Effectiveness Of Participatory Adolescents Strategic Health Action (Pasha) On Practice Regarding Lifestyle Modification Among Adolescents

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Abstract- **Background:** Adolescence is a phase of health formation when people start to develop healthy habits, and the cognitive and psychological changes that take place during this time create the foundation for lifelong health. And adopting healthy lifestyle into practice, creating good habits to prevent diseases will raise the average life expectancy and enhance both physical and mental health. Increased focus on lifestyle behaviors among adolescents encourages preventive action before weight management becomes a problem. Therefore the present study aimed to assess the effectiveness of Participatory Adolescents Strategic Health Action (PASHA) on practice regarding lifestyle modification among adolescents in selected school at Dehradun. **Method:** This study was design with a pre-experimental one group pretest and posttest design. Non-Probability purposive sampling technique was used for this study. The sample consists of 60 adolescences students. The pretest and posttest for practice of the adolescents was carried out using the structured practice questionnaire. The interventional program consisting of snake and ladder game administering to adolescent on modifying the lifestyle practices such as diet, physical activity, sleep, study, hygiene, behavior. The obtained data were analyzed using descriptive and inferential statistics. **Results:** The overall mean post-test practice score is 104.78 which was more than the overall pre-test mean practice score i.e. 62.40 by an overall mean difference of 42.38 of all aspects of practices and obtained paired t-value was 26.43 which was significant at ($p<0.005$) level. It demonstrated that the effectiveness of PASHA on practice regarding lifestyle modification among adolescents. **Conclusion:** The study findings concluded that the Participatory Adolescents Strategic Health Action (PASHA) has improved the practice of adolescents regarding lifestyle modification. Promoting healthy behaviors during adolescence and adopting precautions to better safeguard children from health risks are essential for preventing health issues in adulthood as well as for the future social and health infrastructure of nations. Therefore, by setting up and implementing more programmes to encourage adolescents, it is possible to improve health promotion behaviors.

Index Terms- Effectiveness, Participatory Adolescents Strategic Health Action (PASHA), Practice, Lifestyle Modification, adolescents, overweight.

I. INTRODUCTION

T *"To preserve health is a moral and religious duty, for health is the basis of all social virtues. We can no longer be useful when we are not well."*

-Samuel Johnson

A healthy lifestyle is a valuable tool for lowering the likelihood and severity of health issues, recovering from them, dealing with life's stresses, and generally enhancing quality of life. Our health will be impacted by everything from what we eat and drink to how much exercise we get to whether or not we use drugs or smoke. This includes how long we can expect to go without developing a chronic disease. A healthy lifestyle reduces the likelihood of developing life-threatening illnesses or dying early. It is not only diet and exercise that constitutes a healthy lifestyle. Most people would say that a healthy person stays away from smoking, is overweight, eats a balanced diet, thinks positively, feels relaxed, exercises frequently, has good relationships and benefits from the right kind of life balance. Unhealthy lifestyles are the root of many illnesses and disorders, it is important to prioritize the learning of healthy lifestyles while forming bad habits in the early years of life. A healthy lifestyle is a way of living that supports, maintains, and promotes an individual's health and well-being. Implementing a healthy lifestyle and making good habits to avoid diseases can raise lifetime expectancy and improve both health of mind and body. The fundamentals of a healthy lifestyle include a balanced diet, regular exercise, and enough sleep. According to WHO, Healthy living is a way of

living that helps you enjoy more aspects of your life. It is a way of living that lowers the risk of being seriously ill or dying early. Health is not just about avoiding a disease or illness. It is about physical, mental and social well-being too. A healthy lifestyle gives you longer and happier life. Adopting bad habits, such as poor diet, lack of exercise, irregular sleep pattern and resorting to excessive smoking or alcohol use might put you in with 38 million people, who are limited due to one or more chronic health conditions. Therefore, it is essential to explain health literacy to teenagers in order to promote a healthy lifestyle and maintain good health. Teenagers' lifestyles are undoubtedly impacted by new technology, and their fixation with technology poses a risk to their health and development. Adolescents frequently have unhealthy lifestyles marked by a lack of proper balanced diet, physical activity, sleep and hygiene. Health education may be an essential role in developing strategies for promoting and preventing diseases, given that adolescence is a period of early health formation during which healthy habits begin to develop as well as cognitive and mental changes due to the development of lifelong health. During this phase, adolescents develop patterns of behaviour, such as diet, physical activity, substance use, and sexual activity, which can protect their health and the health of others around them, or put their health at risk in the future. The age category between 10 and 19 years is around 22% of India's population. The main health problems affecting adolescence are identified to be malnutrition and obesity. The most common cause of obesity in young individuals is an energy imbalance due to excessive consumption of high-calorie meals and insufficient exercise. Moreover, the regular attendance of children and parents in the lifestyle modification programme is important for the successful implementation of the lifestyle change and may be a more cost effective approach. To maintain the healthy habit, lifestyle change aims at reducing consumption of energy, increasing physical activity and modifying behavior. In order to induce and maintain weight loss of approximately 10% of initial bodyweight, lifestyle modification is effective. According to evidence, what seems to be the most successful approach is intensive lifestyle modification that includes guidance on dietary aspects, food-related factors, physical activity, and behavioral strategies. Increased focus on lifestyle behaviors encourages preventive action before weight management becomes a problem.

Objectives:
1. To assess the level of practice regarding lifestyle modification among adolescents.
2. To assess the effectiveness of Participatory Adolescents Strategic Health Action (PASHA) on practice regarding lifestyle modification among adolescents.
3. To assess the association between the level of practice regarding lifestyle modification among adolescents with their selected socio-demographic variables.

Legal Consideration
Prior to the conduction of study permission will be obtained from:
- Authorities of selected school, Dehradun.
- Informed written consent will be taken from the children who are willing to take part in the study.
- The subjects were informed that their participation will be on voluntary basis and have the freedom to withdraw from the study at any time.
- Privacy and confidentiality of the subjects will be maintained.
- Data collected will be used strictly for research purpose only.

II.   METHOD AND MATERIAL:

The approach adopted for this study was Quantitative research approach for determining the effectiveness of Participatory Adolescent Strategic Health Action [PASHA] on practice regarding lifestyle modification among adolescents. Pre-experimental design was adopted to accomplish the objectives. The study was conducted at Shri Guru Ram Rai Public School, Patel Nagar, Dehradun. 60 adolescences students from 7th to 12th class were selected as sample who fulfills the inclusion criteria at Shri Guru Ram Rai Public School Dehradun, out of which 10 students from each class were divided in groups by using stratified simple random sampling technique. The pretest and post-test of adolescents was carried out using the structured practice questionnaire to assess the level of practice based on rating scale. The interventional program consisting of snake and ladder game administering to adolescent on modifying the lifestyle practices such as diet, physical activity, sleep, study, hygiene, behavior. The snake and ladder game will be conducted for 1 week of duration for 30-45min per day. The sample of adolescents will be placed into different group and the game will be administered independently. Prior to data collection, the investigator introduced about self and explained the purpose of the study. The informed consent was obtained from the subjects; the subjects were assured

about the anonymity and confidentiality of the information provided by them. The data was collected in the following three phases:

Phase I: Pre-test was conducted to assess the existing level of practice level regarding the healthy lifestyle practices.
Phase II: On the same day Participatory adolescents strategy health action (PASHA) was administered by snake and ladder game for lifestyle modification among adolescents age groupfor the duration of 30-45 minute. It was done for 7 days regularly.
Phase III: After a period of seven days, post-test level of practices was assessed within the same groups using same structured practice questionnaire.
 The obtained data were analyzed and interpreted using descriptive and inferential statistics.

Instruments and Tools
Tool for Data Collection were divided into two sections:
Section A: Demographic Performa
The demographic Performa was developed to collect data on sample characteristics. Demographic Performa consists of eleven items. It includes age, gender, religion, class studying, father education, mother education, father occupation, mother occupation, family monthly income, type of diet and family history of overweight.
Section B: Self Structured Practice Questionnaire
Level of practice on lifestyle modification among adolescents was assessed by using four point Rating scale. This scale includes 40 items. In which 20 items are positive lifestyle practices and 20 items are negative lifestyle practices. Scoring interpretation was classified into two responses on the score.

For positive lifestyle practices:	**For Negative lifestyle practices:**
Always= 3points	**Always=** 0 point
Sometimes= 2 points	**Sometimes=** 1 point
Rare= 1point	**Rare=** 2 points
Never= 0 point	**Never=** 3 points

III. STATISTICAL ANALYSIS

The data was organized in a Master Data Code Sheet and analyzed using descriptive and inferential statistics in accordance with the study's aims and hypothesis using SPSS software version 20.
The data are organized and presented under the following sections:
Section 1: Findings of background variables of adolescents in selected schools
Section 2: Assessment of pre-test practice regarding lifestyle modification among adolescents in selected schools.
Section-3: Assessment of post-test practice regarding lifestyle modification among adolescents in selected schools
Section-4: Comparison of pre and post-test practice regarding lifestyle modification among adolescents in selected schools.
Section-5: Effectiveness of PASHA on practice regarding lifestyle modification among adolescents
Sectiion-6: Association between practices regarding lifestyle modification among adolescents with their demographic variables.

Section 1
Table-1.1: Frequency and percentage distribution of selected background variables of the adolescents in selected schools according to their demographic characteristics.
N=60

S.No	Demographic characteristics	Categories	Frequency	Percentage
1.	Age	12-13	18	30%
		14-15	24	40%
		16 and above	18	30%
2.	Gender	Male	29	48.33%
		Female	31	51.66%

3.	Religion	Hindu	44	73.33%
		Muslim	8	13.33%
		Christian	6	10%
		Other	2	3.33%
4.	Class Studying	7th Standard	10	16.66%
		8th Standard	10	16.66%
		9th Standard	10	16.66%
		10th Standard	10	16.66%
		11th Standard	10	16.66%
		12th Standard	10	16.66%
5.	Father Education	No formal education	11	18.33%
		Primary education	12	20%
		Secondary education	15	25%
		Higher secondary education and above	22	36.66%
6.	Mother Education	No formal education	13	21.66%
		Primary education	26	43.33%
		Secondary education	10	16.67%
		Higher secondary education and above	11	18.33%
7.	Father Occupation	Private employee	22	36.66%
		Government employee	14	23.33%
		Self employed	18	30%
		Other	6	10%
8.	Mother Occupation	Private employee	34	56.66%
		Government employee	7	11.67%
		Self employed	0	0
		Homemaker	19	31.67%
9.	Family Monthly Income	≤ 20,000	6	10%
		20,001- 40,000	10	16.66%

		40,001- 60,000	21	35%
		60,001 and above	23	38.33%
10.	**Type of diet**	Vegetarian	23	38.33%
		Non- Vegetarian	37	61.66%
11.	**History of obesity**	Yes	39	65%
		No	21	35%

SECTION 2

Table -2.1: Distribution of adolescents according to pretest level of practice regarding life style modification.
N=60

S. No	Pre test level of practice	Max. score	Pre-test	
			Frequency	**Percentage**
1	**Poor practice (<50%)**	**<60**	**43**	**71.67%**
2	**Average practice (50- 75%)**	**60-90**	**13**	**21.67%**
3	**Good practice (>75%)**	**>90**	**4**	**6.66%**
	Over all		**60**	**100%**

Table 2.1 shows the assessment of pretest level of practice regarding lifestyle modification, 71.67% (43) were in poor practice level, 21.67% (13) were in average practice level, and 6.66% (4) were in good practice level.

Table-2.2: Mean and SD of pretest practice regarding life style modification among adolescents in selected school.
N=60

S.no	Aspects of practice regarding life style modification	Max Score	Pretest Practice		
			Mean	**SD**	**Mean %**
1	**Diet**	24	13.20	2.81	55
2	**Physical Activity**	24	11.48	3.36	47.8
3	**Sleep**	18	8.66	2.48	48.1
4	**Hygiene**	18	8.86	2.96	48.2

5	Study	18	10.91	2.68	60.61
6	Behavior	18	9.26	1.90	51.4
	Over all	120	62.40	11.47	52

Table 2.2 shows the assessment of pretest level of practice regarding lifestyle modification the mean found in diet is 13.20, SD 2.81, mean% 55, the mean found is physical activity is 11.48, SD is 3.36, mean% 47.8, the mean found in sleep is 8.66, SD 2.48, mean% 48.1, the mean found in hygiene is 8.86, SD 2.96, mean% 48.2%, the mean found in study 10.91, SD 2.68, mean% 60.6, the mean found in behavior is 9.26, SD 1.90, mean% 51.4 and the overall mean of all aspects is 62.40, SD is 11.47 and mean% is 52.

SECTION 3

Table -3.1: Distribution of adolescents according to post-test level of practice regarding life style modification
N=60

S.No	Pre test level of practice	Max. score	Post test	
			Frequency	Percentage
1	Poor practice (<50%)	<60	0	0
2	Average practice (50- 75%)	60-90	11	18.33%
3	Good practice (>75%)	>90	49	81.67%
	Over all		60	100%

Table 3.1 shows the assessment of post-test level of practice regarding lifestyle modification, 81.67% (49) were in good practice level, 18.33% (11) were in average practice level and none of them were in poor practice level.

Table-3.2: Mean and SD of post test practice regarding life style modification among adolescents in selected school.
N=60

S.no	Aspects of practice regarding life style modification	Max Score	Post test Practice		
			Mean	SD	Mean %
1	Diet	24	21.00	2.15	87.5
2	Physical Activity	24	20.71	2.38	86.29
3	Sleep	18	15.26	1.95	84.77
4	Hygiene	18	15.40	1.71	85.55
5	Study	18	16.65	1.95	92.5
6	Behavior	18	15.75	2.23	87.5
	Over all	120	104.78	9.12	87.31

Table 3.2 shows the assessment of pretest level of practice regarding lifestyle modification the mean found in diet is 21.00, SD 2.15, mean% 87.5, the mean found is physical activity is 20.71, SD 2.38, mean% 86.29, the mean found in sleep is 15.26, SD 1.95, mean% 84.77, the mean found in hygiene is 15.40, SD 1.71, mean% 85.55, the mean found in study 16.65, SD 1.95, mean% 92.5, the mean found in behavior is 15.75, SD 2.23, mean% 87.5 and the overall mean of all aspects is 104.78, SD is 9.12 and mean% 87.31.

SECTION-4:
Table -4.1: Distribution of adolescents according to pre and posttest level of practice regarding life style modification
N=60

S.No	Pre test level of practice	Max. score	Pre-test		Post test	
			Frequency	Percentage	Frequency	Percentage
1	Poor practice (<50%)	<60	43	71.67%	0	0
2	Average practice (50- 75%)	60-90	13	21.67%	11	18.33%
3	Good practice (>75%)	>90	4	6.66%	49	81.67%
	Over all		60	100%	60	100%

Table 4.1 shows the assessment of pretest level of practice regarding lifestyle modification, **71.67% (43)** were in poor practice level, **21.67% (13)** were in average practice level, and **6.66% (4)** were in good practice level. After administering PASHA, in the posttest results, some of poor practice, adolescents had **18.33% (11)** average practice and average of adolescents had **81.67% (49)** good practice in their post-test regarding lifestyle modification.

Table-4.2: Mean and SD of pre and posttest practice regarding life style modification among adolescents.

N=60

S. no	Aspects of practice regarding lifestyle modification	Max score	Pre test Practice			Post test Practice		
			Mean	SD	Mean %	Mean	SD	Mean %
1	Diet	24	13.20	2.81	55	21.00	2.15	87.5
2	Physical Activity	24	11.48	3.36	47.8	20.71	2.38	86.29
3	Sleep	18	8.66	2.48	48.1	15.26	1.95	84.77

4	Hygiene	18	8.86	2.96	48.2	15.40	1.71	85.55
5	Study	18	10.91	2.68	60.61	16.65	1.95	92.5
6	Behavior	18	9.26	1.90	51.4	15.75	2.23	87.5
	Over all	120	62.40	11.47	52	104.78	9.12	87.31

Table 4.2 shows the assessment of pretest level of practice regarding lifestyle modification the mean found in diet is 13.20, SD 2.81, the mean found is physical activity is 11.48, SD is 3.36, the mean found in sleep is 8.66, SD 2.48, the mean found in hygiene is 8.86, SD 2.96, the mean found in study 10.91, SD 2.68, the mean found in behavior is 9.26, SD 1.90 and the overall mean of all aspects is 62.40 and SD is 11.47 and post test level of practice regarding lifestyle modification the mean found in diet is 21.00, SD 2.15, the mean found is physical activity is 20.71, SD is 2.38, the mean found in sleep is 15.26, SD 1.95, the mean found in hygiene is 15.40, SD 1.71, the mean found in study 16.65, SD 1.95, the mean found in behavior is 15.75, SD 2.23 and the overall mean of all aspects is 104.78 and SD is 9.12

SECTION-5
Table -5.1: Mean difference of pre and posttest practice regarding life style modification among adolescents.

N=60

S. no	Aspects of practice regarding lifestyle modification	Max. score	Pre and post Practice difference			't-' value	df	Table value	Level of significance
			Mean Difference	SD Difference	% of increase				
1.	Diet	24	7.80	3.38	32.5	17.85	59	1.67	*
2.	Physical activity	24	9.23	3.65	38.49	19.58	59	1.67	*
3.	Sleep	18	6.60	2.70	36.67	18.92	59	1.67	*
4.	Hygiene	18	6.53	3.17	37.35	15.93	59	1.67	*
5.	Study	18	5.73	3.12	31.89	14.92	59	1.67	*
6.	Behavior	18	6.4	2.7	36.1	18.16	59	1.67	*
	Overall		42.38	12.46	35.31	26.43	59	1.67	*

- *** Significant at 0.05 level**

SECTION-6
Table-6.1: Outcomes of Chi-square analyses for association between pre test practice regarding life style modification and demographic variables of adolescents.
N=60

Characteristics	Demographic variables	Respondent's Practice			Total	Chi square value	DF	Table Value	P-value	Level of significance
		Poor	Average	Good						
Age	**12-13**	14 (77.77)%	3 (16.66)%	1 (5.55)%	18 (100%)	1.67	4	9.49	0.79	P>0.05 #
	14-15	15 (62.5%)	7 (29.16%)	2 (8.33%)	24 (100%)					
	16 and above	14 (77.77)%	3 (16.66)%	1 (5.55)%	18 (100%)					
Gender	**Male**	21 (72.41%)	5 (17.24%)	3 (10.34%)	29 (100%)	1.65	2	5.99	0.43	P>0.05 #
	Female	22 (70.96%)	8 (25.80%)	1 (3.22%)	31 (100%)					
Religion	**Hindu**	30 (68.18%)	11 (25%)	3 (6.81%)	44 (100%)	3.99	6	12.59	0.67	P>0.05 #
	Muslim	6 (75%)	2 (25%)	0	8 (100%)					
	Christian	5 (83.33%)	0	1 (16.66%)	6 (100%)					
	Other	2 (100%)	0	0	2 (100%)					
Class Studying	**7th Standard**	8 (80%)	1 (10%)	1 (10%)	10 (100%)	6.70	10	18.31	0.75	P>0.05 #
	8th Standard	7 (70%)	3 (30%)	0	10 (100%)					
	9th Standard	7 (70%)	2 (20%)	1 (10%)	10 (100%)					
	10th Standard	6 (60%)	2 (20%)	2 (20%)	10 (100%)					

	11th Standard	8 (80%)	2 (20%)	0	10 (100%)				
	12th Standard	7 (70%)	3 (30%)	0	10 (100%)				
Father Education	No formal education	10 (90.90%)	1 (9.09%)	0	11 (100%)	3.47	6	12.59	0.74	P>0.05 #
	Primary education	7 (58.33%)	4 (33.33%)	1 (8.33%)	12 (100%)					
	Secondary education	11 (73.33%)	3 (20%)	1 (6.66%)	15 (100%)					
	Higher secondary education and above	15 (68.18%)	2 (9.09%)	5 (22.72%)	22 (100%)					
Mother Education	No formal education	11 (86.61%)	2 (15.38%)	0	13 (100%)	3.35	6	12.59	0.76	P>0.05 #
	Primary Education	19 (73.07%)	2 (7.69%)	5 (19.23%)	26 (100%)					
	Secondary education	7 (70%)	2 (20%)	1 (10%)	10 (100%)					
	Higher secondary education and above	6 (54.54%)	4 (36.36%)	1 (9.09%)	11 (100%)					
Father Occupation	Private employee	18 (81.81%)	3 (13.63%)	1 (4.54%)	22 (100%)	2.93	6	12.59	0.81	P>0.05 #
	Government Employee	9 (64.28%)	4 (28.57%)	1 (7.14%)	14 (100%)					
	Self employed	12 (66.66%)	5 (27.77%)	1 (5.55%)	18 (100%)					
	Other	4 (66.66%)	1 (16.66%)	1 (16.66%)	6 (100%)					
Mother Occupation	Private employee	21 (61.76%)	9 (26.47%)	4 (11.76%)	34 (100%)	4.97	4	9.49	0.29	P>0.05 #
	Government employee	6 (85.71%)	1 (14.28%)	0	7 (100%)					
	Self employed	0	0	0	0					
	Homemaker	16 (84.21%)	3 (15.78%)	0	19 (100%)					
Family Monthly Income	≤ 20,000	5 (83.33%)	1 (16.66%)	0	6 (100%)					

	20,001- 40,000	6 (60%)	4 (40%)	0	10 (100%)	4.43	6	12.59	0.61	P>0.05 #
	40,001- 60,000	14 (66.66%)	5 (23.80%)	2 (9.52%)	21 (100%)					
	60,001 and above	18 (78.26%)	3 (13.04%)	2 (8.69%)	23 (100%)					
Type of diet	**Vegetarian**	15 (65.21%)	5 (21.73%)	3 (13.04%)	23 (100%)	2.49	2	5.99	0.28	P>0.05 #
	Non- Vegetarian	28 (75.67%)	8 (21.62%)	1 (2.70%)	37 (100%)					
Family history of overweight	**Yes**	32 (82.05)	6 (15..38)	1 (2.56%)	39 (100%)	6.51	2	5.99	0.03	P<0.05 *
	No	11 (52.38%)	7 (33.33%)	3 (14.28%)	21 (100%)					

- **# (NS) Not Significant at p>0.05 level**
- *** Significant at p<0.05 Level**

IV. RESULTS:

The finding related to pretest level of practice regarding lifestyle modification, 71.67% (43) were in poor practice level, 21.67% (13) were in average practice level, and 6.66% (4) were in good practice level. After administering PASHA, in the post test results, adolescents 18.33% (11) of them had average practice and 81.67% (49) of them had good practice and none of them were had poor practice in their post-test regarding lifestyle modification. In order to compare the mean, standard deviation, and mean percentage for the level of pre- and posttest practices regarding lifestyle modification among adolescents, before the PASHA was administered, the overall mean score of the subject was 62.40 with 11.47 SD, and the mean percentage score of the subject was 52. In contrast, the subjects' total mean score was determined to be 104.78 with a standard deviation of 9.12, and their mean percentage score was 87.31after PASHA has been administered.

With regards to the effectiveness of PASHA (participatory adolescents strategic health action) on practice regarding lifestyle modification among adolescents, from the table 5.1, it evident that the mean difference between pre test and post test level of practice was 42.38 with mean percentage difference of 35.31 and the obtained paired t-test value was 26.43 and which was found to be significant at $(p<0.05)$ level.

The association was done between pre test levels of practice with the socio demographic variables of adolescents using Chi-square test. In the study, the findings revealed that the result of chi-square analysis presented in table-6.1the chi square test was used to see whether there was a relationship between adolescent's lifestyle practices and their demographic characteristics. It was observed that the type of diet $(x2=6.51, df = 2)$ was significant at the $(P<0.05)$ level of significance because calculated chi-square value is higher than the tabulated value.

V. CONCLUSION:

The findings of the study revealed that, post test overall mean score of level of practice was 104.78 which was found to be higher than the pre test overall mean score of level of practice was 62.40. The overall improvement in the mean score of knowledge was 42.38 and the obtained paired t-value was 26.43 which was significant at $(p<0.05)$ level. The study concluded that there was significant improvement in level of practice in post test after administration of PASHA. Thus, PASHA was effective in improving the level of practice regarding lifestyle modification. In the study it was also found that there was a significant association between mean difference levels of practice regarding lifestyle modification with their selected demographic variables. And there will be an association of being overweight in adolescent period can be the reason of having family history of overweight. It can be directly effect in the children in future and can only reduce by adopting healthy lifestyle practices.
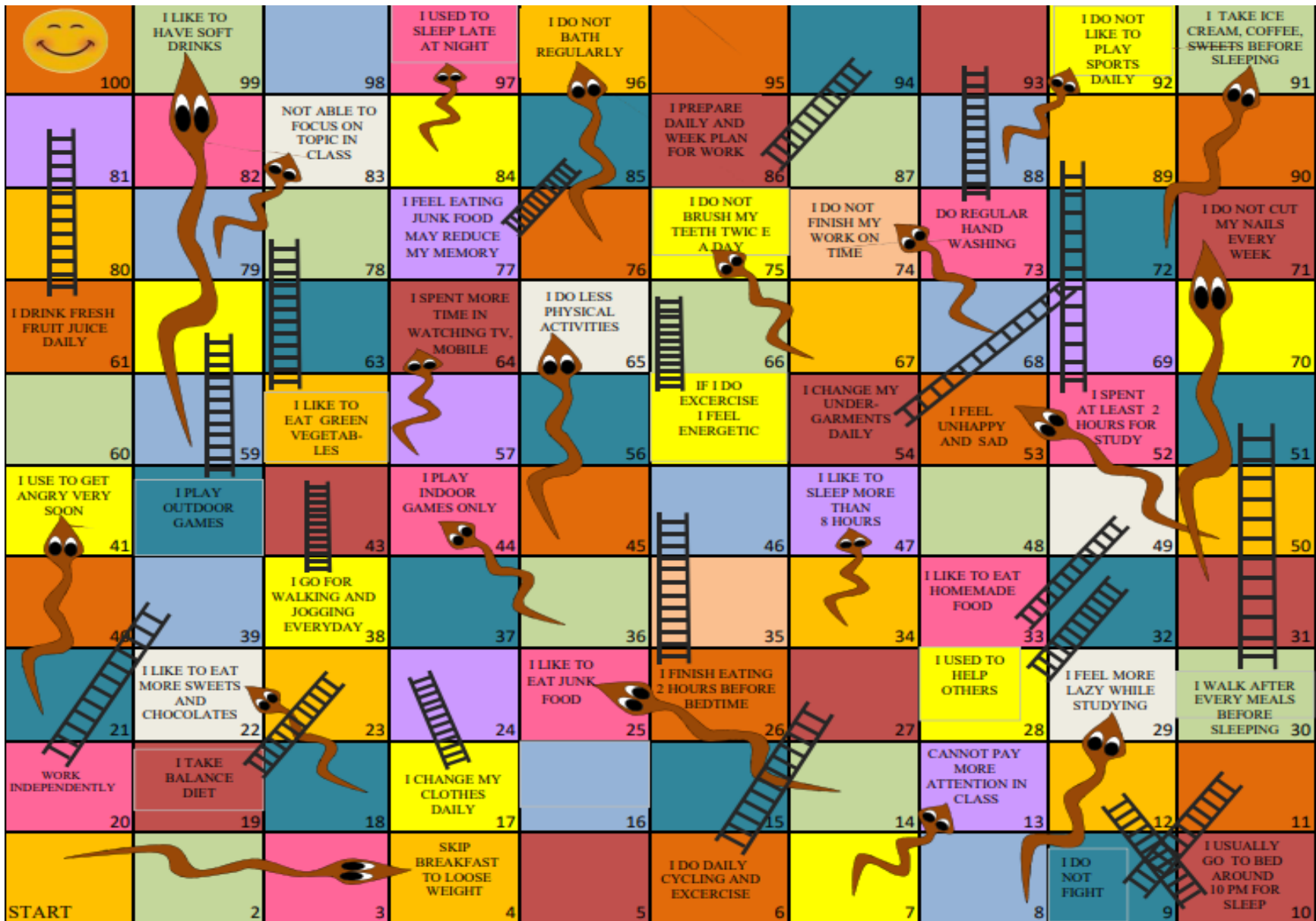
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