

# Anxiety in Adolescence: A Literature Review

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## I. Definitions of anxiety

Anxiety is defined in language dictionaries as “Psychiatry: a nervous disorder marked by excessive uneasiness [a feeling of anxiety or discomfort] and apprehension [anxiety or fear that something bad or unpleasant will happen], typically with compulsive behaviour or panic attacks [sudden overwhelming feelings of acute and disabling anxiety]”<sup>2</sup>. Lewis<sup>3</sup> defined anxiety as “an emotional state with the subjectively experienced quality of fear or a closely related emotion”.

Fingernail biting, hand trembling, heart pounding, insomnia, nervousness, nightmares, palmar perspiration, pressures or pains in the head, shortness of breath when not exercising or working hard, and sick headaches, as well as a frequently objectless feeling of uncertainty and helplessness, a blocking of communication, an intellectual and emotional preoccupation, and an interference with thinking processes and concentration are all indicators of anxiety<sup>4</sup>. The same author also points out that certain factors are associated with low self-esteem which may be expected to create anxiety: instability of self-image, the “presenting self”, vulnerability, and feelings of isolation<sup>5</sup>.

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<sup>2</sup> Lexico, <https://www.lexico.com> (accessed August 5, 2020).

<sup>3</sup> In J. Bowlby, *Attachment and loss Vol. II. Separation Anxiety and Anger* (New York, NY: Basic Books, 1973), 76-77.

<sup>4</sup> M. Rosenberg, *Society and the Adolescent Self-Image* (Princeton, NJ: Princeton University Press, 1965), 173.

<sup>5</sup> M. Rosenberg, *Society and the Adolescent Self-Image*, 151.

## II. Forms/Types of Anxiety

Almost half a century ago, Bowlby<sup>6</sup> wrote about separation anxiety (anxiety caused by the separation from someone loved and longed for) noticing that children, in their mothers' absence, sooner or later become distressed, respond to all slightly strange and unexpected situations with acute alarm, try to find them and keep being anxious until they achieve their goal. Following William James' (1980) view according to which "The great source of terror in infancy is solitude",<sup>7</sup> presented several attempts to explain separation anxiety: Freud's theory of transformed libido (1905), Rank's birth-trauma theory (1924), Freud's signal theory (1926), Klein's theory of persecutory anxiety (1934), Klein's theory of depressive anxiety (1935), and Suttie (1935), Hermann (1936), Fairbairn (1943, 1963) and Winnicott's (1952) theory according to which "distress and anxiety are primary responses not reducible to other terms and due simply to the nature of a child's attachment to his mother".

The Diagnostic and Statistical Manual of Mental Disorders-III (DSM-III) (1980) introduced the category termed anxiety disorders of childhood and adolescence with three specific anxiety disorders: separation anxiety disorder, overanxious disorder, and avoidant disorder<sup>8</sup>. DSM-IV abandoned the last two sub-categories, while DSM-V included the following anxiety disorders: specific phobias (characterized by extreme and unreasonable fears of a specific object or situation such as dogs, loud noises, or the dark), social anxiety disorder (characterized by an extreme and unreasonable fear of being embarrassed or humiliated in front of other youths or adults), generalised anxiety disorder (characterized by persistent and excessive worry about a number of events or activities), separation anxiety disorder (characterized by excessive worry concerning separation from home or loved ones), obsessive compulsive disorder (OCD) (characterized by recurrent thoughts or behaviour patterns that are severe enough to be time consuming, distressful, and highly interfering, including repeated thoughts about contamination, repeated doubts, having things in a

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<sup>6</sup> J. Bowlby, *Attachment and loss Vol. II. Separation Anxiety and Anger*.

<sup>7</sup> *Ibidem*, 30.

<sup>8</sup> C. F. Weems & W. K. Silverman, "Anxiety Disorders (Chapter 16)", in *Child and Adolescent Psychopathology*, ed. P. Beauchaine & S. P. Hinshaw (Oxford: Oxford University Press, 2013), 513.

particular order, and aggressive or horrible impulses), panic disorder (characterized by sudden and severe attacks of anxiety), and posttraumatic stress disorder (PTSD) (characterized by persistent mental and emotional stress occurring as a result of injury or severe psychological shock, typically involving disturbance of sleep and constant vivid recall of the experience, with dulled responses to others and to the outside world) (idem, 515)<sup>9</sup>. Weems & Silverman (idem, ibidem)<sup>10</sup> also pointed out that anxiety disorders exhibit high rates of comorbidity with one another.

Elliott & Smith<sup>11</sup> distinguish six types of anxiety problems – fear of separation from mother, father, or caregiver (6-24 months); fear of unfamiliar adults (6-10 months); fear of unfamiliar peers (2-3 years); fear of animals, darkness, and imaginary creatures (2-6 years); school phobia (3-6 years, 10-11 years); and fear of evaluation by others (13-19 years). The authors claim that fear of evaluation by others almost define adolescence and that most teens worry a fair amount about what others think of them. Though it should gradually reduce as adolescence unfolds, it is not uncommon for it to last through the late teens. Elliott & Smith<sup>12</sup> also point out that a few anxiety disorders that occur in adults show up infrequently in children: agoraphobia (“extreme or irrational fear of entering open or crowded places, of leaving one’s own home, or of being in places from which escape is difficult” – Lexico), panic disorder, and post-traumatic stress disorder, but only panic disorder appears in late adolescence or later.

### III. Approaches of Anxiety

Bowlby<sup>13</sup> tackled the idea of a relationship between anxiety and fear but claimed that fear and anxiety are aroused in situations of many kinds, not only in case of separation, explaining that, “whereas the nature and origin of anxiety are obscure, the nature and origin of fear are simple and readily intelligible [the presence/absence of something likely to hurt or damage

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<sup>9</sup> C. F. Weems & W. K. Silverman, “Anxiety Disorders (Chapter 16)”, 515.

<sup>10</sup> Ibidem.

<sup>11</sup> C. H. Elliott & L. L. Smith, *Overcoming Anxiety for Dummies* (Hoboken, NJ: Wiley Publishing, Inc., 2010).

<sup>12</sup> C. H. Elliott & L. L. Smith, *Overcoming Anxiety for Dummies*, 286.

<sup>13</sup> J. Bowlby, *Attachment and loss Vol. II. Separation Anxiety and Anger*.

us directly/indirectly]"<sup>14</sup>. He also mentioned that feeling afraid has two variants: feeling alarmed (freezing and withdrawal or escape behaviour) and feeling anxious (attachment behaviour, i.e. the behaviour of a human directed to a "(substitute) attachment/mother/support figure")<sup>15</sup>.

#### **IV. Anxious Attachment**

Bowlby<sup>16</sup> wrote about individual differences in susceptibility to fear and described the relationship between anger, anxiety and attachment (anger and anxiety are "directed towards the attachment figure: anxious attachment is to retain maximum accessibility to the attachment figure; anger is both a reproach at what has happened and a deterrent against its happening again") and between anxious attachment and childhood phobias ("extreme or irrational fears of or aversions to something")<sup>17</sup> (anxiety and fear are symptoms of agoraphobia, animal phobia, school phobia/refusal).

#### **V. Research on Anxiety in Adolescents**

##### *A. Review Articles*

De Berardis et al.<sup>18</sup> investigated an increasing body of studies indicating that alexithymic features exist not only in classic psychosomatic disorders but also in other severe and chronic somatic diseases and psychiatric disorders such as Major Depression, and other Axis I disorders such as anxiety disorders. The authors tried to elucidate the relationships between alexithymia and anxiety disorders, in order to investigate possible psychopathological and therapeutic implications.

Cummings, Caporino & Kendall<sup>19</sup> addressed descriptive and developmental factors, gender differences, suicidality, assessments, and

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<sup>14</sup> J. Bowlby, *Attachment and loss Vol. II. Separation Anxiety and Anger*, 77.

<sup>15</sup> Ibidem, 21-22, 91.

<sup>16</sup> Ibidem, 253-258.

<sup>17</sup> Lexico, <https://www.lexico.com> (accessed August 5, 2020).

<sup>18</sup> D. De Berardis, D. Campanella, N. Serroni, G. Sepede, A. Carano, A., C. Conti, A. Valchera, M. Cavuto, R. M. Salerno & F. M. Ferro, "The Impact of Alexithymia on Anxiety Disorders: A Review of the Literature," *Current Psychiatry Reviews* 4(2), (2008): 80-86.

<sup>19</sup> C. M. Cummings, N. E. Caporino & P. C. Kendall, P. C., "Comorbidity of Anxiety and Depression in Children and Adolescents: 20 Years After," *Psychological Bulletin* 140(3) (2014): 816-845. DOI: 10.1037/a0034733.

treatment-outcome research as they relate to comorbid anxiety and depression, and to their three pathways. Research indicated that comorbidity varies depending on the specific anxiety disorder: Pathway 1 describes youth with either social phobia or separation anxiety disorder and subsequent depression, Pathway 2 applies to youth with co-primary generalised anxiety disorder and depression, and Pathway 3 includes depressed youth with subsequent social phobia.

Dobrea & Păsărelu<sup>20</sup> conducted comprehensive systematic searches of electronic databases (PsychInfo, Cochrane, PubMed, Scopus, Web of Science) combining terms related to online social networking with social anxiety terms, and found that only recently researchers have started to investigate their relationship with mental health. The conclusion of the two Romanian researchers based on evidence from literature was that social networking and social anxiety have both advantages and disadvantages for individuals.

Seabrook, Kern & Rickard<sup>21</sup> systematically reviewed the literature (databases such as PsycINFO, MEDLINE (Ovid), Scopus, IEEE Xplore, Cumulative Index to Nursing and Allied Health Literature (CINAHL); Education Resources Information Centre; Social Sciences Citation Index; Communication and Mass Media Complete; conference papers accessed through IEEE Xplore) examining social networking sites (Facebook, Instagram, Myspace, and Twitter) and their relationship with depression and anxiety considering links with well-being, as well as potential mediators and moderators to these relationships.

Hussain & Griffith<sup>22</sup> conducted a literature search (based on databases as PsychInfo, PsycArticles, Medline, Web of Science, and Google Scholar) using problematic social networking site use and its synonyms. Information was extracted based on problematic social networking site use and psychiatric disorders, including attention deficit and hyperactivity disorder (ADHD), obsessive compulsive disorder

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<sup>20</sup> A. Dobrea & C.-R. Păsărelu, "Impact of Social Media on Social Anxiety: A Systematic Review," in *New Developments in Anxiety Disorders*, ed. F. Durbano & Barbara Marchesi, (TechOpen, 2016). DOI: 10.5772/65188.

<sup>21</sup> E. M. Seabrook, M. L. Kern & N. S. Rickard, "Social Networking Sites, Depression, and Anxiety: A Systematic Review," *JMIR Mental Health* 3(4) (2016): 1-32. DOI: 10.2196/mental.5842.

<sup>22</sup> Z. Hussain & M. D. Griffith, "Problematic Social Networking Site Use and Comorbid Psychiatric Disorders: A Systematic Review of Recent Large-Scale Studies," *Frontiers in Psychiatry* 9 (2018): 1-9. DOI: 10.3389/fpsyt.2018.00686.

(OCD), depression, anxiety, and stress. Overall, the studies reviewed showed associations between problematic social networking site use and psychiatric disorder symptoms, particularly in adolescents, with most associations found between problematic social networking site use, depression, and anxiety.

Kaye<sup>23</sup> reviewed research associated with Facebook use (Facebook was chosen over other social media due to its widespread use, significant influence on peoples' lives, and increased research attention) and negative behavioural and mental health outcomes, and found that Facebook use was associated with four mental health domains: Facebook addiction-intrusion, depression, anxiety, and other mental health outcomes.

### *B. Research Articles*

Kostanski & Gullone<sup>24</sup> examined the relationships of anxiety, depression, and self-esteem with Perceived Body Image Dissatisfaction (PBID) in a nonclinical population of 516 Australian adolescents (12-18 years) using the Revised Children's Manifest Anxiety Scale (RCMAS), and found that actual body mass and psychological well-being variables were significantly related with PBID, whilst being independent of each other.

La Greca & Lopez<sup>25</sup> examined the utility of modifying the Social Anxiety Scale for Children-Revised (SASC-R) for use with adolescents, and examined associations between adolescents' social anxiety and their peer relations, friendships, and social functioning on 250 North-American adolescents. Mennin et al.<sup>26</sup> carried out three studies to provide preliminary support for an emotional dysregulation model of generalised

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<sup>23</sup> A. Kaye, "Facebook Use and Negative Behavioural and Mental Health Outcomes: A Literature Review," *Journal of Addiction Research & Therapy* 10(1) (2019): 1-10. DOI: 10.4172/2155-6105.1000375.

<sup>24</sup> M. Kostanski & E. Gullone, "Adolescent Body Image Dissatisfaction: Relationships with Self-esteem, Anxiety, and Depression Controlling for Body Mass," *Journal of Child Psychology and Psychiatry* 39(2) (1998): 255=262.

<sup>25</sup> A. M. La Greca & N. Lopez, "Social Anxiety Among Adolescents: Linkages with Peer Relations and Friendships," *Journal of Abnormal Child Psychology* 26(2) (1998): 83-94.

<sup>26</sup> D. S. Mennin, R. G. Heimberg, C. L. Turk & D. M. Fresco, "Preliminary Evidence for An Emotion Dysregulation Model of Generalized Anxiety Disorder," *Behaviour Research and Therapy* 43 (2005): 1281-1310. DOI: 10.1016/j.brat.2004.08.008.

anxiety disorder, a diagnosis confirmed after controlling for worry, anxiety, and depressive symptoms in North American adolescents.

Mazzone et al.<sup>27</sup> examined the prevalence of anxiety and the relationship between anxiety and school performance among North American elementary (8-10 years), middle (11-13 years), and high school students (14-16 years) using the Multidimensional Anxiety Scale for Children (MASC) and found that the rate of children in the anxious range was 2.3% in elementary, 7.9% in middle, and 15.9% in high school, and was 14.1% among students with insufficient grades, 9.4% among those with sufficient grades, and 3.9% among those with good or very good grades. Their conclusion is that the prevalence of abnormally high self-reported levels of anxiety increased in frequency with age and was negatively associated with school performance.

Ndetei et al.<sup>28</sup> studied prevalence rates of anxiety and depressive symptoms and syndromes in Kenyan adolescents (13-21 years), and found that they varied widely depending on sex, age, emphasis of the different instruments used, and the cut-off points for the various syndromes and instruments: using the Multidimensional Anxiety Scale for Children (MASC), anxiety was recorded in 12.9% of all students; using the Ndetei-Othieno-Kathuku (NOK) scale for Depression and Anxiety showed that 49.3% of all students had positive scores for moderate to severe anxiety with or without depression; using the Screen for Child Anxiety Related Disorders – Revised (SCARED-R) yielded high levels (50–100%) for the different syndromes, with obsessive-compulsive disorder at 99.3%, just below separation anxiety and school phobia at 100%. The conclusion of the Kenyan researchers was that anxiety and depression were found at prevalence rates equal to those in the West.

Selfhout et al.<sup>29</sup> examined the longitudinal associations of time spent on Internet activities for communication purposes (i.e. instant

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<sup>27</sup> L. Mazzone, F. Ducci, M. C. Scoto, E. Passaniti, V. Genitori D'Arrigo, B. Vitiello, "The Role of Anxiety Symptoms in School Performance in A Community Sample of Children and Adolescents," *BMC Public Health* 7(347) (2007): 1-6. DOI: 10.1186/1471-2458-7-347.

<sup>28</sup> D. M. Ndetei, L. Khasakhala, L. Nyabola, F. Ongecha-Owuor, S. Seedat, V. Mutiso, D. Kokonya & G. Odhiambo, "The Prevalence of Anxiety and Depression Symptoms and Syndromes in Kenyan Children and Adolescents," *Journal of Child and Adolescent Mental Health* 20(1) (2008): 33-51. DOI: 10.2989/JCAMH.2008.20.1.6.491.

<sup>29</sup> M. H. W. Selfhout, S. J. T. Branje, M. Delsing, T. F. M. ter Bogt & W. H. J. Meeus, "Different Types of Internet Use, Depression, and Social Anxiety: The Role of Perceived

messaging) versus time spent on Internet activities for non-communication purposes (i.e. surfing) with depression and social anxiety, as well as the moderating role of perceived friendship quality in these associations in 307 Dutch middle adolescents (average age 15 years). They found that, for adolescents who perceive low friendship quality, Internet use for communication purposes predicted less depression, whereas Internet use for non-communication purposes predicted more depression and more social anxiety, results supporting social compensation effects of instant messaging on depression and poor-get-poorer effects of surfing on depression and social anxiety, respectively.

Tahmassian & Jalali Moghadam<sup>30</sup> examined the relationships between self-efficacy and symptoms of depression, anxiety, worry and social avoidance in 549 Iranian students (mean age 16.5 years) using scales measuring trait anxiety – the Spilberger’s State Trait Anxiety Inventory (STAI) with its two sub-scales measuring present anxiety and the predisposition to anxiety), depression, worry and social avoidance – the Social Avoidance and Distress Scale for the measurement and diagnosis of social anxiety, and found significant and negative relationships between total self-efficacy, physical self-efficacy and emotional self-efficacy and anxiety.

Dan, Bar Ilan & Kurman<sup>31</sup> studied how attachment dimensions – anxiety and avoidance, self-esteem – and three subscales of test anxiety – cognitive obstruction, social derogation and tenseness – are related in 327 Israeli adolescents and college students, and found that college students revealed higher test anxiety than did high school students on the cognitive obstruction and tenseness scales, whereas high school students revealed higher social derogation than college students; that anxious attachment was related to all three sub-scales of test anxiety and avoidant attachment was related to cognitive obstruction among college students and to tenseness among high school students; and that most of

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Friendship Quality,” *Journal of Adolescence* 32 (2009): 819-833. DOI: 10.1016/j.adolescence.2008.10.011.

<sup>30</sup> K. Tahmassian & N. Jalali Moghadam, “Relationship between Self-Efficacy and Symptoms of Anxiety, Depression, Worry and Social Avoidance in a Normal Sample of Students,” *Iranian Journal of Psychiatry and Behavioural Sciences* 5(2) (2011): 91-98.

<sup>31</sup> O. Dan, O. Bar Ilan & J. Kurman, “Attachment, Self-Esteem and Test Anxiety in Adolescence and Early Adulthood,” *Educational Psychology* (2013): 1-18. DOI: 10.1080/01443410.2013.814191.

the correlations between anxious attachment and test anxiety were mediated by self-esteem among high school students.

Wilkinson, Croudace & Goodyer<sup>32</sup> studied 658 healthy English adolescents at elevated risk for psychopathology to explore whether there were separate, but correlated, constructs of rumination (“the action or process of thinking deeply about something” – Lexico), depression and anxiety, and identified a single rumination factor, which was correlated with factors representing cognitive symptoms of depression, somatic symptoms of depression and anxiety symptoms, and one factor representing adaptive responses to low mood.

Davidson & Farquhar<sup>33</sup> examined how religiosity, network homophily, and self-monitoring relate to social and Facebook-specific anxiety, role conflict, and Facebook intensity in North-American adolescents, and found that there is a connection between Facebook use and anxiety, as well as a link between religiosity and anxiety, that role conflict correlates with Facebook intensity, Facebook-specific anxiety, and social anxiety, and that those who prefer a literal interpretation of the Bible, attend church more frequently, and pray more often have higher anxiety.

Labrague<sup>34</sup> explored the effects of Facebook usage on adolescents’ emotional states of depression, anxiety, and stress in 70 Filipino students (16-20 years) using the Depression Anxiety and Stress Scale (DASS), and found that, though intensity of Facebook use is not directly related to negative emotional states, time spent on Facebooking increases depression and anxiety scores.

Scimeca et al.<sup>35</sup> studied the relationship between Internet addiction and alexithymia among Italian high school students (13-22 years) taking into account the role of gender differences and the possible effect of

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<sup>32</sup> P. O. Wilkinson, T. J. Croudace & I. M. Goodyer, “Rumination, Anxiety, Depressive Symptoms and Subsequent Depression in Adolescents at Risk for Psychopathology: A Longitudinal Cohort Study,” *BMC Psychiatry* 13 (2013): 1-9.

<sup>33</sup> T. Davidson & L. K. Farquhar, “Correlates of Social Anxiety, Religion, and Facebook,” *Journal of Media and Religion* 13(4) (2014): 1-38.

<sup>34</sup> L. J. Labrague, “Facebook Use and Adolescents’ Emotional States of Depression, Anxiety, and Stress,” *Health Science Journal* 8(1) (2014): 80-89.

<sup>35</sup> G. Scimeca, A. Bruno, L. Cava, G. Pandolfo, M. R. A. Muscatello & R. Zoccali, “The Relationship between Alexithymia, Anxiety, Depression, and Internet Addiction Severity in a Sample of Italian High School Students,” *The Scientific World Journal* (2014): 1-8. DOI: 10.1155/2014/504376.

anxiety, depression, and age, using, among others, the Hamilton Anxiety Scale, and found that Internet addiction is associated with alexithymia over and above the effect of depression and anxiety.

Sampasa-Kanyinga & Lewis<sup>36</sup> investigated the association between time spent on social networking sites and unmet need for mental health support, poor self-rated mental health, and reports of psychological distress and suicidal ideation in 753 Canadian adolescents using the Kessler Psychological Distress Scale (K-10) to measure symptoms of depression and anxiety, and found that students with poor mental health may be greater users of social networking sites.

Cleland Woods & Scott<sup>37</sup> examined social media use related to sleep quality, self-esteem, anxiety and depression in 467 Scottish adolescents (11-17 years) and found that adolescents who used social media more (both overall and at night) and those who were more emotionally invested in social media experienced poorer sleep quality, lower self-esteem and higher levels of anxiety and depression. Nighttime-specific social media use predicted poorer sleep quality after controlling for anxiety, depression and self-esteem.

Ostovar et al.<sup>38</sup> investigated the relationship of Internet addiction with stress, depression, anxiety, and loneliness in 1,052 Iranian adolescents and young adults (16+ years) using the Depression Anxiety and Stress Scale (DASS), and found that Internet addiction is a predictor of stress, depression, anxiety, and loneliness, and that male Internet addicts differed significantly from females in terms of depression, anxiety, stress, and loneliness.

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<sup>36</sup> H. Sampasa-Kanyinga & R. F. Lewis, "Frequent Use of Social Networking Sites Is Associated with Poor Psychological Functioning Among Children and Adolescents," *Cyberpsychology, Behaviour, and Social Networking* 18(7) (2015): 380-385. DOI: 10.1089/cyber.2015.0055.

<sup>37</sup> H. Cleland Woods & H. Scott, "#Sleepyteens: Social Media Use in Adolescence Is Associated with Poor Sleep Quality, Anxiety, Depression and Low Self-Esteem," *Journal of Adolescence* 51 (2016): 41-49. DOI: 10.1016/j.adolescence.2016.05.008.

<sup>38</sup> S. Ostovar, N. Allahyar, H. Aminpoor, F. Moafian, M. Nor & M. D. Griffiths, "Internet Addiction and Its Psychosocial Risks (Depression, Anxiety, Stress and Loneliness) Among Iranian Adolescents and Young Adults: A Structural Equation Model in A Cross-Sectional Study," *International Journal of Mental Health and Addiction* 14, (2016): 257-267.

Calancie et al.<sup>39</sup> interviewed 8 Canadian adolescents (average age 15.5 years) with a primary diagnosis of an anxiety disorder and found that there are various mechanisms through which Facebook may exacerbate anxiety in adolescents who have pre-existing anxiety disorders (because they compare themselves to peers on Facebook, which increases feelings of anxiety, as well as compulsive checking behaviours, such as monitoring posted content and friend lists) and, thereby, may make them vulnerable to negative online experiences.

Paniccia et al.<sup>40</sup> studied the relationship between generalised anxiety disorder (GAD) and alexithymia in 100 Italian adolescents (13-18 years) and found a significantly higher rate of alexithymia in adolescents with GAD.

Ren, Yang & Liu<sup>41</sup> studied the mental health of 432 rural left-behind Chinese middle-school children using the Social Anxiety Subscale of the Self-Consciousness Scale (SASS-CS) and found that the rate of Internet addiction among them was correlated with the length of time their parents spent at home as well as whether one or both parents migrated for work, as well as positive correlations among Internet addiction, social anxiety, and loneliness, with loneliness playing a mediating role in the relationship between social anxiety and Internet addiction<sup>42</sup>.

Hughes<sup>43</sup> studied the relationship between age, time spent using social media daily, the number of social media platforms used daily and the Facebook Intensity Scale and Mental Wellbeing (Depression, Anxiety and Stress) in Irish adolescents (18-19 years) using the Facebook Intensity Scale and the Depression, Anxiety and Stress Scale, and found that there was a positive, significant correlation between number social media platforms across all three negative emotional states, Depression,

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<sup>39</sup> O. Calancie, L. Ewing, L. D. Narducci, S. Horgan & S. Khalid-Khan, "Exploring How Social Networking Sites Impact Youth with Anxiety: A Qualitative Study of Facebook Stressors Among Adolescents with An Anxiety Disorder Diagnosis," *Cyberpsychology: Journal of Psychosocial Research on Cyberspace* 11(4) (2017): 1-20. DOI: 10.5817/CP2017-4-2.

<sup>40</sup> M. F. Paniccia, S. Gaudio, A. Puddu, M. Di Trani, A. Dakanalis, S. Gentile & V. Di Ciommo, "Alexithymia in Parents and Adolescents with Generalised Anxiety Disorder," *Clinical Psychologist* (2017): 1-8. DOI: 10.1111/cp.12134.

<sup>41</sup> Y. Ren, J., Yang & L. Liu, "Social Anxiety and Internet Addiction among Rural Left-behind Children: The Mediating Effect of Loneliness," *Iranian Journal of Public Health* 46(12) (2017): 1659-1668.

<sup>42</sup> P.-L. Runcan "The time factor: does it influence the parent-child relationship?" *Procedia—Social and Behavioral Sciences* 33 (2012): 11-14. <https://doi.org/10.1016/j.sbspro.2012.01.073>.

<sup>43</sup> S. Hughes, *The Effects of Social Media on Depression Anxiety and Stress*. Unpublished BA Thesis. (Dublin: Dublin Business School, 2018).

Anxiety and Stress. There was no significant correlation between Age, Time spent on social across all platforms, the Facebook Intensity Scale and Mental Wellbeing (DASS).

Muzaffar et al.<sup>44</sup> studied the association of symptoms of social anxiety, generalised anxiety, and depression with behaviours performed by adolescents when logged onto Facebook in 102 North American adolescents the Leibowitz Social Anxiety Scale for Children and Adolescents and the Mini Mood and Anxiety Symptom Questionnaire, and found that increased adolescent generalised anxiety symptoms were associated with increased Facebook behaviour and repetitive Facebook behaviour.

Finally, Mackolil & Mackolil<sup>45</sup> noted that anxiety and stigma associated with COVID-19 infection spread proliferate, with anxiety, fear of contracting the virus, frustration, irritability, and sleeplessness as effects of long-term lockdown during the pandemic. Misinformation and sharing of fake news through social media are other factors that cause anxiety and stigma among people causing uncertainty to add to an individual's sense of unease, hopelessness and loss of initiative. People who have active symptoms of anxiety hesitate to disclose or seek help as they anticipate stigma from the society, which makes the fear of contracting the pandemic more destructive than the virus itself.

## VI. Conclusions

- Anxiety is one of the most complex nervous disorder affecting adolescents;
- Only half of the studies on anxiety concern anxiety in adolescents;
- The most studied forms of anxiety disorders are social anxiety disorder and generalised anxiety disorder;

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<sup>44</sup> N. Muzaffar, E. Briceno Brito, J. Fogel, D. Fagan, K. Kumar & R. Verma, "Association of Adolescent Facebook Behaviours with Symptoms of Social Anxiety, Generalized Anxiety, and Depression," *Journal of the Canadian Academy of Child and Adolescent Psychiatry* 27(4) (2018): 252-260.

<sup>45</sup> J. Mackolil & J. Mackolil, "Addressing Psychosocial Problems Associated with the COVID-19 Lockdown," *Asian Journal of Psychiatry* 51 (2020): 1-2. DOI: 10.1016/j.ajp.2020.102156.

- Both social anxiety disorder and generalised anxiety disorder are frequently associated with Internet use and social networking site use (particularly Facebook use);

Geographically, most studies on anxiety in adolescents were carried out by researchers from North America (U.S.A. and Canada), followed by Europe (England, Ireland, Italy, Scotland, and the Netherlands), Asia (India, Iran, Israel, and Philippines), Africa (Kenya), and Australia.

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