Juvenile delinquents refer to young people of age eighteen years or younger who have committed a crime or antisocial acts such as vandalism, stealing the things, or violence against others. Seeking solutions to reduce juvenile delinquency is one of the important responsibilities among members of society. Numerous instances indicate that the pet animals are helpful for the youths who have difficult relationships with other people, cope with the emotions they experienced, improve their communication and social skills, and behave as a responsible citizen which helps to reduce crime rates and promote safe environment. Nonetheless, there are very few evidences of incorporating pet therapy into the community client care setting or rehabilitation center in Malaysia. Public as well as nurses, doctors, social workers and health care providers need to get awareness of pet therapy so that they would integrate it and the best use of it in dealing young people with antisocial behaviors or juvenile delinquents. Thus, the aim of this study is to explore the potential benefits of pet-facilitated-therapy (PFT) such as the importance and use of it, physical, mental, and social benefits of it among the juvenile delinquents. In this paper, all the available articles or studies regards to pet therapy in young people or adolescents are searched through electronic data bases using systematic literature search. The findings are categorized into three themes namely (i) important role of pets in adolescent development, (ii) the use of pet therapy in rehabilitation centre, (iii) physical, social and mental benefits of pet therapy in juvenile delinquents. This study provides strong evidence of the benefits of PFT and recommends the best use of it as part of the rehabilitation process of adolescents with antisocial behaviors or juvenile delinquents.

**Keywords:** Juvenile delinquents, pet-facilitated therapy, rehabilitation, antisocial behaviours.

## Introduction

The health and wellbeing of young people are extremely important for the development of the healthy society since they are the future leaders of society. Health here does not restrict to physical only but also contribute to mental, emotional, social and spiritual aspects. The aim of this study is to explore the potential benefits of pet facilitated therapy in part of the rehabilitation process of young people in need of care and protection. The term juvenile delinquency has been derived from the Latin word *juvenis*, which means young and the *delinquer* which means to omit. It refers to the involvement of teenagers in the crimes or unlawful behaviour or mistakes against the law and not accepted by the society [1]. Juvenile delinquents refer to young people of age eighteen years or younger who have committed a crime or antisocial acts such as vandalism, stealing the things, or violence against others. In other terms, young people with anti-social behavior and whose conduct is beyond the expectations of society, social norms and thus, they may be punished by law or brought before the court.

Some sociologists stated the importance of finding the alternative ways of achieving society valuable things when there is no way of achieving it. Children and young people are innocent, and they are not born as criminals and their behaviors can be shaped in young whether good or bad. They are the useful human resources for the nation and it is worthwhile to improve their behaviors and use their talents. They need to have a feeling of their contributions to the society and sense of value to themselves like other normal people. In this regard, “adolescents in need of care and protection”, was suggested to use interchangeably with the term “juvenile delinquents”.

At the same time, crimes are the most terrible things in society, and should be prevented at all possible
ways. Moreover, the antisocial behaviours are not acceptable in every civilized society. People criticise and avoid those with antisocial acts which in turn may make their conditions worsen and increase their bad behaviour. It is said that just sending them to jail without removing the root cause may not be able to solve the problem completely. Their problems need to be heard and solved by identifying the possible solutions.

Numerous studies pointed out the benefits of the pet therapy in the rehabilitation process of adolescents mentioning the pet animals are helpful for the young people who have difficulty in relationship, coping with emotions, and social skills to behave as a responsible citizen. Nonetheless, there are very few evidences of incorporating pet therapy into the community client care setting or rehabilitation center of juveniles in Malaysia and many South East Asia countries. Thus, this paper aims to identify the potential benefits of pet therapy in the rehabilitation process of adolescents who need of care and protection. It is aimed to improve awareness on pet therapy among the health care professionals, authorities in juvenile centres and the society. It is also intended to reduce antisocial behaviours and crime rates of juveniles after improving their physical, mental, and social health.

**MATERIALS AND METHODS**

Systematic literature review method was used in this study and all available literature sources were identified mainly from the electronic data bases. The data are searched through Google scholars, Psycinfo, Cinahl, PubMed, Science Direct, and Research Gate. The terms such as pet therapy, the use of pet therapy in adolescents or juvenile delinquents, benefits of pet therapy in young people, pet therapy in substance abuse, and communication with juvenile delinquents were typed and searched online. The studies investigated the benefits of pet therapy in adolescents with physical, social, and mental needs were chosen. The articles published between 2000 and 2019 were identified and discussed in this study. Out of the 115204 studies done in the past twenty years explored in the system, 150 articles from openly accessible source were identified in which 20 of them which met inclusion criteria were identified and discussed.

**Findings and discussions**

A lot of factors contributed to the delinquent such as harmful surroundings, wrong company, the abuses, and unmet needs they have. Nowadays, the influence of social media such as the video games, televisions, and the internet may also change their behaviors. It is also found that the prone to crimes such as theft, rape, and murder are resulted from the absence of proper environment, lack of moral education and proper guidance from the family [1]. Most of the young people who are delinquent tend to be from the broken homes, have abandoned and abused in their childhood, and the lower socioeconomic background.

The causes of JD are discussed among psychologists, sociologists and criminologists and are identified as family problems, lower socioeconomic status, peer influences, family structure, and parenting. The types of parents they have, or the parenting styles influenced the warmth and responsiveness receives by the young people which contributed among the causes of JD. The neglected type of parent does not provide adequate guidance to their children nor set reasonable standards of their behaviors. On the other hand, the authoritarian type of parent usually provides harsh treatment without providing the love and warmth their children need. The attachment between the parents and children as well as proving appropriate response is important for developing healthy social behaviors in the children. It could be explained from the perspective of love and belongings needs by Maslow’s psychological theory. All these might lead the young people not knowing how to make themselves happy, increase school dropouts, fail to abide by the laws, or find themselves unlawful means to achieve their goals. If they are being abandoned from the society for their unlawful behaviors, the worthless feelings they have might cause them to indulge in more crimes, and harmful to the society. They are the important resources of the country, they deserve to get a second chance, and thus, education and rehabilitation process of them are extremely important. Upon the findings from a systematic literature review, three themes are developed as follows.

**Important Roles of Pet Facilitated Therapy in Adolescents Development**

The animals have always been an important part of human history. In some culture and religion, they are being treated as gods and stories portraying animals’ human relationship (Hindu), and reincarnation through 550 lives (Buddhists). Islam encourages to treat animals with kind and compassion, reminded reward and punishment regarding their treatments [2]. Humans have been benefiting from animals for a variety of reasons since from the ancient time; transportation, keeping farms, a source of food, milk products and clothing. Nowadays the use of animals even extends to catching criminals with illegal drugs and rescuing the victims from disaster that occurred due to fire, earthquake, accident, flood or land slide, the latest as animal assistant activities (AAA) or animal assistant therapy (AAT) or animal assistant intervention (AAI) or pet facilitated therapy (PFT).

In addition to these, an interest has been raised regarding the use of pets in JD since some studies pointed out the potential benefits of it. Juvenile delinquents are associated with the behavioral problems which are related with their unmet physical, psychosocial needs, problems at home, and peer
pressure. Moreover, an alarming number of children around the world who are convicted of various crimes are usually deprived of their needs and rights and held in detention without sufficient care. According to the UNICEF, the children who committed juveniles’ crimes is related with deprivation of needs, rights and lack of proper care at the detention centre. United Nations’ The Committee on the Rights of the Child (CRC) mentioned that all these could related with their growth retardation, and highlight the need for “providing the proper care, protection, and treatment by catering to their developmental needs and by adopting a child friendly approach in the adjudication and disposition of matters in the best interest of children and their ultimate rehabilitation” [1].

The physical and psychosocial health in adolescent is important for the contribution of healthy behaviors and quality of life in their adult life. Adolescence is the phase for developing self-concept and identity, the failure to meet this need would affect in their self-esteem and cause role confusion. The pets could provide companion and serve as a source of comfort to them. Keeping pets, feeding and walking them around provide the adolescents a sense of responsibility which is necessary for a good and responsible citizen since the lack of sense of responsibility contribute to their antisocial behaviors and crimes. Pet therapy could be used as a form of providing friendly and non-judgmental environment to the adolescents. It is expected that pet therapy would help them achieve bonding and sympathy, improve their social skills, moral behaviors and reduce crimes.

**The Use of Pet Facilitated Therapy in Juveniles Rehabilitation Centers**

Medical studies suggested the use of companion animals have the potential benefits to children physical, social and mental benefits. The mutual interactions with animals help promote children and adolescent development. Therefore, PFT is suggested for people with physical, mental, social disorders, chronic patients with social deprivation, prisoners, drug addicts, and the elderly and young people.

The animal therapy provides positive therapeutic alliance for clients with substance abuse (polysubstance, cannabis, and methamphetamine dependence) and alcohol addiction. And it is demonstrated the success of treatment for drug addicts and substance abusers by using this for complementary and evidenced-based study with n= 231 people [3].

Another study [5] was conducted on the effect of Equine-Assisted Psychotherapy (EAP) with n=90 patients of the psychiatric hospital. 76% of participants were diagnosed with schizophrenia or schizoaffective disorder, while 56% with history of committing civil or forensic reasons, and 63% with aggressive behaviors. The result indicated the significant effect of intervention group (p=.035); with specific benefits of EAP in post hoc tests (p<0.05).

Moreover, one research study recommended pet therapy as cognitive behavioral approach or a tool for working with children and adolescents since it helped reduce their apprehension and anger. It is stated that animal abuse is considered as the important warning signs of the crimes and cruelty to animals which may link with their later abuse to humans. They pointed out the need for therapists and other professionals to understand the role of pets in dealing with individual and family problems to provide proper counseling for the situation [4].

**Physical, Social and Mental benefits of PFT in juvenile delinquents**

**Physical benefits of PFT**

The adolescent is the time for rapid physical growth and taking care of their health since young is important for achieving health and well-being of their later life. The problems of obesity and its related consequences are not unusual among the children nowadays. These are related with their inactive lifestyles due to a need of prolong sitting period for their school workload, playing computer games and lesser outdoor activities. Thus, young adolescents with juvenile should be given opportunity to play with pets, go for a walk or take care of them since animals could be a form of funful games and provide active physical movement for them.

It was supported by the studies [6] in which the physiological effects of animal assisted therapy (AAT) were identified. Six neurochemicals related with blood pressure were measured among the participants (n=18) before and after their interaction with dogs and the result indicated the significant increase in attention seeking behavior (affiliation behavior, positive interaction) (P<.05), and thus AAT is suggested as a form of therapy.

Moreover, the occupational therapy practitioners use animals as an occupation for the children and youth since they can offer unconditional love, improve their motivation, and help reduce their stress [7]. In addition, a study [8] described the use of pets as the prison Pet Partnership Program to help inmates of Washington State Rehabilitation Centers learn to train, groom, and board dogs within the prison walls.

**Social Benefits of PFT**

Animals are useful as the potential providers of social support in troubled children and adolescents, as well as instructional tools for promoting their positive cognitive and behavioral changes such as social skills, sense of personal responsibility, and the ability to
control disruptive behavior, improved self-esteem and self-efficacy [9]. The individual characteristics involve in juvenile crimes is related with their poor judgement, irresponsibility, improper socialization. Even though the animals are not the highest forms of intellectual interaction with humans, they can serve as wonderful companions. Pet therapy could motivate the young people improve their social relationship and sense of responsibility since it includes communication with, feeding and taking care of another creatures.

A study [1] was conducted by interviewing the youths from the inmates of the Home (N=50), and in-depth analysis of the 5 cases of offences with case study method (individual and environmental factors that contribute delinquent acts). The causes behind JD are identified as the individual and environmental variables, individual risk factors of the delinquents, negligence and ignorance of the parents, peer influence, family poor socio-economic status, pressure and lack of proper socialization. They suggested the individual and contextual factors causing harmful behavior of the youths to be considered and the need for assisting them engage in some activities, fair and friendly atmosphere and proper socialization as the key requirement to achieve their positive behavioral development.

A qualitative study design [10] was conducted to explore the effect of Canine-Assisted Therapy (CAT) and the main themes, the “human-animal bond” with three subthemes: “unconditional love and acceptance”, “affect regulation through touch and distraction”, and “facilitating emotional expression” was identified from the interview data. The second theme was developed as “dog as an ally in treatment” with three supporting themes: “catalyst for working alliance”, “therapist-dog relationship”, and “community dog”. Since dealing and interacting with them provide such positive effects on human, the recommendations for the use of it should be made especially in the juveniles with social and behavioral problems.

The study [11] on the family, peer group and economic factors of juvenile crime was conducted in Central Jail Peshawar. Interview with 45 juveniles found that majority of the respondents was illiterate (31.1%), belonged to low income profile (42.2%) and were prone to friend’s bad association (75.6%). Moreover, a systematic review [12] suggested the social relationships as fundamental to the development of child and adolescent and the evidence of the potential benefits of pet ownership could provide their developmental outcomes. They highlighted the link between pet ownerships and development of social behaviors (such as social competence, network, interaction, and play behavior) in addition to other developmental outcomes in emotional (self-esteem, loneliness, anxiety, depression); cognitive and educational (perspective-taking abilities and intellectual development), and behavioral.

Moreover, the mutual giving and receiving of affection is an important component of the human-animal bond since the simple act of giving can make a person feel better and more worthwhile [13]. The pets provide nonjudgmental, unconditional love and acceptance to the young people who are lacking love and belongingness feelings in their life. Incorporating animals in teaching and socialization process of juveniles could improve their sense of responsibilities, concerns about others. It is hoped that young people with stronger social bond and sense of belongingness will increase their sense of worth, self-esteem who will commit lesser crimes than those with weaker social bond, and lack of belongingness.

**Mental benefits of PFT**

Adolescents is the time span of children which experience through many psychological problems and difficulties such as depression, anxiety, substance abuse, and the negative peer pressure. A paper [9] indicated the use of animals as a widely applied therapy in adolescent mental health setting by mentioning the potential benefits of it such as reduction of anxiety, improving rapport and communication, reducing financial burden after engagement and compliance of therapy. It also pointed out the use of animals for sources of comfort in socialization process and increasing positive social behavior.

One of the reasons contributed for the source of aggression in young people is not being able to make lasting and secure attachment with other human beings. Moreover, trauma in childhood and adolescent also resulted unwanted results and contribute to public health issues. Another preliminary finding [14] indicated that animal assisted interventions (AAI) have the encouraging and positive results for clients with Post Traumatic Stress Disorders (PTSD) symptoms, depression, and anxiety for short term improvement. They recommended the AAI as a complementary therapy in addition to the primary treatment of trauma.

One study [15] conducted on the role of the therapy dog among the prisoners (n=6). The participants with mental health needs such as self-harm, childhood trauma, mental illness, addiction, and PTSD are given the (average 30 minutes) visit with therapy dog with the experienced dog handler. The findings were said to be congruent with six evidence-based-trauma principles of US substance abuse and mental health services namely: (i) safety; (ii) trustworthiness and transparency; (iii) peer support and mutual self-help; (iv) collaboration and mutuality; (v) empowerment, voice, and choice; (vi) cultural, historical, and gender issues.

A study on “Complementary Psychosocial Interventions in Child and Adolescent Psychiatry” [16] described the use of Pet Assisted Therapy (PAT) as an augment to conventional medicine and a part of psychological therapies in mental health area. They
suggested the PAT as a new form of complementary therapy for children and adolescent in mental health setting pointing out the potential benefits of pet in psychological responses, their usage in clinical, psychotherapeutic processes and specific psychiatric disorders.

Another descriptive exploratory study evaluated the effect of dog-assisted therapies in the rehabilitation of children with cerebral palsy and physical and mental disabilities in Antalya (Turkey). It is found that the children learn to cope their anxieties, fears, and able to make plans for their aims, improved physical abilities, developed empathy and communication skills, and thus they suggested dog-assisted therapies and activities as supportive method for routine treatment [17].

The study [18] on the “Animal-Assisted Activity” asserted to search the effects of a complementary intervention program on psychological and physiological variables in hospitalized patients at mental health unit of a community hospital. The participants n=218 are divided into two equal groups; intervention and control. The intervention group received 1-hour animal assisted activity while control group receive 1-hour stress management program. It is found that animal-assisted activity decreases the depression (P < .0001), anxiety (P < .0001), pain (P < .0001), and pulse (P < .04). It also helps improve the associated physiological measures of stress such as blood pressure, pulse, and salivary cortisol.

The exploratory study [19] examined the effect of dog-assisted intervention on (n= 132) students’ well-being, mood, and anxiety with either an experimental condition (both dogs and handlers) or one of two control conditions (dog only or handler only). The result revealed the presence of dogs lead the participants to have improvements in mood and well-being, and reduction in anxiety. And it is found that the students interacted with the dog alone have more positive shift in mood compared to those with both the dog and the handler. And these findings suggested a therapy dog as an alternative method of intervention for improving well-being, anxiety, and mood of the students.

The study by (Purewal, 2017) pointed out the association between pet ownership and emotional health benefits of children such as improving self-esteem, and cognitive benefits (perspective-taking abilities and intellectual development), and reducing loneliness, anxiety and depression [12]. Therefore, it is indicated that pet therapy has the potential benefits of developing mental health of juvenile youths.

CONCLUSION
Pet therapy was recommended in many countries and importance of human animal relationships has been highlighted since centuries ago. However, the awareness of pet therapy among the authorized person and medical practitioners are a concern. Helping the juveniles will help reduce crime rates which will subsequently reduce adult crime rates in the society. One study [20] identified the awareness of psychologists (n=52) about AAT which reveals that 11.5% of them only were familiar, 47.5 were somewhat familiar, and 13.1 were not familiar at all with AAT. And average Likert scale on familiarity was 2.85, and they are still lacking the knowledge about AAT. Similarly, the use of pet therapy and their possible benefits need to be raised among the authorized people of Juvenile delinquents who are responsible to manage their programs.

From all the reasons mentioned above, it is noted that PFT provides positive effects to humans such as physical, psychological, mental and social benefits. PFT is used as supportive, complementary and occupational therapies for young people since PFT has potential contributions for the development of children and adolescents. It tends to reason that it would be applicable in the rehabilitation process of JD with psychosocial and behavioral needs for achieving positive results. Thus, the awareness of the responsible authorities from organization, and juvenile rehabilitation center need be increased for the use of PFT in their youth development programs.

Limitations
Many studies have pointed out the possible contribution of animals in the juvenile and adolescent rehabilitation; however the use of PFT has its own limitations. PFT include the use of animals as therapy, and, thus, the careful examination of animals should be done and prevented to reduce the involved risk factors. The skills of the animal handlers are important, and the animals used should receive vaccinations followed by regular medical check-up and thorough examination. The risk of animal abuse by juveniles also should be observed closely and prevented. Moreover, the research of pet/animal therapy in the area of juveniles and adolescents is recommended to conduct using different methodologies to provide more empirical evidence of PFT.

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