstances).	Respecting of confidentiality and anonymity during the subsequent stages of the research process
4	Construction of composite narratives from the data.	Three composite narratives constructed from the data (each includes 1-2 composite eco-map images): Mamoud (M, 16 years old): a composite of 16 RCJ and 6 EMN entries of UASA living in foster care. Amina (F, 17 years old): a composite of 20 RCJ and 7 EMN entries of UASA living in RIU's. Raheem (M, 17 years old): a composite of 14 RCJ and 4 EMN of UASA recently transferred to a DPC
5	Reflexive and polytextual TA	Friendship themes identified within composite narratives and eco-map composites using reflexive and polytextual TA respectively.

[a]*Ireland's reception system for asylum seekers*

Table 1.
Building the composites and analysing the data: a staged approach.

Figure 1.
Mamoud's proxy family eco-map.

Figure 2.
Amina's friendship eco-map.

pseudonyms of Mamoud, Amina and Raheem names which are widely used in countries of the Middle East, South Asia and Africa. Although the composites combine clinical case material from both genders, a gender was assigned to each composite to ensure theme coherence; one female and two males, which reflected the gender split amongst UASA engaging in psychotherapy with the author at the time. As well as capturing common UASA experiences in the therapy room, each composite incorporates 'one off' individual experiences thereby ensuring multidimensionality.

Figure 3.
Raheem's eco-map for coping with the stressors of resettlement.

Figure 4.
Raheem's eco-map for the ways in which he experienced his childhood.

6.5 Reflexive and polytextual thematic analysis: an inductive approach

A data-driven inductive approach to Reflexive and Polytextual TA conducted within the Reflective Lifeworld Approach framework [13], was adopted for the composite data. There was no pre-determined coding frame and as advocated for psychotherapy research [70], the author considered themes to be active creations uniting data and capturing implicit meaning beneath the data surface. Each composite text was read repeatedly for familiarisation with the complexity and scope of the data and analysed using Reflexive TA. Polytextual TA was used to analyse the eco-map composites [17]. Interesting features focused on the protective effects of friendships were assigned initial codes which were combined into potential themes according to similarity and prevalence and then re-checked against the data. 32 categories relating to the protective effects of friendships across both data sets were identified and grouped into the following four themes.

1. Friends as proxy family

2. Deep emotional and experiential bonds

3. Coping with the stressors of resettlement by connecting with friends

4. Friends helping to heal the ruptures of lost childhoods

7. Results

7.1 Friends as proxy family (Theme 1)

The 'patterns of suffusion' concept is particularly relevant for the UASA in this study with its underlying premise that friends can become family-like when they have a strong sense of responsibility towards one another and where an enduring relationship assumes a high degree of significance in their lives [7]. Patterns of suffusion identified amongst Eritrean women living in Norweigan asylum reception centres, which meet the normative expectations of family relationships by providing unconditional emotional and practical support and loyalty, have been conceptualised as 'proxy families' [48]. This process of suffusion is captured in Mamoud's description of his friends as 'brothers', which conveys the importance of their family-like roles:

> *I miss my family so much but it's like my friends are now my family. I have five brothers at home but also four brothers here. We met in Greece and are from the same country with the same language and we came here together. They're not friends, they're brothers - it's different. (Mamoud, RCJ)*

Experiencing friends as proxy family during flight from his home country, manifests strongly in the narrative which accompanied Mamoud's eco-map image (see **Figure 1**). The narrative consists of his responses to the author's warm invitation to describe the objects chosen and her gentle observations, reflections and feedback on symbol choice, arrangement and distancing.

> *I met Aboud when I was running away after the explosion. He's the soldier with the flag in the picture beside me – I have the sword. I was only 12 years old and he took me into his home as his brother. His whole family accepted me and even his sisters*

> *and wife did not wear the hijab around me[1]. His mum is the angel horse and his*
> *wife and sisters are the princesses – they are still protecting me (Mamoud, EMN)*

Amina also refers to friends made in the RIU since fleeing her country, as her new family, and emphasises the importance of having friends to take on roles which she perceives as usually fulfilled by her family, such as providing company, intimacy and support. It is evident that her situation has made her reflect on the blurring of boundaries between friends and family:

> *We're all living in the same place, cooking together, speaking our language (apart*
> *from when staff tell us to speak English) and talking about weird Irish stuff! It's*
> *comforting and you don't feel alone. So it feels like family and sometimes I make*
> *myself think that this is my new family and try to forget about my 'real' family but I*
> *never ever can. (Amina, RCJ)*

For Raheem, attributing family-like descriptors to the two closest friends he had to leave behind when he moved from the RIU to a DPC after turning eighteen, demonstrated that their relationship had taken on additional qualities, which would ultimately strengthen the friendship tie:

> *They're my brothers – sometimes I forget that I haven't known them all my life*
> *(Raheem, RCJ).*

These patterns of UASA suffusion and proxy family relationships were in clear evidence in all three composites across both RCJ and EMN data sets.

7.2 Deep emotional and experiential bonds (Theme 2)

Mamoud, Amina and Raheem all talk about the strength of the friendship bonds between themselves and their closest friends which grew from the intense emotional and harsh physical experiences which they had shared both during flight and since arriving in Ireland. Raheem talks about a deep bond between himself and his two closest friends which was not threatened by his recent move to a DPC:

> *We went through so much together that it doesn't matter where we live – even if we*
> *end up in different countries - we will always be so so close - no one else can under-*
> *stand. It's so hard being moved here and leaving them behind it's like I left part of*
> *me behind. We will do anything for each other ... now and always (Raheem, RCJ).*

Parallels can be drawn between the intensity of these bonds and those documented between war veterans deployed together during periods of armed conflict [71]. Although UASA evidently do not undergo military training which develops intense reliance between soldiers, it could be argued that the profound shared UASA experiences of war and terror, albeit as witnesses or victims rather than in combat roles, also result in the development of deeply personal emotionally sustaining relationships. Of critical importance in this context is the evidence base evaluated by Bessel Van Der Kolk, which demonstrates that the presence of a good support network constitutes the single most powerful protection against becoming traumatised in response to a

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[1] In its traditional form this head covering is worn by some Muslim women to maintain modesty and privacy from unrelated males so the fact that the sisters did not wear it in the presence of Mamoud bestows him with family-like qualities.

terrifying event and that when human beings are traumatised, they recover in the context of relationships which can provide physical and emotional safety [27].

Like UASA, soldiers suffer the loss, albeit as a more managed, predictable and often temporary process, of their family relationships and the growth of their new (military) family—described as 'surrogate family members' [71] and 'brothers and sisters in arms' [72]. For soldiers during the transition to the war phase of deployment, and UASA during the flight phase of forced displacement, physical and social isolation, experiencing shared risks and the deprivations associated with these respective phases, encouraged them to rely heavily on their close friendship networks for social and emotional support, leading to the forging of strongly bonded relationships (see the seminal work of John Bowlby on the ways in which early bonding patterns with primary caregivers develop and guide future relationships [34]). Furthermore, bonding capital has been identified as the strongest form of social capital available to displaced young people in their host countries [9].

Amina's experiences also demonstrate the strength of this bond as she describes how the only person who could understand how she was feeling was the friend from her home country with whom she had shared 'shocking and terrifying' experiences:

> *She went through all that bad stuff with me – and knowing that she understands makes me feel calmer and safe. It's like unspoken and cos we went through it together we have a bond forever. (Amina, RCJ)*

Amina's remarks on feeling safe within this deeply bonded friendship are reminiscent of comments made by the combat soldiers in an ethnographic study by Jamie Ward [72]. The depth of UASA bonded friendships is also illustrated in her use of an angel figure in her eco-map image to depict her friend Khadija with whom she journeyed through four countries (see **Figure 2**). In response to the author verbally noticing her hesitation when choosing the figure, she responded:

> *Yeah I was drawn to the angel cos she (Khadija) protects me but I hesitated cos it has a wing missing but then I thought well Khadija lost her dad so it's like a part of her has gone and losing the wing meant she couldn't function properly cos of her dad so it kind of fit (Khadija, EMN).*

For Amina, the use of the damaged symbol led her to acknowledge and interpret the impact of Khadija's loss and identify qualities in her friend which she may not have previously considered:

> *It's less than a year since she lost her dad and she's still been taking care of me – she's so strong. (Raheem, EMN)*

Amina's choice of an angel for Khadija and a baby gorilla to represent herself, created important therapeutic distance which facilitated the development of role-play dialogue between the two symbols. This allowed Amina to speak through the gorilla rather than directly verbalising her pain and also to focus on the symbols when she needed grounding and wished to avoid eye contact. This created a space where Amina could safely explore her loss, whilst allowing the author to bring unconscious material into Amina's conscious awareness, thereby enabling her to explore the associated feelings, beliefs and thoughts [73].

7.3 Coping with the stressors of resettlement by connecting with friends (Theme 3)

The importance of connecting with friends for refugee coping and overall well-being during the resettlement phase and indeed during all stages of forced migration is well-documented [74, 75] and the social channel of coping is one of the dominant coping modes in Lahad et al's [43] BASIC-Ph integrative model of coping and resiliency [42]. Friendships are consistently evoked by Mamoud, Amina and Raheem as providing important sources of coping, as evidenced by Amina:

> *Whenever I think that I can't cope with any more terrible news from home, I call over to Mariyam – she knows that when I go it means that something bad has happened and that I need company, not even to talk (Amina, RCJ)*

Mamoud talked about connecting with friends from the RIU to help him cope with the isolation which he felt after moving to foster care:

> *I spend a lot of time in my room cos downstairs I'm in the way – I don't feel part of the family and I really miss my friends from the RIU – they were always there when I felt bad, when I was missing my family, they just got it. We would listen to music from our country or prepare food together. Now I have to text or call and although our friendship will always be so strong, it makes it harder (Mamoud, RCJ)*

However, he also acknowledged that sometimes he didn't want to over-burden his friends with his problems:

> *Sometimes I just try to cope with things on my own – I know that my friends have their own problems to deal with. Although therapy can support me you haven't been through it so can't fully understand (Mamoud, RCJ)*

This assertion that full understanding can only come from others who have experienced similar situations is consistent with findings from research into adolescent help-seeking experiences more generally, including adolescents in foster care [76, 77]. A reluctance to over-burden friends has also been documented amongst UM's [4]. Moreover, as well as offering informal help and support, UASA described helping friends to access mental health services:

> *Lila was really struggling to cope and when she got really bad I told my social worker and we persuaded her to get some professional help (Amina, RCJ)*

Raheem's social channel of coping was strongly represented in the eco-map he produced when invited to choose symbols to represent 'different things which help you to cope when you're not feeling great' (see **Figure 3**). The talking figures were placed centre stage (representing Raheem and a friend) and other activities with friends such as enjoying nature and animals, playing sport and engaging in faith-based practices were represented. The author explored with him the emotions he was feeling as he described each symbol and its qualities.

This helped Raheem to get in touch with important conscious and unconscious feelings and thoughts. The symbols placed most closely to Raheem represented God and discussion of their position in relation to the arrangement of other symbols was useful in raising Raheem's awareness of the nature of this relationship.

7.4 Friends helping to heal the ruptures of lost childhoods (Theme 4)

Mamoud, Amina and Raheem all talked about their different experiences of missing out on their childhoods because of the circumstances which led to forced displacement. Mamoud expressed his sadness at not having been able to play as a child and talked about making up for this with his friends:

> *I should feel happy seeing the kids around here play but I feel sadness that I had to work to survive when I was twelve years old when the war started. I think that's why I love having a kick around and messing around with my friends – it's like we are making up for it (Mamoud, RCJ)*

On Raheem's first visit to the therapy room the author noted that his eyes were immediately drawn to a big jar of marbles in the corner. She offered to play with him and after some hesitation which lasted for several sessions, which he later divulged was due to his perception of playing with marbles as being for younger children, he shared games from his home country. In addition to facilitating therapeutic relationship building, this enabled Raheem to re-visit a time in his life when he was able to play freely and to share different aspects of his culture with the author. This was the start of the process of supporting him to put together the narrative of his life. It also led him to buy a small net of marbles:

> *Yes, I bought just a small net of marbles and they felt kind of comforting so I just had them in my pocket, but last week they fell out and my house-mate saw them and at first he teased me but then he wanted to hold them and we ended up playing them in the room and laughed and laughed and it was so fun (Raheem, RCJ)*

Raheem returned to this incident several times and when invited to choose symbols to build a picture of how he experienced his childhood (see **Figure 4**), the marbles were the first things he chose:

When the author commented on the very gentle way in which he handled the kite-flying figure, he became visibly upset and talked about the feeling of freedom he experienced when flying kites in his home country, where they formed an important part of the culture and tradition [78]. This led to a resiliency-enhancing kite-making activity in later sessions which drew on many of Lahad et al's dimensions of coping [42]. For example, the ancient tradition of kite-making (which drew on beliefs, values and cultural heritage) also engaged Raheem in the use of his imagination and creative problem solving skills. When reflecting on his eco-map Raheem saw himself as the small animal looking up at the kite flyer and said that the stones were his current friends:

> *The stones are the friends I have now - I picked the stones as they are all different and have seen a bit of life with their rough edges and one of them, my friend I play marbles with, is over with the play stuff (Raheem, EMN)*

The link between Raheem's present and past selves provided by play was clear from his EMN narrative and RCJ entries and it was evident that his friends played an important role in helping him to re-imagine those parts of his childhood which he perceived the war in his home country to have taken from him.

8. Conclusions

The aim of this study was twofold: firstly to gain insights into the ways in which friendships help UASA to cope during their migration journeys, upon arrival in

Ireland and during the early years of resettlement and secondly to explicate the process of composite narrative character development from the RCJ and EMN clinical case material. This approach, which removed the requirement to obtain informed consent, was developed after carefully considering the critical debate which questions whether bona fide informed consent can ever be obtained in the therapy context [52, 79].

In addition to addressing the issues of confidentiality and the impact on the therapeutic relationship of seeking consent, the decision to present the current data as a series of composite narratives based on a combination of the notes from the RCJ and EMN data, was prompted by the desire to convey the richness and social and emotional complexity of individual motivations and values over time. Interview studies frequently include only one interview with each participant, often without forming a relationship beforehand and sometimes requiring an interpreter who may filter the conversation. Use of the RCJ and EMN provides the opportunity to explore experiences which have been processed within the context of a meaningful and trusting relationship which has been developed over time. The themes identified from these data sources captured the protective effects of friendships in the lives of the three composite characters of Raheem, Amina and Mamoud.

Amina's observation that friends take on roles traditionally associated with family, together with the rupture described by Raheem when he had to leave his 'brothers' behind after moving from an RIU to a DPC, provide clear evidence of the blurring of traditional familial and friendship boundaries captured by Spencer & Pahl's, patterns of suffusion conceptualisation [7]. Mamoud's description of his friend Aboud as a 'brother', choosing a soldier symbol to represent him in a protector role in his eco map, also evokes this blurring of boundaries. Furthermore, the strength of the emotional and experiential bonds which grew from intense shared experiences permeates the data and parallels are drawn between the intensity of these bonds and those documented between war veterans upon deployment. Mamoud experienced these bonds as unbreakable, irrespective of his changed living circumstances and the increased physical distance from his friends. Gentle observations made by the author on Amina's use in her eco-map of a damaged angel to represent her close friend led to increased insight for her into the nature and strength of the emotional bond between them.

There were also many examples of the perceived importance of connecting with friends to help cope with the stressors encountered during resettlement. For Amina, sharing her difficulties with her friends was particularly important at times when circumstances in her home country were unbearable. Although Mamoud also connected with his friends when he needed support, at times he felt that sharing the full extent of his pain was too great a burden to place on his friends who were dealing with their own difficulties. Moreover, Raheem's eco-map illustrated the importance of sharing more somatic experiences when connecting with friends. Finally, the impact of ruptures of lost childhoods were described in all three composites, with Mamoud exploring the ways in which he compensated for missed play opportunities in his home country through engaging in playful activities with his friends in Ireland and Raheem finding both comfort and enjoyment in playing marbles. Making a kite with the author was found to be a highly therapeutic experience for Raheem which as well as tapping into his sociocultural traditions and skills, developed into conversations about freedom, and of creating and imagining a future.

Although the nature of the protective effects of all UASA friendship experiences cannot be generalised from the data, the three composite narratives provide a unique multi-modal re-presentation of the friendship experiences of thirty-three UASA in Ireland, highlighting the different ways in which friendships can be protective and how they can take on roles traditionally associated with family.

This ultimately develops a deeper understanding of these experiences. The use of composite narratives provided an effective way of presenting anonymised clinical data where relationships had already been developed, which retained the richness and complexity of personal experiences. The findings have important implications for all professionals who are interested in understanding and supporting the needs of UASA.

Conflict of interest

The author declares no conflict of interest.

Notes/thanks/other declarations

None.

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Psychosocial Factors Linked to Severe Mental Disorders in a Convenience Sample of Teenage Students

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Abstract

Students with severe mental disorders (SMDs) are a vulnerable population with higher risks of early school dropout than the general population. Our aim has been to define psychosocial factors of students aged 12–18 years who have been diagnosed with severe mental disorders. So, we have defined the psychosocial factors of a group of students aged 12 to 18 years who have been diagnosed with a SMD. We have made the selection of the sample through an intentional nonprobability sampling. One hundred and nine cases of students were analyzed. We have analyzed the evolution of the student throughout their academic history until the moment in which they are hospitalized in serious condition by means of an exploratory factor analysis, with the application of the KMO sample adequacy of 0.776 and the significance of Bartlett's test of sphericity p < .001, we have obtained a high correlation between the variables. The factors obtained are study limitations, symptomatology representation, study facilitators, other limitations. The results show that it is necessary to take into account the conditions that prevent them from permanence, inclusion, coexistence, and educational achievement. Likewise, symptomatic expression and family support are key elements in improving the educational process of pupils with SMD. These factors allow us to infer pedagogical practices that are more appropriate to their needs.

Keywords: mental health, school dropout, educational achievement, adolescence, psychosocial factors

1. Introduction

The impact severe mental disorders (SMDs) have on a student acquires great relevance in the adolescent's life. This is because of the repercussion it has on academic performance and the construction of a personal project while hindered by the disorder [1]. We emphasize the importance of this study, given that it aims to make it known that these students with mental disorders, in order for them to remain in the educational system, must receive adequate attention that meets their needs. It is a vulnerable population that presents greater risks of early school dropout than the general population [2]. It is pertinent to study in-depth lines of work that respond to such a specific need [3].

Before going any further, we would like to delimit the concept of SMD, so we can understand the profile of the studied population and some of the elements that make this population a homogeneous observation group. The severe mental disorders would be those disorders that "due to their severity, seriously compromise evolution, learning, personal development and the social and labor insertion of those children or adolescents who suffer from it. ….. that mental disorder of long duration and involving a variable degree of disability and social dysfunction" [4].

We found different perspectives [5], but they all could be synthesized in the idea that a serious mental disorder is that whose symptomatology affects very severely on different areas of the person and for a long time.

It is estimated that 20% of adolescents suffer from some type of mental disorder [6]. We know mental health problems account for 16% of total adolescent health problems. Also, half of mental health problems begin at the age of 14 years, and most of them go undetected or untreated. The same authors point out that suicide is the third cause of death between ages 15 and 19 years, as a consequence of not addressing mental health problems during the transition from adolescence to adulthood [7]. This limits the opportunities to develop a fulfilling life as an adult. This population segment is at a disadvantage regarding their participation, permanence, and promotion in the educational field. Adopting support measures that respond to their educational needs should compensate this situation.

According to the United Nations Children's Fund [8], children who suffer from mental health problems are among the most vulnerable population groups. For an adolescent with a SMD, academic success is central and structural for the construction of their personal project, both from an academic and therapeutic point of view. Maintaining the relationship and staying in school allow students with SMD to have a reference of fundamental normality, so as to make improvements in other areas of their lives.

Some publications suggest that students with externalizing disorders are more likely to obtain poor academic results. This same publication points out that the economic factors, the age of onset of the mental disorder, academic performance, and family support are among some of the factors that are present in students with severe mental disorders [9]. Other studies indicate that groups of students with higher levels of emotional strength and low levels of distress obtain higher grades, have a greater prosocial contribution to the community, and show greater satisfaction with life [10].

The relationship between mental health and psychosocial factors seems clear [11]. Psychosocial factors play an important role in the adherence to interventions of the population with severe mental disorders. They could also play it on their academic results. Knowing the psychosocial factors of students with severe mental disorders could help us to personalize interventions [12].

We understand that, in order to develop educational practices appropriate to the needs of students with a SMD [13], understanding and knowing the psychosocial characteristics of this class of students is mandatory. This is how the European Education Information Network of the European Union warned in 2017 that one in eight children has a diagnosed mental disorder [14]. These same authors argue that 50% of mental health problems in adulthood begin to take effect before the age of 15 years, in adolescence. From this reality, it is necessary to deepen the development of educational practices that respond to many adolescents who are in a situation of greater vulnerability.

Based on the results obtained in a previous research carried out by us [15], and on the research in the scientific literature, we have used 18 variables to analyze the observed reality. We want to show the meanings attributed to each variable, since

they will serve to interpret and help us make decisions in the factor analysis adjustment that we explain in the following section.

Thus, when we have observed the family accompaniment, we understand the fundamental role the family has both in the genesis and the treatment of the disorder [16]. So, depending on how the family support developed, the family will therefore be either a protective or a risk factor for students in a situation of SMD. When we talk about a family providing positive support, we refer to those families that understand their children's clinical situation and, therefore, make good use of training guidelines favoring a healthy upbringing. We could differentiate between those families that play an abandonment and negligent role, not very favorable to the children's rehabilitation process. At the other extreme, we would find families with an excessively care role and whose accompaniment is overprotective. In either case, we would be referring to families with difficulties in establishing a healthy parental-filial relationship.

When we analyzed the type of linkage with the school, we considered that it was a good linkage when maintaining the relationship and staying in school allow students with severe mental disorders to maintain a reference of fundamental normality that propitiates improvements in other areas of their lives. A proper bond with the school describes not only permanence and regular assistance – elements that are closely related –, but the grade the student feels and perceives the context with [3]. Failure to establish stable and healthy links with teachers, the educational center and the classmates are directly related with low self-esteem and could have a direct impact in the student's academic performance [17]. We cannot forget that the perception that the rest of the educational community has and perceives of students with SMD would be included in the relationship with the educational center. This is how some research indicates that young people have negative attitudes toward their peers with mental health difficulties [18].

With the definition of this variable, we talk about lack of conflicts and a good relationship with teachers and peers. All this defines a contextual framework that allows students to express themselves with emotional tranquility. This is fundamental for their emotional wellness and the avoidance of subclinical or clinical symptoms. So is some authors see the inability to bond as a determining risk factor in obtaining mental health [19].

When analyzing academic success, we cannot forget that the children with mental health problems obtain worse academic results [20]. We also know there is an association between mental health problems and persistent truancy. This relationship is greater in those students who showed externalizing symptoms, since they obtain worse academic results [21]. So, when talking about academic success, we are referring to obtaining good academic results. It is mandatory to pass all subjects, except two, to be promoted to the next course. When a child makes through, we considered they have achieved academic success. When a student fails more than two subjects, we consider they are not in a situation of academic success. Academic success can be interpreted in multiple ways. It depends on where the light is pointing. We have not wanted to establish references in the scientific literature. We wanted to define what the concept means to us. That has been our way of observing and looking for the data in the consulted reports.

On the other hand, we also wanted to analyze the degree of academic promotion of the population analyzed. In this sense, some research shows the negative relationship between academic performance and psychiatric disorders, whether externalizing or internalizing ones [22]. Therefore, the possibility of repeating an academic year seems to be a conditioning element for the population studied. We have taken as a unit of temporal analysis the moment of the analytical work of the present investigation. This circumstance could have happened more times.

Anyway, we understand that when a member of the sample repeated a school year at last once prior to hospitalization, the variable is marked as positive.

Regarding the continuity of learning processes and school attendance of these students, we found data indicating that the degree of truancy in students with mental disorders is higher than in the rest of the population [23]. Many factors define the situation of an absconding student. However, we would like to stress how important the degree of connection between the child and their school is. When a child feels a high-level bond with the school, it is because they also feel understood and included. So, for us, the degrade of truancy is a consequence of the engagement level with the educative center. Moreover, we think an avoidant behavior is an indication that something is not working as it should.

We have considered that the previous academic history of students with severe mental disorders also becomes a conditioning element for the improvement of these students. Thus, when we have considered this variable, we want to highlight one element that could be present in a student with a SMD [15]. Thus, there is a high chance they have bad previous academic records. This circumstance is present specially in externalizing disorders [9].

We also know that curricular backwardness affects many students with a SMD [24]. This variable defines the level of educative competence of a student in relation to their age. When a student has at least 1 year of curricular lag, we believed it pertinent to conceptualize the variable as positive.

Among the risk factors that predispose a student toward an early school dropout, there is the motivation toward study [25]. This is important for clinical improvement, as school expectations are a fundamental protective factor for mental health [26]. We considered this as a qualitative dichotomous variable.

It is also common for students with SMD to have poor study habits. This is because the disorder interrupts any process. Thus, when the student gets in a dire situation, they find it very difficult to maintain a routine in any activity [27].

In relation to limited conceptual and procedural power and/or cognitive difficulties, we can observe that this obstacle to participate in classroom dynamics predisposes students with SMD toward greater vulnerability in the educational context. This is because they lack the necessary skills to function adaptively in the methodological dynamics of a mainstream classroom [9].

We would also like to highlight the attentional difficulties of these pupils. In this regard, we will not only refer to the disorder with the highest level of attention impairment, as is the attention-deficit hyperactivity disorder. Attention difficulties are a circumstance present in many SMDs. This is because, whether the disorder is an externalizing or internalizing one, the moment of the disorder onset marks the difference [28]. Being in a severe moment could provoke attention difficulties due to circumstances such as problems arising from the disorder and medication, among others.

On the other hand, it seems relevant to us to differentiate between internalizing and externalizing disorders, since the way they are represented in the educational context is different. Thus, internalizing disorders collide less with interpersonal relationships, since they do not contribute to the distortion of coexistence in the educative center. On the other hand, externalizing disorders clash frontally with the school life in an educational center [9, 15]. As these disorders generate more disruption in the classroom, the student's struggle with this type of disorder challenges more people and is more evident. So, we could say that internalizing disorders can go unnoticed and externalizing disorders become apparent more easily. Finally, we will point out that internalizing disorders, despite going unnoticed in most cases, are sometimes expressed with greater implosion on social networks. Hence, a minor who goes unnoticed in the educational center might be sharing on social sites such

material that could compromise them before the educational community even more than an externalizing disorder. In our research when we found one of these cases, we conceptualized it as a problem of coexistence.

We also found it interesting to focus on relational style, as the learner may be more or less inhibited in the way he/she relates to others. It is common to find a greater degree of uninhibited in behavioral disorders. On the other hand, internalizing disorders do not always manifest themselves in a little visible way [29]. Because of this, the inhibited-uninhibited categorization could help to clarify how the mental disorder is represented in the educational center.

In the scientific literature, we also find data that leads us to consider the moment at which the disorder was detected, since when detection is early the prognosis may improve. In this sense, it is known that the prodrome symptoms of SMD begin to present themselves during adolescence [21]. For this reason, early detection could be an element that helps reduce the impact of the disorder on the child's vital development.

From here, we could analyze when educational problems start. Some studies show vulnerability to clinical symptoms already in the early school years [30]. We also know mental disorders in early childhood are three times as likely in children who present misconduct at the age of 5 years, and around seven times as likely in children with special educational needs [31]. That is, the moment of detection could determine if the disorder occurs one way or the other, as early detection allows intervening in more preventive and less palliative terms [32].

2. Aim

Having analyzed the conceptual elements on which we have decided to focus our research, we set ourselves the following aim, to define psychosocial factors of students aged 12–18 years who have been diagnosed with a severe mental disorders.

2.1 Materials and methods

2.1.1 Sample selection

For the selection of the sample, we have used an intentional sampling criterion [33]. One hundred and nine cases of students with SMD in the educational field have been analyzed. We have analyzed both internalizing and externalizing serious mental disorders. They range in age from 12 to 17 years old. The mean and mode is 15 years of age. Forty-five percent of them are female and 55% are male.

As inclusion criteria, we note that all cases have been treated for an average of 11 months in a Day Hospital for adolescents with subacute symptomatology. In this Day Hospital, they have received both clinical care and formal educational care. It is therefore a specialized center in which the patients are also students and fulfill this dual role. To be admitted to this Day Hospital, a public Mental Health Centre under DSM-5 and ICD-10 criteria must previously diagnose all patients. All patients have a diagnosis considered a serious mental disorder due to its repercussion and durability. All patients were between 12 and 17 years of age. All of them were in school and doing their studies. Those cases that, despite meeting the criteria indicated, have not been able to access all the information necessary for their analysis because it is not included in their file have been excluded.

The time of the investigative analysis has been retrospective. Therefore, it is a longitudinal study in time that we have analyzed in the present with data from the

past. We have analyzed the evolution of the student throughout his academic history until the moment in which he/she is hospitalized in serious condition. We have not taken into account the time after hospitalization. We have performed the analysis with the data collected up to the time of the onset of hospitalization. The analysis of the sample was carried out during the 2018–2019 school year in the Madrid Regional Authority.

We have taken into account, at all times, ethical principles consistent with scientific honesty and the protection of privacy in the cases analyzed [34]. The cases analysis was conducted by reviewing educational records opened for students hospitalized in a day care hospital working with adolescents with a SMD. In our research, we used secondary documents, not the real persons. We kept the anonymity of the cases throughout the whole research and did not ever use any real names. All cases were assigned a code so as to preserve anonymity. The educational director of the specialized center where the students are hospitalized authorized access to secondary reports. The reports were anonymized prior to submission for further analysis. We evaluated the data using a working matrix of a data sheet, which was the basis for analysis with SPSS. In this work matrix, we have added the data obtained from the reading of educational reports.

To conclude this section, we would like to point out, in relation to the conflict of interest, that the data collection was carried out by a member of the educational team working in the Day Hospital specialized in the care of students with SMD where the fieldwork was conducted. We consider that this element provided analytical depth and global vision to the development of the work.

2.1.2 Instrument

In order to further develop our study, we drew upon a previous research. In that research, carried out under qualitative methodology, we inferred the main characteristics that define students with a SMD. This research used triangulation of in-depth interviews, questionnaires, and case analysis. More information can be found in [15]. This was the first step, but we could feel this investigation as the beginning of something that needed more depth of analysis. We also saw the need to use a larger sample with which to obtain greater rigor and statistical value. With this previous research, we verified that the model obtained was pertinent to the cases analyzed via a qualitative methodology. So, based on the data objected to in this previous research, we understand the present research have construct validity. It is also reliable, since it measures the relationship between variables that it claims to measure with statistical rigor – we explain this element in the next section. Once the sample is shaped, the next step was to define the variables to be used. Then, we have constructed a meaning for the variables, and we have established an observation map for completing the work matrix needed to develop this research. In the following section, we have read the educational reports of the selected students. The analyzed information was recorded in said files. With the reading of these reports, we have completed an ad hoc matrix. This statistical matrix synthesizes the description of the 109 cases observed, allowing us to reduce the complexity of the cases in qualitative terms to measurable and observable units. The records are made up of psycho-pedagogical reports and educational longitudinal information. This information provides data related to the evolution of the student throughout their educational career so far. Then, in relation to reliability, we affirm that we were able to access all the indicated information. Regarding the reliability of the coding of the observed variables, we have been looking for each variable in the report of each student. In the work matrix used, we marked whether it was met or not. Therefore,

all the variables have been dichotomous, except for variable 14 – age – and variable 17 – when did the academic problems begin?. When the report did not provide the information needed, the case was dismissed.

Finally, the variables used and their statuses were as follows: (**Table 1**).

V1.	Accompanying family. We conceptualized this as a qualitative dichotomous variable: Family that accompanies positively in the therapeutic process of the child versus family that does not accompany positively.
V2.	Good bonding with the educational center. We conceptualized this as a qualitative dichotomous variable: has good school bonding versus poor school bonding.
V3.	Academic success. The educational norm tells us that it is necessary to pass all but two subjects in order to move on to the next year. When the child is in this situation, we understand that he/she has achieved academic success. When the student has failed more than two subjects, we consider that he/she was not in a situation of academic success. We conceptualized this as a qualitative dichotomous variable.
V4.	Sex. We have differentiated between female and male students. We conceptualized this as a qualitative dichotomous variable.
V5.	They repeated some grade. We conceptualized this as a qualitative dichotomous variable: Repitieron algún grado frente a no repetir.
V6.	Truancy/irregular assistance. We conceptualized this as a qualitative dichotomous variable: in the case of a student whose class attendance is not continued.
V7.	Bad previous academic history. We conceptualized this as a qualitative dichotomous variable: bad previous school history versus good previous school history.
V8.	Curricular lag. We considered this as a qualitative dichotomous variable: we have used the curricular lag as a variable that defines the level of educative competence that the student has in relation to their age. If the student has at least 1 year of curricular lag at least, we have understood that was pertinent to conceptualize the variable like positive.
V9.	Good motivation toward study. We considered this as a qualitative dichotomous variable: has good study motivation versus does not have good study motivation
V10.	Study habits. We considered this as a qualitative dichotomous variable: has study habits versus does not have study habits.
V11.	Limited conceptual and procedural power/cognitive difficulties. Students with less procedural and conceptual skills have more difficulties and accumulated negative experiences in the educational context. This incidence in basic elements to participate in the dynamics of classroom-class predisposes students with serious mental disorders to have greater vulnerability in the educational context. This is because they do not meet the necessary skills to function in the methodological dynamics of a classroom. We considered this as a qualitative dichotomous variable.
V12.	Attention difficulties. The attention difficulties are a circumstance present in many severe mental disorders. It is because, whether the disorder is externalizing or internalizing, the moment of the disorder marks the different. Being in a severe moment could involve having difficulties with attention due to circumstances such as problems arising from the disorder and medication, among others. We considered this as a qualitative dichotomous variable.
V13.	Coexistence issues. We considered this as a qualitative dichotomous variable: presents coexistence problems versus does not present coexistence problems.
V14.	Age. We considered this as a quantitative scale variable.
V15.	Relational style (inhibited/uninhibited). We considered this as a qualitative dichotomous variable.
V16.	Early detection. Early detection is a fundamental element to be able to conduct a good prognosis and minimize the impact of the disease on adulthood. We considered this as a qualitative dichotomous variable: has an early detection record versus does not have an early detection record.

V17.	Onset of the educational issues. We considered this as a qualitative polychotomous variable. The ranges used were primary education, 1st year of secondary education, 2nd year of secondary education, 3rd year of secondary education, and 4th year of secondary education.		
V18.	Disorder typology. We conceptualized this as a qualitative dichotomous variable: externalizing versus internalizing.		

Table 1.
Variable.

2.2 Data collection and analysis procedure

A descriptive analysis of the quantitative variables yields the following data:

After collecting all the information on the work matrix, and identifying the items that apply to each participant in the sample, we used the exploratory factor analysis to conduct our research (**Table 2**). As this is a multivariate method that allows for reducing the dimensionality of a problem in a set of underlying variables, we considered it adequate for obtaining factors as a set of variables that allow us to understand the relationships between the variables previously described. Therefore, we looked for those factors that explain most of the common variance.

We used an exploratory factor analysis with SPSS Statistics Mac software (v.20.0.0). For this analysis, we used all the variables that make up the study. After analyzing the correlation matrix, we decided on removing variables V4-Sex, V12-Difficulties of attention, and V16-Early detection. We noticed that, by removing them, we obtained a more adequate model, regardless of the values obtained from correlation, the level of Kaiser-Meyer-Olkin sample adequacy, and the significance of the Bartlett sphericity test. To make this decision, we have factored the analysis of communalities and the total value of the variance explained. Regardless of the variables used, we obtained communities close to and greater than .6, as well as better values for total variance. Also, we found greater explanatory coherence according to the theoretical model used, since our intention has been to reach the greatest possible objectivity through a reflective process in which, sometimes, the researcher has to distance himself/herself from the reality constructed by himself/herself [35]. We have ruled out that the variables can cause problems with collinearity because there are no values equal to or greater than 0.9 in the correlation matrix [36]. Finally, after dispensing with the variables indicated, we obtained a Kaiser-Meyer-Olkin sample adequacy result of .776 and significance in the Bartlett test $p < .001$. Since the Kaiser-Meyer-Olkin test is greater than 0.7, we can count this as a good value [37]. Bartlett's sphericity test is $<.05$ and therefore significant. It indicates there are sufficient correlations between the variables to proceed. Given this data, we could say the factor analysis is relevant (**Table 3**).

Statistics			
		Age	**Academic problems begin**
N	Valid	109	109
	Missing	0	0
Mean		14,69	1,05
Std. deviation		1296	,937

Table 2.
Academic problems begin.

Kaiser-Meyer-Olkin measure of sampling adequacy		.776
Bartlett's test of sphericity	Approx. Chi-square	721.333
	df	105
	Sig.	.000

Table 3.
Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of sphericity.

Analysis of the anti-image correlation matrix through the sample adequacy measure shows that, once said variables are eliminated and we work with the chosen model, all the variables show high correlation. We have used the anti-image correlation matrix analysis because it is the most suitable for principal component analysis, and this is the method we have used. This method gives us a representation of variance for each variable explained by the factors. The data obtained in the table of communalities offer adequate extraction values, since they are close to or above 0.6 (**Tables 4** and **5**) [38].

3. Results

To determine the number of factors extracted, we took into account the initial self-values, the total of the explained variance, and the theoretical model. Looking at **Table 6**, we find that all four factors selected are above 1. Therefore, we have performed the factor analysis extracting four factors. Although with other models we obtained a higher percentage of the total variance explained, we consider the chosen model does a better job at explaining its representation from a theoretical point of view.

In other words, we weighted the part of the common variance that enables us to explain these factors with greater theoretical sense. We therefore seek an interpretation that combines parsimony and plausibility [38].

The total accumulated variance value is 66.763%, which, together with the criteria described earlier, allows us to think about the model's adequacy. As the value obtained is above .60%, we consider it appropriate [37] (**Table 6**).

The extraction method is the principal component analysis, while rotation type is orthogonal with the varimax method. We see each factor is represented by three or more variables; therefore, we consider that the model obtained meets moderate conditions for interpretation (**Tables 7** and **8**) [38].

We will focus our analysis on the rotated components matrix and not on the main components matrix. In this way, we obtain what is called the simple structure principle, achieving a better scientific interpretation of the obtained factors, since we give more importance to the variables that obtain greater weight in the obtained factors [39].

Analyzing the matrix of rotated components, we can see factor number 1 is formed by these variables:

V5. They have repeated some course.
V7. Bad previous school history.
V8. Curricular lag.
V9. Motivation toward study.
V11. Reduced conceptual and procedural power/cognitive difficulties.

We called this factor *Study Limitations* because all the variables that make up the factor indicate some limitation for carrying out the study. We can observe that

		V1	V2	V3	V5	V6	V7	V8	V9	V10	V11	V13	V14	V15	V17	V18
Anti-image covariance	V1	.615	−.164	−.032	−.018	−.041	−.107	.090	−.161	.048	−.115	−.026	.096	.015	.130	−.065
	V2	−.164	.549	−.109	−.017	.189	.048	−.019	.072	−.063	.068	.064	.041	−.078	−.063	.032
	V3	−.032	−.109	.429	.081	.018	.083	−.044	−.068	−.094	.025	−.036	.013	.000	.045	−.067
	V5	−.018	−.017	.081	.540	.007	−.091	−.025	.031	.037	.000	−.005	.146	−.052	−.086	−.066
	V6	−.041	.189	.018	.007	.742	−.061	−.027	−.038	.042	.071	−.008	.031	−.061	.041	.115
	V7	−.107	.048	.083	−.091	−.061	.289	−.155	.060	−.033	.026	.022	.012	.032	−.105	.003
	V8	.090	−.019	−.044	−.025	−.027	−.155	.324	−.003	.048	−.211	.010	−.057	−.001	.055	−.007
	V9	−.161	.072	−.068	.031	−.038	.060	−.003	.397	−.186	.077	.037	.039	−.048	−.091	−.010
	V10	.048	−.063	−.094	.037	.042	−.033	.048	−.186	.418	−.105	−.015	.001	−.004	.063	.081
	V11	−.115	.068	.025	.000 −005	.071	.026	−.211	.077	−.105	.487	.015	.054	−.078	−.084	.009
	V13	−.026	.064	−.036	−.005	−.008	.022	.010	.037	−.015	.015	.353	.023	.161	−.146	−.162
	V14	.096	.041	.013	.146	.031	.012	−.057	.039	.001	.054	.023	.698	.003	−.191	−.043
	V15	.015	−.078	.000	−.052	−.061	.032	−.001	−.048	−.004	−.078	.161	.003	.447	−.036	.094
	V17	.130	−.063	.045	−.086	.041	−.105	.055	−.091	.063	−.084	−.146	−.191	−.036	.468	.037
	V18	−.065	.032	−.067	−.066	.115	.003	−.007	−.010	.081	.009	−.162	−.043	.094	.037	.436
Anti-image correlation	V1	.632[a]	−.283	−.062	−.032	−.061	−.253	.201	−.327	.094	−.210	−.057	.147	.029	.243	−.125
	V2	−.283	.795[a]	−.224	−.031	.296	.120	−.045	.155	−.132	.132	.145	.067	−.157	−.124	.065
	V3	−.062	−.224	.882[a]	.168	.032	.234	−.117	−.164	−.223	.055	−.092	.024	−.001	.100	−.155
	V5	−.032	−.031	.168	.878[a]	.011	−.230	−.060	.066	.079	.000	−.012	.238	−.107	−.171	−.137
	V6	−.061	.296	.032	.011	.672[a]	−.131	−.055	−.070	.075	.118	−.015	.044	−.106	.069	.203
	V7	−.253	.120	.234	−.230	−.131	.799[a]	−.507	.178	−.096	.071	.069	.026	.089	−.286	.008
	V8	.201	−.045	−.117	−.060	−.055	−.507	.741[a]	−.009	.131	−.532	.031	−.120	−.002	.141	−.020

	V1	V2	V3	V5	V6	V7	V8	V9	V10	V11	V13	V14	V15	V17	V18
V9	-.327	.155	-.164	.066	-.070	.178	-.009	.799[a]	-.458	.174	.100	.075	-.115	-.210	-.024
V10	.094	-.132	-.223	.079	.075	-.096	.131	-.458	.820[a]	-.233	-.040	.002	-.010	.142	.189
V11	-.210	.132	.055	.000	.118	.071	-.532	.174	-.233	.646[a]	.037	.092	-.168	-.176	.019
V13	-.057	.145	-.092	-.012	-.015	.069	.031	.100	-.040	.037	.742[a]	.046	.405	-.358	-.413
V14	.147	.067	.024	.238	.044	.026	-.120	.075	.002	.092	.046	.748[a]	.005	-.335	-.078
V15	.029	-.157	-.001	-.107	-.106	.089	-.002	-.115	-.010	-.168	.405	.005	.803[a]	-.079	.212
V17	.243	-.124	.100	-.171	.069	-.286	.141	-.210	.142	-.176	-.358	-.335	-.079	.735[a]	.081
V18	-.125	.065	-.155	-.137	.203	.008	-.020	-.024	.189	.019	-.413	-.078	.212	.081	.762[a]

Measures of sampling adequacy (MSA)

Table 4.
Matrix of anti-image correlations.

	Initial	Extraction
Accompanying family	1.000	.672
Good bonding with the educational center	1.000	.583
Academic success	1.000	.659
They have repeated some grade	1.000	.588
Truancy/irregular assistance	1.000	.657
Bad previous academic history	1.000	.771
Curricular lag	1.000	.730
Good motivation toward study	1.000	.570
Study habits	1.000	.614
Reduced conceptual and procedural power/cognitive difficulties	1.000	.692
Coexistence problems	1.000	.769
Age	1.000	.661
Relational style	1.000	.717
Disorder typology	1.000	.761
Onset of the educational issues	1.000	.570
Extraction method: principal component analysis.		

Table 5.
Commonalities obtained through principal component analysis.

variable V9 is the one with a lesser weight in this regard. Variable V5 has a significant contribution and the rest of variables, V7, V8, and V11, have a relevant contribution.

Factor number 2, which we will call the *Symptomatology Representation,* because the variables that represent the factor indicate the way in which the disorder is made visible in the educational context is formed by the variables:

V18. Type of disorder.

V15. Relational style.

V13. Coexistence problems.

We can observe that, in all three cases, the weight of the variables in the factor is higher than 0.8, so we consider that their contribution is relevant.

Factor number 3, which we will call *Study Facilitators,* because all the variables contribute positively to the study if they are fulfilled in the students consists of the variables:

V2. Good bonding with the educational center.

V3. Academic success.

V6. Truancy. Irregular assistance.

V10. Study habits.

Of the four variables that make up the factor, the best representations are V6 and V2. We can see the other variables have a lesser weight.

Finally, factor number 4 will consist of these variables:

V1. Accompanying family.

V14. Age.

V17. Onset of the academic issues.

We called this factor *Other Limitations*. Variables V14 and V1 are the ones with the highest weight; therefore, they are relevant. Variable V17 will have a moderate representation (**Table 9**).

Component	Initial autovalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	**% of variance**	**Cumulative%**	**Total**	**% of variance**	**Cumulative %**	**Total**	**% of variance**	**Cumulative %**
1	4.880	32.536	32.536	4.880	32.536	32.536	3.238	21.584	21.584
2	2.607	17.381	49.916	2.607	17.381	49.916	2.827	18.846	40.429
3	1.355	9.034	58.950	1.355	9.034	58.950	1.997	13.315	53.745
4	1.172	7.813	66.763	1.172	7.813	66.763	1.953	13.019	66.763
5	.911	6.073	72.836						
6	.764	5.096	77.932						
7	.627	4.181	82.113						
8	.506	3.372	85.485						
9	.445	2.964	88.449						
10	.433	2.885	91.333						
11	.343	2.289	93.622						
12	.300	2.001	95.623						
13	.270	1.799	97.422						
14	.231	1.540	98.962						
15	.156	1.038	100.000						

Extraction method: principal component analysis.

Table 6.
Total variance explained with the first four factors.

	Component			
	1	**2**	**3**	**4**
Accompanying family	−.439	.011	.652	−.233
Good bonding with the educational center	−.624	.090	.263	.341
Academic success	−.736	−.262	.146	.166
They repeated some grade	.641	.198	.351	−.119
Truancy/irregular assistance	.201	.400	−.268	−.620
Previous academic history	.777	.331	.238	−.034
Curricular lag	.650	.462	.248	.181
Motivation toward study	−.751	.016	.075	.001
Study habits	−.734	.161	.092	.202
Reduced conceptual and procedural power/cognitive difficulties	.365	.555	.388	.316
Coexistence problems	.434	−.739	.184	−.017
Age	.411	−.178	−.452	.506
Relational style	−.376	.737	−.113	.138
Disorder typology	.327	−.738	.331	−.016
Onset of the educational issues	.662	−.084	−.034	.353

Extraction method: principal component analysis. a. Four components extracted.

Table 7.
Matrix of main components.

	Component			
	1	**2**	**3**	**4**
Accompanying family	−.005	.044	.275	**.771**
Good bonding with the educational center	−.167	−.276	**.641**	.262
Academic success	−.509	−.037	**.562**	.287
They have repeated some grade	**.683**	.205	−.274	.061
Truancy/irregular assistance	.051	−.286	−**.744**	.135
Bad previous academic history	**.798**	.101	−.334	−.108
Curricular lag	**.827**	−.079	−.125	−.155
Good motivation toward study	−**.460**	−.288	.369	.373
Study habits	−.327	−.420	**.503**	.279
Reduced conceptual and procedural power/cognitive difficulties	**.781**	−.241	.152	−.003
Coexistence problems	.033	**.865**	−.023	−.137
Age	.069	.125	.056	−**.798**
Relational style	.069	−**.830**	.121	.092
Disorder typology	.038	**.868**	.085	.009
Onset of the educational issues	.467	.289	−.025	−**.518**

Extraction method: principal component analysis. Rotation method: varimax with Kaiser normalization. a. Rotation converged in six iterations.

Table 8.
Rotated component matrix.

Factor 1 *Study limitations*	Factor 2 *Symptomatology representation*	Factor 3 *Study facilitators*	Factor 4 *Other limitations*
They have repeated some course Bad previous school history Curricular lag Motivation toward study Reduced conceptual and procedural power/cognitive difficulties	Type of disorder Relational style Coexistence problems	Good bonding with the educational center Academic success Truancy. Irregular assistance Study habits.	Accompanying family Age Onset of the academic issues

Table 9.
Factors.

4. Discussion and conclusions

Beyond the mental disorder and knowing how it is represented, we have tried to understand how it is present in the educational environment. We believe that knowing how MSD is represented in the 109 cases analyzed can help us to deepen the understanding and establishment of compensation mechanisms in preventive terms [3]. Only by understanding and knowing the elements that define a reality in contextual terms, we can develop and implement educational measures that are empathetic [40].

Therefore, we wanted to look at the common elements the students with mental disorders show when in a severe condition. We used 18 variables to test them using the quantitative methodology. In the interpretation of the exploratory factor analysis that we have carried out, we have decided to dispense with the variables V4-Sex, V12-Attention Difficulties, and V16-Early Detection. Using these three variables, the factorial models obtained were less statistically consistent. Therefore, in making the decision not to include the three variables we have dispensed with in the proposed factor analysis, we have taken into account both the statistical data obtained and the theoretical framework. We put theory and data together to make a decision. In this way, we were able to obtain a more consistent factor model.

We observed that the variable V12 expresses a symptomatic value that mainly affects externalizing disorders. We were also able to observe that without this variable in the factor analysis, we obtained better statistical results. So given that its contribution to the model generated many doubts from a statistical point of view, and after reviewing the theoretical framework, we decided to eliminate this variable.

Regarding variable V16, we can see it defines a time frame from the clinical perspective. The analysis we are doing focuses on the educational field. In this sense, it must be said we already had another variable covering the moment in which the disorder visibly affects the educational environment, and that is variable V17 – when academic problems start. Thus, given the little representativeness obtained for the model by incorporating variable V16 and the weight of the interpretation carried out under the theoretical framework, we decided to continue without it.

Therefore we find that, when in a serious situation, students with mental disorders show a profile that could be defined by the following factors:

- Study Limitations

- Symptomatology Representation

- Study Facilitators

- Other Limitations.

The four factors obtained explain 66.763% of the total variance. Thus, we can affirm that the reduction to four factors gives us a satisfactory result.

With this research, we want to gain an in-depth understanding of the way in which mental disorder is represented in the educational environment through the 18 variables used in the population analyzed. We understand that, when implementing educational practices that serve students with severe mental disorders, we should think about working along four different lines. These intervention lines cannot be understood without the others; therefore, the practices to be implemented should involve specific actions in each of the indicated factors.

In this regard, we observe that the factor *Study Limitations* is telling us there are elements to take into account when developing specific methodological practices. We are referring to those educational practices that favor the student's motivational elements and practices that favor procedural elements. The risk of repeating a course and having developed a bad school history make it necessary to establish mechanisms that improve the motivation of affected students as well as the use of methodological practices to adapt the procedures that students with a severe mental disorders need [41, 42].

Regarding the *Symptomatology Representation* factor, we are obtaining data that does not interpellate academic elements as much and has more to do with relational elements. That is, how the child with mental disorder represents their disorder in the context of the educational center and how the disorder conditions their inclusion among peers and adults. We have already seen that mental disorder has two different ways of representing itself, internalizing and externalizing [43], and how, along with the relational style, we can find coexistence issues that jeopardize the permanence of the student with mental disorder in the educational center. Therefore, educational practices should assume the need to establish a mechanism that influences the coexistence of this population segment within the educational field.

The *Study Facilitators* factor generates a work line focusing more in the consequences than in the process. Hence, in this case, we would be talking both about the relationship the child establishes with their educational center and how this relationship affects and conditions their approach to study and their educational achievements. We are talking about how the student manages to remain in the educational center and how he promotes after obtaining academic achievements. If we want to go deeper in the search for theoretical models that support a more inclusive educational intervention, this factor allows us to address the degree of inclusion that the learner enjoys in his or her educational context [44].

With the factor *Other Limitations*, we find a correlation of variables, such as age and when the academic issues begin. Both variables are time-based and give us clues to the moment in the child's developmental when there could be a serious condition. The moment when the symptomatology is more prevalent and implodes with significant force in the educational field will be the most delicate time for supporting a child in their educational center. Therefore, the educational center has to make the greatest containment so the minor can continue his schooling since this moment. The variable V1 not only correlates but also acquires a great meaning in this factor, since it is a fundamental variable from a theoretical point of view. The type of relationship that the family establishes with the disorder and how it accompanies the student with a severe mental disorders greatly determines their progress [45].

We consider this research as a descriptive approach that brings us closer to the object studied. In statistical terms, the exploratory factor analysis has been statistically relevant, since we obtained a Kaiser-Meyer-Olkin sample adequacy result of .776 and significance in the Bartlett test p < .001. In conceptual terms, we have been able to understand which are the factorial groups that condition the educational reality of a student with a serious mental disorder. These factors indicate the

elements to work to help this population achieve academic success. On the other hand, they also point out the main risk factors that a student with a mental disorder could have. This would allow for preventive pedagogical practices. Therefore, we consider factor analysis to be informative for the data set.

5. Limitations

Finally, we could have investigated in relation to the variables that predict school results in this population. We could also have analyzed the differences between students with externalizing disorders versus internalizing. Likewise, to know with certainty the adequacy of the information from the factor analysis for the data set, it is necessary to perform a confirmatory factor analysis. We are indicated these elements as limitations of the present investigation. We will investigate future research in relation to these elements.

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The studies in this book focus on factors that challenge the developmental paths of adolescents. The themes are: online experience (i.e., the overuse of screens, the proliferation of inappropriate videos, or parental pressures for children to remain always connected), the difficulties of pandemic times (i.e., coping with anxiety or illness), and two conditions of great fragility (that of being a migrant refugee minor, or an adolescent with severe mental disorder). These topics illustrate the multiple adolescent development pathways that inspire the plural title of the volume: Adolescences. Each author suggests protective factors (personal, family, educational, and friendship-related) that can contribute to promoting a healthy developmental outcome.