



To Investigate The Mental Health Of Working Professionals In Connection To Their Locus Of Control In The Industrial Workplace

Uma Sharma

Dr. (Prof) Mamta Vyas, Head Of Department (Psychology), Sri Satya Sai University of Technology and Medical Sciences, Sehore, Bhopal(M.P.)

Abstract

Locus of Control (LOC) refers to a person's belief system about the repercussions of his or her activities, which is founded on beliefs that shape an individual's attitude toward success or failure. Locus of control is an essential personality attribute that has been linked to a variety of factors, including an individual's mental health. The primary goal of this research was to investigate the association between locus of control and mental health in working professionals. Females and the unmarried are somewhat more positive in LOC than men. Furthermore, we observed that respondents' LOC and mental health of working professions had the greatest rate based on a t-test, correlation study of Mental health and LOC of working professions. In this context, it is critical to investigate the relationship between locus of control and mental health among persons working in various organizational sectors.

1. Introduction

Lack of mental illness is seldom considered while discussing mental wellness. However, the absence of mental illness is just one aspect of mental health. We should all strive for psychological well-being. The state of our minds has an impact on every aspect of our lives. The way we go about our daily lives may provide light on the matter. It's a balance between the things we have and the things we want to acquire. There are "currently two schools of thinking concerning the concept of mental health," as stated in [1]. The medical community as a whole finds it helpful to define mental health as the absence of mental illness. The second group, which includes many professionals in fields like psychology, education, and psychoanalysis, defines mental wellness more positively. As defined by the American Psychiatric Association[2], a mental health illness is one in which a person has discomfort and/or has trouble coping with everyday tasks at home, at work, or with friends and family. Despite the growing number of people experiencing mental health issues at work [3] and the detrimental consequences these issues have on businesses [4] (yet surprisingly little is known about how people with mental health issues get by at work[5]). Much research has

been conducted on these people in the medical sector, but little has been done in management and organizational psychology [6].

There are several compelling reasons to investigate workplace mental health issues. First, the financial burden of mental health issues is high, both in the immediate sense, when people are unable to work and must depend on government income support[7], and in the longer term, when they experience a loss of productivity or sick leave[8]. Employers are also hesitant to recruit people who have mental health issues [9], despite the fact that such illnesses are recognized as a handicap under the law [10]. As a result, the employment rates of this group of employees are lower than the national average [11], and even when they do find work, they often do so under substandard conditions and for poor pay [12]. Previous studies have shown that employment is beneficial for people with mental health disorders because it provides structure and stability [13], offers them a sense of meaning and purpose in life, and boosts their overall well-being and financial independence.

Whether or if professionals' professional lives have an effect on their mental health is determined by a number of variables, including genetics, neurobiology, and psychosocial context[14,15]. However, professionals' perceptions of their own agency in shaping their lives may also play a role. These ideas are known as "locus of control" beliefs. As part of his social learning theory, Julian Rotter proposed the concept of locus of control[16]. People's expectations and beliefs about the role of internal (their own actions and talents) vs external (powerful people, chance, destiny, or luck) factors in shaping their life are referred to as their "locus of control" (external locus of control). Although the degree to which an individual believes that a given occurrence is within their control as opposed to being influenced by other forces may vary depending on the circumstances, most individuals exhibit a more generalized locus of control when making sense of their lives as a whole[16]. Numerous studies have been conducted on the topic of mental health and locus of control, with strong relationships being discovered between locus of control and the different characteristics of psychopathology. This study investigates the locus of control among an exclusively professional worker sample since previous research has shown that this construct has a significant impact on the actions and decisions of teenagers who are also professional workers. Adolescent mental health has been determined to be the greatest predictor of overall mental health, and studies on teens have shown that locus of control influences mental health. Overall health and locus of control scores were shown to have a somewhat favorable and significant association. The purpose of this research is to investigate the mental health of working professionals in relation to their locus of control in the industrial workplace.

2. Review of Literature

Findings from a literature review on locus of control link this personality characteristic to both negative and good aspects of mental health[17–20]. A broad variety of psychiatric illness have been researched in connection to locus of control, with chronic pain serving as the focal point[21].

Walter et al.[22] conducted a survey to identify the opinions of teachers' about the need of mental health services in primary schools. The study was designed to know opinions of teachers about the prevalence of problems related to mental health and main obstacles in overcoming of the problems. Further the study aimed to investigate teachers' preferences for the items related to mental health to be included in in-service education programs. Teachers were categorized on the basis of their qualification, tenure of work, their knowledge and attitude. Respondents reported that their schools were facing mental problems and main obstacles in overcoming of these problems were lack of knowledge and proper training. It was also revealed by the results of the study that disruptive behaviour disorders and implementing behaviour plans were the main preferences of the teachers to be included as content in the in-service training programs. In spite of little qualification and knowledge related to mental health problems, most of the teachers dealt students with mental health problems. It was suggested by the investigator that proper education, training and consultation should be provided to teachers from mental health professionals. The phenomenon of educator burnout was investigated by Anand[23]. When comparing the rates of burnout among instructors of varying levels of experience and education, those with more experience and education were shown to be more likely to feel burned out on the job. The study's findings established a link between stressful working circumstances and job dissatisfaction. Teachers' burnout was mostly attributable to the conditions in which they were required to work.

Singh[24] studied middle-aged female educators to determine their levels of stress, role conflict, anxiety, depression, physical complaints, and social dysfunction. The results of the study revealed that fifty four percent female teachers were lying in moderate to high stress group and twenty eight percent female teachers were lying in low to moderate stress group and only eighteen percent teachers were having low level of stress. So, on the basis of results it could be said that though female teachers were normal in general, but many of them were found to be predisposed to psycho-social stress related problems that may have detrimental effect on their mental health.

The concept of locus of control comes directly from the psychotherapeutic clinic where it was a frequent observation that psychotherapy was seldom successful if the client did not believe that reinforcement used during therapy were contingent on his behavior. The conclusion was that the individual must also believe that there is a causal relationship between what one does and what follows. This idea occurs in psychological literature in

various guises. Adlers [25] concept of “striving for superiority,” Piaget’s[26] notion of causality and other concepts such as self-confidence, ego strength, mastery etc.. More recent concepts like self-efficacy introduced by Bandurea[27] also means somewhat similar when he perceived “control is defined as the belief that one can determine one’s own internal states and behavior, influence one’s environment and/or bring about desired outcomes are also linked to the concept of locus of control”. Rotter [28] defined the construct of locus of control as follow: “when a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then in our culture, it is typically perceived as the result of luck, chance, fate as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted in this way by an individual, we have labeled this a belief in external control. If the person perceives that the event is contingent upon his own behavior and is relatively permanent characteristic, we have termed this as belief in internal control.”. Numerous academic investigations focused on the connection between mental illness and locus of control[19,29,30], rather than physical sickness. Internal health locus of control refers to a person's perception that he or she has the power to attain the desired end while experiencing mental or physical illness [3]. What individuals do when they're sick, both mentally and physically, is heavily influenced by this idea. Having an internal rather than an external locus of control has been demonstrated to be a favorable predictor of dealing with both physical and mental ailments. "locus of control in societies that promoted a greater impression of external control also fostered higher incidence of suicide," as documented by Marks (1998, referenced in[32]) (p. 124). It was claimed by April et al.[32] that those with an external locus of control are more predisposed to depression and less likely to benefit from antidepressant treatment. Those people are also far less content. It has been hypothesized that feelings of helplessness and despair are central to the depressive disorder known as depression. Those who place their sense of agency outside of themselves are more likely to feel helpless and depressed [19]. This is due to the fact that pessimism is intrinsically linked to the attitudes that make individuals feel helpless in the face of adversity. Coyne and Thompson[18] also showed that mothers' depressive symptoms (such despair) are linked to their own sense of powerlessness, which in turn increases their children's internalizing difficulties.

People who believed they could influence their own outcomes had good grade point averages and a positive outlook on their future academic achievement [22]. Phares's (1968, referenced in[33]) research on self-pity and dealing with events as they relate to locus of control found that persons with an external locus of control tend to wallow in self-pity and struggle to accept and adapt to the realities of their lives. Acceptance of one's current circumstances is a sign of personal adjustment, a means by which people deal with the demands of daily life and the challenges posed by unforeseen events. Numerous definitions

of mental health highlight this trait as a crucial element[34]. One's sense of agency and the causality they attribute to their actions are linked in the process of personal adjustment [35]. People who attribute the results of their actions to factors outside their control (those with an external locus of control) tend to be less emotionally stable and less able to find positive resolutions to adversity.

Here, the interdependence of a healthy sense of self-worth, healthy social connections, successful adaptation, and a secure sense of one's own agency is crucial. Taking into account the available research, it becomes clear that they are positively and linearly correlated with the internal locus of control that is associated with a healthy mental state[35]. One possible explanation for the improved mental health of these individuals is that they are better able to regulate their own physiological responses to stress, such as their degree of involuntary arousal and the release of stress hormones [36]. This form of self-control is thought to improve both physical and mental health [36], so it's no surprise that it's often advocated for as a means to boost immunity. College students may benefit from a better locus of control since it improves their feeling of personal control, which in turn improves their mental health [30]. Pannells and Claxton[37] looked at 171 college students and found that those with an internal locus of control were more likely to report positive mental health outcomes such as happiness, academic success, and creative thinking.

Positive psychological traits in people have been linked to where they feel their power lies, a topic that has been studied independently[37]. The primary elements of mental health in Ryff's theory[38,39] were collected from various developments, personalities, and clinical theories; yet, the stated traits may be indicative of mental health components. We examine the significance of locus of control in relation to Ryff's determinants of mental health, which include maturation, acceptance of oneself, a sense of purpose in one's existence, freedom to make one's own decisions, close relationships, and the capacity to exert influence over one's environment. As a result, the goals of this study are to: use Ryff's theory of personality characteristics to investigate the connection between locus of control and other psychological variables; and (psychological well-being theory). It was hypothesized that people with high scores on measures of internal locus of control would also have high scores on all six dimensions of Ryff's scale of mental health.

It is a well-known fact that everyone experiences mental stress in situations such as the stifling and conflicting environment of the family, the robotic nature of the technologically advanced environment, the humiliating outbursts of the boss at work, the unhealthy working conditions, the feeling of alienation from society, and so on. Mental stress, in its broadest sense, is the psycho-physiological response to any danger to one's well-being, whether real or imagined, arising from one's immediate surroundings. Anxiety disorders are often the result of mental stress. If your level of worry is manageable, it might serve as a driving factor.

Stress is exacerbated if a person's sense of control over their lives is diminished due to a decline in mental health while in the professional workforce. While research exists in these spheres, there is a paucity of studies on industrial working professionals in India, and notably in Delhi. Therefore, it was appropriate for the researcher to investigate the state of mind of working professionals in industry in connection to their sense of agency and other socio-demographic factors

3. Objectives of the Study

1. To find out the relationship between locus of control and mental health (with its different dimensions) of working professionals..
2. To examine the relation between mental health and demographic variable of industrial working professionals.
3. To examine the relation between work locus of control and demographic variable of industrial working professionals.

4. Hypothesis

H1: There is a significant relationship between Demographic variable (Gender and Marital status) and LOC.

H2: There is significant relationship between demographic variables (Gender and Marital status) and mental health.

H3: There is a significant relationship between working professionals' LOC and mental health.

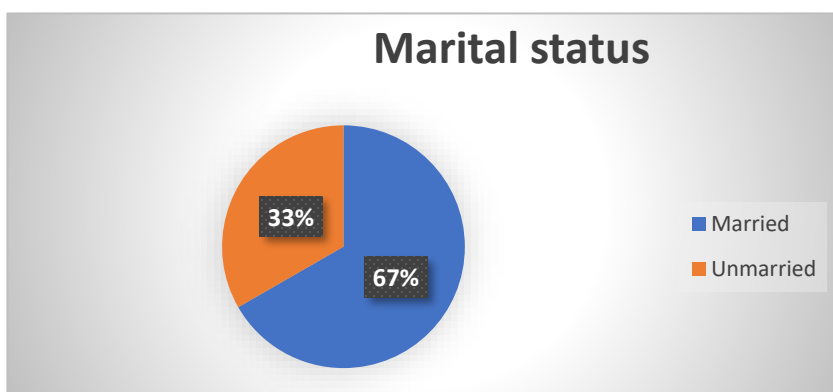
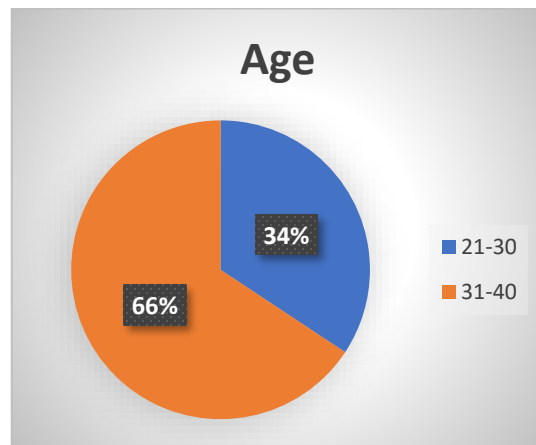
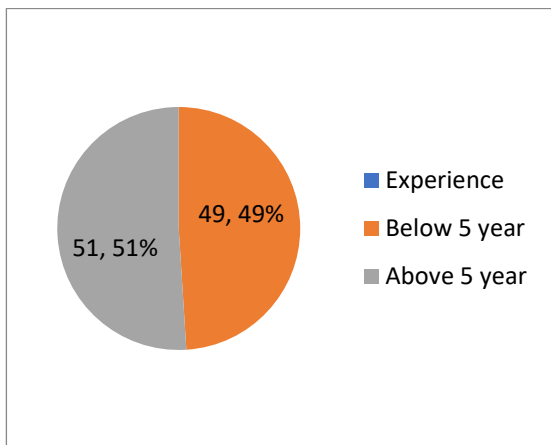
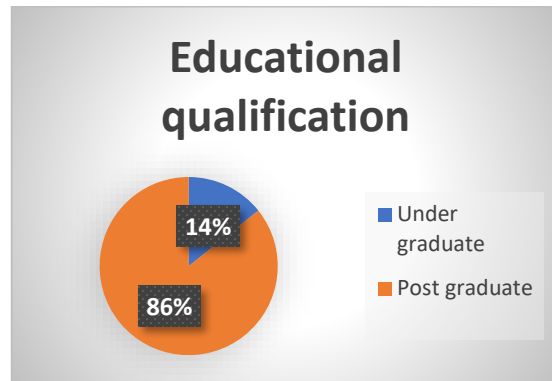
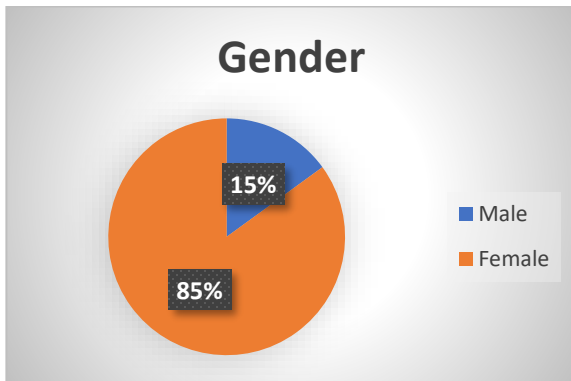
5 Methodology

A research methodology is a specific approach to solving a research topic. Research will use the Descriptive Survey Method in light of the character of the issue at hand. Using this strategy, the researcher will look at similarities and differences between variables. Three-hundred active professionals will serve as the study's sample. This is a quantitative study. The following methods were used in this study to collect data.

1. Mental health questionnaire developed by the investigator.
2. Work Locus of control questionnaire developed by the investigator.

Mean differences will be calculated for all the groups under study and for different variables. T-test, correlation analysis and appropriate techniques will be applied to analyze the data for the present problem.

6.. Result And Discussion



According to the data shown in the preceding figure, 65.7% of respondents are between the ages of 31 and 40. Among those who participated in the survey, only 34.3% are between the ages of 21 and 30. While 49% have less than 5 years of experience, 51% have worked in the industry for more than 5 years. Postgraduate students make up 86% of the responses, while undergraduates make up 14%. In this poll, there was a total of 85 percent female respondents and 15 percent male respondents. 67 percent of respondents are married, whereas 33 percent of respondents have never been married

Gender V/S LOC

Gender

		Frequency	Percent	Mean	Median
Valid	Male	45	15.0	1	1
	Female	255	85.0	2	2
	Total	300	100.0		

	Mean	Median	P-value	Correlation
Gender	1.85	2	0.000	0.89
LOC	3.86	3.875		

We observed that the mean of gender is 1.85 and the LOC is 3.86, while the median of gender is 2 and the LOC is 3.875. The P-value is less than 0.05, indicating statistical significance. Gender and LOC have a favorable correlation. We discovered that male and female medians varied statistically. Females had much higher LOC (median value of 3.875) than men (median value of 1). Females have a somewhat higher LOC than men..

Marital status V/s LOC

Marital status					
		Frequency	Percent	Mean	Median

Valid	Married	200	66.7	1	1
	Unmarried	100	33.3	2	2
	Total	300	100.0		

	Mean	Median	P-value	Correlation
Marital status	1.33	1	0.000	0.75
LOC	3.86	3.875		

We discovered that the mean of married status is 1.33 and the LOC is 3.86, with a median of 1 of marital status and 3.875 of LOC. The P-value is less than 0.05, indicating statistical significance. The correlation between married status and LOC is positive. We discovered that the medians for married and unmarried respondents are statistically different. Unmarried people have much higher LOC (median value of 3.875) than married people (median value of 1).

Gender V/S Mental health:

Gender

		Frequency	Percent	Mean	Median
Valid	Male	45	15.0	1	1
	Female	255	85.0	2	2
	Total	300	100.0		

	Mean	Median	P-value	Correlation
Gender	1.33	1	0.000	0.63

Mental health	2.4738	2.5		
---------------	--------	-----	--	--

We observed that the mean of gender is 1.33, the mean of mental is 2.4738, and the median of LOC is 1. The P-value is less than 0.05, indicating statistical significance. Gender and mental health have a good correlation. We discovered that male and female medians varied statistically. Females have much better mental health (median value of 2.5) than males (median value of 1).

Marital status V/s Mental health

Marital status

		Frequency	Percent	Mean	Median
Valid	Married	200	66.7	1	2
	Unmarried	100	33.3	2	1
	Total	300	100.0		

	Mean	Median	P-value	Correlation
Marital status	1.33	1	0.000	0.61
Mental Health	2.4738	2.5		

Based on the data presented above, we discovered that the mean of married status is 1.33 and the median of mental health is 2.4738. The P-value is less than 0.05, indicating statistical significance. The correlation between marital status and mental health is good. We discovered that the medians for married and unmarried respondents are statistically different. When compared to unmarried people, married people had much better mental health (median value of 2.4738). (median value of 1).

Conclusion: Also, based on an t-test, correlation analysis of Mental health and demographic factors, we discovered that Females and married respondents had the highest rate of Mental health.

LOC V/s mental health

	Mean	Median	P-value	Correlation
LOC	3.86	3.875	0.002	0.759
Mental Health	2.4738	2.5		

From above table we found that Mean of LOC is 3.86 and Mental health is 2.4738 and median is 3.875 of LOC and 2.4738 of mental health. P- value is less than 0.05 which is statistical significant. Correlation of LOC and mental health is positive correlate. We found that the medians are statistically different for LOC and mental health of working professions. LOC is significantly high (median value of 3.875) among working profession of LOC (median value of 2.5).

7. Conclusion

The researchers set out to learn how locus of control influences the mental health of professionals in the workplace. The results point to locus of control as one of the cognitive traits that significantly affects an employee's emotional well-being. As the results reveal, those in the working world who have a strong sense of agency tend to have better mental health overall. Furthermore, we discovered that females and single professionals are somewhat more positive in LOC than male and married professionals. More study is required to discover how locus of control may be effectively handled in the treatment and prevention of mental health in other types of organizations.

References

- [1]. JAHODA, M. (1967). MENTAL HEALTH AND CONTEMPORARY THOUGHT-SODDY, K AND AHRENFELDT, RH.
- [2]. American Psychiatric Association (2018), Diagnostic and statistical manual of mental disorders (5th ed.), American Psychiatric Publishing, Arlington, VA.
- [3]. Weissman, J., Russell, D., Jay, M., Beasley, J.M., Malaspina, D. and Pegus, C. (2017), "Disparities in health care utilization and functional limitations among adults with

- serious psychological distress, 2006-2014”, *Psychiatric Services*, Vol. 68 No. 7, pp. 653-659.
- [4].Collins, P.Y., Patel, V., Joestl, S.S., March, D., Insel, T.R., Daar, A.S., ... and Glass, R.I. (2011), “Grand challenges in global mental health”, *Nature*, Vol. 475 No. 7354, pp. 27–30.
- [5].Elraz, H. (2018), “Identity, mental health and work: How employees with mental health conditions recount stigma and the pejorative discourse of mental illness”, *Human Relations*, Vol. 71 No. 5, pp. 722-741.
- [6].Follmer, K.B. and Jones, K.S. (2018), “Mental Illness in the Workplace: An Interdisciplinary Review and Organizational Research Agenda”, *Journal of Management*, Vol. 44 No. 1, pp. 325-351.
- [7].Heffernan, J. and Pilkington, P. (2011), “Supported employment for persons with mental illness: systematic review of the effectiveness of individual placement and support in the UK”, *Journal of Mental Health*, Vol. 20 No. 4, pp. 368-380.
- [8].Levinson, D., Lakoma, M.D., Petukhova, M., Schoenbaum, M., Zaslavsky, A.M., Angermeyer, M... and Gureje, O. (2010), “Associations of serious mental illness with earnings: Results from the WHO World Mental Health surveys”, *The British Journal of Psychiatry*, Vol. 197 No. 2, pp. 114-121.
- [9].Dietrich, S., Mergl, R. and Rummel-Kluge, C. (2014), “Personal and perceived stigmatization of depression: A comparison of data from the general population, participants of a depression congress and job placement officers in Germany”, *Psychiatry Research*, Vol. 220 No. 1-2, pp. 598-603.
- [10]. Santuzzi, A.M. and Waltz, P.R. (2016), “Disability in the workplace: A unique and variable identity”, *Journal of Management*, Vol. 42 No. 5, pp. 1111–1135.
- [11]. Harris, L.M., Matthews, L.R., Penrose-Wall, J., Alam, A. and Jaworski, A. (2014), “Perspectives on barriers to employment for job seekers with mental illness and additional substance-use problems”, *Health & Social Care in the Community*, Vol. 22 No. 1, pp. 67-77.
- [12]. Baldwin, M. L. and Marcus, S. C. (2007), “Labor market outcomes of persons with mental disorders”, *Industrial Relations: A Journal of Economy and Society*, Vol. 46 No. 3, pp. 481-510
- [13]. Boot, C.R., de Kruif, A.T.C., Shaw, W.S., van der Beek, A.J., Deeg, D.J. and Abma, T. (2016), “Factors important for work participation among older workers with depression, cardiovascular disease, and osteoarthritis: A mixed method study”, *Journal of Occupational Rehabilitation*, Vol. 26 No. 2, pp. 160-172.
- [14]. Beck AT. The evolution of the cognitive model of depression and its neurobiological correlates. *Am J Psychiatry*. 2008;165(8):969–977. <https://doi.org/10.1176/appi.ajp.2008.08050721>

- [15]. Lorant V, Croux C, Weich S, Delière D, Mackenbach J, Anseau M. Depression and socioeconomic risk factors: 7-year longitudinal population study. *Br J Psychiatry*. 2007;190(4):293–298. <https://doi.org/10.1192/bjp.bp.105.020040>
- [16]. Rotter JB. Generalized expectancies for internal versus external control of reinforcement. *Psychol Monogr*. 1966;80(1):1–28. <https://doi.org/10.1037/h0092976>
- [17]. Arslan, C., Dilmaç, B., & Hamarta, E. (2009). Coping with Stress and Trait Anxiety in Terms of Locus of Control: A Study with Turkish University Students. *Social Behavior and Personality*, 37, 791-800. <http://dx.doi.org/10.2224/sbp.2009.37.6.791>
- [18]. Coyne, W. L., & Thompson, D. A. (2011). Maternal Depression, Locus of Control, and Emotion Regulatory Strategy as Predictors of Preschoolers' Internalizing Problems. *Journal of Child and Family Studies*, 20, 873-883. <http://dx.doi.org/10.1007/s10826-011-9455-2>
- [19]. Field, W., & Kruger, C. (2008). The Effect of an Art Psychotherapy Intervention on Levels of Depression and Health Locus of Control Orientations Experienced by Black Women Living with HIV. *South African Journal of Psychology*, 38, 467-478. <http://www.msvu.ca:2048/login?url>
<http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=34993547&site=ehost-live&scope=site> <http://dx.doi.org/10.1177/008124630803800302>
- [20]. Nabors, L., McGrady, E. M., & Kichler, J. (2010). Children's Attitudes toward Their Diabetes, Locus of Control, and HbA1c Levels. *Journal of Developmental and Physical Disabilities*, 22, 475-484.
- [21]. Baker, A. T., Buchanan, T. N., & Corson, N. (2008). Factors Influencing Chronic Pain Intensity in Older Black Women: Examining Depression, Locus of Control, and Physical Health. *Journal of Women's Health*, 17, 869-878. <http://dx.doi.org/10.1089/jwh.2007.0452>
- [22]. Walter, H.J., Gouze, K., Cicchetti, C, et al. (2006). A pilot demonstration of comprehensive mental health services in inner-city public schools. *Journal of School Health*, 81, 185-193.
- [23]. Anand, S.P. (2006). A Study of Student's Mental Health Attitude and Motivation for Studies. *Journal of Educational Research and Extension*, 36 (2), 55-61.
- [24]. Singh, A.K. (2006). Mental health behavior as a function of socioeconomic status and residence. *Indian Journal of Psychometric and Education*, 39, 118-120.
- [25]. Adlers, A. (1924). Adler's theory of personality, retrieved from http://cengagesites.com/academic/assets/sites/schultz_ch03.pdf
- [26]. Piaget, J. (1929). The Child's Conception of the World. *Mind* 38 (152):506-513.

- [27]. Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215. <https://doi.org/10.1037/0033-295X.84.2.191>
- [28]. Rotter, J.B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80 (1,Whole No.609). American Psychological Association.
- [29]. Lloyd, T., & Hastings, R. P. (2009). Parental Locus of Control and Psychological Well-Being in Mothers of Children with Intellectual Disability. *Journal of Intellectual & Developmental Disability*, 34, 104-115. <http://dx.doi.org/10.1080/13668250902862074>
- [30]. Karayurt, Ö., & Dicle, A. (2008). The Relationship between Locus of Control and Mental Health Status among Baccalaureate Nursing Students in Turkey. *Social Behavior & Personality: An International Journal*, 36, 919-30.
- [31]. Shelley, M., & Pakenham, K. (2004). External Health Locus of Control and General Self-Efficacy: Moderators of Emotional Distress among University Students. *Australian Journal of Psychology*, 56, 191-199. <http://dx.doi.org/10.1080/00049530412331283336>
- [32]. April, A. K., Dharani, B., & Peters, K. (2012). Impact of Locus of Control Expectancy on Level of Well-Being. *Review of European Studies*, 4. <http://dx.doi.org/10.5539/res.v4n2p124>
- [33]. Bozorgi, S. (2009). On the Relationship between Locus of Control and the Grade Point Average of the Iranian Azad University EFL Students. Online Submission. <http://files.eric.ed.gov/fulltext/ED505569.pdf>
- [34]. Westerhof, G., & Keyes, C. (2010). Mental Illness and Mental Health: The Two Continua Model across the Lifespan. *Journal of Adult Development*, 17, 110-119. <http://dx.doi.org/10.1007/s10804-009-9082-y>
- [35]. Pufal-Struzik, I. (1998). Self-Acceptance and Behaviour Control in Creatively Gifted Young People. *High Ability Studies*, 9,197-205.
- [36]. Leotti, L. A., Iyengar, S. S., & Ochsner, K. N. (2010). Born to Choose: The Origins and Value of the Need for Control. *Trends in Cognitive Sciences*, 14, 457-463. <http://dx.doi.org/10.1016/j.tics.2010.08.001>
- [37]. Pannells, T. C., & Claxton, A. F. (2008). Happiness, Creative Ideation, and Locus of Control. *Creativity Research Journal*, 20, 67-71. <http://dx.doi.org/10.1080/10400410701842029>
- [38]. Ryff, C. D. (1989a). Beyond Ponce de Leon and Life Satisfaction: New Directions in Quest of Successful Ageing. *International Journal of Behavioral Development*, 12, 35-55.

- [39]. Ryff, C. D., & Singer, B. H. (2006). Best News Yet on the Six-Factor Model of Well-Being. *Social Science Research*, 35,1103-1119.
<http://dx.doi.org/10.1016/j.ssresearch.2006.01.002>