SELF REGULATION AND ACHIEVEMENT MOTIVATION IN PATIENTS WITH PRIMARY HYPERTENSION:A COMPARATIVE STUDY

K.M. KRISHNA SEKHAR SARMA, E. RAJKUMAR, HARISH C, SOORAJ KV

Abstract: This study aimed at finding the difference between hypertensive and normotensive population in achievement motivation and self-regulation and also to find out the relationship between the variable in both groups. The sample consists of 75 hypertensive participants and 75 normotensive participants. Results of the study indicated that there is significant difference between hypertensive and normotensive population in self-regulation. Secondly self- regulation and achievement motivation have a positive correlation in both the groups. Therefore this study calls for the interventions to target hypertension by designing techniques to manage blood pressure through self-regulated training. Further, there is also a strong need for holistic treatment of hypertension bearing in mind its impact on the biological, psychological and social aspects in consultation with a health psychologist.
Keywords: Hypertension, Self regulation and Motivation

Introduction: It is well said that Health is Wealth. But people make money by losing health and then lose their money to recover their health. But the recovery is not always assured inspite of spending lot of money. Hence it is always advised that prevention is better than cure. Even though there is sufficient knowledge in most of the cases to prevent so many abnormalities or disorders of both physical and mental health, people often mistake in receiving and following healthy practices and realities of life and to live with wisdom. There are ample of evidences to prove this.

Hypertension is one such example, which could be the result of and reason for so many physical disorders and psychological abnormalities. Accumulating evidence in recent years suggests that there is increased prevalence of Hypertension globally. In 2008, approximately 40% of adults aged 25 and above were diagnosed with hypertension; the number of people with the condition rose from 600 million in 1980 to 1 billion in 2008 (WHO, 2011). There are several antagonistic effects of hypertension, the predominant being the physical, psychological and social predicaments (Waldstein, 2003).

Blood Pressure: Blood pressure is the force exerted by blood on the artery walls. The pressure required by the heart to exert blood through the arteries at rest is termed as diastolic pressure. Similarly, when the heart pumps, each contraction produces a maximum force in the arteries, termed as systolic pressure.

Hypertension: Hypertension is defined as a systolic blood pressure equal to or above 140 mmHg and/or diastolic blood pressure equal to or above 90 mm Hg. Hypertension, as one of the disruptions of health, is found to be one of the major cause for many malfunctions of health (Manolio, Jean & Longstreth,2003 ;Waldstein,1995).

Motivation: Motivation refers to "the reasons underlying behavior" (Guay, Chanal, Ratelle, Marsh, Larose & Boivin, 2010, p. 712). Broussard and Garrison (2004) broadly defined motivation as "the attribute that moves us to do or not to do something" (p. 106). The concept of motivation is to think about a typical achievement behaviour, which is defined as behaviour directed at developing or demonstrating high rather than low ability (Nicholls, 1984).

Self Regulation: Self-regulation is the ability to develop, implement, and flexibly maintain planned behavior in order to

achieve one's goals. Self-regulation broadly refers to the processes of goal setting and goal striving, and includes dealing with a range of challenges that individuals may face when trying to achieve something that is important but, almost by definition, difficult to attain (Mischel, Cantor & Feldman, 1996). Self-regulation is defined by social cognitive researchers as proactively initiated thoughts, feelings, and behaviors that are planned and cyclically adapted based on self-generated or performance feedback in order to attain personal goals (Zimmerman, 1989, 2000).

Rationale of the study: Self-regulation as a process encompasses the self-efficacy mechanism, which plays a central role in the exercise of personal agency by its strong impact on thought, affect, motivation and action. And achievement motivation as defined by McClelland, Atkinson, Clark, and Lowell (1953), is an evaluative process in terms of standard of excellence in which affect is associated with performance. It was found that the research studies relating to the association between self-regulation and achievement motivation are very few. This study is intended to ascertain the relationship between achievement motivation and self-regulation in the area of hypertension.

Research Question: Would there be any difference between hypertensive and normotensive population with reference to achievement motivation and self-regulation?

Objectives:

The objectives of the study are:

1. To find out the difference, if any, between hypertensive and normotensive population with reference to achievement motivation and self regulation.
2. To find out if there is any relationship between achievement motivation and self regulation in the hypertensive group and normotensive group.

Hypothesis:

- There will be significant differences between hypertensive and normotensive population in achievement motivation and self regulation.
- There would be relationship between achievement motivation and self-regulation in the target population.

METHODOLOGY

Plan and Design: The design of the study is between group design and survey method, with the independent variable being hypertension.

Sample: The sample was drawn from the adult population aged 25 to 65 years, from various hospitals and organizations of twin cities of Hyderabad and secunderabad of Andhra Pradesh. The sample consisted of 75 hypertensive and 75 normotensive adults (Males = 71; Females = 79); socio-economic status and medium of instruction being no bar.

The blood pressure readings were inquired from the participants and also confirmed from their medical reports and this measure was considered for the inclusion of the hypertensive population in the study.

Inclusion criteria for the sample is that the , individuals with age group between 25 years to 65years having systolic blood pressure more than 140mmHg and diastolic blood pressure more than 90mmHg (Hypertension) and also systolic blood pressure between 120mmHg to 139mmHg and diastolic blood pressure 80mmHg to 89mmHg (Normotension).

The individuals below 25 years and above 65 years were excluded from the study and past/present psychiatric illness, history of neurological disorders, past/current history of alcohol/drug abuse, impaired sensory functions, past/present history of sever medical illness were also excluded.

Tools

Achievement Motivation:

Achievement Motivation is measured by means of Achievement Motivation Scale developed by S.N.Singh. It is a 6 item scale with 5 alternative responses to each item. The respondent has to choose one of the

alternatives to each item. Split-half Reliability coefficient is 0.79 and Test-retest reliability coefficient is 0.84.

Self-Regulation: Self-Regulation is measured by Self-regulation Questionnaire (Brown, Miller, & Lawendowski, 1999) which is developed as a first attempt to assess these self-regulatory processes through self-report. It is a 63 item scale with 5 alternative responses to each item. The items are rated on a five-point Likert scale, ranging from (1) strongly disagree to (5) strongly agree and reverse scoring is given to the negative items, where higher sum score on the scale indicates high levels of self regulation. Test-retest reliability for the total SRQ score was high (r = .94, p < .0001). Internal consistency of the scale was also quite high (α = .91).

RESULTS

Table 1

Showing difference in self regulation and achievement motivation between two groups.

Dimensions	Hypertensive		Normotensive		t test (df=148)
	M	SD	M	SD	
Achievement motivation	21.65	3.20	22.52	3.06	1.69
Self regulation	218.40	19.48	224.45	19.17	1.91*

*Note. N = 150, *p<.05.*

Table 2 shows the results of t-test done to find out the difference between hypertensive and normotensive group in psychological variables of achievement motivation and self regulation. There was significant difference between hypertensive and normotensive group with respect to the self-regulation (t_{148}=1.91,p<.05). The mean score for the normotensive group (M=224.45; SD=19.17) was found to be higher than the mean score of the hypertensive group (M=218.40;SD=19.48).

Table 2

Descriptive statistics and correlation between achievement motivation and self regulation among hypertensive population.

Variables	*M*	*SD*	*Achievement motivation*	*Self Regulation*
Achievement Motivation	*21.65*	*3.20*	*1*	*.48***
Self-Regulation	*218.40*	*19.48*		*1*

Note. N = 75, **p<.01

Table 3

Descriptive statistics and correlation between achievement motivation and self regulation among normotensive population.

Variables	*M*	*SD*	Achievement motivation	Self-regulation
Achievement motivation	22.52	3.06	1	.36**
Self-regulation	224.45	19.17		1

Note. N=75, **p<.01

The above result tables (table 3 and table 4) show that the achievement motivation had significant positive correlation with self regulation in both the groups of hypertensive and normotensive population. This indicates that the higher the achievement motivation the higher the likelihood of self regulation and vice-versa.

Discussion: This study is designed to find, if there are any, differences between hypertensive and normotensive population group in achievement and self-regulation. And the study yielded two primary sets of findings.

There is a significant difference between hypertensive and normotensive population with respect to self regulation and there is a positive correlation between self-regulation and achievement motivation.

As seen in the table-1, hypertensive and normotensive groups differ in their self-regulation, where normotensive population is found to be high on self-regulation. The significant difference between both the groups with reference to self-regulation can be because that normotensive are highly self regulated than hypertensives who may be working against deadlines. This is evident from the mean scores of normotensives which is higher than the hypertensives. The reason could be that normotensives receive the relevant information and compare it to the norms keeping in view the feasible options. In this context, they may formulate, implement the plan and assess the alternatives of the plan given the availability of the appropriate resources. In other words, the normotensives may be regulating their work with realistic goal setting unlike the hypertensives.

This result is consistent with the previous research findings which demonstrated that the hypertensives performed more poorly than normotensives in virtually all domains of cognitive functions including learning & memory, attention, abstract reasoning, executive functions (i.e., self-regulatory behaviors such as planning and organization, mental flexibility, and response inhibition), and psychomotor abilities(Waldstein, 1995; Waldstein & Katzel, 2001; Waldstein, Manuck, Ryan, & Muldoon, 1991).

In the present study, no significant difference was found between hypertensive and normotensive population in achievement motivation. We presume that it could be because of majority of the population in both the hypertensive and normotensive group are employees. This result shows that the achievement motivation is same across the population irrespective of presence or absence of the hypertension.

Self regulation and achievement motivation have significant positive correlation with each other in hypertensive population and as well as in normotensive group. This result is consistent with the previous finding that there is significant correlation between motivation and self-regulation (Walker, 2012). This reflects that individual with high achievement motivation are more likely to have high self regulation and conversely people with high self regulation are more possibly to have high achievement motivation. A study by (Pintrich & De Groot, 1990) on school children found that students who were found to have achieving high grades were more likely to use more self-regulatory strategies than were low achieving students. And also it found that higher levels of self regulation were associated with higher levels of motivation on all works.

Implications: The results of the present study suggest the development of self-regulated training in management of hypertension. self-regulated training shows effective result in controlling hypertension. And also motivation constructs are known to be of relevance to self-regulated learning include not only simple extrinsic and intrinsic forms of motivation but also goal orientation, task value, and self-efficacy .Motivation and self-regulation are found to be intertwined

concepts that have a corresponding relationship. This will benefit throughout the learning and task completion processes, they work together to facilitate these processes.

Conclusion: The results of the study show that the hypertensive population and normotensive population differ in self-regulation. It is found that the normotensives are high on self-regulation than hypertensive population. There is a positive relationship between self-regulation and achievement motivation in both hypertensive and normotensive groups. This reflects that individual with high achievement motivation are more likely to have high self regulation and conversely people with high self regulation are more possibly to have high achievement motivation.

References

1. Broussard, S. C., & Garrison, M. E. B. (2004). The relationship between classroom motivation and academic achievement in elementary school-aged children. *Family and Consumer Sciences Research Journal, 33*(2), 106–120.
2. Brown, J. M., Miller, W. R., & Lawendowski, L. A. (1999). The self-regulation questionnaire.
3. Fahrion, S., Norris, P., Green, A., Green, E., & Snarr, C. (1986). Biobehavioral treatment of essential hypertension: A group outcome study. *Biofeedback and self-regulation*, *11*(4), 257-277.
4. Garner, J. K. (2009). Conceptualizing the regulations between executive functions and self-regulated learning. *The Journal of Psychology, 143*(4), 405-426.
5. Green, E., Green, A., & Norris, P. A. (1999). Self-regulation training for control of hypertension. *Subtle Energies & Energy Medicine Journal Archives*, *10*(1).
6. Guay, F., Chanal, J., Ratelle, C. F., Marsh, H. W., Larose, S., & Boivin, M. (2010). Intrinsic, identified, and controlled types of motivation for school subjects in young elementary school children. *British Journal of Educational Psychology, 80*(4), 711–735.
7. Manolio, T. A., Jean Olson MD, M. P. H., & WT Longstreth Jr MD, M. P. H. (2003). Hypertension and cognitive function: pathophysiologic effects of hypertension on the brain. *Current hypertension reports*, *5*(3), 255-261.
8. McClelland, D. C., Atkinson, J. W, Clark, R. W., & Lowell, E. L. (1953). The achievement motive. New York: Appleton- Century Crofts.
9. Mischel,W., Cantor, N. & Feldman, S. (1996). Principles of self-regulation: The nature of willpower and self-control. In E.T. Higgins & A.W. Kruglanski (Eds), *Social Psychology. Handbook of Principles* (pp. 329–360). New York: Guilford.
10. Nicholls, J. G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological review*, *91*(3), 328.
11. Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of educational psychology,* 82(1), 33.
12. Walker, S. F. (2012). *Self-Regulation: The Link between Academic Motivation and Executive Function in Urban Youth.*
13. Waldstein, S. R. (2003). The relation of hypertension to cognitive function.*Current directions in psychological science*, *12*(1), 9-12.
14. Waldstein, S.R., Manuck, S.B., Ryan, C.M., & Muldoon, M.F. (1991). Neuropsychological correlates of hypertension: Review and methodologic

considerations. *Psychological Bulletin*, *110*, 451-468.
15. Waldstein, S.R. (1995). Hypertension and neuropsychological function: A lifespan perspective. *Experimental Aging Research*, *21*, 321-352.
16. Waldstein, S.R., & Katzel, L.I. (2001). Hypertension and cognitive function. In S.R. Waldstein & M.F. Elias (Eds.), *Neuropsychology of cardiovascular disease* (pp. 15-36). Mahwah, NJ: Erlbaum.
17. Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, 81, 329–339.
18. Zimmerman, B. J. (2000). Attaining self-regulation: A social–cognitive perspective. In M. Boekaerts, P. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp.13–39). Orlando, FL: Academic Press.