

Self-Efficacy and Lifestyle Patterns: Finding the Link

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Abstract—Self-referent thoughts play a very important role in all domains of psychological functioning. Self-efficacy refers to the belief in our capabilities to take certain actions to manage situations effectively. Self-efficacy beliefs affect the way we think, feel, and act. All over the world, lifestyle patterns have emerged as important determinants of health and well-being. Since self-efficacy beliefs play a crucial role in our thoughts, feelings and behaviours, it is important to study the link between self-efficacy beliefs and lifestyle patterns. The present study aimed to investigate the relationship between self-efficacy beliefs and lifestyle patterns in the sample. It also aimed to find out whether gender and age differences exist in self-efficacy and lifestyle patterns. The sample consisted of 184 participants living in Delhi-National Capital Region. The General Self-efficacy Scale (Schwarzer & Jerusalem, 1995), and Healthstyle: A Self-test (Bobroff, 2015) were used for data collection. To gain in-depth understanding of the variables in the study, a structured open-ended questionnaire constructed by the researchers was also used. Results showed that the level of self-efficacy in the sample was high. Lifestyle patterns were found to be good yet there was scope for improvement. A significant positive correlation was found between self-efficacy and lifestyle patterns. No significant gender differences were found on self-efficacy and lifestyle patterns. Significant age differences were found on lifestyle patterns but not on self-efficacy. Thematic analysis of the qualitative data obtained from open-ended questionnaire revealed certain important themes such as mind-body relationship. Implications of the study in understanding the link between self-efficacy and lifestyle patterns and enhancing self-efficacy beliefs are discussed.

Keywords: Self-efficacy, Lifestyle patterns, Gender, Age, Mind-body relationship.

1. INTRODUCTION

1.1 Self-efficacy

Self-referent thoughts play a very important role in various psychological aspects. Bandura (1977) introduced the concept of perceived self-efficacy with reference to cognitive behaviour modification. Self-efficacy is a key construct in Social Cognitive theory (Bandura, 1977, 1986, 1991, 1992) [1-4].

Wood and Bandura, (1989) defined self-efficacy as “beliefs in one’s capabilities to mobilize the motivation, cognitive responses, and courses of action needed to meet given situation demands” [26]. Later Bandura (1994) defined self-efficacy as “the belief in one’s capabilities to organize and execute the courses of action required to manage prospective situations” [5].

The construct of Perceived Self-Efficacy reflects an optimistic self-belief (Schwarzer, 1992) [20]. A strong sense of self-efficacy has been found to be related to better health and higher achievement. Self-efficacy has been applied to academic achievement, mental and physical health, career choice and development and many other domains. Self-efficacy influences how one initiates and maintains health behaviours.

Any kind of behavioural change is hugely influenced by beliefs of self-efficacy. If people believe that they can make efforts to solve a problem, then they are more likely to do so. This "can do" cognition is important in having a sense of control over one's environment. Self-efficacy involves the belief that one can effectively organize and execute certain actions (Bandura, 1997; Chen et al., 1998; Gist & Mitchell, 1992) [6, 9, 12].

Self-efficacy makes a difference in how people feel, think and act (Bandura, 1997) [6]. A low sense of efficacy is usually related to depression, anxiety, helplessness, low self-esteem and pessimistic thoughts about one’s accomplishments. Self-efficacy levels also influence motivation.

People with high self-efficacy choose to perform more challenging tasks (Bandura, 1997) [6]. They attribute failure to lack of effort. Such an efficacious outlook produces personal accomplishments, reduces stress and lowers vulnerability to depression (Bandura, 1997) [6]. In contrast, people with low self-efficacy have low aspirations and weak commitment to their goals. They also experience more stress and anxiety.

Self-efficacy is usually understood to be domain specific. But some researchers have also conceptualized a generalized sense of self efficacy (Schwarzer, 1994) [20]. Generalized self-

efficacy aims at a broad and stable sense of personal competence to deal effectively with a variety of stressful situations (Schwarzer, 1994; Sherer et al., 1982) [20, 24].

Self-efficacy theory is built upon triadic (cognitive, affective, biological) influences and reciprocal determinism, wherein the sources of efficacy information lead to the initial development of efficacy expectations and also interact complexly over time to influence and shape both self-efficacy and performance (Bandura, 1977, 1997) [1, 6]. According to Bandura (1997), there are four major sources of self-efficacy:

(a) Past performance accomplishments and successful mastery experiences: They are the most important ways of creating a strong sense of efficacy.

(b) Vicarious learning experiences through observing the performance of role models and modelling them: Many self-efficacy beliefs are also developed by learning from other people's experiences (Bandura, 1977) [1].

(c) Verbal persuasion and encouragement from others: Another way of strengthening self-efficacy beliefs is through social persuasion. When a person is persuaded that they possess the capabilities to master certain activities, they are likely to put greater effort (Litt, 1988) [16].

(d) Emotional arousal and other psychological states: Emotional arousal is another source of information that can impact self-efficacy (Bandura, 1977) [1]. High negative emotional arousal often debilitates performance, whereas positive emotional arousal can raise performance (Bandura, 1977) [1].

The four major psychological processes through which self-efficacy beliefs affect human functioning are as follows:

Cognitive Processes: Self-efficacy affects human functioning through cognitive processes. Stronger the self-efficacy, higher the goal challenges people set for themselves and the firmer is their commitment to them (Locke & Latham, 1990) [17].

Motivational Processes: According to Bandura (1997), self-efficacy beliefs play a key role in the self-regulation of motivation [6].

Affective Processes: People's self-efficacy beliefs affect how much stress and anxiety they might experience in threatening situations.

Selection Processes: Beliefs of self-efficacy influence the activities and environments people choose for themselves.

1.2 Lifestyle patterns

Lifestyle patterns are one of the most important factors affecting our health and well-being. 5 of the 10 leading causes of death could be reduced through some simple changes in our lifestyle. According to Bobroff (2015) our lifestyle consists of the following six important aspects [8]:

- **Cigarette Smoking:** It is one of the leading causes of illness and early death in the world. Cigarette smoking puts one at risk of getting heart disease and cancer. It is especially risky for pregnant women and their unborn babies.
- **Alcohol and Drugs:** Alcohol leads to changes in mood and behaviour. Heavy, regular use of alcohol can lead to liver diseases, accidents and death. Excessive drug use can cause physical and mental problems. Drug abuse may lead to a number of illnesses or even death.
- **Eating Habits:** Unhealthy eating habits are related to high blood pressure, heart disease, obesity, diabetes, and some forms of cancer. Therefore, it is suggested to eat whole-grain foods, fruits, and vegetables every day. It is also advised to limit the amount of saturated fat and transfat, added sugars, and salt in our diet.
- **Exercise/Fitness:** Around 30 minutes of vigorous exercise a day, five times a week, will help in having a healthier heart and fitness. Regular exercise has also been found to lead to happiness, and well-being.
- **Stress Control:** Stress is a normal part of living. However, if not managed properly it can lead to poor health and many diseases.
- **Safety:** This is another important aspect of our lifestyle. Wearing seatbelt/helmet is considered an important part of road safety.

The benefits of a good night's sleep include better mental and physical functioning during the day. Inadequate sleep leads to risk for obesity, and high blood pressure.

1.3 The crucial link between self-efficacy and lifestyle patterns

Adopting health-promoting behaviours and giving up health impairing behaviours is a very difficult task. One must believe that one has the capability to perform the required behaviour. Much research has focussed on the role of self-efficacy in the health domain.

In adopting a desired behaviour, first individuals form an intention and then execute the action. Efficacy beliefs affect the intention to change risk behaviour, the amount of effort invested to attain this goal, and the persistence to continue striving in spite of barriers and setbacks.

Seydel, Taal and Wiegman (1990) report that outcome expectancies as well as perceived self-efficacy are good predictors of intention to engage in behaviours to detect breast cancer (such as breast self-examination) [23]. Perceived self-efficacy was found to predict outcomes of a controlled-drinking programme (Sitharthan & Kavanagh, 1990) [25]. Perceived self-efficacy has also proven to be a powerful personal resource in coping with stress (Lazarus & Folkman, 1987) [14].

Perceived self-efficacy has been studied with respect to prevention of unprotected sexual behaviour (eg. Levinson, 1982) [15]. Bandura (1994) has summarized a large body of research relating perceived self-efficacy to the exercise of control over HIV infection [5]. Perceived self-efficacy has been found to be a major aspect in forming intentions to exercise and persistence overtime (Dzewaltowski, Noble & Shaw, 1990) [11]. Dieting and weight control are health-related behaviours that can also be governed by self-efficacy beliefs (Hofstetter, Sallis & Hovell, 1990) [13].

In sum, perceived self-efficacy has been found to predict intentions and actions in different domains of health functioning. The intention to engage in certain health behaviour and the actual behaviour itself are positively associated with self-efficacy beliefs. Another area in the health field where perceived self-efficacy has been studied extensively is smoking. Cross-sectionally, 64% of the variance of intentions as well as of behaviour, was due to the predictive power of perceived self-efficacy ($r = .66$ for intention, $r = .71$ for reported behaviour) (DeVries, Dijkstra & Kuhlman, 1988) [10].

Self-efficacy has become hugely appealing to health psychologists and therefore it has been adopted as part of most health behaviour theories. For instance, Becker and Rosenstock (1987) have incorporated it into their Health Belief Model [7]. Maddux and Rogers (1983) have incorporated self-efficacy as one major determinant of intentions in their Protection Motivation Theory [18]. Thus, self-efficacy has proven to be an essential component in all major models of health behaviour.

2. THE PRESENT STUDY

Self-referent thoughts play a very important role in various psychological arenas. Self-efficacy has been applied to school achievement, mental and physical health, career choice and development among many other important domains. Self-efficacy influences initiating and maintaining health behaviours. Self-efficacy reflects optimistic self-belief. Any kind of behavioural change is influenced by self-efficacy beliefs. If people believe that they can solve a problem, then they are more likely to do so.

Health experts describe lifestyle patterns as one of the most important factors affecting our health. In fact, around 5 of the 10 leading causes of death could be reduced by making certain changes in one's lifestyle.

Therefore, it is crucial to understand the link between self-efficacy and lifestyle patterns especially in the Indian context. Hence, this study was designed to study the relationship between self-efficacy and lifestyle patterns. Very few studies on such a linkage have been done in the Indian context so it becomes all the more important to understand this relationship in the Indian context.

2.1 Objectives

1. To find out the level of self-efficacy, and lifestyle patterns in the sample.
2. To find out the relationship between self-efficacy and lifestyle patterns in the sample.
3. To find out gender and age differences in self-efficacy and lifestyle patterns in the sample.

2.2 Hypotheses

1. There will be no relationship between self-efficacy and lifestyle patterns in the sample.
2. There will be no gender differences in self-efficacy in the sample.
3. There will be no age differences in self-efficacy in the sample.
4. There will be no gender differences in lifestyle patterns in the sample.
5. There will be no age differences in lifestyle patterns in the sample.

2.3 Method

2.3.1 Design

Mixed methods approach was undertaken. This was done to better understand the variables under study and their relationship. Questionnaires were administered to the sample to assess the variables. Correlational analysis and ANOVA were carried out for statistical analysis. An open-ended structured questionnaire was also administered. Thematic analysis was carried out to analyse the qualitative data obtained from it.

2.3.2 Sample

The sample consisted of 184 participants living in Delhi-NCR. Out of these 83 were males and 101 were females. Of the total sample of 184 adults, 90 belonged to the age group of 18-25 years while 94 were in the age group of 35-50 years. Purposive sampling technique was used. Attempt was made to obtain as heterogeneous sample as possible.

2.3.3 Measures

1. **The General Self-efficacy Scale:** German version of this scale was developed in 1979 by Matthias Jerusalem and Ralf Schwarzer. The English version was developed by Ralf Schwarzer and Matthias Jerusalem in 1995. The scale was created to assess a general sense of perceived self-efficacy to predict coping with daily hassles as well as adaptation after experiencing all kinds of stressful life events. The scale is designed for the general adult population, including adolescents [21].
2. **HealthStyle: A Self-Test:** This questionnaire was taken to assess the lifestyle patterns of the sample. This questionnaire is adapted from Healthstyle: A Self-Test,

U.S. Department of Health and Human Services Public Health Service by Linda B. Bobroff (2015) [8].

- 3. Structured open-ended questionnaire:** A structured open-ended questionnaire was constructed by the researchers to study the variables in the study in detail. Two questions were formulated:
- Do you think that your lifestyle has an influence on your health? How?
 - Do you think that your belief in yourself influences your health and lifestyle in some way? How?

2.4 Procedure

After the questionnaires were selected the sample was contacted. Informed consent was taken from them. The questionnaires were administered to them. They were assured that their responses would be kept strictly confidential. The participants were thanked for their cooperation.

3. RESULTS

Correlational analysis and ANOVA were carried out for statistical analysis. Thematic analysis was carried out to analyse the qualitative data obtained from it. The results are presented in the tables below.

Table 1: Showing the descriptive statistics

	MEAN	SD
SELF-EFFICACY	32.02	4.47
LIFESTYLE	44.38	6.69
SMOKING	9.60	1.50
ALCOHOL & DRUGS	8.14	2.29
EATING HABITS	7.64	2.34
EXERCISE	6.24	2.93
STRESS CONTROL	7.29	2.29
SAFETY	7.40	2.50

Table 2: showing the correlation between self-efficacy and lifestyle patterns

		LIFESTYLE
SELF-EFFICACY	Pearson correlation	.211**
	Sig. (2 tailed)	.004
	N	184

**Correlation is sig. at .01 level

Table 3: Showing ANOVA for all variables

	GENDER		AGE	
	F	Sig.	F	Sig.
SELF-EFFICACY	.059	.808	2.577	.110
LIFESTYLE	.259	.612	3.929	.049
SMOKING	1.521	.221	.811	.371
ALCOHOL & DRUGS	11.012	.001	.434	.512
EATING HABITS	7.408	.008	2.908	.092
EXERCISE	4.183	.044	.771	.383
STRESS CONTROL	.108	.744	.809	.371
SAFETY	.009	.926	3.261	.075

4. DISCUSSION

The present study aimed at studying the level of self-efficacy and lifestyle patterns in the sample. It also aimed to study the relationship between the two variables as well as study gender, and age differences in the variables. Data were collected on a large sample of 184 adult participants living in Delhi-NCR.

A look at table 1 shows that the mean score of self-efficacy is 32. This shows that the level of self-efficacy of the present sample is high. This means that the belief in their capabilities to organize and execute the courses of action required to carry out certain actions is high. The mean score for lifestyle patterns is 44. This means that the current health practices of the sample are good yet there is scope for improvement. The high score could be due to the increasing awareness about lifestyle patterns and their effect on health. Yet there is some scope for change and adopting a healthier lifestyle.

Table 2 shows the correlation between the two variables self-efficacy and lifestyle patterns. The correlation is positive and highly significant ($r=.211, p=.004$). This shows that there is a positive relationship between the two variables. Hence, the first null hypothesis is rejected.

Two way ANOVA was carried out to study gender and age differences in the two variables under study. Two way ANOVA for self-efficacy shows that there are no significant gender and age differences in self-efficacy. Hence, the null hypotheses 2 & 3 are retained. Two way ANOVA for lifestyle patterns shows that there are no significant gender differences. Hence, null hypothesis 4 is retained. However, age differences were found to be significant in lifestyle patterns. Younger adults have a higher score (45.37) than older adults (43.43) which means that they have a healthier lifestyle as compared to older adults. Hence, null hypothesis 5 is rejected. No significant age differences were found between any of the six components of lifestyle patterns. Gender differences were found to be significant only on alcohol and drugs, eating habits, and exercise whereby males were found to have higher scores as compared to women. No significant interaction effects between gender and age on self-efficacy, lifestyle patterns and the six components of lifestyle were found.

The data obtained from the open ended structured questionnaire were also analysed. Thematic analysis was used for this. Open coding, focussed coding, and closed coding were done. For the first question “Do you think that your lifestyle has an influence on your health? How?”, open coding led to generation of many codes. Focussed coding led to the following codes: exercise and fitness, eating habits, mental, physical and emotional well-being are connected, hectic schedule influences lifestyle, belief in oneself is important, types of activities constitute lifestyle, healthy body-healthy mind, sleep habits, and ways to remain healthy. Closed coding led to the following themes- mind-body link, and link between mental, physical, and emotional well-being.

For the second question “Do you think that your belief in yourself influences your health and lifestyle in some way? How?”, open coding yielded many codes. Focussed coding led to the following codes: positive impact on performance, positive approach is important, benefits of self-belief, self-confidence, attitude and health, belief in one’s abilities influences health and lifestyle, various ways of enhancing self-belief. Closed coding led to the following themes- belief in oneself is important, belief in oneself influences one’s health and lifestyle. As can be seen the results obtained from both qualitative and quantitative approaches are similar and show an important link between self-efficacy, lifestyle patterns and health.

To conclude, the findings of the present study show a high level of self-efficacy and good (could be better) lifestyle patterns in the sample. A significant positive correlation was found between self-efficacy and lifestyle patterns. No significant gender or age differences were found on self-efficacy. No significant gender differences were found on lifestyle patterns. Yet, significant age differences were found in lifestyle patterns wherein young participants were found to have a healthier lifestyle as compared to older participants.

The strengths of the study were that it is one of the initial attempts to study the relationship between self-efficacy and lifestyle patterns in the Indian context. A large sample was taken for the study and an attempt was made to obtain a heterogeneous sample as possible. Both males and females, old and young participants were studied. The limitations were that an even bigger sample could have been taken for the study.

Since a strong positive relationship has been found between self-efficacy beliefs and lifestyle patterns, certain intervention strategies can be designed to enhance self-efficacy beliefs. This can be done according to the four sources of self-efficacy beliefs. This will lead to better lifestyle patterns.

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