The Relevance Of Acceptance And Commitment Therapy (ACT) In The Treatment Of Emotional Numbing Among The Adolescents: A Narrative Review

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Abstract
The issue of emotional numbing is a serious emotional challenge among the adolescents and which is greatly impacting on them negatively and sometimes goes unnoticed until the damage is done. The study explored the concept of emotional numbing, its symptoms and the causes for a clear understanding of the phenomenon. It also examined the Acceptance and Commitment therapy (ACT), its core processes as a suitable therapeutic property to resolve the emotional problem of the adolescents who go through such pain. The ACT is a process and mindfulness model which promotes psychological flexibility through fostering openness, awareness and engagement as illustrated in its six core processes. It was observed that the ACT promotes emotional awareness through the functions of the six core processes of the ACT model and as a result, could be adopted to manage the challenges of emotional numbing among the adolescents. The researchers therefore recommend that the therapists identify such adolescents in the schools and address their issues with the ACT model.

Key words: Adolescents, Emotional Numbing, Psychological flexibility/inflexibility and Acceptance and Commitment Therapy (ACT).

Introduction
Emotion is a very important aspect of human life which determines how we function in life. Emotions manifest in cognitive, behavioural and physiological properties of man and as a result influences human behaviour. Daniel (2011) has observed that emotions are state of feelings that result in physical and psychological changes that influence our behaviour. Emotions are multifaceted phenomenon that involves changes in subjective experience, behaviour and physiology (Gross, 2014). This explains that emotion is behavioural, we behave in a certain way due to our emotions; people who can readily express their emotions behave differently from people who conceal their emotions. Emotions are also instrumental to our motivation in life, be it
positive or negative (Gaulin et al., 2003). Though emotion is not a causal force but comprises of components such as anger, mood, motivation, temperament, disposition etc.

The study of emotion is a necessary outcome in the life of the adolescents because they spend quite amount of time learning in the classroom and interacting actively which involves a lot of emotions. Emotions also predict important learning outcome as well as future career choices (Valiente et al., 2012). These researchers have juxtaposed students’ emotion with their academic achievement, asserting that the former influences the latter.

Studying emotions within a group of adolescents lends support to Emotional Contagion which is a situation of one person’s emotions and related behavior reflecting a similar emotions and behaviour on other people. Emotional contagion was observed to influence significantly the individual level attitude and group processes (Barsade, 2002). In his study on group emotional contagion, positive emotional contagion members experienced improved co-operation, decreased conflict, and increased perceived task performance. Evidently, maintaining positive emotions or emotional stability among our adolescents is a way of improving the quality of their achievement; be it academics, social life, and their future career choices. Albeit, it is a fact that emotions generally are not well addressed in researches, in the words of Zembylas (2003), he pointed out that emotion was an elusive construct that could not easily be measured and regarded a feminine issue and not a worthwhile research topic.

The adolescence is a formative period in the life of the adolescents, during which they experience emotional changes as well as other changes. Heller et al. (2016) defined adolescence as a time of transition from childhood to adulthood when individuals experience significant changes in cognitive capabilities, physical maturity, biological functioning, social environment and family and peer relationships. Though some of them may go through these challenges successfully, there is need to understand and maintain their emotional development and habit, to promote their well-being, improve their interpersonal relationships, adopt effective academic standard which could foster their career development and assist them to integrate properly in the society. Researchers like Rojas et al. (2015) have related the adolescents’ poor psychological outcome such as anxiety, suicidal thought etc to a range of emotional intensity. They described the emotions as; high frequency and intensity of positive emotions, low frequency and intensity of negative emotions, instability of positive and negative emotions, and low emotional clarity.

Maintaining emotional stability requires training, counselling and psychotherapy depending on the intensity and the trigger of the emotional instability. Emotional numbing is a type of emotion that one may have without being aware of it and may exacerbate the adolescents’ activities, development and productivity if it prolongs.

**Emotional Numbing**

Emotional numbing is an aspect of emotion that has not received much attention probably because it is overtly a situation of shutting off negative feelings. Litz and Gray (2002) posited that emotional numbing entails a deficit in
responsiveness to positive emotional stimuli but not to negative emotional stimuli. A person may decide to shut out feelings and certainly not feel anything. Shutting out feelings may make one feel he/she is in control but it comes with underlying effect on the individual especially when the numbness lasts for a long time. It manifests as feelings of emptiness, confusion, exhaustion and in diminished responsiveness to emotional stimuli. Mendez (2019) described emotional numbing as a mental and emotional process of shutting out feelings and may be experienced as deficits of emotional response or reactivity. She also explained that “while emotional numbing blocks or shuts down negative feelings and experiences, it also shuts down the ability to experience pleasure, engage in positive interactions and social activities, and interferes with openness of intimacy, social interests, and problem-solving. Emotional numbing obviously affects one’s feelings, his/her actions and social relationship.

Emotional numbing is a diminished interest or pleasure in important activities: feelings of detachment or estrangement from people: and a restricted range of emotion (APA, 2000). Emotional numbing makes one feel:

- isolated from and superficial to reality,
- invisible to and detached from other people and activities,
- numb to people’s reactions and opinions,
- loss of interest in important activities one used to enjoy,
- flat in both physical and emotional situations
- inability to participate in life,
- difficulty in expressing positive feelings like joy, happiness, and love
- confusion and lack of communication
- sleep walking through the day time
- altered sense of sight, feelings and sounds,


Researchers have stressed the semblance between emotional numbing and posttraumatic stress disorder saying that the people who suffer PTSD experience emotional numbing- a deficit to express or experience emotion (Tull, 2003). According to Kerig et al (2016), emotional numbing has implications for maladaptive outcomes in adolescence such as delinquent behaviour. Delinquent behaviors may include the addiction to, use and abuse of substances, sexual related offences, truancy, stealing, pilfering, aggressions, violence and the like. He drew attention to the symptom of emotional numbing in posttraumatic stress disorder (PTSD) in his study by investigating whether numbing of positive emotions was associated with PTSD symptoms above and beyond numbing of negative emotions, general emotional numbing or depressive symptoms among at-risk adolescents. The result in hierarchical multiple regression evinced that general emotional numbing and numbing of anger accounted for significant variance with PTSD symptoms while numbing of sadness and positive emotions were correlates of depressive symptoms.
In an attempt to underpin the emotional numbing symptoms associated with PTSD, Tull et al. (2003) discovered that hyperarousal symptoms predicted emotional numbing above and beyond experiential avoidance and other symptoms of PTSD. Foa et al (1992) expressed that emotional numbing symptoms are the distinctive feature of PTSD from other anxiety disorder.

Researchers for example Huizen (2017) identified some causes of emotional numbing to include:
1. Trauma and Stress: Individuals who are exposed to continual stress may develop emotional numbness as a coping mechanism to avoid the experience. Huizen (2017) listed some examples of stress as; loss of close one, traumatic experiences like car crash, bombing, physical abuse, exposure to violence, emotional abuse or neglect, impairment, interpersonal conflict and financial crisis.
2. Medications: The anti-anxiety drugs and Anti-depressant medications have been found to have side effect of emotional numbing on the young children who took them.
3. Other common causes of temporary emotional numbness include: seizure, drug abuse, panic attacks, severe depression, severe anxiety and posttraumatic stress disorder.

Clients in this category, experience a lot of pain which include psychological and physical pain. HeShuchang et al (2011) found in their study that scores of emotional distressed pain patients (Chronic backache) were higher than the control group, explaining that emotional distress could lead to chronic pain. The professionals who treat emotional distressed pain find it difficult to provide a soothing solution to their problems. Medical intervention, in most cases may cause further problems in terms of chronic pain, though might be helpful with acute pain (Van Tulder et al (2000).

Based on the researchers’ experience, emotional numbing is a serious problem which the adolescents experience all the time. The temporary emotional numbing might not be dangerous but its persistence impacts on their academic achievement. An adolescent who is experiencing emotional numbing as a result of trauma, shock or other forms of stressors may feel alienated or act in alienation to things around him for instance he/she may forget examination time or to write his or her name and matriculation number on the answer script and when confronted may look aloof to the situation. Sometimes they are encountered wandering hopelessly in the compound, at times talking to themselves, appearing tattered, not placing value and committed to their goals, playing truancy to class work and dwell much on the pain and seeking for immediate relieve from it. Such search for relieve from emotional discomfort is destructive, a situation known as psychological inflexibility. Therapists need to identify the cause of the numbing and help resolve the pain clinically.

Given the situation, emotional numbing among the adolescents could be treated with Acceptance and commitment therapy for its efficacy in chronic pain. ACT has also adapted an assessment measure for the pain adolescence, Chronic Pain Acceptance Questionnaire, Adolescent Version (CPAQ-A)
Description of Acceptance and Commitment Therapy (ACT)

Acceptance and Commitment Therapy (ACT) is a psychotherapy of learning to accept change in circumstance but try as much as possible to make the best of the situation without trying to change your perception of the outcome (Chalk, 2019). This therapy is essential to coping with chronic pain from long-term conditions. Emotional numbing if lasts longer can trigger a condition of chronic pain as reported above. As a result, the processes and methods incorporated in the ACT will have a far reaching effect in treating emotional numbing.

ACT according to Eccleston et al (2009) emanated as a call to improve the standard of psychotherapy by focusing adequate attention on therapeutic processes through selection of processes and methods known to produce improvement. In line with the consideration, ACT was one of the approaches within Cognitive Behaviour therapy (CBT) that met the challenge. ACT is an acceptance and mindfulness based-approach that can be applied to many emotional problems and disorders. It is also a process-based, third wave, cognitive behavioural therapy (CBT). It has been reported to solve a broad set of psychological problems (Ruiz, 2010 & Bach and Hayes, 2002). ACT approaches psychological problem in a dynamic manner manifesting in verbal, social, emotional and direct sensory influences on behaviour with emphasis on how suffering emerges with human abilities in language and thought. People who are in pain exhibit psychological inflexibility or destructive experiential avoidance, a constant behaviour pattern geared towards searching for immediate relieve of minimizing physical and emotional discomfort (Hayes, 1999). They spend great effort in fighting against their experiences of pain; which includes physical sensations, emotions, memories, images and thoughts about the pain. They normally indulge in reducing their physical activities, avoiding thoughts of pain or by engaging in excessive thoughts of pain, avoiding people, ruminating about the causes of their pain, asking overwhelming questions about their pain or seeking a second opinion to their medications. ACT emphasizes observing thoughts and feelings as they are, without trying to change them and behaving in ways consistent with valued goals and life direction. Its goal mainly, is to reduce the dominance of pains in someone’s life and improve daily functioning (McCracken, 2011) through increased psychological flexibility rather than increased psychological inflexibility or destructive experiential avoidance. Psychological inflexibility or experiential avoidance can only reduce pain tolerance and increase the enormity of the pain (Gilbert et al, 2004). Psychological flexibility on the other hand is the ability to persist or to change behaviour, being conscious in the midst of discomfort and other discouraging experiences guided by goals and values (Hayes, 2000). This implies having the ability to accept pain, or any form of discomfort in manner to reduce the dominance of such pains in ones’ life. A patient who is experiencing emotional numbing as a result of trauma, one has to develop the capability to accept the pain and other devastating experiences through reduction of dominance of the pain. The basic understanding of ACT in respect to chronic pain is that in as much as the pain hurts, it is the struggle with the pain that
causes suffering or more pain. In the case of the chronic pain, the causal and the maintaining factors may be uncertain and the struggle to reduce or remove the pain may not be successful. Be it the case, McCracken et al (2004) posited that the continuing attempts to control the pain (a situation Hayes, 2000 termed psychological inflexibility) may be maladaptive especially if the pain control measures cause unwanted side effects or lack of involvement in valued activities like family relationships, dedication to work, community roles.

ACT emphasizes on seeing that patients’ responses toward the symptom of pain is more successful in relation to their own goal through the increase of psychological flexibility. Patients experiencing emotional numbing in ACT will realize that turning away from pain and distress simultaneously result to turning away from their values and goals. Psychological flexibility comprises of six therapeutic processes which are organized into a structure known as hexaflex, which are; Acceptance, Cognitive defusion, Flexible present-focused attention, Self-as context, Values and Committed action (Hayes, 1999). Taking a look at the processes, Feliu-Soler et al (2018) described them thus: Acceptance is described as the ability to embrace or accept the unwanted experiences (pain, thoughts, feelings, memories etc) in connection to one’s goals. Cognitive defusion is the ability to differentiate between the thoughts and the experiences which the thoughts relate. It means experiencing thoughts as thoughts without getting entangled in the literal meaning of thoughts. Therefore it is the process of learning to notice the process of thought rather than getting caught up in the content. They described flexible present-focused attention as being able to connect with the present moment and track moment to moment experiences. Self-as a context is the distinction between the observed thoughts /feelings and the person who observes. They saw values as freely chosen directions connected with desired aims and goals that guide actions. Lastly, committed action is related with choosing a course of action guided by value, and then persisting in this choice, or changing one’s direction if need be.

The hexaflex is the key model of Acceptance and Commitment Therapy (ACT) framework encompassing the structure of the six core processes (as mentioned above) and the treatment guide. When the clients work through the key areas, they identify areas of entanglement and are able to remove themselves from such entanglement. The psychological flexibility is at the centre of the ACT model. The six core processes relate to one another as well foster psychological flexibility. The six core processes are in three components; Open (acceptance and cognitive defusion), Aware (Contact with the present and self-as a context) and Engaged (values and committed action) as illustrated below

Figure 1: The hexaflex model of ACT for psychological flexibility and inflexibility
Facets of psychological flexibility

<table>
<thead>
<tr>
<th>Open</th>
<th>Aware</th>
<th>Engaged</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptance</td>
<td>Contact with the present moment</td>
<td>Values</td>
</tr>
<tr>
<td>Cognitive defusion</td>
<td></td>
<td>Committed action</td>
</tr>
<tr>
<td>Self-as-context</td>
<td>Psychological flexibility</td>
<td></td>
</tr>
</tbody>
</table>

Source: Feliu-Soler et al (2014)
Measuring the six core processes of ACT in relation to Emotional Numbing

1. Acceptance: The most widely used assessment measures in pain context for acceptance is a 20-item Chronic Pain Acceptance Questionnaire (CPAQ) developed by McCracken et al. (2004). The scale has emphasized on two major aspects of pain assessment:

(a) Achieving acceptance is the willingness to experience pain, it reflects the absence of attempts to control or reduce pain. Ones’ thoughts and feelings about pain must change before one can take important steps in my life. Achieving acceptance for the emotional numbing adolescents depends on their being able to open up fully to the reality of the pain or discomfort they are experiencing and accepting both the positive and negative of the new situation. Focusing only on the negative side will lead to self-defeatism, and depression while a focus on the reality and the worst possible outcome will assist them achieve genuine acceptance and gain productive life while experiencing discomfort.

(b) Activity engagement entails engaging in valuable activities in the presence of pain, living a good life irrespective of pain or discomfort. Pain acceptance in ACT was correlated with lower self-rated pain intensity, less self-rated depression and pain-related anxiety, greater physical and social ability, less pain avoidance and better work status. This scale will afford the therapist the level of acceptance of pain by the adolescents. An adolescent suffering emotional numbing, the cause of the pain, be it stress or trauma, should be accepted and they should not struggle with attempts to remove the pain. The therapists should provide activities that the adolescents could engage in as to move on with their life endeavours rather than focus on the pain which could generate more devastating issues.

The CPAQ was validated by Wicksell et al. (2009) among other researchers, they compared CPAQ with the Tampa scale of Kinesiophobia in the treatment of pain in an empirical study. The study investigated the psychometric properties of the instrument and compared its relation to another pain assessment scale-Tampa Scale of kinesiophobia. The result indicated that CPAQ explained more variance than Tampa Scale of kinesiophobia in pain intensity, disability, life satisfaction, and depression.

2. Cognitive Defusion. The widely used measure for cognitive defusion is the Cognitive Fusion Questionnaire (CFQ). It is a seven item scale with all the items keyed towards cognitive fusion. In ACT, cognitive defusion intervention tries to detach thoughts from actions and create psychological distance between the person and their thoughts, memories, beliefs and self-stories. This suggests that how we react to mental occurrences is basically essential. For instance, ones’ thought should not cause one emotional pain or distress. The adolescents should be thought decentering, to step outside of their mental events towards objective stance in life. Evidence has lend support on the reliability and validity of the CFQ for use among people with chronic pain (Gillanders et al, 2014)

3. Flexible present-focused attention: This aspect of the process is mostly measured by questionnaires that
measure mindfulness. According to Feliu-soler et al (2018), the most commonly used is the Mindful Attention Awareness Scale (MAAS). The scale is a 15-item one that measures the general tendency to be attentive to one’s experiences in daily life. The level of one’s mindfulness or mindlessness to moment-to-moment activities. Abilities in trait mindfulness improves psychological and physical well-being, manifesting in autonomy, vitality and satisfaction. The authors of this scale have ascertained its validity and reliability across cultures and ages in patients with chronic pain. The adolescent of emotional numbing should be discouraged against dwelling in the past. They should pre-occupy themselves with the present issues instead of the past or even future events or occurrences. Some of them may not be aware of what they doing until they fall into great problems. For instance, an adolescent in a counselling session who was recovering from a shock in an accident has maintained that he did know how his car got into the gutter. He was neither hit by another car nor did his car developed a fault. The scale will help determine how the adolescents are focused in what they are doing.

(4). Self-as a context: The Self-Experience Questionnaire (SEQ) is the mostly widely used assessment measure for self in people with chronic pain. SEQ’s validity and reliability was ascertained for measure of self as defined within the psychological flexibility model Yul et al (2017). It is a 15-item questionnaire for investigating “Self” in chronic pain. The adolescents through the response to the items, elucidate their level of self-separateness from thoughts, emotions and sensations. Self-as a context entails an experience of taking a perspective from which to observe one’s psychological experience, a sense of separation from of containing one’s psychological experiences. Be it the case, the adolescents should learn to a distinction between their experiences and Self through which they could improve their psychological flexibility.

(5). Value: The ACT model emphasizes on values-based action for the treatment of chronic pain. It developed a measure for value known as Chronic Pain Value Inventory (CPVI), a 12-item measure. The respondents rate the importance of the value they hold for in six domains of live functionalities: family, friends, work, intimate/close interpersonal relationships, health, and growth or learning and their success in at living according to them on a 5point scale. Evidently, the greater success scores are associated with better future functioning (McCracken et al, 2014). The adolescents based on their rating are expected to rate high on the domains for vitality and productivity irrespective of pain. If reverse is the case they need to be drilled to place values on the things that matter in their lives.

(6). Committed Action: Finally the measure for committed action. The most widely measure on this aspect is the Committed Action Questionnaire (CAQ). Its reliability and validity for the treatment of chronic pain was ascertained. It has a version of 18 items and a version of 8-items (CAQ-8). It assesses the construct of committed action drawn from the psychological flexibility model of ACT.
The 8-item questionnaire is rated on a scale of 0 to 6 of how true the statements are in commitment to one’s goal. The items are positively keyed and the higher the scores, the indication of being committed to one’s goals. An adolescent who remains committed to his/her goal and who makes effort to reach his goals amidst pain will function well.

The ACT as well has a specific assessment measure for the adolescence. Though it is not detailed as the main CPAQ, its assessment is based only on acceptance, the other five core processes of ACT were not considered. The Chronic Pain Assessment Questionnaire for Adolescents (CPAQ-A) is a 20-item questionnaire developed for acceptance of pain in adolescents. It is associated with quality of life and functional disability in adolescents with chronic pain and validated as having internal consistency, convergent and predictive validity (Connolly et al., 2019). The scale was used by some researchers, Gauntlett-Gilbert et al. (2018), the objective of the study being: Acceptance of pain is a predictor of pain-related disability and treatment outcome in adolescents with pain. They used simple item reduction to select eight (8) (CPAQ-A8) items from the 20-item measure to ensure brevity and to reduce clinician and patients’ workload in the clinical setting. The items 1-4 elicited response on Activity management while items 5-8 was on Pain Willingness. The responses are rated on a scale of 5. Where Never True (NT) = 0, Rarely True (RT) = 1, Sometimes True (ST) = 2, Often True (OT) = 3 and Always True (AT) = 4

The result of their study demonstrated sensitivity to treatment and they found that the CPAQ-A8 produced a suitable result to the overall model of the 20-item with four items fitting well to each factor (activity engagement and pain willingness).

Table 1: The 8-item questionnaire for adolescence Chronic pain assessment (CPAQ-A8).

<table>
<thead>
<tr>
<th>S/N</th>
<th>Items</th>
<th>NT</th>
<th>RT</th>
<th>ST</th>
<th>OT</th>
<th>AT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I am getting on with my life no matter what the level of my pain is.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>My life is going well even though I have chronic pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I am living a normal life with my chronic pain</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>4</td>
<td>I don’t need to concentrate on getting rid of my pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I do things that are important and things that are fun even though I have chronic pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Keeping my pain under control is the most important whenever am doing something</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Before I can make my real plans, I have to get some control over my pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>I avoid situations where pain might increase.</td>
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</table>
The scale will assist identify the chronic pain adolescents who are engaging actively in other activities irrespective of the pains because activity engagement will improve and foster their psychological flexibility which aids their functionality in life. On the other the adolescents who are not engaging well in activities would get some professional help to enable them adjust. The last four items will indicate the chronic pain adolescents who have accepted and who have not accepted the pain situation willingly. The latter will get help to improve their psychological flexibility.

Discussions
ACT is a mindfulness-process based approach to treating emotional pain and it has showcased that pain is unavoidable in humans but can be accepted. Accepting pain and engaging in activities that will help one establish sense of self. A sense of self that is greater than one’s thoughts and feelings. The ACT teaches the individual to develop observed-self which facilitates cognitive defusion, a situation where the clients learn neither to believe nor be controlled by thoughts. For instance, Dahl et al (2014) expressed that any pain-related thoughts that tell the client to avoid particular situation or activities can be seen for what they are (thoughts), rather than what they say they are (truth or reality).ACT helps clients to create and maintain awareness of the present moment, identify personal and deeply important valued life direction that will provide natural positive reinforcement.

In ACT, struggling to avoid pain causes more suffering to the client because it indicates non-acceptance to what is already there, the intensity of (the suffering) which depends on the extent of the clients’ fusion with thoughts and feelings associated with the pain (Feliu-Soler et al, (2014)).

Efficacy of ACT in the treatment of emotional pain of adolescents which manifests in form of emotional numbing is not in doubt because emotional numbing is evidence of poor emotional awareness. Most of the sufferers use destructive experiential avoidance and psychological inflexibility for discomforting experiences which worsens the situation. Teaching them processes that promote psychological flexibility will enhance their well-being.

Conclusion
Emotional numbing is a serious emotional problem that has been in the cog of the adolescents’ development and has not received much attention in the area of research. Its manifestations may result from exposure to trauma, shock, attack or exposure to violent situations. Kerig et al (2016) noted that emotional numbing has implication for maladaptive outcomes in adolescence such as delinquent behaviour. Emotional numbing (avoidance, detachment) blocks the adolescents’ capacity from confronting, processing and managing emotions and experiences. The Acceptance and Commitment Therapy (ACT) as a psychotherapy creates positive awareness in them through the exposure to core processes of ACT and which will predispose them to psychological flexibility and in turn aids them to function properly in the society and improve their interpersonal relationships.
**Recommendations**

The researchers make the following recommendations based on the study:

1. That therapists should identify emotional numbing among the adolescents and use the ACT model to resolve their problems.
2. That psychologists should make further researches on emotional numbing.
3. That the in-school adolescents should be constantly educated on emotional awareness.

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