

## Effect of Motivational Program on Modification of Impulsivity among Cairo University' Nursing Students

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### Abstract

This study aimed to evaluate the effect of developed Motivational Program titled "Motivation Program for Change of Impulsive Behavior" on modification of impulsive behaviors of Cairo University' nursing students – into controlled socially acceptable behavior as compared with the comparison group. The development of this program is based on the Trans-theoretical model of change (TTMC) and composed of 15 semi-structured sessions. A mixed design of both quantitative and qualitative methods was used in this study. It included a quasi experimental nonequivalent comparison groups (pre / post test) and semi structured interviewing sessions. Purposive sample for the study group was recruited from all nursing students of the faculty of nursing (target population) who were screened for highest scores of impulsive behavior using the "Impulsive Behavior Scale" and accepted to participate in the study (n=17). In addition to the Impulsive Behavior Scale another two tools for data collection were used in the current study; the Demographic and some personal data sheet and Video recording of the interviewing sessions. Results showed that, more than ninety percent of the target population had moderate to severe impulsivity and about ten percent had mild impulsivity. A highly statistically significant difference was found between pre and post program regarding improvement on the "Impulsive Behavior Scale" as well as between the study and comparison groups post program. Qualitative results showed the control of emerged new seven major themes of students' impulsivity. In conclusion, the study proved that "Motivation Program for Change of Impulsive Behavior" had significant effect on changing the impulsive behavior of the study group post the program and in comparison with the nonequivalent comparison group. Therefore, this study recommends establishment of a center for modification of Cairo University nursing students' impulsive behaviors using this program.

**Keywords:** Motivational Program, Impulsive Behaviors, Cairo University, Nursing Students

### 1- Introduction

Impulsivity in the Egyptian community may have increased recently and played a role in the political instability and conflict in Egypt since 25<sup>th</sup> January revolution in 2011. Egyptian University students by virtue of their ability to communicate through information technology and their awareness of the political instability that hit their community have made them overactive to play a significant role in the eruption of 25<sup>th</sup> January revolution as documented in "Mobilization Theory" by El Tantawy, (2011). He supported the idea of social movement implementation around the world throughout the new communication technologies especially social media via internet which have become an important resource. Most of the Egyptian universities have suffered severely negative impacts of 25<sup>th</sup> Jan. revolution and witnessed a series of students' demonstrations that turned into violence, terrorism, destruction of some universities' buildings and the killing of some students (Mohammed, 2015).

Impulsive behaviours among university students are a multifaceted phenomenon that must be addressed at the interpersonal, psychological, and societal levels. The change in the nature of students' attitudes and behaviour is widespread in many academic settings and is serving as the impetus for strategic changes being made by faculties and administrators throughout the nation (Mohammed, 2015). Understanding students' attitudes and perceptions about unethical behaviour may provide insights that could form the foundation for strategies that may decrease the frequency of unethical impulsive students' behaviours. Studies in this area could improve the teaching-learning milieu and assist in the development of effective strategies for violence prevention and intervention. A greater understanding of the problems associated with unethical behaviour in nursing education may help to recruit nurses into the profession as practitioners and as faculty into nursing education (Abd Elkader et. al., 2012).

Addressing unacceptable behaviours in nursing education is imperative and more research is needed to understand both students' and Faculty perceptions of such behaviours in nursing education (Lashly and de Meneses, 2001). They described academic unethical behaviour as an important concern in nursing education. When working with impulsive youths who undertake any misbehaviour, one should examine different approaches that would highlight any potential risk they may pose to themselves, to others or to property. These

students usually turn to violence in quick response to disagreement, disinteresting issues or resisting managerial bodies. Based upon, the theoretical model of motivation and raising the readiness to change one can develop a very necessary and effective model for therapeutic intervention for changing youth with impulsive behaviour (Willoughby and Perry 2002).

Therefore, motivation for change is the key element for any therapeutic success or enhancement of client's ability for improvement (Serin & Brown, 1996; Prochaska & DiClemente, 1982). The theoretical framework that guided this research is motivational interviewing which based on Trans theoretical model of change developed by Prochaska and Diclemente (1982). The Trans theoretical Model is an integrative model of behaviour change, combining key constructs from other theories as change theories, motivational interviewing approach, decision making theories, and behavioural theories of Bandura (Velicer, 2000).

## 2- Significance of the study

Impulsive hostile behaviours encountered in nursing education are an emergent problem that seriously disrupts the teaching-learning environment and often results in stressful student - faculty relationships. Persons with impulsivity have a significant deficit in problem-solving skills and have trouble developing strategies to effectively manage difficult situations. Generally, they are able to function in society but their interpersonal interactions are maladaptive, disturbing, and possibly destructive to themselves and others. This study should help identify unacceptable impulsive behaviour perceived and experienced by nursing students that are considered as an example of unethical behaviours in nursing education and are rejected by nursing educators, students and nursing staff. The study as well will develop and implement a "Motivational Program for Change of Impulsive Behaviours" to reduce nursing students tendency for impulsivity in order to help them deal with encountered stressful situations, learn to tolerate conflicts with others, especially people in authority, control tendency for barbaric behaviour and acquisition of adaptive communications skills. Such skills should act on changing maladaptive behaviours into controlled socially acceptable behaviour essential for the personal development of the student nurses' personality to learn to express anger or negative feelings in positive socially acceptable manner.

### Aim of the study

This study aimed to evaluate the effect of Motivational Program on modification of impulsive behaviors of nursing students – Cairo University into controlled socially acceptable behavior as compared with the comparison group.

### Study hypothesis

**H1:** Nursing students who will receive the "Motivation program change of impulsive behavior" will show an improvement in controlling their impulsive behavior and will have lower scores on the "Impulsive Behavior Scale" in the post- test than in the pre-test as compared to the comparison group.

### Research design

The research design in this study used a mixed method of both quantitative and qualitative which included a quasi experimental design (pre/ post test type) and semi-structured interviewing sessions i.e., Concurrent Nested Strategy of mixed method. The primary method was the quantitative method which guides the research while the secondary was the qualitative method provides a supporting role "embedded" or "nested" within the predominant method to addresses different questions.

### Sample

The target population of the study was all student nurses of the Faculty of Nursing- Cairo University who met the inclusion criteria of the study (n=600 student). The number of the target population reached 437 students recruited from the first three levels of the academic year (2015-2016). Non-Egyptian students (n=72 students), and students who refused to participate (n= 90) were excluded from the study. Fourth academic level was also excluded from the target population.

**Criteria of inclusion for the target population:** Egyptians, gender: males and females, age (18 - 22 years old) and students at their first, second and third level in the academic years 2015- 2016.

**Criteria of exclusion for the target population:** the Non-Egyptian students, fourth level of the students and the students who exceed the required age.

Purposive sample were the students who screened for tendency of impulsivity and scored high scores for impulsive behavior in the Impulsive Behavior Scale and accept to attend the "Motivational Program Change of Impulsive Behavior" (MPCIB) as a study group (n= 17 students). By the end of the study the possible available students from the faculty who met the inclusion criteria were recruited to the post test scale (n.= 217 students) acted as a Comparison group. Comparison group is the faculty students who did not attend the program sessions and scored highest on the Impulsive Behavior Scale.

### Setting

The study was conducted at the Faculty of Nursing - Cairo University. The faculty is four academic years in addition to one internship year. The faculty started academic activities in the year 1962- 1963 by accepting

female students only. The education in the faculty is both theoretical and clinical using teaching hospitals facilities. In the academic year 2001- 2002 started to accept male students as well. The faculty consists of nine academic departments that serve 900 students in the year of 2015 -2016. The faculty's building consists of five floors at kasr El- Ini Medical campus. The Faculty of Nursing hosts many units and centers which serve students affairs, legal affairs, and counseling affairs. The legal affairs recorded numbers of legal reports on unethical and impulsive behaviors of the student.

**Tools of data collection:** The researcher in this study developed three tools for data collection;

- A. Demographic and some personal data sheet: it records all the related demographic data of the sample i.e., age, sex, residence, income of their families, students' orders in the family, and marital status of the parents and other factors affect the students behaviors as exposure to legal problems, smoking behavior and running away from the school or the faculty.
- B. Impulsive Behavior Scale: is based on three scales measuring the different forms of impulsivity (University Violence scale of Asfor and Nemr, (2012); the Rebelliousness scale by Daowd, (1991) and Barratt Impulsiveness Scale (Revised) (1995).

**Content validity of the tools:** the tools of the study were confirmed by panels of 3 experts in psychiatry and psychiatric nursing. Necessary modifications of the two tools were done according to the panel judgments on the appropriateness of the content, sequence of items and according to accuracy of items as in characteristics demographic items and in questions (2, 4, 8, 10, 24 and 29).

**Reliability of the tool;** Internal consistency was measured to identify the extent to which the items of tools measure the same concepts and the extent to which the items are correlated with each others. Internal consistency estimated reliability by Cronbach's alpha for reliability testing was performed which was 71%

- C. Video recording: The qualitative data were collected through video tape recording to document and register body language, facial expressions, allegories and metaphors. Content analysis was performed by the researcher for the data collected from the "Motivation Program for Change of impulsive behavior" sessions.

### 3- Theoretical frame work

The current research program based on the Trans-theoretical Model of Change (TTMC) was developed by Prochaska and DiClemente (1982) and Motivational Interviewing which developed by Miller & Rollnick (1991, 2002). The rationale for using this model is related the importance of using motivation skills with impulsive students who lose control over their misbehavior. For this reason one should examine different approaches that would highlight any potential risk impulsive students may pose to themselves, to others or to property. These students usually turn to violence in quick response to disagreement, disinteresting issues or resisting managerial bodies. Based upon, the theoretical model of change and raising the readiness to change one can develop a very necessary and effective model for therapeutic intervention for changing youth impulsive behaviour (Willoughby and Perry 2002). Therefore motivation for change is the key element for enhancement of person's ability for improvement (Prochaska & DiClemente, 1982; Serin & Brown, 1996).

#### Procedure of the study

**Assessment phase (January- February 2016):** Data were collected from all students of the Faculty of Nursing-Cairo University who fit the criteria for inclusion (the target population) was screened by using the Demographic and personal data sheet and the Impulsive Behavior Scale. Data were analyzed to detect the students with high tendency for impulsive behavior (pretest phase).

**Implementation phase (March – May 2016):** The students who show high tendency for Impulsive behaviors (17 students) in analysis of scale results were informed about the "Motivational Program for Change of Impulsive Behavior" which aims to help them modify their Impulsive behavior and improve their communication skills. Students informed with content of the program, number of sessions, and method of data collection which included recording all sessions by video camera to identify change in facial expressions, body language, verbal expressions, tone of voice, control of anger, and hand movements. The program implemented on 15 sessions classified as one session per week for 45- 60 minutes.

**Evaluation phase (June – July 2016):** After application of the program, students' of the study group who attend the program and the comparison group who did not attend the program sessions completed the Impulsive Behavior Scale as a post-test to evaluate the effect of the program on their Impulsive behaviors and Quantitative analysis of data followed.

#### Description of the Motivation Program for Change of Impulsive Behavior (MPCIB)

The program was designed to help nursing students with impulsive behaviors to change their negative impulsive behaviors in order to improve their personal skills of self-control and enhance their social functioning. The program aimed to help students to:

1. Consciousness rising with impulsivity.
2. Deal with the situations that may stimulate impulsive acts.
3. Demonstrate alternative and acceptable behaviors to deal with thoughts or feeling.

4. Develop more than one alternative behavior to relieve anger through role play and practice.
5. Demonstrate decrease in impulsive acts in role playing.

The program was administered within the framework of motivational interviewing sessions. The total recruited numbers of affected students with impulsive behavior were 17 students who received 15 sessions of intervention, each session was take one hour weekly. TTMC comprised of three major components: stages of change, processes of change, and levels of change. There are five stages of change: Pre-contemplation, Contemplation, Preparation, Action, Maintenance, and Termination (Prochaska, 2001). The model views change of health-related behavior as a process which runs through several stages.

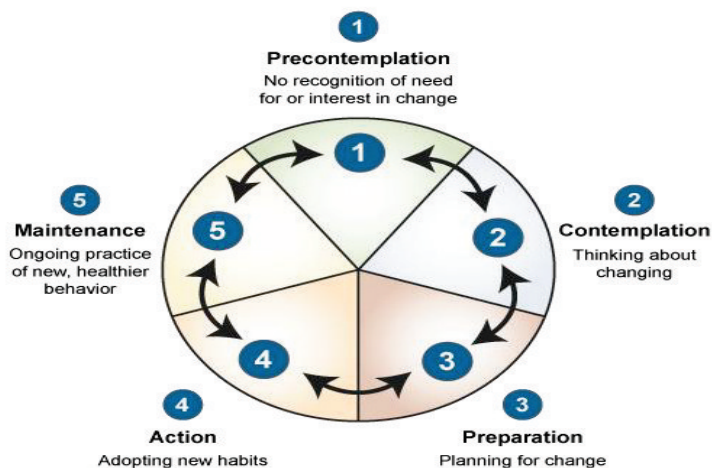


Figure (1) process of Trans-theoretical model of change

The first stage is that of pre-contemplation, where the person still has very little or no problem awareness. Problem awareness grows as they move towards the second stage of contemplation, where there is still some oscillation between wanting and not wanting to change their behavior. Once they enter the third stage of preparation, they begin to plan concrete steps which are then tested in the fourth stage of action and maintained over a longer period in the last stage of maintenance. Change is viewed as a process or flow, which can be interrupted at any time leading to the return to a previous stage. The Content validity of the intervention program was determined through an extensive review of literature related to impulsivity and its management and were submitted to a panels of 2 experts in psychotherapy and psychiatric nursing to test their validity.

#### **Ethical Consideration**

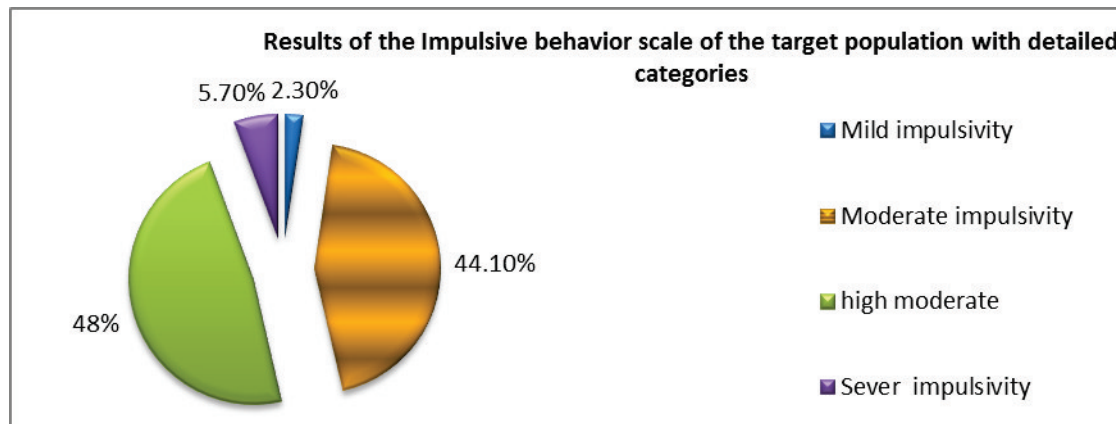
A written ethical approval was received from the Ethical Scientific Research Committee at the Faculty of Nursing - Cairo University. In addition, an official permission to conduct this study obtained from the Dean of the Faculty of Nursing. The informed consent obtained from the students after complete description of the purpose and nature of the study. All subjects were informed that participation in this study is voluntary, anonymity and confidentiality of each subject is protected by the allocation of a code number for each participant who will respond to the questionnaire and participation is without risk and they can withdraw from the research program at any time without any risk or punishment or affection of their grades in the faculty. As well, the students' approval was taken for the video tapping of the sessions.

#### **4- Results**

**Section one:** Quantitative results of pre program and post program results of demographic data and Impulsive Behavior Scale for the all faculty students / study group of the program also.



**Part one: Impulsive Behavior Scale results for the target population**



**Figure (2): Frequency distribution of the total scores of "Impulsive Behavior Scale" (n= 437)**

Figure (2) showed that, (2.3%=10) of the students had mild impulsivity, (44.1%=192) of the students had moderate impulsivity, (48%= 210) of the students had high moderate impulsivity while (5.7%= 25) of the students had severe impulsivity.

**Part 2: Comparison between Impulsive Behavior Scale results before and after the program implementation for the study group and the comparison group**

Table (1): Comparison between the total result of the impulsive behavior scale before and after the program for the study and comparison group (n=17 for study group and 217 for comparison group)

Impulsive behavior scale pre / post program result	No. / % of Pre program test				No. / % of Post program test			
	Study group		Comparison group		Study group		Comparison group	
Mild impulsivity	0	0%	64	29.5%	2	11.8%	76	35.0%
Moderate impulsivity	14	82.3%	148	68.2%	13	76.5%	136	62.7%
Sever impulsivity	3	17.6%	5	2.3%	2	11.8%	5	2.3%
Total	17	100%	217	100%	17	100%	217	100%

Table (1) showed that, (82.3%) of the study group had moderate impulsivity, (17.6%) had severe impulsivity before implementation of the program. In comparison, after implementation of the program the result showed that, (76.5%) of the study group had moderate impulsivity, (11.8%) had severe impulsivity. Regarding to the Comparison group before the program the result showed that, (29.5%) had mild impulsivity, (68.2%) had moderate impulsivity and (2.3%) had severe impulsivity. While the results of Comparison group after the program showed that, (35.0%) had mild impulsivity, (62.7% = 136) had moderate impulsivity and (2.3% = 5) had severe impulsivity.

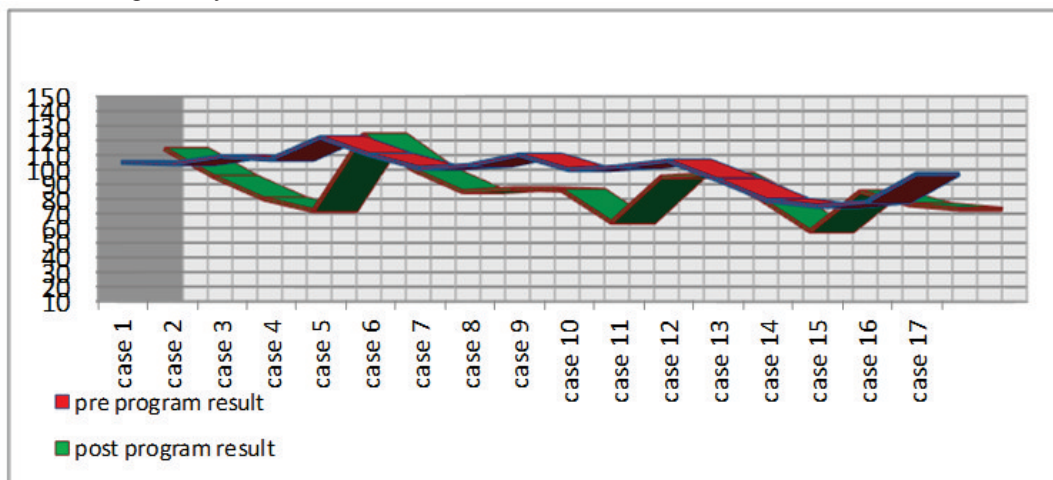


Figure (3): the total scores of Impulsive Behavior Scale according to the study group before and after implementation of the program

Figure (3) revealed that the total scores of the impulsive behavior scale for case (1) were (105) before the program, (114) after the program which represented increase in the level of impulsivity after the program as in case (5,15), while the total scores of the impulsive behavior scale for case 2 were (104) before, (95) after the

program which represents decrease in the level of impulsivity after the program as also in (case 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17).

**Part 3: The differences between the total scores of Impulsive Behavior Scale of the study group and comparison group**

Table (2): The difference between the total scores of the study group according to the "Impulsive Behavior Scale" before and after the program

The variables	The Impulsive Behavior Scale		t	P- value
	M±SD			
	Pre program	Post program		
the impulsive behavior scale	100.06 ± 12.53	86.532±16.790	4.057	.001**

\*p <.05 =Significant relation

\*\*p <.005 highly Significant

Table (2) showed that there is highly significant difference between the Impulsive Behavior Scale results for the study group before and after the program session (P- value = .001)

Table (3): The difference between the total scores of the Impulsive Behavior Scale for the study group and comparison group

The variables	the Impulsive Behavior Scale		t	P- value
	M±SD			
	Study group	Comparison group		
the impulsive behavior scale	86.53 ± 16.790	76.64 ±15.222	2.354	.030*

\*p <.05 =Significant relation

\*\*p <.005 highly Significant

Table (3) showed there is also significant difference between the Impulsive Behavior Scale results for the study group and comparison group (P- value = 0.030).

**Section two: Qualitative results**

**a. Results of the first and second sessions of the qualitative assessment**

Table (4): The indicators for achieving the objectives of the sessions (1 and 2) were:

Qualitative assessment		
Codes and numbers of students	Subthemes	Themes
1. Uncontrollable Nervousness (8) 2. Anger from others (3) 3. Hurt myself (3) 4. Crying (4) 5. Stubborn &insistence (6) 6. Moody (3)	1- Poor inhibition of control	1- Dysfunctional impulsivity
1. Unable to take decision (3) 2. Cannot define my goals (3) 3. No motive (3) 4. Hesitance (3)	1- Un planning	
5. domineering person (3) 6. The Criticism of others (3) 7. Superficial relations (6) 8. High self esteem (4)	2- Controlling personality	2- Depressive attitudes
9. Frustration (3) 10. Disinterested with complex tasks (6)	3- Simple cognitive tasks	
11. Loneliness (4) 12. Sadness (8) 13. Fear and anxiety (7)	6. Negative emotions	

**Findings**

Qualitative assessment of student nurses in the study group performed before application of the Intervention program revealed students' evaluation of their strengths and weakness and self-assessments of their behaviors in different life situations as well as their coping strategies. Student's comments were categorized into thirteen codes according to the essences of each meaningful unit of data. These codes were conceptualized as six subthemes and two themes according to the objective of these sessions which was to assess the impulsivity qualitatively so that students of the study group would be ready for the application of the (TTMC) stages of change starting from session three. Table (4) displayed how all thirteen codes were formed into six subthemes and how the six subthemes were trace-formed into two major themes. Each theme is elaborated in more detail along with quotes from the students' comments to illustrate codes or essences under the themes.

## 1- Dysfunctional Impulsivity

### A. Inhibitory control and risk taking

The first theme emerged from the data was “Dysfunctional Impulsivity” recognized in students' nurses involved in the program sessions. The most prominent subtheme that the students described was control inhibition which was described in the form of nervousness, anger from others, hurting themselves and Stubbornness & insistence to prove their point of view. Eleven of the participants in the program identified this as key part of their weaknesses in dealing with others.

- انا عندي عصبية زائدة عن حدها وعدم قدرة علي التحكم برد الفعل امام اي شخص وارتفاع صوتي رغم عني واحيانا الجأ الي الضرب في اخواتي او اضرب نفسي واصرخ عاليا واكسر لو حد ضايقتي وألجأ الي البكاء بمفردي.
- لما بتعصب او بتضايق صوتي بيعلني وبزعق ولما بيحصل مشكله بفضل مضايقه طول اليوم ودموعي بتنزل لوحدها
- بتترفز بسرعه جدا وبزعل من اقل حاجه وممكن اذي نفسي او اعاقب نفسي بأي حاجه
- عصبية جدا وجوايا غيظ من كل اللي حواليا ولا اعرف الرد المناسب علي الناس التي تغضبني
- محتاجة اعرف اتكلم واوصل وجهة نظري للقمامي من غير ما يضايق مني
- عندي اصرار علي اللي بخططه وعمرى ما خطط لحاجه وفشلت
- مش باخذ برأى حد ويعمل اللي في دماغي حتي لو غلط حتي ولو كل الناس قالوا عكس كده
- عنيده جدا وبلاقي مخرج لكل مشكله
- لما بحط حاجه في دماغي بعملها ومش بيهمني حد مادام انا صح

### B. Un- planning

The second prominent subtheme of weakness for “Dysfunctional Impulsivity” described by the studied students was un- planning. They mentioned that this weakness was indicator for certain forms of impulsivity i.e., unable to take decision, cannot define goals and no motive in their lives. Four participants in the program identified this as key part of their weaknesses in dealing with others.

- محتاجة اقدر احدد اهدافي واكون واثقة في نفسي
- محتاجة يكون عندي دافع معايا طول الوقت واتعلم اخذ قرار مناسب من غير تسرع
- مش لاقية هدف اعيش عشاته وشايله هم المستقبل وخايفه منه

### C. Controlling personality

The third prominent subtheme that the students described was the controlling personality which was described in the form of domineering person, the criticism of others, heightened self-esteem and superficial relationships with others. Five participants in the program identified this as key part of their weaknesses in dealing with others.

- انا شخصية قيادية والناس بيقولوا عليا كدة وبحب كمان امشي كل اللي حواليا علي مزاجي
- بكون قوية مع اي حد يسى لية واخذ حقي منه
- شخصيتي قوية وديكتاتوريه ومش بحب حد يكون افضل مني في حاجه
- الناس بيقولوا عليا متكبره ومغروره
- قوية الشخصيه وحادة الطباع
- يساعد اي حد في اي حاجه ويقدر احل اي مشكلة لاي حد ماعدا مشاكلي
- احب الصداقات ولكن اللي بتكون سطحه جدا واحب الاشخاص اللي بيعرفوا شخصيتي فقط
- يقول رأي في اللي امامي منه غير حرج وبصراحه
- مش بثق في حد ولا حتي بفكر في حد اصلا ولو حبيت بكم مشاعري عشان ميكنش حد نقطة ضعفي
- من نقاط القوة بي ان انا عندي ثقة زايده بنفسى واقدر اتعامل مع كل الناس واخليهم يتعاملوا معايا بالطريقة اللي انا عايزها

## 2- Depressive Attitudes

### a. Poor performance of simple cognitive tasks

“Depressive Attitudes” was the second major theme emerged from the codes described by studied student nurses involved in the program sessions. The first and most prominent subtheme that the students described as depression was the poor performance of simple cognitive tasks such as frustration, crying, and disinterested in complex tasks. Five participants in the program identified this as key part of their weaknesses in dealing with others.

- نفسي اتخلص من الاحباط اللي بيكسر حاجات كثير بينيها واتعلم مكش كسول ومش قادر اعمل حاجه
- بفكر كثير في مشاكلي ومش قادر افكر في الحل
- الاحباط بيخلي دماغي مشتته وبتتحول الي قرارات سريعه غلط بنسبة 90 %
- طول الوقت بفكر في الفشل والكتابة وده بيخليني افشل وامشي في طريق الفشل
- بخاف احاول تاني افشل واحس بخيبة الامل
- مش قادر اتقدم في دراستي ورسبت اكثر من مرة

### b. Negative emotions

Negative emotions was the second prominent subtheme for depressive attitudes that the students described from codes of loneliness, crying and, sadness. Seven participants in the program identified this as key point of their weaknesses in dealing with others.

- بفضل اكون منفردة عن الاختلاط عشان مفيش حد يكون نقطة ضعفي
- بحب العمل الفردي مش الجماعي يكون مرتاحة وانا لوحد
- بحس ان في حد ماسك رقبتى وخانتنى لما بضايق
- ماليش اصدقاء مقربين في حياتي الشخصيه
- ميقاش عندي حد مقرب ليا واشعر بالوحدة طول الوقت
- يعيط طول الوقت ومضايقه من الناس

### B. Results of third, fourth and fifth sessions

The first stage of change "Pre- contemplation" 's short-term goal was performed in the third, fourth and fifth sessions to help impulsive students wanting to change to acknowledge that a problem exists, assess their abilities to reduce impulsivity, and identify the costs of it.

Table (5): The indicators for achieving the objectives of the sessions (3, 4 and 5) were:

Pre-Contemplation Stage of Change		
Codes and numbers of students	Subthemes	Themes
Before the session: 1. My behavior makes others respect me (4) 2. Increase my self esteem (3) 3. Increase psychological comfort (3) 4. Increase self relief (3) 5. Give power (3) 6. Put limits to others (5) 7. Takes my right (2)	- Positive side of impulsivity	- Insight-less with impulsivity
Contemplation Stage of Change		
After the sessions through numbers of interventions and management measures: 1- My behavior is weakness point (4) 2- I need for change (4) 3- I need to be happy (5) 4- I need to learn how to control (8) 5- I need to think positively (5)	- Negative side of impulsivity	- Insight enhancement with impulsivity

### Findings

The second stage "Contemplation Stage of Change" for consciousness raising and dramatic relief students were encouraged to throw down numbers of comments to report their point of view in the numbers of tests as decisional balance test for testing the positives and negatives of their behaviors and costs of impulsivity and self assessments for their abilities to change in different life situations before the start of the session . Students' comments were categorized into seven codes according to the essences of each meaningful unit of data. These codes were conceptualized as one subtheme and one theme according to the objective of the session, as displayed in table (5). Each theme is elaborated in more details along with quotes from the students' comments to illustrate codes or essences under the theme. The major theme for this part was:

#### 1- Insight-less with impulsivity

This first theme emerged was insight-less with impulsivity of the students' nurses in the study group. The most prominent expressions which were emerged in codes that the students described as forms of the Insight-less with risks of impulsivity were: my impulsive behavior makes others respect me, it increases my self-esteem, it provides me with psychological comfort, it produces self-relief, give me power over others, it put limits to others, and make me gain my rights. Twelve participants in the program identified these as key point of their behaviors in dealing with others.

- سلوكي يساعديني في الدفاع عن حقي ولا يسمح للشخص الاخر ان يتمادي في اخطاءة
- اسلوبى يخليني اخذ حقي ومفيش حد يجرا ويعيد معايا نفس الموقف ولا يتناول الطرف الاخر على ابدأ
- سلوكى يخليني احس براحة نفسيه انى جرت اللى جوايا
- بسلوكى زادت ثقتي بنفسى واشجع الاخرين على ذلك مثلى

After achieving the content of the sessions to increase the students' awareness with their behavior and give numbers of theoretical knowledge and practical exercises about risks of impulsivity. These tests especially aimed to empower students' ability to change their impulsive behavior and learn the skills of self evaluation process for exploring the positive and negative feelings toward their behaviors. Table (5) displayed number of comments that were categorized into five codes according to the essences of each meaningful unit of data. These codes were conceptualized as one subtheme and one theme according to the objective of the session. The major theme for this part was:

#### 1- Insight enhancement of impulsivity

The most prominent theme emerged from the data involved increasing students insight with impulsivity. The



most prominent expressions that the students described as a form of increasing insight to risks of impulsivity were: my impulsive behavior is my weak point, I need for change, I need to be happy, I need to learn how to use self-control, and I need to think positively. Ten participants in the program identified this as key point of their behaviors in dealing with others.

- نفسي اتغلب علي كل نقاط ضعفي واصبح بشكل افضل من اللي انا عليه
- انا محتاجة اتعلم اسيطر علي مشاعري و علي دموعي واتعلم اكون هاديه قصاد الناس المستفزه ومتعصبش بسرعه
- انا بحب التغير جدا ونفسي فيه وابقى حد ثاني غير ده
- انا نفسي احاول اتحكم في عصبيتي واعرف ازاى اخرجها
- انا دايمًا بتسرع في الحكم علي الناس بس في الاخر بطلع غلطانه في بعض احكامي واكتشف اني كنت غلطانه والاخر عنده حق
- وبتسرع في اجاباتي او رد فعلي بالضرب والصوت العالي مع اخواتي اصحابي
- انا اندفاعي ومتسرع في افعالي
- انا عايز اتغير لكن مش متأكد اني اقدر اتغير ولا لا

### C. Results of following seven sessions (preparation and action stages)

The short-term goals of the (6, 7, 8, 9, 10, 11 and 12) sessions according to the third stage of change "Preparation Stage" of change involved developing specific objectives for change and establishing a plan to accomplish them. Reaching the fourth stage of change "Action Stage of Change" student were encouraged to be committed to implement the plan of change at a specific point in the near future. Students in those sessions were asked to put numbers of comments to report their point of view in the numbers of tests as cognitive restructuring test for helping the students to reframe their behaviors and other tests for evaluation of their abilities to apply coping strategies in different life situations

Table (6): The indicators for achieving the objectives of the sessions (6, 7, 8, 9, 10, 11 and 12) were:

Preparation Stage of Change		
Codes and numbers of students	Subthemes	Themes
1. Put causes for my nervousness (4) 2. Put other alternatives to my nervousness (3) 3. Put causes for other's actions (4)	- Planning to change	- Objective Interpretation skills
Action Stage of Change		
4. Maintain good impression of others (3) 5. Take appropriate decision (3) 6. Keep my position (3) 7. maintain my health (6) 8. maintain good relations with others (7)	- Positive Objective of change	- Positive energy to change

### Findings

Obtained students' comments were categorized into eight codes according to the essences of each meaningful unit of data. These codes were conceptualized as two subthemes and two themes according to the objective of the session, as displayed in table (6). Each theme is elaborated in more detail along with quotes from the students' comments to illustrate codes or essences under the theme. The major code for this part was:

#### 1- Objective Interpretation skills

The first theme emerged from the data involved "Objective Interpretation Skills" for managing impulsivity of the students' nurses attending the program sessions. The most prominent subtheme that the students described as learning interpretation skills was planning to change which was described in the form of putting causes for nervousness, putting other alternatives to nervousness and putting rationales for other's actions which were in the emerged codes. Twelve participants in the program identified this as a key point of their behaviors in dealing with stressful situations.

- انا لما فكرت ليه انا اضايقت واتعصب لقيت انه مش عشان غلط الشخص الاخر لكن عشان شكلي قدام الناس بقي وحش وعشان كدة اتعلمت افكر في السبب الحقيقي لنرفزتي
- ممكن اللي قدامي مش قصده يضايقتني لكن له قصد ثاني برئ

#### 2- Positive Energy to Change

The second theme emerged from the data involved "Positive Energy to Change" impulsivity of the students' nurses attending the program sessions. The most prominent subtheme that the students described as Positive energy to change were *positive objective of change* which described in the form of maintain good impression of others, take appropriate decision, keep proper social status, maintain health and maintain good relations with others which were in the emerged codes. Thirteen participants in the program identified these as key points of their desires for change.

- انا عايز اغير اسلوبي عشان الشخص الاخر ما ياخذش انطباع خاطئ عني
- السلوك الغير مندفع يساعدني علي القرار الصحيح والتفكير في هدوء وكمان ما تعرضتتش لفصل من العمل واسمح للامامي ان يتناول عليا
- انا عايز اغير اسلوبي عشان صحتي البدنية والجسدية والنسبة اللي اتأثرت من السلوك المندفع
- باسلوبي بخسر ناس المفروض انهم مهمين في حياتي

### **Results of last two sessions (Maintenance Stage of Change)**

The short-term goal of session (13, and 14) according to the fifth stage of change the "Maintenance Stage of Change" was to help students of the study group develop rule-based control over their behavioral changes while integrating achieved change into their lifestyles. They were helped to develop the needed script about proper actions to avoid impulsivity such as "this is what I do and/or say to myself when I am tempted to engage in the negative behavior", and sticking to a schedule, or some type of established routine for maintaining the behavior change.

Table (7): The indicators for achieving the objectives of the sessions (13, and 14) were:

Maintenance Stage of Change		
Codes and numbers of students	Subthemes	Themes
1. Confront others appropriately (6) 2. Think before act and give opinion (5) 3. Think in requirements and needs of others (3)	- Reframing thoughts (positive focus)	- Developing conscious thinking habits

### **Findings**

The students put in those sessions number of comments to report their expression that indicated using approaches of maintenance stage of changing impulsivity through application of number of tests and reactions of different life stressors. A numbers of comments were categorized into three codes according to the essences of each meaningful unit of data. These codes were conceptualized as one subtheme and one theme according to the objective of the session, as displayed in table (7). Each theme was elaborated in more detail along with quotes from the students' comments to illustrate codes or essences under the theme. The major theme for this part was:

#### **1- Developing Conscious Thinking Habits**

The major theme emerged from the data was "Developing Conscious Habits" for overcoming impulsivity of the student nurses involved in these program sessions. The most prominent subtheme that the students described as developing conscious thinking habits was reframing thoughts (positive focus) which were described in the form of confronting others appropriately, thinking before acting or giving opinion and thinking in requirements or needs of others which emerged from the recorded codes. Nine participants in the program identified these codes in dealing with stressful situations.

- فكرت الاول في الكلام كويس بعد ما هديت خالص من العياط وعرفت ان الكلام ده اكيد فيه غلط وصارحت زميلتي اللي معاها المشكله بالكلام اللي ضابقتي منها وعرفت منها ان الكلام وصلني غلط واتعلمت اني مصدقش اي كلام بتقال من اي حد مهما ان كان
- انا اتعلمت افكر في السبب الحقيقي لاندفاعي
- يمكن لو كنت فكرت في اللي بيطلبه اللي قدامي مكنتش اضايقت
- بقيت احاول اخذ برأي الناس وانتظر قبل ما انفذ اللي في دماغي

## **5- Discussion**

### **Section one: Discussion of the quantitative results of the study**

#### **Part I: Discussion of the "Impulsive Behavior Scale" of the target population scores:**

Regarding to the frequency distribution of target population according to the total scores of "Impulsive Behavior Scale" results indicated that the total results of the " Impulsive Behavior Scale" of the target population of students of Faculty of Nursing – Cairo university showed that most of target population suffered moderate to severe impulsivity and about three percent of the students had mild impulsivity. The explanation of this finding may be due to two rationales; the first is that moderate and severe scores of negative impulsive behaviours represented big sector of the target population. This alarming result show the serious extent of negative impulsive behaviour practiced by those students, despite the fact that they are nursing students who should demonstrate high level of self control, tolerance of stressful situations and warmth toward their patients. Nonetheless, the second rational may be due to the aggressive atmosphere in the Egyptian society following the 2011 revelation where students were faced security chaos, bullying and different kinds and forms of violence which left negative impacts on the society's cohesion and unity. Many Egyptian universities such as Cairo University, Al-Mansoura University and Al-Azhar University suffered the cease of the educational process and delaying it several times. In addition these universities witnessed serious impacts of students' demonstrations that turned into violence, terrorism, destruction of some university buildings and the killing of some students.

This result did find support in the study of Mohammed, (2015) who studied "the phenomenon of students' violence in the Egyptian Universities especially El-Zagazig University after the 25th January Revolutions (2011). She mentioned that El-Zagazig University was one of the most universities that witnesses violence and terrorism (Zagazig University Security, 2013). She also mentioned the spread of students' violence phenomenon in different educational levels especially in Higher Education and Secondary school levels. She referred to the nature of this age group that is prevalent in students of these levels. Disruptive behaviours against values, customs and traditions of the university were also documented. These behaviours ranged from verbal abuse or objection to the use of force, bullying, firing, destruction of university facilities and attacking some faculty staff

members and some university leaders.

The present study results showed that more than ninety percent of the target population had moderate and severe impulsivity that share similarities with the results of Abu- Zeinah's (2012) study who documented that violence occur regardless of the age group. He studied the "Potential Factors behind School Violence Phenomenon: An Analytical Study" which aimed to recognize the size of secondary school violence phenomenon, its rate, and the gender differences. His study results showed increasing violence against properties, domestic violence, and student violence against each others.

### **Part II: Discussion of the Comparison between "Impulsive Behaviour Scale" results before and after the program implementation of both the Study subjects and Comparative group**

Part two of the current study discusses comparison between "Impulsive Behavior Scale" analysis results before and after the program implementation for the selected program subjects (the study group) as well as comparison between results of the study group and the comparison group. Results showed that the majority of the study group have moderate to severe impulsivity before implementation of the intervention program.

After implementation of the program results showed that about two thirds of the study group improved and scored lower grades of impulsivity than before the program; however two students continued to suffer severe impulsivity after the end of the program. As for the comparison group who did not attend the intervention program sessions, two thirds of them continued to have moderate impulsivity, more than quarter of them had mild impulsivity, while 2 students of them continued to have severe impulsivity. These results showed no significant difference between first and last assessment of the comparison group (table 7, 8, and 9). Nonetheless, differences between the study group and the comparison group was highly statistically significant indicating the success of the (MPCIB) program in improving student nurses abilities to control their impulsive behavior.

These results goes well in agreement with, Orue, Calvete, and Gamez-Guadix (2016); Flook Goldberg, Pinger, and Davidson (2015) who reported the success of number of implemented programs to prevent impulsive and aggressive behavior in adolescence. Programs consisted of different activities to develop coping strategies and other transversal goals, such as developing interpersonal skills (empathy, active listening, social skills, constructive conflict resolution, etc). Additional techniques to reduce aggressiveness include emotional education, improving self-control and problem-solving skills, especially with adolescents showing impulsivity and reactive aggression. In the same context, confirmation of the result of the current study are found in the results of the study of Franco, Amutio, López-González, Orío, and Martínez-Taboada (2016) who studied the "Effect of a Mindfulness Training Program on the Impulsivity and Aggression Levels of Adolescents with Behavioral Problems in the Classroom". They confirmed the effectiveness of mindfulness training at reducing impulsive and aggressive behaviors in the classroom. The efficacy of mindfulness-based programs is emphasized and as a result of the application of the Flair meditation technique as used in the study of Franco et al., (2011) during 10 weeks, significant reductions in all the dimensions of impulsivity and aggressiveness levels which were in line with the findings of other studies by Oberle et al., (2011) and Fishbein et al., (2016). Reduction in hostile affect, including frustration and anger feelings are documented by Kemeny et al., (2012) and Krishnakumar & Robinson (2015), while an increase in self-control before stressors are found by Broderick and Metz, (2009) and Yusainy & Lawrence (2014). In this way, reduced impulsivity enhances the capacity to regulate attention and emotion in forms of self-regulation that support dispositions conducive to learning and maintaining positive social relationships (Flook et al., 2015).

### **Section two: Discussion of Qualitative results of the program sessions**

This part of discussion discusses the results of qualitative analysis of the current mixed research design. The following discussion will elaborate on the findings content related to the research hypothesis: Nursing students who will receive the "Motivation Program for Change of Impulsive Behaviour" (MPCIB) will show an improvement in controlling their impulsive behavior and will have lower scores on the "Impulsive Behaviour Scale" in the post test than in the pre-test as compared with the comparison group. As presented in tables of the Content analysis of qualitative results seven themes were identified in relation to qualitative assessment of the students in the study group and the effect of the (MPCIB) program on changing the impulsive behavior of the student. The seven themes included all the following:

#### **Theme one: Dysfunctional Impulsivity**

Regarding, findings of the qualitative analysis according to the objective of the first and second sessions of the program which was directed toward conducting qualitative assessment of students in the study group, illustrated two major themes. The first major theme emerged from the data content analysis involved the "Dysfunctional Impulsivity" of the student nurses attending the program sessions. This major theme included three sub-themes i.e., (1) risk taking & inhibitory control, (2) un-planning and controlling personality which were described in the form of nervousness, anger from others, hurting themselves and (3) stubborn & insistence control conversation. These subthemes were demonstrated by number of behavioural signs; such as Failure to attend meetings in time, non compliance, late attendance, or inability to wait until the end of the session, using head gestures and stubborn hand signals or stand up when they talk. Furthermore, regarding the analysis of the content of the first

session, student nurses' in the study program used inappropriate facial expressions such as sharp look, gazing, elevation of eyebrows and angry fanatic destination.

This finding confirms the quantitative results of "Impulsive Behavior Scale" analysis of the study group before program implementation which show that the study group of students suffered high levels of impulsivity. Along with the qualitative analysis, results showed the different forms and signs of impulsivity recorded by the video tapes of those students in each session and according to the emerged codes that were transferred to subthemes and main themes.

Result of "Dysfunctional Impulsivity" was in accordance with several studies. For instance, Dickman (1990) studied the functional and dysfunctional Impulsivity on personality and cognitive correlates in-order to work on the relationship between impulsivity and cognitive functioning. He claimed that consequences of impulsivity are not always negative and defined Impulsivity as the tendency of deliberate-less than most people of equal ability before taking action. While Luciana & Collins (2012) studied the relationship between impulsivity, sensation seeking, and risk behavior. Similarly, Boyer (2006) and Johansen (2014) studied sensation seeking and impulsivity in relation to youth decision making about risk behavior and mindfulness training to improve self-regulatory skills. Their studies found positive correlations between impulsivity and sensation-seeking, and these two variables were in turn correlated with engagement in risk behavior. They concluded that there would be a relation between impulsivity and sensation seeking and the bases of various decision-making.

Moreover, the current study finds support in the study of Fino, Melogno, Iliceto, D'Aliesio, et al., (2014) who studied "the executive functions, impulsivity, and inhibitory control in adolescents" on group of youths in the adolescents stages. They documented that impulsive adolescents represent a critical period for brain development and age-related changes. These changes include alterations in sensitivity to salient stimuli, addressed by neurodevelopment models that enhance the frontal, sub cortical-limbic, and striatum activation, in a pattern associated with the rise of impulsivity (IMP) and deficits in inhibitory control (IC) marking risk for psychopathology and maladaptive behaviors.

#### **Theme two: Depressive Attitudes of the Study Sample**

Regarding to the second major theme emerged from the content analysis of the qualitative results of the current study involved "Depressive Attitude Expressed by the Study Group". The theme of depressive attitudes included two sub-themes: the first prominent subtheme was students' reports of disturbed forms of simple cognitive tasks such as frustration and disinterest in complex tasks. The second described prominent subtheme was forms of negative emotions such as loneliness, crying and, sadness. This result of the current study of reported depressive attitude was found to be related to lack of assertiveness. This result was in agreement with the study of Rezayat and Nayeri (2014) who studied "The Level of Depression and Assertiveness among Nursing Students". They investigated depression and assertiveness levels and the relationship between them in nursing students at Tehran University of Medical Sciences. They claimed that among the selected students, who completed the questionnaires, most students were at the age of 18-20 years old, female, unemployed, had 4 to 5 household members, and moderately interested in their field of study. They found that more than half of the students had average to low levels of assertiveness and one third of students had mild to severe depression. Their results showed a significant relationship between depression and lack of assertiveness. In the same context, results of the current study showed that the impulsive students of the study group showed low assertiveness skills associated with their impulsive actions and anger reactions to different situations, with signs of depression

In the same line, the study of Swann, Anderson, Dougherty, and Moeller (2001), Corruble, Damy & Guelfi, (1999) and Chamorro, Bernardi, Potenza, Grant, Marsh, Wang, et al.,(2012) reported that depressive episodes are potentially associated with impulsivity. They reported that impulsivity has been found to be associated with a number of psychiatric disorders, such as depressive disorders, antisocial, narcissistic and borderline personality disorders, bipolar disorders, suicide attempts, substance abuse, ADHD, posttraumatic stress syndrome, pathological gambling, and OCD as well as with domestic violence and driving violations, promiscuity and risky sexual behavior.

As well, other studies done by, Mobini, Pearce, Grant, Mills, &Yeomans, (2006) and Dvorak, Lamis, & Malone, (2013) revealed that impulsivity may often lead to cognitive distortions since impulsive individuals may interpret a given situation in a different way. Such cognitive distortions may be when the individual tends to focus on the negative aspects of the situation or discount positive ones, catastrophes the situation, over generalizes, blames, personalizes, regrets orientations or ruminates. These cognitive distortions may result in depressive symptoms or suicidal ideation/ attempts. In addition, impulsivity may also contribute to depression through strengthening maladaptive coping as in a study by Cyders & Coskumpinar, (2011).

#### **Third theme: Insight-less of impulsivity**

According to, the qualitative findings of third, fourth and fifth sessions of the program which were related to the objective of helping impulsive students wanting to change to realize the need to acknowledge that a problem exists, assess their abilities to reduce impulsivity, and identify the costs of it. All these actions were directed



towards consciousness raising and dramatic relief as required by the first stage of change i.e., the pre-contemplation stage. The theme emerged from the data showed insight-less with impulsivity before the program sessions. The prominent subtheme students described to this theme was lack of awareness to risks of impulsivity. In this subtheme, the students reported lack of awareness of the negative consequences. Conversely, they claimed positive aspects of their impulsive behavior such as "my behavior makes others respect me, increase my self esteem, increase psychological comfort, increase anger relief, give me power, put limits to others, empower me to gain my rights". These findings of the current study refer to the uncertainty and insecurity of the adolescent students regarding the costs of their behaviors which in-turn require structured intervention program to help them overcome the resistant to change and lack of insight to their problems and its consequences.

In this context, Haggard, (2008); and Soon et al., (2008) studies suggested that our actions are initiated by unconscious mental processes long before awareness of intention to act. However, the interval between conscious intention and movement onset seems to be sufficient to allow a conscious 'veto' of the impending action (Brass & Haggard, 2007; Matsushashi & Hallett, 2008; Kuhn, Haggard, & Brass 2009; Walsh, Kuhn, Brass, Wenke & Haggard, 2010). As well, the study of Cincotta et al., (2016), suggested that impulsivity is related to a delayed awareness of voluntary action. The result of the current study also find support in the theory of Prochaska, DiClemente, & Norcross (1992) who documented that the negative behavior is like an automatic habit under minimal cognitive control, the lack of desire for change may be due to lack of awareness of the problem, demoralization from past failures to change, or defensiveness. People in this stage are more likely to generate reasons to continue their unhealthy behavior than reasons to stop. As a result, people in this stage are unlikely to seek help on their own, and may only attend counseling as a result of pressure from others.

Similarly, Casey, Day, & Howells (2005) suggested in their assessment of stage of change tools used in offender populations, that the "problem behavior is not clearly identified". Furthermore, treatment providers know that individuals may be in one stage of change for behavior (A) but in another stage of change for behavior (B). For example, someone might be taking active steps to curb their addiction to heroin but unwilling to admit that alcohol is also a problem for him.

#### **Fourth theme: Insight Enhancement**

According to the second stage of change (contemplation stage) giving number of face to face raising awareness exercises within the intervention sessions about impulsivity on a decisional balance approach sheet, self assessment exercises and increasing self awareness skills showed the emergence of the theme of "Insight Enhancement" which include one prominent subtheme i.e., increasing awareness to risks of impulsivity as described by the students in the form of these codes; "my behavior is my weak point, I need to change, I need to be happy, I need to learn how to be in control, and I need to think positively". This finding may mean the confirmation of achieving the sessions' goals and objectives of the "pre contemplation phase" of the trans-theoretical model of change which is used in the current study blended with the motivational interviewing principles for enhancing students' awareness of their problems and consequences of their impulsivity which help them to put options for changing their behaviors.

In agreement with the current study result, are the studies of Easton, Swan, and Sinha, (2000), and Brownlee, Ginter, & Tranter (1998), and Daniels & Murphy (1997) who have discussed the application of stage-matched interventions in order to maximize treatment with male batterers and suggested that interventions should be tailored to the client's degree of readiness for change, should enhance motivation at different stages of change, and should guide the application of treatment techniques. As well, Dewhurst & Nielsen (1999) and Kear-Colwell & Pollock (1997) proposed a model that integrated the trans-theoretical model of change (TTMC) with a relapse prevention model, culturally sensitive strategies (e.g., resiliency-based treatment, and narrative treatment) and have demonstrated that TTMC is a useful model in conceptualizing treatment approaches and compared a confrontational treatment approach with a stage-based approach, and concluded that the stage-based approach was more effective in helping sexual offenders to make treatment progress.

Moreover, the study of Willoughby and Perry (2002) that studied "Working with Violent Youth with Application of the Trans theoretical Model of Change" to highlights how the Trans theoretical Model of Change can be utilized to guide treatment interventions with adolescents who engage in violent behavior. They applied (TTMC) in the first stage of change to help the therapist to understand from the assessment tools how willing the youth to change those factors that are related to violence. There was likely be an uneven "profile" of preparedness, in which the youth is more willing to address some factors (e.g., substance use) and less willing to address others (e.g., antisocial peers). The study suggested that therapists according to TTMC in this study are mindful of this difference and decrease the likelihood of developing a negative halo effect resulting from negative client expectations and avoid direct confrontation with youth and instead present themselves as a pro socially. In addition, they used the process of experiencing negative emotions associated with violence (i.e., dramatic relief) for helping the youth to express feelings of low self-confidence. The researchers in this study helping youths identifying the costs of violence and avoid challenging youths' perceived benefits of violence, as this will likely force the youth into defending or rationalizing the choice of violence.

### **Fifth theme: Objective Interpretation Skills**

According to the qualitative findings of the following sessions (6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> and 12) which employed the third and fourth stage of change "Preparation and Action stages of change" the objectives of these sessions were to establish a plan to accomplish required levels of change. Furthermore, students' commitment to implement the plan at a specific point in the near future helps the future Maintenance Stage. The prominent themes emerged from the sessions analyses included two major themes "Objective Interpretation Skills" and "Positive Energy to Change". This theme emerged from the data analysis the subtheme of learning thinking skills that was planned to change form codes; put causes for my nervousness, put other alternatives to my nervousness and, put causes for other's actions.

In agreement, the study of Nkrumah, Olawuyi, and Seidu (2015) who studied "the Effect of Cognitive Modeling on Impulsive Behavior Among Primary School" to assess the cognitive modeling procedure for modifying impulsivity among children in Ghanaian schools. The treatment group in this study received training in cognitive modeling with reflective thinking practices, and the control group was given a placebo in reading comprehension in English. The study revealed superiority in response-time and accuracy of the treatment group over the control group. The impact of the impulsive problem solving style becomes pronounced in the Ghanaian educational system where examinations at all levels have been dominated by multiple Choice items, a test in which impulsive children mostly fail.

In accordance, results of the current study were also, agreeable with earlier studies by Gorrel (1993) and Olasehinde (1991) who studied whether a behavior learned through modeling is enduring. The study conducted a test one month after cessation of training and yet at delayed post-test, the experimental group demonstrated reduced impulsivity compared to the control group. This affirms with Robinson, Smith, Miller, & Brownell (1999) and study of Nwamuo (2010) who reported similar results that cognitive behavior interventions continue to reduce inappropriate behavior after the cessation of treatment.

### **Sixth theme: Positive energy to change**

According to, the second theme emerged of the same sessions depending on the fourth stage of change "Action Stage of Change" involved "Positive Energy to Change" the impulsivity of the study group. This stage included one prominent subtheme which was "Positive Objective of Change" that the students described in the form of these codes; maintain good impression of others, take appropriate decision, protect status, maintain good health and, maintain good relations with others. These qualitative findings of the current study can be related to the TTM view of behavior change as a series of gradual steps involving multiple tasks and requiring different coping activities rather than a single dimension process that has led to a significant change (DiClemente, 1999b; Joseph, Breslin & Skinner, 1999; Shaffer, 1992; Weinstein, Rothman & Sutton, 1998). However, moving through the stages of change requires effort and energy for thinking, planning and doing. Motivation is what provides the impetus for the focus, effort and energy needed to move through the entire process of change (DiClemente, 1999a; Rollnick Mason & Butler, 1999; Simpson & Joe, 1993).

Moreover, result of the current study finds support in the study of Hall, Gibbie and Lubman (2012) who revealed that the motivational interviewing (MI) approach is effective at engaging apparently 'unmotivated' individuals and when considered in the context of standard practice can be a powerful engagement strategy. As well, Miller, Rollnick (2002) who documented that motivational interviewing (MI) is an effective counseling method that enhances motivation through the resolution of ambivalence which drew on the phrase 'ready, willing and able' to outline three critical components of motivation. These were: the importance of change for the person (willingness), the confidence to change (ability) and whether change is an immediate priority (readiness).

### **Seventh theme: Developing conscious habits**

According to the qualitative findings of the following sessions (13<sup>th</sup>, 14<sup>th</sup> and 15<sup>th</sup>) depending on the fifth stage of change "Maintenance stage of change" which was related to the objectives of these sessions was to develop rule-based control over their behavioral changes while youth integrate change into their lifestyles. They need to have a script about "this is what I do and/or say to myself when I am tempted to engage in the negative behavior," a schedule, or some type of established routine and maintaining the behavior change. The major theme emerged from these sessions was developing conscious habits which involve one subtheme was reframing thoughts (positive focus) which was described in the form of the following codes: confront others appropriately, think before act and give opinion and think in requirements and needs of others.

This result also congruent with the data concluded from the study of Siegel (2010) who outlined another intervention for reactive impulsivity which addresses regulation of emotions through Mind Sight. He teaches clients to use meditative attention to focus on their thoughts, feelings, and sensations as they arise in consciousness. In doing so they move from "being the emotion" to becoming a more distant observer of the emotion. Siegel proposes that by doing this regularly, they will build the cortical connections necessary to regulate intense emotions and added that Mind Sight is a kind of focused attention that allows us to see the internal workings of our own minds. It helps us to be aware of our mental processes without being swept away

by them, enables us to get ourselves off the autopilot of ingrained behaviors and habitual response.

## 6- Conclusion and Recommendations

The study concluded that majority of the students of the faculty of nursing had moderate to severe impulsivity. The study also proved that (MPCIB) was effective on almost all student nurses of the study group as compared with the comparison group. In addition, the qualitative findings provided detailed information that could contribute to better understanding of those students' impulsive behaviors, as based on their personal characteristics, analysis of their social and situational problems as well as the structure of their families. Therefore, this study recommends establishment of a center for modification of Cairo University nursing students' impulsive behaviors using "Motivation Program for Change of Impulsive Behaviour" (MPCIB) program.

## 7- References

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