# Development and Evaluation of Social Cognitive Measures Related to Adolescent Dietary Behaviors. 

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#### Abstract

\section*{Aim and objective:}

This study is aimed to develop social cognitive measures regarding adolescent dietary behaviours.

\section*{Background:}

Social cognitive measures are based on the adolescents' poor dietary practices, in addition on failing to meet the demand dietary guidelines and recommendations. The survey questionnaire is administered to the students by using survey monkey link. This is based on 65 students of dental students.


## Result:

The survey done has shown that more than $80 \%$ of the participants are aware that eating healthy foods are important for a healthy life style.

## INTRODUCTION

Nowadays, there are many evidences showed that adolescents illustrate poor dietary behaviors. Furthermore, they have proved that they are unable to fulfill the requirements of current dietary guidelines and those that are suggested (1-3). During adolescent, a major contributor for weight gain is the extreme consumption of energydense nutrient poor foods (2). Thus, it emphasizes the vital of programs that can enhance the quality of diet among these people. However, the programs done in this population have obtained the least successful $(4,5)$. This can be explained by a lack of understanding related to behavior change mechanisms (6).

Relevant theory such as Social Cognitive Theory and Selfdetermination theory can be applied to guide health behavior interventions which is more effective in behavioral changes in comparison to non-theoretical approaches (7,8). Both theories conclude that effects of an intervention can be obtained via mediators, for instance self-efficacy, which works in various degrees to improve the pathway between an intervention and the outcomes of the behavioral (9). For instance, the Social Cognitive Theory, SCT (10) illustrates which the changes of behavior
is affected by a complex interaction, known as 'reciprocal determinism'. They are occur in between individual and environmental factors, and gives behavior of an individual (9).

In association of good psychometric properties applied to intervention, the use of social cognitive measures regarding dietary behaviors results in development and refinement of theory, in addition supported the design and much effective deliver interventions. On the other hand, children and adolescent dietary behavior interventions do not assess the theoretical mechanisms of dietary behavior change (6). In addition, the minimum research done to investigate the theoretical mechanisms of dietary behavior change in youth mixed by the use of mediator measures with not known, minimum and psychometric properties with a lack of quality (6). To conclude, only minimum is known about the mediators that are effectively functioning in dietary behavior change in youth.

SCT is the theory that is used to guide interventions in order to improve dietary behavior in youth and there is back up for social cognitive related to adolescents' dietary behavior (11-13).

## MATERIALS AND METHODS

65 dental students of Saveetha Dental College, both male and female, 16 and 49 people in number respectively, weregiven a survey questionnaire by using survey monkey link, regarding the evaluation of social cognitive measures
related to adolescent dietary behaviors. The age of students are in range of 10-38 years old.
The questionnaire comprises of 15 questions. Each question has four multiple choices answers; strongly agree(SA), agree(A), not sure(NS), and disagree(D).

| Table 1: Age |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Valid |  |  |  |  |  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|  | 10 | 1 | 1.5 | 1.5 | 1.5 |  |  |  |  |  |
|  | 17 | 13 | 20.0 | 20.0 | 21.5 |  |  |  |  |  |
|  | 18 | 36 | 55.4 | 55.4 | 76.9 |  |  |  |  |  |
|  | 19 | 6 | 9.2 | 9.2 | 86.2 |  |  |  |  |  |
|  | 20 | 8 | 12.3 | 12.3 | 98.5 |  |  |  |  |  |
|  | 38 | 1 | 1.5 | 1.5 | 100.0 |  |  |  |  |  |
|  | Total | 65 | 100.0 | 100.0 |  |  |  |  |  |  |

## ObSERVATION AND RESULTS

Table 2: Questionnaire analysis

| QUESTIONS | ANSWERS |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Strongly agree(SA) | Agree <br> (A) | Not sure (NS) | Disagree <br> (D) |
| 1. I prefer to choose low-fat foods (ex: fruit or low-fat milk). <br> 2. It is difficult for me to choose a healthy snack when I eat in between meals <br> 3. I am able to prepare/cook nutritious foods. <br> 4. I hardly choose healthy snacks when I am eating out with friends. <br> 5. I consume fruits every day in a week. <br> 6. I rarely eat vegetables every day. <br> 7. I always eat till I feel full. <br> 8. I prefer to drink carbonated drinks. <br> 9. Whenever I have a choice, I choose drinks and foods that are low in added sugar. <br> 10. There are more healthy snacks available to eat at home. <br> 11. There are a lot of fruits available to eat at home. <br> 12. I frequently eat instant foods in a week (ex: instant noodles). <br> 13. I always prepare healthy snacks and meals that are low in fat and calories to my family or friends <br> 14. My parents serve more nutrition and low calories food. <br> 15. I prefer to bring my own lunch box to school (day scholar). <br> 16. Whenever I feel bored, I tend to eat more food. <br> 17. Whenever I break my dieting session, I prefer to eat junk food. <br> 18. Whenever I feel stress, I tend to eat a lot of food. <br> 19. When I am hanging out with friends, I choose to eat what my friends do. <br> 20. Healthy eating (ex: not skipping meals) can help to improve my concentration at school. | $\begin{gathered} 11 \\ 2 \\ 9 \\ 14 \\ 19 \\ 9 \\ 6 \\ 6 \\ 3 \\ 25 \\ 25 \\ 8 \\ 2 \\ \\ 18 \\ 21 \\ 13 \\ 7 \\ 12 \\ 11 \\ 34 \end{gathered}$ | $\begin{aligned} & 33 \\ & 38 \\ & 30 \\ & 29 \\ & 22 \\ & 11 \\ & 19 \\ & 12 \\ & 25 \\ & 29 \\ & 32 \\ & 19 \\ & 23 \\ & 29 \\ & 18 \\ & 24 \\ & 31 \\ & 20 \\ & 27 \\ & 24 \end{aligned}$ | $\begin{gathered} 12 \\ 12 \\ 12 \\ 8 \\ 12 \\ 14 \\ 16 \\ 14 \\ 23 \\ 7 \\ 3 \\ 12 \\ 29 \\ \\ 12 \\ 12 \\ 8 \\ 11 \\ 11 \\ 14 \end{gathered}$ | $\begin{gathered} 7 \\ 11 \\ 12 \\ 12 \\ 10 \\ 28 \\ 21 \\ 30 \\ 11 \\ 1 \\ 2 \\ 23 \\ 8 \\ \hline \\ 3 \\ 11 \\ 17 \\ 13 \\ 19 \\ 10 \\ 3 \end{gathered}$ |


| Table 3. I consume fruits every day in a week. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Strongly Agree | 19 | 29.2 | 30.2 | 30.2 |
|  | Agree | 22 | 33.8 | 34.9 | 65.1 |
|  | Not Sure | 12 | 18.5 | 19.0 | 84.1 |
|  | Disagree | 10 | 15.4 | 15.9 | 100.0 |
|  | Total | 63 | 96.9 | 100.0 |  |
| Missing | System | 2 | 3.1 |  |  |
|  | Total | 65 | 100.0 |  |  |
| 5. I consum |  |  | ay in a week. |  |  |

able 4. Whenever I have a choice, I choose drinks and foods that are low in added sugar.

|  |  |  |  | Frequency | Percent |
| :--- | :--- | :---: | :---: | :---: | :---: |
| Valid | Strongly Agree | 3 | 4.6 | Valid Percent | Cumulative Percent |
|  | Agree | Not Sure | 25 | 38.5 | 4.8 |
|  | Disagree | 23 | 35.4 | 40.3 | 45.2 |
|  | Total | 11 | 16.9 | 37.1 | 82.3 |
| Missing | System | 62 | 95.4 | 17.7 | 100.0 |
|  | Total | 3 | 4.6 | 100.0 |  |



Table 5. There are more healthy snacks available to eat at home.

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Valid | Strongly Agree | 25 | 38.5 | 40.3 | 40.3 |
|  | Agree | 29 | 44.6 | 46.8 | 87.1 |
|  | Not Sure | 7 | 10.8 | 11.3 | 98.4 |
|  | Disagree | 1 | 1.5 | 1.6 | 100.0 |
|  | Total | 62 | 95.4 | 100.0 |  |
| Missing | System | 3 | 4.6 |  |  |
| Total |  | 65 | 100.0 |  |  |



Table 6. I frequently eat instant foods in a week (ex: instant noodles).

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Valid | Strongly Agree | 8 | 12.3 | 12.9 | 12.9 |
|  | Agree | 19 | 29.2 | 30.6 | 43.5 |
|  | Not Sure | 12 | 18.5 | 19.4 | 62.9 |
|  | Disagree | 23 | 35.4 | 37.1 | 100.0 |
|  | Total | 62 | 95.4 | 100.0 |  |
| Missing | System | 3 | 4.6 |  |  |
| Total |  | 65 | 100.0 |  |  |



Table 7. Whenever I feel bored, I tend to eat more food.

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Valid | Strongly Agree | 13 | 20.0 | 21.0 | 21.0 |
|  | Agree | 24 | 36.9 | 38.7 | 59.7 |
|  | Not Sure | 8 | 12.3 | 12.9 | 72.6 |
|  | Disagree | 17 | 26.2 | 27.4 | 100.0 |
|  | Total | 62 | 95.4 | 100.0 |  |
| Missing | System | 3 | 4.6 |  |  |
| Total |  | 65 | 100.0 |  |  |

16. Whenever I feel bored, I tend to eat more food.


Table 8. Whenever I break my dieting session, I prefer to eat junk food.

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Valid | Strongly Agree | 7 | 10.8 | 11.3 | 11.3 |
|  | Agree | 31 | 47.7 | 50.0 | 61.3 |
|  | Not Sure | 11 | 16.9 | 17.7 | 79.0 |
|  | Disagree | 13 | 20.0 | 21.0 | 100.0 |
|  | Total | 62 | 95.4 | 100.0 |  |
| Missing | System | 3 | 4.6 |  |  |
| Total |  | 65 | 100.0 |  |  |



Table 9. Whenever I feel stress, I tend to eat a lot of food.

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Valid | Strongly Agree | 12 | 18.5 | 19.4 | 19.4 |
|  | Agree | 20 | 30.8 | 32.3 | 51.6 |
|  | Not Sure | 11 | 16.9 | 17.7 | 69.4 |
|  | Disagree | 19 | 29.2 | 30.6 | 100.0 |
|  | Total | 62 | 95.4 | 100.0 |  |
| Missing | System | 3 | 4.6 |  |  |
| Total |  | 65 | 100.0 |  |  |

18. Whenever I feel stress, I tend to eat a lot of food.


Table 10. When I am hanging out with friends, I choose to eat what my friends do.

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Valid | Strongly Agree | 11 | 16.9 | 17.7 | 17.7 |
|  | Agree | 27 | 41.5 | 43.5 | 61.3 |
|  | Not Sure | 14 | 21.5 | 22.6 | 83.9 |
|  | Disagree | 10 | 15.4 | 16.1 | 100.0 |
|  | Total | 62 | 95.4 | 100.0 |  |
| Missing | System | 3 | 4.6 |  |  |
| Total |  | 65 | 100.0 |  |  |

19. When I am hanging out with with friends, I choose to eat what my friends do.


Table 11. Healthy eating (ex: not skipping meals) can help to improve my concentration at school.

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| :---: | :--- | :---: | :---: | :---: | :---: |
| Valid | Strongly Agree | 34 | 52.3 | 54.8 | 54.8 |
|  | Agree | 24 | 36.9 | 38.7 | 93.5 |
|  | Not Sure | 1 | 1.5 | 1.6 | 95.2 |
|  | Disagree | 3 | 4.6 | 4.8 | 100.0 |
|  | Total | 62 | 95.4 | 100.0 |  |
| Missing | System | 3 | 4.6 |  |  |
|  | Total | 65 | 100.0 |  |  |



## DISCUSSION

Based on the questionnaire analysis, approximately more than $80 \%$ of the participants are aware that eating healthy foods are necessary to meet the daily requirements of the body. They are able to cook nutritious food and consume fruits and vegetables every day in a week. However, less than $50 \%$ of them are unaware that eating and drinking beverages with high added sugar content can lead to serious diseases.
In addition, about $90 \%$ of the students are practicing a healthy lifestyle as there are more healthy foods such as fruits, vegetables etc. are available at home. Furthermore, their parents $60 \%$ also ensures to give nutritious food. This is a good practice as parents are the role model in creating a healthy life style. In contrast, there are small populations of the people who prefer to eat instant foods though they are aware that these foods has greater risk of metabolic syndrome(14).
About $60 \%$ of the students prefer to bring lunch box to school and only $18 \%$ disagree about this. Bringing lunch box which means the food is prepared at home is healthy. People tend to eat more not necessarily that they are hungry, but feeling bored is another reason in addition to stress. More than $50 \%$ of the participants agreed with this statement.
Many people preferred dieting by avoiding snacks or any other foods that can cause weight gain. However, every
time they break the dieting session, they prefer only junk foods. In Table 8, almost 40 participants agreed doing this when they break the diet, which came up to $61 \%$.
It is said that healthy eating can aid in improving concentration of students in class. This is strongly agreed by the participants of this survey.About $55 \%$ and $94 \%$ of them answered 'agree' and 'strongly agree' respectively based on the Table 11.

## Conclusion

Healthy mind comes from healthy body, thus eating behaviours influence body health greatly. Therefore, people must maintain good healthy dietary practices and ensure that the body meets the dietary demand and nutrition required to keep healthy. 'We are what we eat'. The quote says that whatever we eat will create what inside the body, good or bad depending upon what we consume daily. Hence, healthy eating behaviours must be maintained to preserve health and prevent any diseases from attacking the body. Based on this study, it has been proven that people are aware about healthy eating behaviours are important yet still some of them unable to resist from eating unhealthy food. This survey has created awareness among people related to healthy eating behaviours which leads to more people especially teenagers to achieve the same goal.

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