

More Than Mental Disorder but Also a Serious Criminal Offence: An Internet-mediated Secondary Research (IMR) on Pedophilic Disorder and How Online Mental Health Services Facilitate the Help- seeking Pathway

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Abstract: Severe Mental Illness (SMI) usually refers to mental disabilities that result critical functional impairments, such as schizophrenia, bipolar disorder, dissociative identity disorder or post-traumatic stress disorder (PTSD). However, there are some types of mental illness that are also detrimental not only may put the patient at risk of committing criminal offences but may also injure others and bring serious harm to the community. Pedophilic Disorder is one of the potential crises that often being underestimated or even overlooked due to taboo, stigma, misconception, and unknown prevalence. Help seeking intention is extremely low and the services available for this illness are also insufficient. This study aims to explore the various aspects of Pedophilic Disorder with regards to the effectiveness of online mental health services in order to facilitate the help-seeking pathway for both prevention and treatment purposes, with an ultimate goal to reduce the risk of developing Pedophilic Disorder and minimize the potential threat to the community.

Keywords: pedophilic disorder, pedophilia, paedophilia, pedophile, paedophile, online mental health, telepsychiatry, telepsychotherapy

I. Introduction

The term “Pedophilia” (or Paedophilia) originated from the Greek παῖς, παιδός [paidós], meaning “child”, and φιλία [philia], meaning “love” (Liddell et al., 1959), represents a primary or exclusive sexual attraction to a prepubescent child or children (American Psychiatric Association, 2013a; World Health Organization, 2019). Although the history of Pedophilia can be traced back as old as human history and can be found in many different cultures and religions (Seto, 2008), German sexologist and psychiatrist Richard von Krafft-Ebing first coined the term “Paedophilia Erotica” and defined as “Psychosexual Perversion” in his article *Psychopathia Sexualis* published in 1886 (Janssen, 2015).

From a clinical point of view, Pedophilia is a subgroup of Paraphilia, and Paraphilia is a necessary but not a sufficient condition to be diagnosed as a mental disorder that require clinical intervention (American Psychiatric Association, 2013a). The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) clearly differentiates Pedophilia from Pedophilic Disorder (302.2 (F65.4)), while the latter defined as recurrent, intense sexually arousing fantasies, sexual urges, or behaviours involving sexual activity with a prepubescent child or children (generally age 13 years or younger) that has been exhibited for a duration not less than 6 months, while the patient has to be at least age 16 years and at least 5 years older than the child or children and has overtly acted out these sexual urges, or the sexual urges or fantasies cause marked distress or

interpersonal difficulty (American Psychiatric Association, 2013a), while the latest version of the International Statistical Classification of Diseases and Related Health Problems (ICD-11) defines Pedophilic Disorder (6D32) as a Paraphilic Disorder of sustained, focused, and intense pattern of sexual arousal—as manifested by persistent sexual thoughts, fantasies, urges, or behaviours—involving pre-pubertal children that has been acted out (World Health Organization, 2019; Gaebel et al, 2017).

Despite the differences on cultural views and social norms of acceptability across nations and religions (Seto, 2008), there is a great deal of controversy which pose a huge concern whether Pedophilia is normal or deviant (therefore disordered). The golden standard in mental health assessment is that the magnitude of the problem that causes significant impairments and harmful risk to the patient or others (Münch et al., 2020). The condition of whether the sexual urges have been “acting out” plays a crucial role in the determination and clinical diagnosis of mental disorder (Abdalla-Filho, 2020). Although Pedophilia per se is not a mental disorder (Kershner, 2017), the behaviour of “acted out” could be manifested in various ways, such as unlawful contact offenses including both sexual activities or simply kissing, leaning, or fingering a child in a subtle or implicit manner. In many cases, searching, watching, and downloading Child Sexual Exploitation Material (CSEM or Child Pornography) also regarded as “acting out”, while masturbation to pedophilic fantasies is undoubtedly an “act out” behaviour (Berlin, 2014). In addition, child pornography as a by-product of children sex abuse, despite producing or distributing of child pornography, even mere consumption is definitely not a victimless crime (Endrass et al., 2009; Christensen & Tsagaris, 2020). In fact, the DSM-5 explained the extensive consumption of child pornography as a good indicator for the diagnostic of Pedophilic Disorder (American Psychiatric Association, 2013a). In this sense, the individual should be eligible enough to be considered as Pedophilic Disorder, rather than just Pedophilia. Moreover, since the behaviour of watching and downloading of child pornography is illegal in many jurisdictions worldwide, such behaviour is already sufficient to put the patient at risk of committing a serious criminal offense.

Child Sex Offending (CSO) is very taboo and is one of the worst things that could happen in society. The general public have very strong and negative feelings for this, and even in the prison systems, it is seen as something that can be attacked by others and therefore, preventive measures are of paramount importance. With regards to the severity of the inherent harm, the main purpose of this study is to encourage all at-risk Pedophiles to seek help before any sexual offense happened. We tried best to stay as neutral as we can, without any moral or sentimental judgements and aimed to study the various aspects of Pedophilia and Pedophilic Disorder, by discussing the scope and nature of the prevailing problem, examination of the prevalence, types, aetiology, neurobiology and neuropathology and characteristics of the disorder. Identifying the currently available support groups and technology being adopted to deal with the problem, while treatments (both Psychotherapy and Pharmacotherapy), preventions, education as well as the facilitators and barriers of help seeking will be investigated. In addition, analysis of online mental health services to serve as a preventive and therapeutic tool that facilitate the help seeking pathway will be critically discussed.

II. Literature Review

Pedophiles are ubiquitous and come from all walks of life. Most countries have notorious cases that are so appalling and dreadful to the extent that shock the world. The Josef Fritzl case in Austria that he locked up his daughter in a cellar and abused her for years (Weaver, 2008), Robert, M. in the Netherlands abused 83 children aging from 0-4 during work, at a community day-care centre (BBC News, 2012). Other best known daunting cases such as: Jeffrey Epstein (Lewis, 2015), Joel Le Scouarnec, a French surgeon sexually abusing 349 children within a 30 years duration (Euronews, 2020), the 'dark web Nth room' case in Korea, (Yonhap, 2021), the Cho Doo-soon Case (The Korea Herald, 2012), Harvey Weinstein (BBC News, 2021), The US Olympics doctor Larry Nassar (BBC News, 2018), the #Me Too# movement (Chuck, 2017), the Megan case (Glaberson, 1996) and the numerous cases committed by members of the clergy that gave pressure to Pope Francis to finally abolish the pontifical secret in all cases of sexual violence and the abuse of minors committed by members of the clergy (Vatican News, 2019). Locally, Hong Kong Police arrested Child Pornography Offenders (CPOs) with 4,000 images and 600 moving images of child pornography (Ming Pao, 2011; News.gov.hk, 2015; Lo, 2017) and reported cases involving child pornography in Hong Kong have increased sharply (RTHK News, 2020). However, the well-known cases are just the tip of the iceberg, and many incidents are, in fact, unreported or undetected.

By definition, Pedophilia or even Pedophilic Disorder (Pedophiles) are not synonym for Child Sex Offending (CSO), depend on the fantasies or urges have been illegally “acted out” or not. In other words, Child Sex Offenders are not necessarily Pedophiles, unless the crime is pathologically due to the primary or exclusive sexual interests and misconduct to prepubescent children (Edwards et al., 1997; Blaney et al., 2009). The general public, the media and even many researchers use these terms interchangeably, which is a mistake that may result various confusions. First of all, “Pedophiles” or “Pedophilia” are clinical rather than legal terms (Hall & Hall, 2007), and those who suppress their urges and not “acting out” are non-offender. Besides, 50%-75% of Child Sex Offending are not committed by Pedophiles (Cantor & McPhail, 2016; Schaefer et al., 2010), and many Child Sex Offenders do not have a primary or exclusive sexual interest in prepubescent children (Seto, 2009), but due to other reasons (Barbaree & Seto, 1997; Seto, 2008).

Clinically, Pedophilia and Pedophilic Disorder can be subcategorised in various dimensions. Exclusive Pedophiles refers to individuals only sexually attracted to prepubescent children and has no erotic interest in adults (Cohen & Igor, 2009), while Non-exclusive Pedophiles are sexually attracted to both children and adults (American Psychiatric Association, 2013a). Both male and female can be Pedophiles, and the estimated ratio is 10:1 (Cohen, 2009), while most of the studies are mainly on men and female Pedophiles are more difficult to detect (Seto, 2008; Goldman, 2000). Although, rare, Infantophilia (or Nepiophilia) is a sub-type of Pedophilia are sexually attracted infants and toddlers (age 5 or below) (Greenberg, 1995; Hall & Hall, 2007; Goode, 2010), while Pedophilia refers to sexually attracted to prepubescent children (age 13 or younger) (American Psychiatric Association, 2013a), and Hebephilia is the sexual attractions to

pubescent children (age 11-14) (Blanchard et al., 2009). A combination of Pedophilia and Hebephilia (age 14 or under) is not uncommon and is termed as Pedohebephilia, while Ephebophilia represents sexual arousal towards post-pubescent minors (age 15-19) (Blanchard et al., 2009). Only Pedophilia (including Infantophilia which is below the age of 13) is considered as mental disorder (Pedophilic Disorder (302.2 (F65.4))) by the DSM-5 (American Psychiatric Association, 2013a), but any unlawful sexual activities with children below the age of 16 is considered as illegal. (Table 1.)

	Clinical Diagnosis				Legal Definition	
Sub-types	Male		Female		Male	Female
	Exclusive	Nonexclusive	Exclusive	Nonexclusive		
	Infantophilia (Nepiophilia) - Infants and Toddlers (5 or below)				Illegal Sex (Below 16)	
	Pedophilia - Prepubescent Children (13 or younger)					
	Hebephilia - Pubescent Children (11 to 14)					
	Pedohebephilia - A combination of Pedophilia and Hebephilia					
	Ephebophilia - Post-pubescent Minors (15 to 19)				Legal Sex (Over 16)	

Table 1.

Pedophilia can further be distinguished by Ego-Dystonic and Ego-Syntonic (Harvard University, 2010), whereas Ego-Dystonic refers to individuals who consider their sexual interest as inappropriate and can restricted their sexual urges without “acting out”, both with or without distress, and Ego-Syntonic individuals accept their sexual orientation and interest (O'Neil et al., 2005). Therefore, individuals who suppress their sexual urges and feel distressed about the resisted behaviour, and those who “act out” the sexual urges meet the criterion to a clinical diagnosis of Pedophilic Disorder (American Psychiatric Association, 2013a; World Health Organisation, 2019), regardless of the “acted out” behaviour is an overt contact offense, voyeuristic or frotteuristic behaviours, consumption of child pornography or masturbating privately to pedophilic sexual fantasy towards prepubescent children.

Legally, non-offenders are those who can stay law-abiding for whatever reasons, such as the fear of the disastrous consequences or the serious harms to the children. The difference between Child Sex Offending (CSO) and non-offending is obvious, while people who are offending, they are breaking the law (Gerwinn et al., 2018). In other words, unless the individual can restrict his or her behaviour without distress, otherwise he or she as a patient of Pedophilic Disorder, the victim (both in-person directly and indirectly via the form of child pornography) as well as the entire society are all at risk and in danger. Those who commit Child Sex Offences (CSO) with Pedophilic Disorder are called Preferential Offenders, while those who commit without

pedophilic intentions are Situational Offenders (Lanning, 2020). In 2006, Wortley & Smallbone discovered that situational and environmental factors play an important role in Child Sex Offending.

Clinical Diagnosis	Pedophiles			
	Pedophilia			
	Sexual Interest Only		Sexual Interest and Behaviors (Acted out)	
	Non-disordered		Pedophilic Disorder	Non-disordered
	Ego-Dystonic (Resisted)	Ego-Dystonic (Resisting with Distress)	Ego-Syntonic (Comfortable with Pedophilic Sexual Fantasies) Masturbating about Children (Non-contact-Offending)	Child Pornography Offenders (CPOs)
				Contact Offenders
Legal Definition	Non-offending			Child Sex Offending (CSO)
				Preferential Situational
				Pedophilic Non-pedophilic
	Non-offender			Child Sex Offender Child Molestation Child Sexual Abuse Offender

Table 2.

The actual prevalence of Pedophilia in the general population is unknown (Seto, 2009; Seto, 2004), but some estimated appropriately 5% of male and less is known about females (Seto, 2009). A recent systemic review indicated a mean prevalence rate of sexual interest in children ranging from 2 % - 24 % (Savoie et al., 2021), while another online survey with a nonrepresentative sample of male (N = 997) shows that almost 1/4 (23.1%) declare certain degree of sexual interest in children, propensity of, or history of offensive behaviours towards children (Ó Ciardha et al., 2021). In the UK, Leeds Beckett University anticipated up to 10% of male population have sexual thoughts towards children sometimes in their lives (Turner-Moore & Waterman, 2017).

Sexually interested in children is a predictor of Pedophilic Disorder diagnosis (Hanson & Morton-Bourgon, 2005; Stephens et al., 2017), while a history of child pornography consumption is another (Seto, Cantor, & Blanchard, 2006). Prevalence of Pedophilic Disorder is unclear, with an estimation of approximately 3% - 5% (American Psychiatric Association, 2013a).

Sex is one of the most popular topics being searched over the Internet. The Americans spend US\$10 billion every year on pornographic materials such as magazines and videos (Arnett, 2006). As the development and popularity of internet and digital devices, online child pornography has now become a multi-billion industry worldwide (Eggstein & Knapp, 2014). The world of internet (especially dark web) is a hotbed for Pedophilia, and Pedophiles shrink the need for child pornography. In fact, the prevalence of sexual interest in children among Child Pornography Offenders (CPOs) is higher than contact offenders (Babchishin, Hanson, & Hermann, 2011). According to research, 12.5% of Child Pornography Offenders had a criminal record of contact sex offense against children, while 50% has self-reported that had committed a contact sex offense before without being detected (Seto et al., 2010a). Two research studies conducted by leading and top scholars specialized in the contemporary study of Pedophilia, indicated that the majority of Child Pornography Offenders are motivated by a sexual interest in children, who

exhibit more sexual arousal to children than to adults, and a stronger relative response than do offenders with contact victims (Blanchard et al., 2007; Seto et al., 2006). 30%-50% of Child Pornography Offenders interviewed by the police or by clinicians admitted they were sexually interested in children or child pornography (e.g., Seto et al., 2010b). Other studies have also demonstrated a connection between sexual interest in children and child pornography consumptions through self-report surveys (Buschman et al., 2009; Riegel, 2004), while some may disagree with the correlations between Pedophilia, Pedophilic Disorder, child pornography and Child Sex Offending (CSO) (Hamilton, 2012). Nevertheless, the UK National Crime Agency (NCA) estimated around 750,000 men in Britain are sexually attracted to children, and at least 300,000 of them may pose a threat to children online or in person (Dearden, 2020), while the National Society for the Prevention of Cruelty to Children (NSPCC) reported annual statistics for England 2015-2016 is around 38,000 sexual offences victims are under the age of 16, while 5,600 were raped under 13, indicating an average of over 100 children aged 9-12 were raped each week in England (Bentley et al., 2017). However, it is impossible to determine accurately how many Child Pornography Offenders will become contact offenders and how many can and will restrict their sexually offensive behaviours merely online (Johnson, 2015).

While in the US, the National Child Abuse and Neglect Data System (NCANDS) recorded 58,114 cases related to suspected sexual abuse in 2017. (U.S. Department of Health & Human Services (H.H.S), 2019; Hinds et al., 2020). In China, only 25.96% of in-person child sex offences were committed by strangers while 74.04% were committed by people who have good access to the victims such as coaches, teachers, relatives or neighbours, and the majority of victims are under the age of 14 (81.48%) (Girls Protection, 2021). In Hong Kong, based on Statistics figures of Hugline 2016-2017, 88% of the victims of child sex offences age 15 or lower (ECSAF, 2017).

Although there are no official figures of the actual prevalence of Pedophiles, individuals who suffered by Pedophilic Disorder and those “would-be” offenders, court case after court case and the frequency of reported incidence by the media depicted the severity and the jeopardy of this medical and social problem.

Attempts to uncover the aetiology of Pedophilia and Pedophilic Disorder are important and has been studied extensively over the past few decades. Some started from the biological roots of Pedophilia and Pedophilic Disorder. However, there is still no consensus about which part of the brain responds exclusively to a sexually preferred stimulus until nowadays. (Jordan et al., 2015). Sartorius et al. (2008) used Functional Magnetic Resonance Imaging (fMRI) discovered abnormal amygdala activation profile among Pedophiles, while Cazala et al. (2019) revealed that images of children induced a bilateral activation in the lateral occipital and temporal cortices, especially in the right inferior temporal gyrus, and an activation in the cerebellar declive, in male with Pedophilic Disorder. Walter et al. (2007) reported reduced activation of the hypothalamus, where is a brain region involved in regulating hormone release and physiologic arousals, when Pedophiles viewing sexually arousing images of adults when compared with healthy controls. Besides, damages of the right frontotemporoinsular lobes with sparing of the anterior hypothalamus appeared to be related (Lopes et al., 2020). Some theories suggested the concept

of a general neurodevelopmental disorder or alterations of the structure and function in the frontal, temporal, and limbic brain areas. (Wiebking & Northoff, 2013; Mohnke et al., 2014; Tenbergen et al., 2015), or other brain disease (Mendez & Shapira, 2011) such as cortical and subcortical abnormalities (Poepl et al., 2011), frontotemporal dementia (Mendez et al., 2000) or brain tumours (Gilbert & Vranič, 2015; Burns & Swerdlow, 2003). Increased anterior insula response has been found when Pedophiles viewing infant animal images (Ponseti et al., 2018). Massau et al. (2017) showed increased activation in the left temporo-parietal-junction, left posterior insular cortex, the posterior cingulate gyrus and the precuneus, which are brain regions that responsible for moral processing of sexual offenses. Habermeyer et al., (2013a) showed erotic images of children activate the right dorsomedial prefrontal cortex, which is considered to be related to the reward and punishment system. Brain regions associated with action inhibition and social cognition, such as frontal lobe pathology (Habermeyer et al., 2013b), the right inferior temporal gyrus and bilateral orbitofrontal cortex (Scarpazza, 2021) and temporal and in particular prefrontal regions (Kärgel et al., 2017) play an important role in response inhibition and self-control to prevent behaviours being “acted out” (Gibbels et al., 2019).

Cerebral white matter deficiencies were found (Cantor et al., 2008; Cantor et al., 2015), while Schiffer et al., (2007, 2017) discovered grey matter anomalies in the ventral striatum, the orbitofrontal cortex and the cerebellum.

Brain imaging studies discovered that Pedophiles are generally weaker in memory functioning (Cantor et al., 2004), inhibition and verbal functioning (Turner. & Rettenberger, 2020), lower in intelligence (Cantor et al., 2004; Cantor et al., 2005a; Cantor et al., 2006; Blanchard et al., 2007) and cognitive functioning (Schiffer et al., 2008), more likely to be left-handed (Bogaert, 2001; Cantor et al., 2004; Cantor et al., 2005b; Blanchard et al., 2007; Rahman & Symeonides, 2008) and shorter in physical height (Cantor et al., 2007; Ian et al., 2015). However, some studies showed contradictory results about cognitive functioning (Azizian et al., 2016; Schiffer & Vonlaufen, 2011).

So far, no evidence showing that genetic factors contribute the establishment of Pedophilia (Alanko et al., 2016; Langevin, 1993; Gaffney et al., 1984). Blanchard et al. (2006) suggested that Pedophiles have less testosterone hormonal release and Ristow et al. (2018) indicated a reduced in GABA release in dorsal anterior cingulate cortex for concentration.

Different branches in the field of psychology have been trying to provide an illustration of the trajectory of Pedophilia and the psychopathology of Pedophilic Disorder. Psychoanalytic Theory asserted that the deviant sexual preference was developed by the immature level of psychological growth (Karpman, 1951), due to unresolved Oedipus Complex (Freud, 1953), that childhood weaning trauma emotionally deprived an individual from maternal warmth from the mother. Three Freudian concepts such as Repetition Compulsion as a drive to re-live the trauma (Freud, 1920) or projection of early childhood anxieties and avoidance in the sense of adulthood and intimate relationships with the adults induced by the Défense Mechanism (Freud, 1936) or

Reaction formation (Freud, 1936) to “act out” the sexual behaviour have been adopted to explain the sexual preference towards children.

Behaviourists described the lack adequate heterosexual skills and rejections by parents cause fear in developing relationship and interactions with adults and other peers, and subsequently prefer seeking affiliation with younger companions, while the chances of being rejected is lower. Averse to secondary sexual characteristics (Levin and Koenig, 1980) or conditioning children as sexual stimuli through learning process, may also be applicable to Pedophiles, while some explained that boys started beginning masturbation to immature or under-developed female bodies (girls at their own age), have conditioned the sexual arousal to these erotic images related to children (McGuire, Carlisle, & Young, 1964). Moreover, memory distortions of child abuse victims may develop fantasies that places them in the role of the aggressor and as a result of this recurrent fantasy, they became sexually conditioned to have sex with children (Garland & Dougher, 1990). Another common explanation is the Cycle of Abuse or the Abused Abuser Hypothesis, suggests that those sexually abused as children grow up to become more likely to be a child sex abuser. However, as victims are mostly female but most sexual abusers are male, the direct link between victimisation and perpetration cannot be validated (Plummer & Cossins, 2018).

The DSM-5 indicates that there is a correlation between Pedophilia and antisociality (personality type) (Seto, 2004) and therefore considered antisocial personality disorder could be a risk factor for Pedophilic Disorder (American Psychiatric Association, 2013a). Other psychological theories such as the Attachment Theory (Bowlby, 1988) and Ferenczi’s Theory of Trauma (Frankel, 1998) tried to suggest some explanations regarding the cause and development of Pedophilia, there is still no satisfactory elucidation for evidence proof.

At present, there is no cure for Pedophilia and attempts in changing deviant sexual preference are highly challenging. Principles for treating Pedophilic Disorder are reduce libido and sex drive, increase resistance and alteration of cognitive distortions (Fagan et al., 2002; Seto & Ahmed, 2014).

Pharmacological agents are often being used for diminishing the sex drive, the most common and most studied hormone inhibiting medications are the competitive testosterone inhibitors, the progestogens, and the gonadotropin-releasing hormone agonists. Cyproterone acetate (CPA) (Androcur®) and Medroxyprogesterone acetate (MPA) or depot medroxyprogesterone acetate (DMPA) (Depo-Provera®) are progestin type medications similar to the female hormone progesterone (Kuhl, 2005) and Luteinizing hormone-releasing hormone (LHRH) agonists (also called LHRH analogs or GnRH agonists) [Leuporelin (Eligard®)] is a gonadotropin-releasing hormone (GnRH) antagonist, they all work by decreasing testosterone and estradiol (Turner & Briken, 2018), and stop the pituitary gland from signalling the testicles to produce testosterone. Degarelix (Firmagon®) is also a gonadotropin-releasing hormone antagonist that has been studied recently for its efficacy in treating Pedophilic Disorder (Slomski, 2020; Landgren et al., 2020; ElSayed & Gupta, 2020).

However, when comparing androgen therapy and hormone treatment to SSRIs treatment, the later believed to have less severe adverse effects (Bradford & Kaye, n.d.) but also efficient in decreasing pedophilic fantasies (Federoff & Moran, 1997), while there are no significant differences in the effectiveness and efficacy of the three separate SSRIs – Fluvoxamine (Luvox®), Fluoxetine (Prozac®), and Sertraline (Zoloft®). (Greenberg et al., 1996).

Cognitive Behavioural Therapy (CBT) usually being used to increase resistance and alteration of cognitive distortions. There are several therapeutic models such as conditioning approaches, social and behavioural skills training, moral and empathy enhancement, and addressing the underlying sexual arousal pattern (University of Wisconsin, Board of Regents, 2002). Therapist focused on the pedophilic fantasies (Berlin & Krout, 1986), and re-evaluating and clarifying the negative moral and legal consequences of Child Sex Offending (CSO), CBT aims to reduce inappropriate attitudes and beliefs and subsequently increase resistance in “acting out” the inadequate behaviours that may reduce the likelihood and risk of Child Sex Offending (CSO) (Lösel & Schmucker, 2005; Hanson et al., 2002). Initially designed for treating addictions, Relapse Prevention through identification of goals and preventing high-risk situations is an important component in CBT (Witkiewitz, & Marlatt, 2004; Seto, 2008). Aversion Therapy is a kind of behavioural interventions that attempts to condition the inappropriate sexual urges with something negative, such as the consequences of being arrested, being sent to jail, and being attacked in the prison (University of Wisconsin, Board of Regents, 2002). Covert Sensitization is another behavioural intervention technique that associate the sexual orgasms with a more appropriate stimulus through Masturbatory Reconditioning (Laws, & Marshall, 1991), while in Satiation Therapy the patient has to masturbate to orgasm with an appropriate sexual stimulus and continue to masturbate with the previous inappropriate pedophilic fantasy after the climax.

The combination of Pharmacotherapy and Psychotherapy is suggested with better efficacy compared with either treatment as monotherapy (Garcia & Thibaut, 2011). However, the DSM-5 have not specified treatment options for Pedophilic Disorder and consider Pedophilic Disorder is not amenable to both Psychotherapy and Pharmacotherapy (American Psychiatric Association, 2013a).

There are several organizations that provide supports specifically to those who suffers from Pedophilia and Pedophilic Disorder. **Stop It Now!** (<https://www.stopitnow.org>) is an US based international organization with another branch in the UK & Ireland and is one of the leading organizations that provides national toll-free helpline, community-based outreach programs and online preventive tools services to Pedophiles for help seeking. **B4U-ACT** (<https://www.b4uact.org>) is a UK based organization aimed at educations and promotions for professional care services for those who are sexually attracted to children, by providing online information and resources for preventions and treatments. **StopSO** (<https://stopso.org.uk>) is a specialist treatment organisation for the prevention of sexual offending based in the UK. **Virtuous Pedophiles** (<http://www.virped.org>) is a website developed by and for people who have sexual interests in children but determined not to act on these interests, they provide online information materials and peer support for all

like-minded. **Troubled Desire** (<https://www.troubled-desire.com>) is an online self-help tool for those who need help for their sexual interests in children and are unable to seek in-person treatment. **Circles of Support and Accountability (COSA)** (<https://www.cosacanada.com>), with operations in Canada, the US and Britain offer helps to high-risk sex offenders not to reoffend after they have been released from prison. (Höing, et al., 2013). **The Global Prevention Project™** (<http://theglobalpreventionproject.org>) first launch in 2017 and is the first to provide treatment to high-risk offenders of child sexual abuse and child sexual exploitation in Canada. The treatment model based on the belief that pedophilic interests can be changed and treatment include individual and group psychotherapy, pharmacotherapy and referral mental health programs, while **The Canadian Centre for Child Protection** (<https://www.protectchildren.ca>) is a nationwide centre with three different programs (*Cybertip*, *Kids in the Know*, and *Commit to Kids*) aimed at reducing child exploitation, both in the real world and online. **Don't offend** (<https://www.dont-offend.org>), originally known as **Prevention Project Dunkelfeld (PPD)** (which means dark field), **The Prevention Network**, started in 2011 in Germany, where therapists are forbidden from revealing anything that happened during the context of treatment, and patient's confidentiality are protect by the German legal code (Beier et al., 2009; Mokros, & Banse, 2019). **The Association for Sexual Abuse Prevention (ASAP)** (<https://asapinternational.org>) is a US based non-profit organization dedicated to the primary prevention of child sexual abuse, brings together mental health professionals and those who are sexually attracted to children, and provide public health education for non-offending minor attracted persons (MAPs) who want to avoid acting out the behaviours. **PrevenTell** (<http://preventell.se>) is a Sweden national help line for individuals with unwanted sexual attractions operated under Karolinska Institute & Karolinska University. **Schicksal und Herausforderung (Fate and Challenge)** (<https://www.schicksal-und-herausforderung.de>) is a German support group for Non-offending Pedophiles.

However, there are no such services targeting or specialised in Pedophilia and Pedophilic Disorder in Hong Kong. **The End Child Sexual Abuse Foundation. (ECSAF)** (<https://www.ecsaf.org.hk>) is the only organisation dedicated to the field of Child Sex Offending (CSO) but is not designed for providing treatment services.

After search through the availability of mental health services in Hong Kong, both GovHK. (<https://www.gov.hk/en/residents/health/mental/mentalhealth.htm>) and **MindHK**, (<https://www.mind.org.hk/service-providers>) display no results for specialized treatment service for Pedophilic Disorder, while many of them concentrate on mood disorders such as Depressive Disorder, Anxiety Disorder, or developmental disorders such as autism spectrum disorder. There are plenty of online mental health services that provide self-help tools and programs in Cognitive Behavioural Therapy, Mindfulness as well as information about these types of mental disorders. **The Wellness Travellers App** (<http://socube.cuhk.edu.hk/en/fundedproject/wellness-travellers-psychological-services-co-ltd>) and **The Jockey Club TourHeart Project** (www.jctourheart.org), both ran by the Department of Psychology, The Chinese University of Hong Kong (CUHK) also focused on mood disorders only.

III. Research Hypothesis

Our hypothesis is that some special features of online mental health services such as (but not limited to): remain anonymous, all-day availability, treatment program designs and AI chatbot algorithms may cater the unique characteristics of Pedophilic Disorder (especially those susceptible individuals) and facilitate the help-seeking pathway in order to reduce the risk of developing Pedophilic Disorder and minimize the potential threat to the community.

IV. Materials and Methodology

Due to the extreme sensitivity of the subject, this study adopted internet-mediated research (IMR) on secondary data on academic studies on Pedophilic Disorder; its aetiology (nature and nurture), assessments, diagnosis, preventions and educations, interventions and treatments (both psychotherapy and pharmacotherapy) as well as the contemporary genetic and neurobiological findings related.

Literature searches of journals and publications focused within the past 30 years (unless classical theories and iconic findings in the field) were conducted through PubMed, ResearchGate, ScienceDirect (Elsevier), NCBI, EBSCOhost, Ovid, Sagepub, ProQuest, Springer Link, APA PsycNet, Frontiers in Psychiatry, Dow Jones Factiva, Semantic Scholar, Psychiatry Online, Tandfonline, Gale eBooks, Wiley Online Library, Annual Reviews, SOCPUS CUHK Library, Google scholar, Oxford Academic, Cambridge Core, Europe PMC and Gender Watch. Incident and court cases related to child-sex offences are sourced from news clippings within the recent 5 years through Google search.

V. Results

We screened 997 titles and abstracts and evaluated 869 full-text articles for our studies. Of which, we identified 869 primary publications met our eligibility criteria, of which, 366 articles fulfilled the inclusion criteria, of which ($n=211$) directly related to Pedophilic Disorder, ($n=69$) associate with child-sex related cases, ($n=37$) regarding treatment, therapy, education, and preventions, and ($n=49$) about online mental health services and help-seeking facilitators and barriers.

Prevalence of Pedophilic Disorder is unknown, but the number of reported cases related to child-sex and child pornography have indicated the problem of Pedophilic Disorder is not uncommon or not serious.

Help-seeking rate is very low either because of the lack of awareness of the severity or lack of available service dedicated to Pedophilic Disorder.

VI. Discussion

Controversies around deviant sexual desires had become especially acute in the context of the discussion of Pedophilia. The DSM-5 initially described Pedophilic Disorder as a sexual orientation and later clarified that the word “preference” was a typographical mistake and should

have read “interest” (American Psychiatric Association, 2013b). The American Psychiatric Association (APA) asserted their position on Pedophilic Disorder that acting on pedophilic desires is a crime, and adult-child sexually contact is always wrong (American Psychological Association, 2013c). In fact, the difference among “sexual orientation”, “sexual preference” and “sexual interest” are abstractive, while distinguishing between sexual desires and “act out” behaviours essentially helped to discriminate those non-offenders who resists and suppressed the desires, from those offenders who indulges the desires (Harvard University, 2010). Bailey (2009) stated that sexual arousal pattern characterized by strong arousal to one type and much weaker arousal to others, and he also endorsed the idea that Pedophilia is a sexual orientation. A distinction between Paraphilia and Paraphilic Disorder was proposed by Blanchard (2010), an American Canadian sexologist who famous for his works on Pedophilia. Table 3., extracted from Bridge & Duman (2018), demonstrates the evolution of the DSM from classifying Pedophilia as “Sexual Deviations” to “Paraphilias” to the current concept of separating “Pedophilia” and “Pedophilic Disorder”.

Pedophilia classification in DSM manual

DSM-I	DSM-II	DSM-III	DSM-III R	DSM-IV	DSM-IVTR	DSM-V
Personality Disorders	Personality Disorders And Certain Other Non-Psychotic Mental Disorders	Psychosexual Disorders	Sexual Disorders	Sexual And Gender Identity Disorders	Sexual And Gender Identity Disorders	Paraphilic Disorders
Sociopathic Personality Disturbance						Voyeuristic Disorder
	<u>Sexual Deviations</u>	<u>Paraphilias</u>	<u>Paraphilias</u>	<u>Paraphilias</u>	<u>Paraphilias</u>	Exhibitionistic Disorder
<u>Sexual Deviation</u>	Homosexuality	Fetishism	Exhibitionism	Exhibitionism	Exhibitionism	Frotteuristic Disorder
	Fetishism	Transvestism	Fetishism	Fetishism	Fetishism	Sexual Masochism Disorder
Homosexuality	Pedophilia	Zoophilia	Frotteurism	Frotterism	Frotterism	Sexual Sadism Disorder
Transvestism,	Transvestism	Pedophilia	Pedophilia	Pedophilia	Pedophilia	Pedophilic Disorder
Pedophilia,	Exhibitionism	Exhibitionism	Sexual Masochism	Sexual Mashosizm	Sexual Mashosizm	Fetishistic Disorder
Fetishism,	Voyarism	Voyeurism	Sexual Sadism	Sexual Sadism	Sexual Sadism	Transvestic Disorder
Sexual Sadism (Including Rape, Sexual Assault, Mutilation)	Sadism	Sexual Masochism	Transvestic Fetishism	Transvestic Fetishism	Transvestic Fetishism	Other Specified Paraphilic Disorder
	Masohism	Sexual Sadism	Voyeurism	Voyarism	Voyarism	Unspecified Paraphilic Disorder
	Other Sexual Deviations	Atypical Paraphilia		Paraphilia NOS	Paraphilia NOS	
	Unspecified Sexual Deviations		Paraphilia NOS			

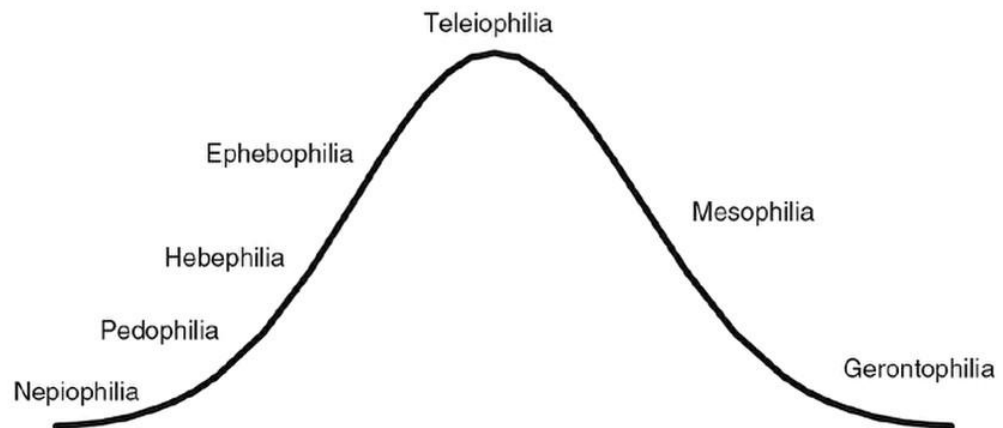
Bridge, E. & Duman, N. (2018). Identifying Pedophilia. *Life Skills Journal of Psychology*. 2. 215-222.

Table. 3.

In fact, many self-claimed non-offending Pedophiles adopted the mentality based on the DSM. First of all, the term “Hebephilia” denotes the erotic preference for pubescent children (age 11–14) was not considered as mental disorder by the DSM. Table 4, extracted from Seto (2017), demonstrates the hypothetical relative frequency distribution of Chronophilias among males. A common misconception is that anything above Pedophilia (age 13 or below) is not mental

disorder and less cautions has been addressed to Hebephilia (sexual preference for children age 11–14), and Ephebophilia (sexual interest in mid-to-late adolescents age 15 – 19).

Table 4. Hypothetical Relative Frequency Distribution of Chronophilias Among Men



Seto, M. C. (2017). The Puzzle of Male Chronophilias. *Archives of Sexual Behavior*. 46, 3–22.

However, any sex activities involving children under the age of 16 (commonly defined by most jurisdictions) and pornography involving children under the age of 16 (defined by Hong Kong jurisdiction) are considered as illegal, Hebephiles (sexual preference for children age 11–14), Pedohebephiles (a combination of Pedophilia and Hebephilia) and Ephebophiles (sexual interest in mid-to-late adolescents ages 15 – 19) are all at risk for Child Sex Offending (CSO), which are serious criminal offense. Although they are not considered as mental disorder, given the age for legal sex is 16 (for sex activities and for child pornography), the potential risks of these minor-attracted persons (MAPs) (Levenson & Grady, 2019) to offend as well as the marked distress for behavioural control, should be regarded as interpersonal difficulties.

Despite private masturbation, most behavioural expressions of Pedophilic Disorder and Child Sex Offending (CSO) are criminal offenses in most places across the world. Although more than 50% of Interpol member countries (95 out of 184) have no laws addressing child pornography (International Centre for Missing & Exploited Children (ICMEC), 2006), and out of 22 countries worldwide, Hong Kong is the only place within the Asia & the Pacific region that substantially comply with the recommended criteria set by the ICMEC. In addition to the Crimes Ordinance (Cap.200) Intercourse with girl under 13 (section 123) and Intercourse with girl under 16 (section 124), the Prevention of Child Pornography Ordinance (PCPO) (Cap.579) has come into operation since 2002, Any person who has in his possession any child pornography commits an offence and is liable for a maximum fine of HK\$1,000,000 and to imprisonment for 5 years, and for those whose conviction is related to prints, reproduces, publishes, the punishment would be even more serious. The initial idea of this bill is to prohibit child pornography, which is considered as “may pose serious harm to children”, because:

- “ a. *Child pornography promotes paedophiles’ feelings that having sex with children is normal behaviour.*

- b. *It fuels fantasies that incite offenders to offend.*
- c. *It is used for grooming and seducing children.*
- d. *Children are abused in the production of child pornography involving real children.*

”

The Legislative Council of the Hong Kong Special Administration Region (LegCo, HKSAR), 2001.

Hence, in the legal point of view, child pornography is considered as normalizing the sexual behaviour and fuels fantasies that incite people to offend. Regardless of the clinical ground to support, the rationale of the ordinance is to prevent and avoid harm to children. In other words, Pedophiles are already criminal offending if child pornography is merely in their possession. Furthermore, the law use “pornographic depiction” in defining child pornography, implies that the child does not necessarily has to be under age 16, while there are 18 years old who look like 16 and there are 16 years old who look like 18, there are children who look like young adults and vice versa. Likewise, “pornographic depiction” implies that the child does not necessarily has to be “in fact engaged in explicit sexual conduct”, or whether or not the child is in nudity, any sexual conduct or erotic behaviour can be regarded as child pornography, even when they are fully closed. This broadened definition and the rigour of the law, challenges many self-claimed non-offending pedophiles. Although some of them may not fully aware of the legal boundary or chose to try their luck of not being prosecuted, the risk of them being at risk as well as the associated stresses will not be lessened.

In accordance with the advanced technology and resources available for detecting Child Pornography Offenders (CPO), the number of detected Child Pornography Offenders (CPOs) has increased drastically since year 2000 (Wolak, 2011; Dauvergne & Turner, 2010; Middleton, Mandeville-Norden, & Hayes, 2009), while most of them are convicted of downloading or possessing child pornography (Wolak, 2011).

In additional, Child Sex Offending (CSO) can also be committed through online grooming, by which the offender meets children online, usually via cyber chat rooms or social media, with the specific intentions to gain their compliance and to maintain their secrecy to avoid disclosure, with the ultimate goal to commit Child Sex Offense (CSO). (Kleijn & Bogaerts, 2020; Craven et al., 2006). Pedophile Hunting refers to the process of tracing and entrapping these potential offenders online and the UK Supreme Court adjudicated that there is no right to privacy against “Pedophile Hunters” (Sutherland v Her Majesty’s Advocate, 2019).

A wide variety of advanced technology has been used for online Pedophile Hunting. Child Exploitation Tracking System (CETS) helps to track thousands of suspects simultaneously and collect evidence against suspected Child Sex Offenders (United Nations, 2015). The Terre des Hommes International Federation uses chat robot of a 10-years old virtual Filipino girl to track, identify and warning potential online offenders since 2013. The project namely **SWEETIE 2.0: CHAT ROBOTS** (<https://www.terredeshommes.org/sweetie-2-0-chat-robots>) has highly life-like outlook and chat online in cyber chat rooms and on dating sites. When someone starts talking to

her in a sexually suggestive manner, she automatically engages back, and all information from their conversation will be stored and used to warn, trace or even arrest and convict the offenders. Similarly, **Negobot** (a.k.a. **Lolita** or **Lolita chatbot**) is a 14-year-old-girl chatterbot designed by researchers from the University of Deusto and Optenet to lure online Pedophiles since 2014 (Laorden et al., 2015; Laorden et al., 2013). In 2018, Microsoft created an automated tool, namely **Project Artemis**, to spot patterns of communication in dialogue and detect Child Sex Offenders who try to groom children online, (Gregoire, 2020). Facebook also used computer systems to spot suspected online offenders and send warning messages to underage users for the risks.

PhotoDNA (<https://www.microsoft.com/en-us/photodna>) is an image-identification technology used to detect child pornography and other illegal content which has been reported to the National Center for Missing & Exploited Children (NCMEC). It was developed by Professor Hany Farid at Dartmouth College and Microsoft Research in 2009. The Baseline Project of Interpol aims to prevent users from accessing websites containing child sexual abuse material, by blocking access and warn users who may be about to commit a serious offence by viewing or downloading illegal materials. Google also launched an Artificial Intelligence (AI) based tool to identify illegal materials on the internet (Todorovic & Chaudhuri, 2018), while **iCOP** is an AI toolkit that detects new child pornographic images and videos in online peer-to-peer networks automatically (Ponseti et al., 2018). Meanwhile, a Singaporean IT company uses AI program to send warning messages to the offenders' social media accounts when they search for child pornography online.

This phenomenon indicates that Pedophiles, especially those who has “acted out” the illegal behaviours, are active on the internet, while locating and reaching them online is feasible with our current technology. This opens a door not only for the police to arrest them for their illegal behaviours, but also an opportunity to educate them and make them aware of the potential risks. Many self-claimed non-offending Pedophiles are in fact offending, and clear identifications and clarifications of their sexual interests and behaviours can help them to recognize their problems. The low seek-help rate of Pedophilic Disorder is partly because of these misconceptions and therefore they do not see a need for intervention (Bradley, Robinson & Brannen, 2012; Feng et al., 2011; Freeman et al., 2008). Besides, the lack of affordable mental health services with regards to Pedophilic Disorder is also a main reason for the low seek help rate, while public and perceived self-stigmatisation also prevent them to seek help (Levenson et al., 2017), as they are afraid of the mandatory reporting regulations. Seto (2018) claimed that among those who do not seek help, 78% fear of a negative reaction by the professional and fear of mandatory reporting to the police is 78% and to family or others is 68%, 54% are unable to find suitable mental health service and 43% are uncertain of whether the physician is knowledgeable in treating Pedophilic Disorder. Adolescents and young adults tend not to seek help (Guillver et al., 2010), while help-seeking attitudes do not appear to be a barrier among older adults (Mackenzie et al., 2006).

Early recognition of the problem before occurrence of any Child Sex Offences (CSO) is vital (Harlow et al., 2001) and poor insight always results in poor treatment outcomes. Early realisation of the underlying risk factors and early start of interventions is critical in prevention (Houtepen et

al., 2016). In recent years, there has been a burgeoning interest in online mental health services, telehealth (telepsychiatry and telepsychotherapy), Artificial Intelligence (AI) and virtual reality (VR). Our contemporary technologies are powerful and effective in both primary and secondary preventions of Child Sex Offence (CSO) (Açar, 2016; Seto, 2009). Primary prevention includes education and training programs to parents (Wurtele et al., 1991) and education campaigns to all children (Seto, 2008), while secondary prevention focuses on at-risk Pedophiles and vulnerable child victims for Child Sex Offending (CSO) (Heasman & Foreman, 2019; Seto, 2008). Accessibility to online resources is an excellent facilitator for help-seeking (Bradley et al., 2012; Collin et al., 2011; Davis-McCabe & Winthrop, 2010; Burns et al., 2010; Horgan & Sweeney, 2010), while non-face-to-face services (Rasmussen Pennington et al., 2011; Horgan & Sweeney, 2010; Kummervold et al., 2002), remain anonymous (Bradley et al., 2012; Burns et al., 2010; Horgan & Sweeney, 2010; Kummervold et al., 2002), credibility and trust (Collin et al., 2011), reduced stigma (Davis-McCabe & Winthrop, 2010; Shandley et al., 2010; Gulliver et al., 2012), less distress (Gould et al., 2002; Davis-McCabe & Winthrop, 2010), and enhancement in mental health literacy (Kummervold et al., 2002; Costin et al., 2009; Nicholas, 2010; Shandley et al., 2010; Horgan & Sweeney, 2010; Collin et al., 2011; Rasmussen Pennington et al., 2011; Gulliver et al., 2012) serve as important components for effective online mental health services.

Evidence for psychiatric use of Artificial Intelligence (AI) chatbots is receptive and positive (Vaidyam et al., 2019; Nadarzynski et al., 2019). By learning diagnostic criteria, treatment information and clinician behaviour (Miner et al., 2019), AI chatbots offer an opportunity for patient self-disclosure and sharing, while the emotional effects are equivalent to in-person disclosure (Ho et al., 2018). AI chatbots can also provide preliminary medical screening, consultation, and referral to offline mental health professionals. Other functions of online mental health services such as health information offers updated research findings on treatments or coping strategies enable early recognition and enhance insight to the problem. Users can learn self-control techniques to cope with the sexual urges and therefore strengthen their resistance of “acting out” the inappropriate behaviour, while open forum allows Pedophiles to connect with others and obtain peer supports. The most commonly endorsed barriers for help-seeking such as concerns regarding negative reactions and stigma, privacy, confidentiality, and fear of mandatory reporting can be resolved (Levenson & Grady, 2019). The 7x24 availability and relatively lower cost also facilitate Pedophiles to seek help online. In addition, the unclear prevalence implies that many medical practitioners are not familiar in dealing with the actual case of Pedophilic Disorder (Lasher & Stinson, 2017), the online platform provides practical and fruitful materials for them to gain a better understanding and establish more effective treatment and prevention programs for patients with Pedophilic Disorder. Psychotherapy and behaviour interventions such as mindfulness and CBT self-help programs can be delivered online, for self-control, altering cognitive distortions, or even sexual preference reconditioning.

VII. Conclusion

Despite debates on the clinical and legal definition of the age of a child (Kalim, 2013), Pedophilic Disorder is a multidisciplinary concern worldwide that requires a bio-psycho-socio-legal plan for prevention and intervention (Bridge & Duman, 2018). Conventional view of

Pedophilia is an incurable sexual deviant but contemporary findings suggest considering Pedophilia as a sexual interest, preference, or orientation for age (Seto, 2012), similar to homosexuality as a sexual orientation for gender (Seto, 2017). Given the sexual urges to actually molest and harm children is under self-control or not, Pedophilia and Pedophilic Disorder are differentiated. Attention has to be drawn on the marked distress related to the sexual urges as well as the nature of the “acted out” behaviours are illegal or not. SSRIs and the recently studied hormone antagonist Degarelix may be an option to manage the inappropriate sex drives and urges. Alternatively, our proposed online mental health platform may play an important role in providing useful information (for early recognition and better insight), updated resources (of research findings of new treatment or coping strategies), mindfulness and CBT self-help programs (for self-control of inappropriate or unwanted urges, changing cognitive distortions, or even sexual preference alteration), interactive AI chatbot algorithms (for preliminary medical screening, consultation or referral), open forum (for peer support).

In addition to all moral, ethical, and legal considerations, the practical use and efficacy of our proposed model served as a facilitator to help seeking pathway for Pedophiles are still yet to be thoroughly justified, examined and validated. A rigorous clinical trial is needed and more extensive research in coping strategies and treatments methods; both psychotherapeutic and pharmacotherapeutic, the application of the cutting-edge technology and debates regarding the moral and ethical concerns are strongly recommended and encouraged.

VIII. References

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XI. Appendix A

Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2009 Checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	More Than Mental Disorder but Also a Serious Criminal Offence – An Internet-mediated Secondary Research (IMR) on Pedophilic Disorder and How Online Mental Health Services Facilitate the Help-seeking Pathway	1
ABSTRACT			
Structured summary	2	Severe Mental Illness (SMI) usually refers to mental disabilities that result critical functional impairments, such as schizophrenia, bipolar disorder, dissociative identity disorder or post-traumatic stress disorder (PTSD). However, there are some types of mental illness that are also detrimental not only may put the patient at risk of committing criminal offences but may also injure others and bring serious harm to the community. Pedophilic Disorder is one of the potential crises that often being underestimated or even overlooked due to taboo, stigma, misconception, and unknown prevalence. Help seeking intention is extremely low and the services available for this illness are also insufficient. This study aims to explore the various aspects of Pedophilic Disorder with regards to the effectiveness of online mental health services in order to facilitate the help-seeking pathway for both prevention and treatment purposes, with an ultimate goal to reduce the risk of developing Pedophilic Disorder and minimize the potential threat to the community.	3
INTRODUCTION			
Rationale	3	Existing online mental health services mainly focus on common mental illnesses such as Major Depressive Disorder, Bipolar Disorder, Anxiety Disorder, Sleeping Disorders or Obsessive-compulsive Disorder. Many studies proven its effectiveness, while none has been done towards Pedophilic Disorder. This study aims to validate online mental health services (Telepsychiatry and Telepsychotherapy) in order to facilitate the help-seeking pathway for both prevention and treatment purposes.	6
Objectives	4	To study the theoretical framework on the aetiology of Pedophilic Disorder and how this disease impacts the patients, the care givers and the entire community in the clinical sense. Investigation of the unique pathology and characteristics of Pedophilic Disorder as well as the prevailing treatments, while validating some special features of online mental health services could help to deal with the problem by increasing the help-seeking rate and reduce the risk of developing Pedophilic Disorder. Barriers and ethical issues of online mental health services will also be discussed.	6
METHODS			
Protocol and registration	5	This study adopted internet-mediated research (IMR) on secondary data on academic studies on Pedophilic Disorder; its aetiology (nature and nurture), assessment, diagnosis, prevention and education, intervention and treatment (both psychotherapy and pharmacotherapy) as well as the contemporary genetic and neuroscience findings related.	
Eligibility criteria	6	Study characteristics: P - Population = Pedophiles I - Intervention = Online mental health services (Telepsychiatry and Telepsychotherapy)	

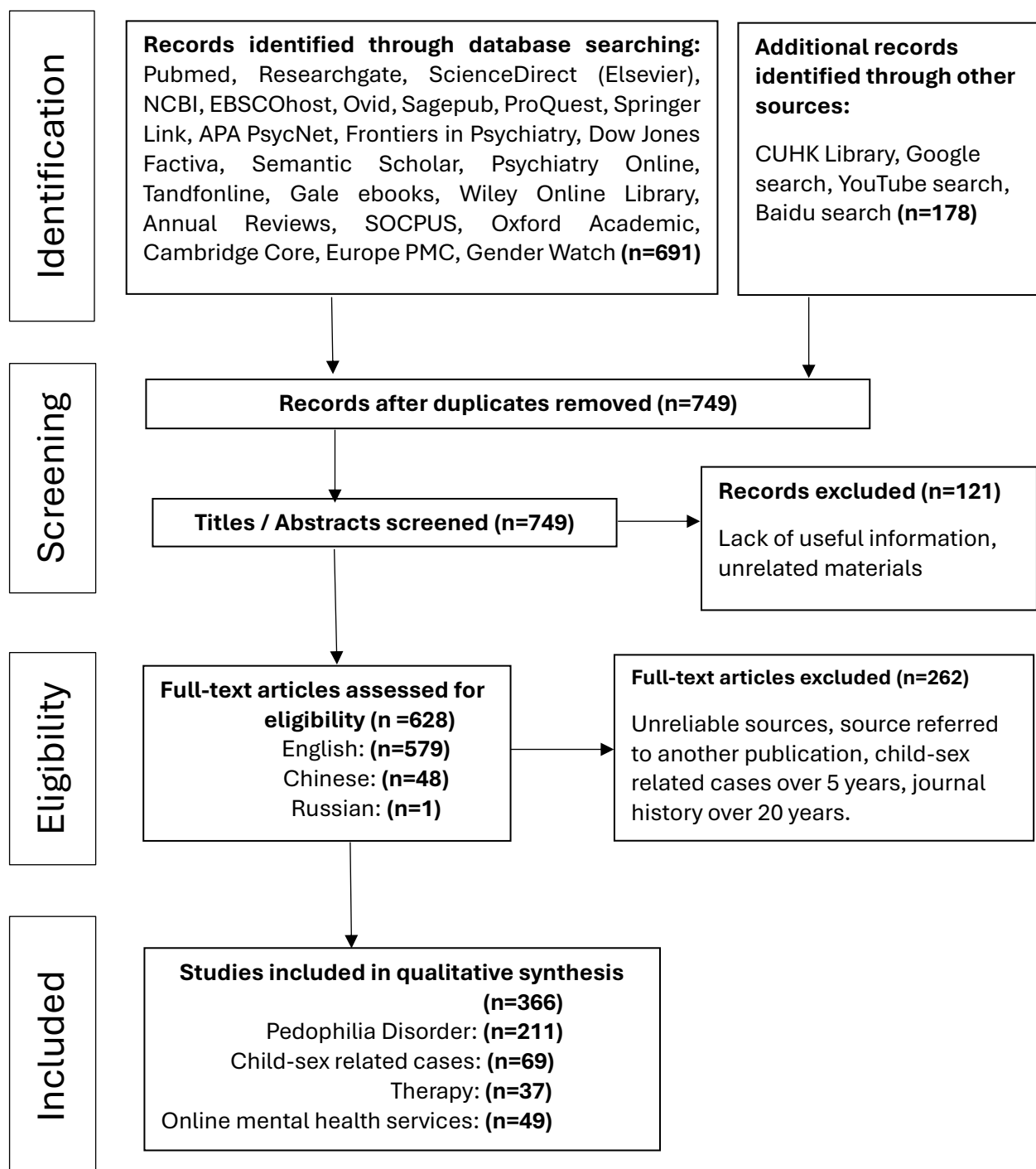
		<p>C - Compared with = Patient with other types of mental disabilities O - Outcome of interest = Increase help-seeking rate</p> <p>Report characteristics Years considered = Recent 30 years for journals (Unless classical theories and iconic findings in the field) and recent 5 years for news clippings. Language = English and Chinese Publication status = Full text and online</p>	
Information sources	7	Peer-reviewed journals, clinical textbooks, creditable internet-based resources, mainstream news articles, renowned documentary videos	
Search	8	<p>Journals and publications will focus within the past 30 years (Unless classical theories and iconic findings in the field) through (but not limited to) the following online databases:</p> <ol style="list-style-type: none"> 1. Pubmed 2. Researchgate 3. ScienceDirect (Elsevier) 4. NCBI 5. EBSCOhost 6. Ovid 7. Sagepub 8. ProQuest 9. Springer Link 10. APA PsycNet 11. Frontiers in Psychiatry 12. Dow Jones Factiva 13. Semantic Scholar 14. Psychiatry Online 15. Tandfonline 16. Gale ebooks 17. Wiley Online Library 18. Annual Reviews 19. SOCPUS CUHK Library 20. Google scholar 21. Oxford Academic 22. Cambridge Core 23. Europe PMC 24. Gender Watch <p>And news clippings will limit within the recent 5 years through:</p> <ol style="list-style-type: none"> 1. Google search 2. YouTube 	
Study selection	9	<p>The following keywords will be used for searching and study criteria:</p> <p>Pedophilia Paedophilia Pedophile Paedophile Pedophilic Paedophilic Pedophilia-Themed Obsessive–Compulsive Disorder Pedophile OCD Pedophilic OCD POCD Paraphilia Infantophilia</p>	

		<p> Nepiophilia Hebephilia Hebophilia Hebophilie Pedohebephilia Ephebophilia Pederasty Paederasty Chronophilia Offending- (+ Pedophilia) Nonoffending- (+ Pedophilia) Child pornography (+ Pedophilia) Child Porn (+ Pedophilia) Lolicon (+ Pedophilia) Lolita (+ Pedophilia) DSM (+ Pedophilia) ICD (+ Pedophilia) Aetiology (+ Pedophilia) Etiology (+ Pedophilia) Pathology (+ Pedophilia) Psychopathology (+ Pedophilia) Epidemiology (+ Pedophilia) Prevalence (+ Pedophilia) Assessment (+ Pedophilia) Diagnosis (+ Pedophilia) Prevention (+ Pedophilia) Education (+ Pedophilia) Treatment (+ Pedophilia) Therapy (+ Pedophilia) Medication (+ Pedophilia) Intervention (+ Pedophilia) Online mental health Digital mental health Cyber mental Health Telehealth Telepsychiatry Telepsychotherapy 戀童 恋童 變童 </p>	
Data collection process	10	Data collection will focus on internet-mediated research (IMR) through internet by one viewer. Academic journals and articles within the recent 20 years (Unless classical theories and iconic findings in the field) and child-sex related cases within the recent 5 years will only be considered.	
Data items	11	Journals, publications, news clippings and videos regarding Pedophilic Disorder, child related sexual offences, and online mental health services.	
Risk of bias in individual studies	12	In justifying the validity and feasibility of online mental health service with regarding to facilitate a help seeking pathway to Pedophilic Disorder, features, characteristics as well as moral concerns will be considered.	
Summary measures	13	The primary outcome measure is the effectiveness of online mental health service to reduce the possibility of developing Pedophilic Disorder.	
Planned methods of analysis	14	Components and characteristics of existing therapies for Pedophilic Disorder will be examined if they are conducted online. Other new and existing online tools for Pedophilic Disorder will also be evaluated.	

Risk of bias across studies	15	Barriers and ethical issues of online mental health services (for mental disorders other than Pedophilic Disorder) will also be considered.	
Additional analyses	16	Existing online mental health services worldwide will be included in this study	
RESULTS			
Study selection	17	Records identified through database searching (n=691) and Additional records identified through other sources (n=178). Records after duplicates removed (n=749) and Titles / Abstracts screened (n=749). Records excluded due to lack of useful information and unrelated materials(n=121). Full-text articles assessed for eligibility (n =628) [English: (n=579), Chinese: (n=48), Russian: (n=1)]. Full-text articles excluded due to unreliable sources, source referred to another publication, child-sex related cases over 5 years and journal history over 20 years. (n=262). Studies included in qualitative synthesis (n=366) [Pedophilia Disorder: (n=211), Child-sex related cases: (n=69), Therapy: (n=37), Online mental health services: (n=49)]	
Study characteristics	18	Psychopathology, personality traits and common behaviors of individual who has a high risk to develop Pedophilic Disorder and Pedophiles has been identified and compared with online mental health services	
Risk of bias within studies	19	Pros and cons of online mental health service and its feasibility to facilitate a help seeking pathway to Pedophilic Disorder have been evaluated, legal and moral concerns have also been considered.	
Results of individual studies	20	Since there are no existing online mental health services especially for Pedophilic Disorder, studies regarding evidence-based therapies (off-line) for Pedophilic Disorder and existing online mental health services for other mental disorders have been compared.	
Synthesis of results	21	Components and characteristics of existing offline therapies for Pedophilic Disorder will be examined if they are conducted online. Other new and existing online tools for Pedophilic Disorder will also be evaluated.	
Risk of bias across studies	22	Barriers and ethical issues of online mental health services (for mental disorders other than Pedophilic Disorder) have been considered.	
Additional analysis	23	Existing online mental health services worldwide have been reviewed.	
DISCUSSION			
Summary of evidence	24	Not available yet	
Limitations	25	The methods being adopted only depends on desktop research and the feasibility and validation of online mental health services as a solution to the problem is not being tested	
Conclusions	26	Not available yet	
FUNDING			
Funding	27	Not applicable in the study	
From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097			

X. Appendix B

Preferred Reporting Items for Systematic Reviews and Meta-Analyses
(PRISMA) 2009 Flow Chart



Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). *Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement*. PLoS Med 6(7): e1000097.