



The Influence of Psychological Factors during Early Years of Life in the Development of Addiction: A Mini Review

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Received date: July 17, 2017; Accepted date: July 27, 2017; Published date: July 31, 2017

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Abstract

Addiction is a multifaceted condition with various entry and exit points throughout its course in an individual's life. In some adolescents, early onset can be followed by limited adolescent use or abuse and is more related to social risk factors especially in socialized adolescents. On the other hand, if the early onset use leads to addiction beyond adolescence, the chances are high there are interpersonal contributing factors and possibly a difficult or problematic adolescent stage. This paper discusses the various psychological factors influencing addictions during early years of life. The study is a mini review of past publications.

Keywords: Addiction; Dependency; Psychopathology; Substance use

Introduction

Addiction is a multifaceted condition with various entry and exit points throughout its course in an individual's life. Not everyone who experiments with or consumes drugs for medicinal or recreational purposes becomes dependent or addicted to it. In some adolescents, early onset can be followed by limited adolescent use or abuse and is more related to social risk factors especially in socialized adolescents. On the other hand, if the early onset use leads to addiction beyond adolescence, the chances are high there are interpersonal contributing factors and possibly a difficult or problematic adolescent stage [1].

West [2] stated that the substance abusers motivational system is out of balance or disorderly and it needs to be restored to maintain a balance. It is rare for any single event or element to be responsible for the addictive pattern in behaviour but the event may be responsible for initiating addictive pattern [2]. The initiation process can start as early as during the adolescence period when experimentation takes place leading to compulsive patterns of use [3]. However beyond the adolescent stage, early onset of substance abuse is more related to intrapersonal factors such as impulsivity [1]. In addition to this, intrapersonal, interpersonal and environmental factors either hasten the development of compulsivity leading to dependency, or protect the individual from dependency [1].

Miller and Carroll [1] state that the short term impact of the substance, such as the sedating and anaesthetic effects, help to relief temporary discomfort or stress and reinforces the substance abusing behaviour. This form of negative reinforcement persists and continues as a form of 'self-medication' [1].

Dependency on some stimulants like amphetamines and cocaine can cause the depletion of some of the neurochemicals which moderate moods and lead to depression for certain people [4]. On the other hand alcohol, barbiturates and some other form of drugs are known as downers and continued use can lead to states of depression [1,5].

Personal Factors

There is well-documented research on genetic influences in addiction. Paternal addiction increases risk for developing dependency in both male and female children. Studies employing twin and adoption cases have provided compelling evidence in the increased risk for developing addiction when there is an affected biological parent [6].

On the other hand there is a second class of contributing factors to the variable risk of addiction referred to as personal factors. These factors include personality traits, cognition and psychopathology.

Personal factors are able to influence the induction to substance use, conditioning the behaviour, initiation to the problems related to the dependency, motivation to seek treatment and ultimately the dependency itself by actually moderating and influencing the genetic expression.

Personal Factors-Temperament

Temperament is defined as a group of behavioural and emotional responses to situations, which are generally stable over time appearing even in early childhood. Temperament has been identified as having a close relationship in the development of substance use specifically pathological use [1]. Studies suggest that the temperament differences may result from genetic variability regulating addiction [1].

Tarter and colleagues report in their study that temperament traits influence alcoholism and identify five specific traits; behavioural activity level, sociability, attention span/persistence, emotionality and soothability [1]. Personality traits deviating or associating to the population norm affects the person's ability to either inherit risk factors or protective factors in developing addiction.

Behavioural under control activities include extraversion, antisociability, impulsivity, novelty seeking and psychoticism [1]. Conduct problems are associated with antisociability while those who are more easily bored have the tendency to engage in behavioural problems such as addiction. Impulsiveness, oppositionality and

inattention, known as disinhibitory behaviour, are related to early onset of alcohol consumption [1].

Another closely associated element of temperament traits is negative affectivity influencing conduct problems leading to substance use. Some people struggle to manage painful emotions and tend to use substances to 'numb' the pain while others employ aggression to cope with the negative effects.

The sympathetic nervous system activation also known as the fight or flight response can be used to describe the response to perceived harmful attack. Where it is hypothesized that individuals predisposed to addiction are more prone to take 'flight' when faced with difficult emotions or situations [7]. While Miller and Carroll [1] mention that substance dependent people prefer to use their dependency as a form of negative reinforcement as they are naturally unequipped to manage the stressors.

Cognition and Coping

Lazarus [8] developed a transactional model of stress and coping, which affirms that coping, consists of two interlinked processes: Efforts taken in coping and the cognitive appraisals involved in the process. Cognitive appraisals are applied to first evaluate if the situation exposed to is going to be a threat and stressful-referred to as primary appraisal- followed with an evaluation of possible coping mechanisms in response to the situation- referred to as secondary appraisal [9-11]. This model states that efforts to cope in a situation are triggered when the individual is exposed to some form of threat. If the situation is not appraised as a threat, the primary appraisal is not activated and therefore there is no coping necessary. Continuous use and abuse of substances sometime do not alert the abuser to the situation as being a threat and this leads to relapses. Cognitive appraisals and coping responses have been identified as interrelated and interacting elements but Myers et al. [12] state that there is not much research conducted on cognitive appraisals. While Myers and Brown [13] indicate in their finding that under appraisal of a relapse situation leads to poor outcomes.

Impulsivity due to poor assessment of situations and acting out caused by emotional reactivity without considering the consequences, are considered risk-taking behaviour and are closely linked with substance use [6]. Poor impulse control is described as a core behavioural characteristic trait of substance use disorders [2]. This impulsivity observed in some people also explains why only certain individuals exposed to substances become dependent due to their predisposition.

Learning mechanisms are triggered with the continuous use and abuse of substances in the individual while behavioural theories view addiction as a learned and socially acquired behavior [11]. Besides the psychological influences, cognitive processes, previous learning, situational antecedents or cues and reinforcing contingencies predisposes an individual to addiction [11]. Cognitive factors act as mediators to the '...process of learning patterns believed to be responsible for the development of psychological disorders.' [11]. These cognitive factors predispose the individual to experimenting and continuing use with the substances.

Coping mechanisms are developed over time to respond to particular stressors with the use of these substances. The stress response dampening theory is used to explain substance use as a form of relief from anxiety and stress [12]. When continuous use and abuse

of the substance causes negative repercussion and the stressors increase, the individual copes by continuing to abuse the substance. This in itself becomes a vicious cyclic pattern of abuse and dependency is formed [14,15].

MacKay et al. [16] explain that there are cognitive processes such as anticipation of the effects of use, pleasant memories and associations of using the substance as well as modelling the behaviour which can become reinforces of the act of substance use. Gardner [17] adds to this concept in that a behaviour, which is rewarding or providing a positive experience for the individual is likely to be repeated more often.

Initial use of substances is associated with feelings of 'euphoria' or rewarding experiences and these emotions along with the reinforcing factor by the brain reward system creates high dependency. Creating an awareness of this behaviour leading towards dependency and alerting the substance dependents of the possible repercussion becomes a protective factor from active abuse.

Researchers claim that there are various cognitive variables that can cause relapses and effect a person's belief towards his recovery [13]. These variables are also known as cognitive errors or maladaptive thoughts, which maintain the substance abusing behaviour. Some of the more common cognitive errors include all or nothing thinking (unable to consider situations or people in a moderate way-"I am a wonderful husband or I am the worst husband"), overgeneralizing (assuming that a situation will always happen over and over again because it happened once), mind reading (believing that one knows how the other feels without any evidence) or fortune telling (believing that one has the ability to predict the outcome of things to come).

Psychopathology-Comorbidity

Psychopathology and substance use has been known to coexist with specific psychiatric disorders [15]. One or more aspects of this feedback loop have an effect on the development of the other and coexist. Psychopathology is defined as a mental disorder leading to clinically prominent distress, dysfunction in crucial areas of functioning [10].

Stressful life events are contributing factors towards the acceleration of substance use [4]. The belief that drugs can relieve stress [5] indirectly motivates and nurtures the drug seeking behaviour. Dawes [6] explains that both traumatic and interpersonal life events contribute to suicidal behaviour, which is linked to substance abuse in adolescents. These events may possibly include physical and sexual assaults experienced in adolescents and young adults [6]. The oppressive experiences can even lead to mental or physical distress, increasing the involvement in substance abusing behaviour along with expectations that the substance can relieve stress [16].

Alcohol dependent patients are at higher risk to suffer from Axis I (related to anxiety, depression) or Axis II (personality) mental disorders when there is a dysregulation of neurotransmitter activities in areas other than the dependency area (the mesolimbic dopamine system) [17]. While childhood behavioural and conduct problems are often associated with increased risk in developing alcoholism [1]. Hyperactivity [1] and attention deficit disorder, [18] on the other hand, have been identified with links to later onset of alcoholism especially in children from alcoholic parents [1]. Studies on treating disorders such as ADHD (Attention Deficit Hyperactivity Disorder) with the use of

stimulants seems to be effective with the symptoms of ADHD but has no effect on the drug or alcohol disorders [18].

The odds are two to three times higher for a person with mental disorders to develop alcohol abuse, as compared to a person with no mental disorders. 53% of people with substance use disorders (other than alcohol) suffer from at least one other mental disorder [19], while 26-88% of psychiatric patients (depending on the type of mental illness) smoke tobacco as compared to 20-30% of the general population [6]. Conduct Disorders (CD) among adolescent males [15], Antisocial Personality Disorder (APSD) in adults and affective spectrum disorders among female substance abusers occur comorbidly with substance use disorders [15]. This high comorbidity among substance disorders and mental illness in certain human populations lead to four neurobiological hypotheses on comorbidity [8]:

- There are various symptomatic expressions of the same neurobiological abnormalities.
- Continuous use of the substance leads to biological changes displaying complementary elements with the abnormalities mediating other mental illnesses such as depression.
- Use of these psychoactive substances are for self-medication to get rid of or reverse the abnormalities associated with mental illness, caused either by the substance use or which existed prior to use.
- The observed comorbidity is caused by chance but extensive data collected prove otherwise.

Continued use of substances also impacts other areas in life such as job, family and relationships and this in turn deprive these substance dependents of the important reinforces in their life [1]. At the same time, the loss of these reinforces becomes a stressor and may possibly lead to depression and the dependency on substances as a form of relief.

Conclusion

Psychological factors, which influence addiction, focus on concepts, which are common to compulsive or impulsive behaviours similar to gambling or obsessive-compulsive disorders [20]. In particular, attention is given to the loss of control on the dependency especially even after creating an awareness of the negative consequences. As a result this inability, particularly the explanation of the strong influences by the psychological and emotional problems, we are now able to appreciate the lack of motivation in treatment seeking behaviour.

People, who are predisposed or already actively involved in this addiction, struggle to accept the loss of control when it comes to the dependency. They prefer to enter into a denial mode when challenged with the dependency. Very often the denial acts as a form of a defense mechanism to "protect" them.

In order to respond better to the addiction issues, a comprehension of the complexity of this multifaceted condition is critical. This paper presents a critical review of specifically the psychology model and how it is viewed as an overarching framework to better inform us on the development and treatment aspects. The researcher provides evidence in this paper that there is a need for further detailed studies in the influences of the psychological model, which in return will assist in developing comprehensive treatment approaches.

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