TECHNIUM
SOCIAL SCIENCES JOURNAL

Vol. 28, 2022

A new decade for social changes

www.techniumscience.com

ISSN 2668-7798

TECHNIUM SOCIAL SCIENCES JOURNAL

Technium Social Sciences Journal
Vol. 28, 67-75, February, 2022
ISSN: 2668-7798
www.techniumscience.com

Women with Special Educational Needs. Policies & ICT for Integration &Equality

Lizeta Bakola, Irene Chaidi, Athanasios Drigas, Charalabos Skianis Charalampos Karagiannidis

Net Media Lab Mind - Brain R&D IIT - N.C.S.R. "Demokritos" , Athens, Greece

bakolalizeta@icsd.aegean.gr, irhaidi@gmail.com, dr@iit.demokritos.gr, cskianis@aegean.gr, karagian@uth.gr

Abstract. Gender equality is a demand in all societies and is a key goal of all of us, as well as the integration of people with disabilities and especially women. This article reports on the prevailing situation of women with disabilities in society, how to deal with them and how to eliminate their exclusion and accept them as equal citizens in society.

Keywords. Gender Equality, disability, Women, ADHD, Comorbidity, Exclusion, Inclusion

1. Introduction

According to UN spokeswoman Elizabeth Lockwood, people with disabilities are implicitly included in all SDGs (Sustainable Development Goals) such as Objective 4 which states that it's necessary "to *ensure inclusive and equitable quality education and to promote lifelong learning opportunities for all* ", that if could be implemented our world will become more equal for all people regardless of age, gender, disability, race, nationality, origin, religion or economic or another status.

It is well known that all kinds of people with disabilities, women, girls, men, boys, face discrimination and exclusion in education, employment, services, and most of the time are not included in development programs aimed at the integration of people with disabilities or gender equality [1].

2. Gender and Disability

Women with disabilities are considered "doubly marginalized" because of their disability and gender.

Girls and women with disabilities are:

- more frequent victims of violence, sexual abuse and trafficking
- often in social isolation due to attitudes, prejudices and stereotypes
- are at increased risk of poverty due to their exclusion or limited access due to disability in the labor market and on account of this consequence women with disabilities and mothers of children with disabilities are the first victims of financial misery in times of economic crisis

Technium Social Sciences Journal
Vol. 28, 67-75, February, 2022
ISSN: 2668-7798
www.techniumscience.com

- 2 to 5 times more violent than women without disabilities while undergoing sterilization and abortion against their will
- almost absent from the decision-making centers and invisible to the media

Moreover women with disabilities and mothers of children with disabilities have limited opportunities to combine work and family life because of the insufficient support for the family of people with disabilities.

It would be of added value to mention that there are:

- 46 million women and girls with disabilities in Europe,
- 60% of the total population of people with disabilities
- 34% of women with health problems or disabilities have suffered violence (physical or sexual) from a partner during their lifetime [2].

It is certainly considered, however, that to address the above issues we need to resurvey and understand the social roles between women and men, with or without disabilities, and address the exclusion of women and girls with disabilities not just as a "women" problem with or without disability but as a social issue that requires the active participation of women, men, girls, and boys in the development of equality of individuals but also to develop programs and initiatives as well as policies to ensure the integration and empowerment of women and girls with disabilities as enshrined in Article 6 of the Convention on the Rights of Persons with Disabilities (CRPD) [3].

3. Objectives of the United Nations for Gender equality and inclusive growth for disabled people

The United Nations SDGs, and in particular Objective 5, which focus on Gender Equality and the Empowerment of Women and Girls, aim to create opportunities for women and girls with disabilities to reach their full potential.

Analyzing the general goal 5, we list below a number of goals that are included in it and are related to women and girls with disabilities.

- ***End discrimination against all women and girls everywhere*** **and** especially for women and girls with disabilities. Women and girls with disabilities, compared to both men with disabilities and women without disabilities, largely do not complete their education, will not be rehabilitated professionally and are at greater risk of living in poverty.
- ***Eliminate all forms of violence and harmful practices against all women***: especially women with disabilities as the risk of violence, exploitation, and abuse is much higher than for women without disabilities,
- **Recognize and value unpaid care work:** both women and men with disabilities need personal assistance/care assistance and adequate resources should be available from governments to remunerate caregivers of people with disabilities who, according to the majority of the care / personal assistance workforce is women.
- **Reform legislative and policy blocks that prevent women having equal rights to economic resources:** women with disabilities are at risk of living in poverty, as there are laws and policies that prevent women with disabilities from gaining control of their livelihoods.

Technium Social Sciences Journal
Vol. 28, 67-75, February, 2022
ISSN: 2668-7798
www.techniumscience.com

- **Enhance the use of enabling technology:** Technology and assistive devices are key factors for women and men with disabilities to access society as they remove barriers and play an important role in their integration.
- **Ensure participation and leadership in decision-making**: Women with disabilities usually do not hold leadership positions in the governmental, public or private sector, as well as in the disability or gender movements, and
- **Ensure universal access to sexual and reproductive health and reproductive rights:** Women and girls with disabilities are faced with disability and gender-related behaviors related to sexual and reproductive health enjoyment and rights, as well as the right to a family [1].

4 The relationship between Exclusion & ADHD

4.1. ADHD & Comorbidity or Co-Occuring Conditions

Attention-deficit/hyperactivity disorder (ADHD) in the adult population is frequently associated with comorbid psychiatric diseases that complicate its recognition, diagnosis and management [4].

The prevalence of ADHD in the general adult population is 2.5% and it is associated with substantial personal and individual burden [5]. Torgersen T. et al., (2006) and Sobanski E. et al., (2007) refer that as many as 80% of adults with ADHD have at least one coexisting psychological or psychiatric disorder. The term psychological disorder is sometimes used to refer to what are more frequently known as mental disorders or psychiatric disorders [6,7]. Bakola, N. L., et al, (2018) define that mental illnesses or disorders are patterns of behavioral or psychological symptoms that impact multiple areas of life. The most frequent comorbid psychopathologies include mood and anxiety disorders, substance use disorders (SUD), and personality disorders as well [8,9].

Katzman, M. A.,et al (2017),in their article support that there are strong familial relations and neurobiological similarities between ADHD and the various associated psychiatric comorbidities. The overlapping symptoms between ADHD and comorbid psychopathologies represent challenges for diagnosis and treatment. The specialists say *that guidelines recommend that when ADHD coexists with other psychopathologies in adults, the most impairing condition should generally be treated first* [10].

Attention-deficit/hyperactivity disorder (ADHD) is a psychiatric disorder associated with considerable personal and societal burden. According to Lange KW et all, (2010) while ADHD is well recognized in the pediatric population, where it was first described as a clinical diagnosis in the 1930s, focus has shifted to include the recognition and management of the condition in adults [4,11].

Often, adult ADHD has a more heterogeneous clinical presentation that dominates the typical motor symptoms described in pediatric populations, and includes a broader spectrum of emotional dysregulation and functional impairment. Refer to Katzman MA., et al.,(2016) *this can complicate the recognition and diagnosis of ADHD in adults, and despite ongoing clinical controversy, the bulk of evidence suggests that ADHD remains under-recognized and under-treated in the adult population* [10].

Despite the challenges of recognizing ADHD in adults with complex clinical presentations, there are effective treatments available that have been demonstrated to improve clinical and functional outcomes, including important elements of psychosocial functioning such as social relationships, workplace performance, and parenting skills [9,10].

Technium Social Sciences Journal
Vol. 28, 67-75, February, 2022
ISSN: 2668-7798
www.techniumscience.com

Simon V., et al., (2009) and Klassen, L. J., et al. (2010) report that the general population prevalence of ADHD in adults has been calculated to be 2.5%, with adults with ADHD presenting with symptoms such as: failing to pay attention to detail, difficulty organizing tasks and activities, excessive talking or fidgeting, difficulty relaxing, overworking, forgetfulness, and distractibility. Nonetheless, despite the relatively high prevalence of ADHD in adults, it is often unrecognized in many cases of patients and this is particularly true for females, who are a largely unrecognized population for several reasons. The risks and toll of suffering that can come with having attention deficit/hyperactivity disorder, or ADHD, is anxiety, depression, school failure, self-harm, unemployment, social exclusion e.c.t [5,12,13,14,15,16,17].

Matthews, T., et al. (2015) in their study about the social isolation or exclusion and mental health mention that individuals with early behavioral problems or symptoms of ADHD were at greater risk for becoming more isolated over time than those without these problems [13]. Moreover, Hoza, B. (2007) in a previous research on children with ADHD suggests that difficulties with self-monitoring and cue-taking can hamper their social interactions, which may contribute to their risk of isolation .In the 1990s, scientists believed it was as much as nine times as common in boys, and very few girls were diagnosed. Today's diagnosis rate has narrowed to 2.5 boys to every girl. Despites girls and women, in general, engage in more "internalizing" behavior than boys, meaning they tend to take their problems out on themselves rather than others. Compared with boys who have the disorder, as well as with girls without it, girls with ADHD suffer more anxiety and depression [18,19] .

4.2. The high risk of developing ADHD in Social Isolation Conditions

Attention deficit-hyperactivity disorder (ADHD) is a neurobehavioral disorder that has three main characteristics: inattention (the tendency to frequently shift attention), hyperactivity, and impulsivity [20].

Bastien Myla, (2013) support that although many scientists believe that several factors can contribute to the onset of ADHD, research in various fields of psychology indicates that social isolation could be a possible contributor to the severity of expressed ADHD [21].

According to Baumeister et al, (2005), social exclusion can provoke people who do not have a history of ADHD to act impulsively. Furthermore, attentional patterns as well as misconduct/ or bad behavior can also be altered and developed as a result of social isolation [22].

Bastien Myla, (2013) assign the Ostracism as *the state of being ignored, excluded, or rejected by another individual or group*. In her study refers that Leary, (1990) and Sebastian, (2010) regarding to ostracism research have largely focused on the affective consequences of social exclusion such as depression and social anxiety. In addition, more recent research focuses on the cognitive and behavioral consequances of social isolation. Bastien Myla, mention that pursuant to dACC and Williams, (2007) on the neural level, ostracism simulates the physical pain such that both physical pain and ostracism (whether perceived or real) activates the same region of the brain. Thus, Siegrist, (2000), Baumeiste et. al.(2005) and Williams, (2007) cite that long-term periods of ostracism may lead individuals to involve in health-damaging behaviors and even brief periods of ostracism can result in aggressive behavior and lack of motivation as well as cause changes in attention, self-consciousness, and self-regulation [21,22,24,25].

Ohan & Johnston, (2007) refer that children with ADHD are often excluded by their colleagues and Hoza, (2007) justify that the key characteristics of ADHD result in behaviors that may repel their peers. Specifically, the inattentive symptom prevents children from being

Technium Social Sciences Journal
Vol. 28, 67-75, February, 2022
ISSN: 2668-7798
www.techniumscience.com

able to attend and learn social norms and interactions. Moreover, the hyperactive symptom of ADHD may result in aggressive, overwhelming and unwanted behaviors to their peers. Without positive peer relationships, children are subject to negative outcomes. *ADHD children have risk spiraling down a path of social exclusion, which may exasperate their behavioral problems, causing them to be further ostracized by their peers (Hoza*, 2007). However, the author underline that few studies address the possibility that ostracism alone could future behavioral issues that resemble the symptoms of ADHD [19,26].

Bastien Myla, (2013) also mention that individuals with ADHD demonstrate difficulties with attention in several ways including focused attention, sustained attention, selective attention, alternating attention, and dividing attention. Individuals who have experienced social exclusion then exhibit impaired attentional abilities. According to Bastien Myla, (2013) and Baumeister et al. (2005) *if brief implicit social exclusion can directly cause a change in attentional style, it is plausible that prolonged feelings of ostracism, especially early in life may influence attention deficit disorder that follows an individual into adulthood* [21,22,23].

5. Social Exclusion and individuals with Intellectual and/or Learning Disabilities

Individuals with learning disabilities constitute one of the most marginalized groups in Western society today. Previous research has shown that children with intellectual or learning disabilities are at high risk for social exclusion by their peers. Because of the discrimination and prejudice faced by these individuals, many teens and young adults with learning disabilities do experience social exclusion. Moreover, according to Redley Marcus, (2009) these people, men and women compared with their non-disabled peers are more likely to be unemployed, less likely to own their own homes and are at a significantly greater risk of physical and mental ill health. Thus, people with learning disabilities are less likely to be employed and less likely to be economically active. As a result, these negative effects of social exclusion can have a significant impact later in life. Studies indicate social exclusion in adolescence is linked to problems with attunement in adulthood. These adjustment problems often manifest as mental health issues and/or criminal activities [27,28].

Social ability and emotional wellbeing are issues for some adults and children with learning disabilities. Being liked, feeling accepted, and having self-belief is all related to an individual's social skills.

6. Social isolation in individuals with ADHD & ASD comorbidity

ADHD and autism, also called Autism Spectrum Disorder (ASD), according to the DSM-5, are both two of the most common neurodevelopmental disorders in childhood although they can continue into adolescence. ADHD is characterized by inattention, hyperactivity and impulsivity and Autism by problems with social interactions and stereotyped (repetitive or ritualistic) behaviors. Many studies have proved that the two conditions can occur together and furthermore, that children with ADHD and or autism disorder can have or develop a co-morbid psychiatric disorder [17, 20].

ASD is the name for a group of developmental disorders. Autism Spectrum Disorder includes a wide range, "a spectrum" of symptoms and disabilities in communication and social skills and stereotypical behaviors as well. These two disorders are related in several ways. Although ADHD is not on the Autism Spectrum Disorder, they seem to have some of the same symptoms. For example, in both conditions, children and adults, in both gender, have difficulties in paying attention, troubles with social interactions, exhibit hyperaction , present difficulties in reading social cues and have meltdowns, but for different reasons [17,20,29,30].

Technium Social Sciences Journal
Vol. 28, 67-75, February, 2022
ISSN: 2668-7798
www.techniumscience.com

There seems to be a valid concern about the shortage of social opportunities for individuals on ASD and ADHD to develop close relationships with peers and how these people learn to share and join into social experiences. Their inability for repetitive social communication as well as their difficulty in sharing thoughts and feelings makes these individuals incapable of managing relationships and complex situations that arise when confronted with real school or community living conditions. Thus, when *friendships do occur, they appear to be less close and supportive than in the general population* [31, 32]. In addition, Shattuck Paul T. underline that *young adults with an autism spectrum disorder (ASD) are more likely to never see friends, never get called by friends, never be invited to activities and be socially isolated* [33].

7. **Discussion**

The inclusive growth on disability and gender equality can collaborate on integration. For an inclusive and just world, strategies will need to be put in place to ensure inclusive development for people with disabilities, gender equality and cooperation as equal members. In order for this to happen, the walls must be "broken down", the barriers that separate people who separate on the basis of different identities, religious beliefs, gender, origin, etc. must be removed**,** and programs must be developed and implemented to raise awareness and remove the disability of women and girls with disabilities in employment, education, health, violence prevention, financial empowerment and leadership [1].

For this purpose is also necessary to help individuals with these disabilities to access suitable treatment adapted to their impairment. These complex disorders that we have mentioned mainly include impairments in communication and language skills, (language Impairment, dyslexia, learning problems, etc.). Language conquest constitutes the process by which individuals obtain the capacity to perceive, comprehend, produce and use words and sentences to communicate [4, 17]. In the other hand intelligence is an important component of the mind that includes a bounty of cognitive skills such as skills in programming, in logic, adaptation, abstract thinking, understanding ideas, language use and learning. Thus, it's a scientific fact that emotions precede thought and therefore understanding and managing our emotions or the emotions of others can contribute to have successful or professional lives. On account of this it's very important that individuals develop their Emotional Intelligence and social skills, as well as train the pillars of metacognition because are the most important tool of self-learning, self-development, self-treatment and self-knowledge and they contribute to the correct functioning of the cognitive and psycho physiological mechanism, the melioration of intelligence in all areas (physical, intellectual, emotional and spiritual), the emergence of consciousness and self-knowledge as well. Only when people meet their needs they will develop their emotional intelligence and improve their metacognitive skills so that will be able to master the appropriate cognitive and socio-emotional skills that will allow them to integrate into the social environment (Drigas & Mitsea 2020; Drigas & Mitsea 2021). The "Self-actualization step is at the top of Maslow's hierarchy of needs. In order to achieve this condition of becoming, it is necessary to meet needs at lower levels of the pyramid, such as the need for survival, security, social acceptance, and self-esteem (Maslow 1987) [34 -37, 48-50].

In addition, in the policies of dealing with inequality is highly recommended the education of people with disabilities in ICTs. It is scientifically accepted that in the part of people with disabilities, ICTs manage to overcome the natural obstacles and alleviate the shortcomings and deficits, in order to approach the knowledge and remove the isolation by restoring the social reality as they enable the possibility of communication with the environment

and its interaction with it as equal members [39, 40]. Ending, another goal of eliminating inequality and integration is for women to have access to work also in entrepreneurship and in decision –making centers. For people with disabilities, ICTs can offer this big opportunity [41-47].

References

[1] *SDG 5: Gender equality and Disability Inclusive Development in the SDGs* Retrieved from: https://www.cbm.org/news/news/news-2016/sdg-5-gender-equality-and-disability-inclusive-development-in-the-sdgs/ (15/12/2021)
[2] *National Confederation of Persons with Disabilities* retrieved from: https://www.esamea.gr/pressoffice/press-releases/3344-8i-marti-gia-tis-pollaples-diakriseis-poy-antimetopizoyn-oi-gynaikes-me-anapiria) (17/12/2021)
[3] *Gender and disability.* Retrieved from: https://asksource.info/topics/social-inclusion/gender-and-disability (15/12/2021)
[4] American Psychiatric Association. Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: 1994.
[5] Simon, V., Czobor, P., Bálint, S., Mészáros, A., & Bitter, I. (2009). Prevalence and correlates of adult attention-deficit hyperactivity disorder: meta-analysis. *The British Journal of Psychiatry*, *194*(3), 204-211
[6] Torgersen, T., Gjervan, B., & Rasmussen, K. (2006). ADHD in adults: a study of clinical characteristics, impairment and comorbidity. *Nordic journal of psychiatry*, *60*(1), 38-43.
[7] Sobanski, E., Brüggemann, D., Alm, B., Kern, S., Deschner, M., Schubert, T., ... & Rietschel, M. (2007). Psychiatric comorbidity and functional impairment in a clinically referred sample of adults with attention-deficit/hyperactivity disorder (ADHD). *European archives of psychiatry and clinical neuroscience*, *257*(7), 371-377.
[8] Bakola, N. L. N., Rizos, N. D., & Drigas, A. S. (2018). ICTs Supportive and Therapeutic Contribution in Psychoemotional Disorders in Childhood and Adolescence. *International Journal of Recent Contributions from Engineering, Science & IT (iJES)*, *6*(2), 69-78.
[9] Biederman, J., Wilens, T., Mick, E., Spencer, T., & Faraone, S. V. (1999). Pharmacotherapy of attention-deficit/hyperactivity disorder reduces risk for substance use disorder. *Pediatrics*, *104*(2), e20-e20.
[10] Katzman MA, Bilkey T, Chokka PR, Fallu A, Klassen LJ. Re: Is Adult Attention-Deficit Hyperactivity Disorder Being Overdiagnosed? Can J Psychiatry. 2016 Jan;61(1):60-1. doi: 10.1177/0706743715620143. PMID: 27582455; PMCID: PMC4756599..
[11]Lange, K. W., Reichl, S., Lange, K. M., Tucha, L., & Tucha, O. (2010). The history of attention deficit hyperactivity disorder. *ADHD Attention Deficit and Hyperactivity Disorders*, *2*(4), 241-255.
[12] Klassen, L. J., Katzman, M. A., & Chokka, P. (2010). Adult ADHD and its comorbidities, with a focus on bipolar disorder. *Journal of affective disorders*, *124*(1-2), 1-8.
[13] Ginsberg Y, Quintero J, Anand E, Casillas M, Upadhyaya HP. Underdiagnosis of attention-deficit/hyperactivity disorder in adult patients: a review of the literature. Prim Care Companion CNS Disord. 2014;16(3):PCC.13r01600. doi: 10.4088/PCC.13r01600. Epub 2014 Jun 12. PMID: 25317367; PMCID: PMC4195639.
[14] Gershon, J., & Gershon, J. (2002). A meta-analytic review of gender differences in ADHD. *Journal of attention disorders*, *5*(3), 143-154.
[15] Waite, R. (2007). Women and attention deficit disorders: A great burden overlooked. *Journal of the American Academy of Nurse Practitioners*, *19*(3), 116-125.

Technium Social Sciences Journal
Vol. 28, 67-75, February, 2022
ISSN: 2668-7798
www.techniumscience.com

[16] Bond, D. J., Hadjipavlou, G., Lam, R. W., McIntyre, R. S., Beaulieu, S., Schaffer, A., & Weiss, M. (2012). The Canadian Network for Mood and Anxiety Treatments (CANMAT) task force recommendations for the management of patients with mood disorders and comorbid attention-deficit/hyperactivity disorder. *Ann Clin Psychiatry*, *24*(1), 23-37.
[17] American Psychiatric Association. Diagnostic and statistical manual of mental disorders (5th ed.). Washington, DC: 2013.
[18] Matthews, T., Danese, A., Wertz, J., Ambler, A., Kelly, M., Diver, A., Caspi, A., Moffitt, T. E., & Arseneault, L. (2015). Social isolation and mental health at primary and secondary school entry: a longitudinal cohort study. *Journal of the American Academy of Child and Adolescent Psychiatry*, *54*(3), 225–232. https://doi.org/10.1016/j.jaac.2014.12.008
[19] Hoza, B. (2007). Peer functioning in children with ADHD. *Journal of pediatric psychology*, *32*(6), 655-663.
[20] Bakola, N. L., & Drigas, A. (2020). Technological Development Process of Emotional Intelligence as a Therapeutic Recovery Implement in Children with ADHD and ASD Comorbidity
[21] Bastien, M. (2013). Examining the Relationship Between Ostracism and ADHD. *UC Merced Undergraduate Research Journal*, 5(1). http://dx.doi.org/10.5070/M451020758 Retrieved from https://escholarship.org/uc/item/638287br
[22] Baumeister, R. F., DeWall, C. N., Ciarocco, N. J., & Twenge, J. M. (2005). Social exclusion impairs self-regulation. *Journal of personality and social psychology*, *88*(4), 589-604.
[23] Baumeister, R. F., Twenge, J. M., & Nuss, C. K. (2002). Effects of social exclusion on cognitive processes: Anticipated aloneness reduces intelligent thought. *Journal of personality and social psychology*, *83*(4), 817-827
[24] Williams, K. D. (2007). Ostracism. *Psychology*, *58*(1), 425.
[25] Siegrist, J. (2000). Place, social exchange and health: proposed sociological framework. *Social science & medicine*, *51*(9), 1283-1293.
[26] *Ohan, J. L., & Johnston, C. (2007). What is the social impact of ADHD in girls? A multi-method assessment. Journal of abnormal child psychology, 35(2), 239 250.*
[27] Nowicki EA, Brown J, Stepien M. Children's thoughts on the social exclusion of peers with intellectual or learning disabilities. J Intellect Disabil Res. 2014 Apr;58(4):346-57. doi: 10.1111/jir.12019. Epub 2013 Jan 28. PMID: 23356579.
[28] Redley, M. (2009). Understanding the social exclusion and stalled welfare of citizens with learning disabilities. *Disability & Society*, *24*(4), 489-501.
[29] Gadow, K. D., DeVincent, C. J., Pomeroy, J. (2006). ADHD symptom subtypes in children with pervasive developmental disorder. *Journal of Autism and Developmental Disorders*., 36(2):271-83 doi:10.1007/s10803-005-0060-3
[30] Harstad, E. (2017). I've heard that autism and ADHD are related. Is that true?. *UNDERSTOOD.ORG,* from https://www.understood.org/en/learning-attention-issues/child-learning-disabilities/add-adhd/ive-heard-that-autism-and-adhd-are-related-is-that-true
[31] *Study Examines Social Isolation of Young Adults With ASD* https://www.socialworktoday.com/news/dn_050313.shtml
[32] Baron-Cohen S, Wheelwright S. The Friendship Questionnaire: An investigation of adults with Asperger syndrome or high-functioning autism, and normal sex differences. *Journal of Autism and Developmental Disorders.* 2003;33:509–517.
[33] Orsmond, G. I., Shattuck, P. T., Cooper, B. P., Sterzing, P. R., & Anderson, K. A. (2013). Social participation among young adults with an autism spectrum disorder. *Journal of autism and developmental disorders*, *43*(11), 2710-2719.

[34] Drigas, A., & Bakola, L. (2021). The 8x8 Layer Model Consciousness-Intelligence-Knowledge Pyramid, and the Platonic Perspectives. *International Journal of Recent Contributions from Engineering, Science & IT (iJES)*, *9*(2), pp. 57–72. https://doi.org/10.3991/ijes.v9i2.22497
[35] Drigas, A. S., & Papoutsi, C. (2018). A new layered model on emotional intelligence. *Behavioral Sciences*, *8*(5), 45.
[36] Drigas, A., & Mitsea, E. (2021). 8 Pillars X 8 Layers Model of Metacognition: Educational Strategies, Exercises &Trainings. *International Journal of Online & Biomedical Engineering*, *17*(8).
[37] Drigas, A., & Mitsea, E. (2020). The 8 pillars of Metacognition. *International Journal of Emerging Technologies in Learning (iJET)*, *15*(21), 162-178.
[38] Maslow, A. H. (1987). Motivation and personality (3rd ed.). Boston, MA: Addison-Wesley
[39] Chaidi, I., Drigas, A., & Karagiannidis, C. (2021). ICT in special education. *Technium Soc. Sci. J.*, *23*, 187.
[40] Alexopoulou, A., Batsou, A., & Drigas, A. S. (2019). Effectiveness of Assessment, Diagnostic and Intervention ICT Tools for Children and Adolescents with ADHD. *Int. J. Recent Contributions Eng. Sci. IT*, *7*(3), 51-63.
[41] Pappas, M. A., Drigas, A. S., Papagerasimou, Y., Dimitriou, H., Katsanou, N., Papakonstantinou, S., & Karabatzaki, Z. (2018). Female entrepreneurship and employability in the digital era: The case of Greece. *Journal of Open Innovation: Technology, Market, and Complexity*, *4*(2), 15.
[42] Pappas, M., Papagerasimou, Y., Drigas, A., Raftopoulos, D., & Nikolaidis, P. (2017). ICT-based Innovation and Employability for Women.
[43] Pappas, M. A., Drigas, A. S., Papagerasimou, Y., Dimitriou, H., Giannacourou, M., Katsanou, N., ... & Agoritsa, C. (2017). Online Research for the Impact of ICTs on Greek Women's Employability and Entrepreneurship. *International Journal of Advanced Corporate Learning*, *10*(1).
[44] Drigas A, Ioannidou R.E., A Review on Artificial Intelligence in Special Education, Information Systems, Elearning, and Knowledge Management Researc h Communications in Computer and Information Science Volume 278, pp 385-391, 2013 http://dx.doi.org/10.1007/978-3-642-35879-1_46
[45] Kefalis C and Drigas A. (2019) Web Based and Online Applications in STEM Education. International Journal of Engineering Pedagogy (iJEP) 9, 4 (2019), 76–85.https://doi.org/10.3991/ijep.v9i4.10691
[46] Drigas A, and Marios A. Pappas. "On line and other Game-Based Learning for Mathematics." International Journal of Online Engineering (iJOE) 11.4, 62-67, 2015 https://doi.org/10.3991/ijoe.v11i4.4742
[47] Papanastasiou, G., Drigas, A., Skianis, C., & Lytras, M. D. (2017). Serious games in K-12 education: Benefits and impacts on students with attention, memory and developmental disabilities. Program, 51(4), 424-440. https://doi.org/10.1108/prog-02-2016-0020
[48] Drigas A and M. Pappas, "The Consciousness-Intelligence-Knowledge Pyramid: An 8x8 Layer Model," International Journal of Recent Contributions from Engineering, Science & IT (iJES), vol. 5, no.3, pp 14-25, 2017. https://doi.org/10.3991/ijes.v5i3.7680
[49] Mitsea, E., & Drigas, A. (2019). A journey into the metacognitive learning strategies. International Journal of Online & Biomedical Engineering, 15(14). https://doi.org/ 10.3991/ijoe.v15i14.11379
[50] Drigas A, Karyotaki M (2017) Attentional control and other executive functions. Int J Emerg Technol Learn iJET 12(03):219–233