

A Test of Maslow's Hierarchy of Needs Concept by a Correlational Model Among Adult Learners

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Abstract: Maslow's hierarchical needs theory has a unique approach to classifying human needs into five different levels. Some researchers agree that Maslow's need theory followed a "low-high" order and that there is a dominance level for five needs in a hierarchical structure. At the same time, some researchers argue that Maslow's needs are approached randomly. Therefore, this study uses correlation and regression models to examine the relationship among five diverse Maslow's needs levels among adult learners. It is expected that this research would assist adult education educators and practitioners in understanding the relationship of the five needs' levels and craft adaptable teaching or training strategies based on the similarities of the five needs' levels for adult learners.

Keywords: Maslow's needs, adult development, motivation theory

What are human needs? From a drive theoretical perspective, needs reflect a set of continual physiological and psychological desires for human beings (Patrick, Knee, Canevello & Lonsbary 2007). In 1954, Abraham Maslow published *"Motivation and Personality"* that introduced the personal needs theory in various contexts (Gawel, 1996). In this book, Maslow found that humans have five types of needs. They are driven by innate needs for survival, safety, love and belonging, esteem, and self-realization. Additionally, there is a general pattern of needs recognition and satisfaction that humans follow in the same order (Abulof, 2017; Gawel, 1996 & Kaur, 2013).

Maslow constructed a pyramid shape hierarchy of needs for the five different levels. Physiological needs are positioned at the bottom level of Maslow's needs pyramid, and this level includes fundamental biological needs such as food, water, air, and shelter. Safety needs occupy the second level of Maslow's needs pyramid, and this level reflects the needs for finding safe circumstances, stability, and protection. Belonging needs are located on the third level of Maslow's needs pyramid, and they represent the human desire for seeking affectionate relationships with friends, partners, children, or even a sense of community. Esteem needs are situated at the fourth level of the Maslow's needs pyramid. This level includes the need for self-respect such as confidence, competence, achievement, mastery, independence and freedom, approval from others such as status, fame, glory, recognition, attention, reputation, appreciation, dignity, even dominance. Self-actualization sits on the top level of Maslow's needs pyramid, and this level refers to the continuous desire to develop one's fullest potential (Boeree, 2006; Goodman, 1968 & Poston, 2009).

According to Maslow's theory, many inventories were developed. For example, Porter (1961) developed Need Satisfaction Questionnaire (NSQ) to apply to the managerial job attitude in the human resource development field. To examine the needs of students with learning disabilities, Skirrow and Perry (2009) created the Maslow Assessment of Needs Scale (MANS) tool in the

academic field. Meanwhile, those survey tools of Maslow's hierarchy of needs are also examined by many studies. For instance, Waters and Roach (1973) conducted a comparative study and examined the validity of Porter (1961) Need Satisfaction Questionnaire (NSQ). The results revealed that the question items used in representing Maslow's need categories are not valid for testing professional workers in working contexts. Similarly, Roberts, Walter & Miles (1971) used a factorial analytical method to measure the Porter's (1961) categories of Maslow's hierarchical needs, and their study showed that Maslow's needs investigation is not an effective tool to apply to the test of job satisfaction levels. However, Weber and Hadd's (1974) study indicated that Need Satisfaction Questionnaire (NSQ) was valid to measure five dimensions of psychological need satisfaction. Thus, it seems that there is not a consistent survey assessment tool that is broadly accepted by academic scholars and professional practitioners. Rennie (2008) noted that people use their own linguistic way to interpret and represent their actions and experiences. The Maslow's needs assessment is open to interpretation in many different perspectives on the different fields such as school or workplace.

Additionally, Rennie (2008) pointed out that "the satisfaction of higher needs is contingent on the lower needs having been met" (p. 445). Rauschenberger, Schmitt, and Hunter's (1980) study proved Rennie's (2008) statement, and their study found Maslow's need of satisfaction follows low-high order in the hierarchical structure. Wahba & Bridwell (1976) also supported that "people seek objects and engaging behavior that are no way related to the satisfaction of needs," and questioned the pyramid structure of Maslow's needs (p. 519). Conversely, Taormina, and Gao's (2013) study found that the satisfaction of a lower level need immediately below any given need in the hierarchy of Maslow's needs can predict the next higher-level need's satisfaction.

The majority of previous literature focused on Maslow's hierarchy of needs in work settings. Fewer studies have investigated this hierarchy of needs in academic settings among adult learners. Therefore, this study aims to explore the correlation between each level in the hierarchy of Maslow's needs among adult learners. In response to the purpose of this study, the following questions were addressed:

1. Is the self-actualization needs level the single motivation governing other human needs?
2. Can lower-level needs of satisfaction predict the higher-level needs of satisfaction in Maslow's hierarchy of needs?

Research Design

Data were collected from one higher education institution in China. A total number of 189 participants responded to the self-reported online survey for this study. The Five Need Satisfaction Measure (Taormina & Gao, 2013) was used in this study. This 52-item 5-point Likert Scale (1 = *Strongly Disagree* to 5 = *Strongly Agree*) inventory aims to measure human physiological needs, safety-security needs, belongingness needs, esteem needs, and self-actualization needs. Pearson's correlation analysis was conducted to examine the relationship among five levels of Maslow's needs satisfactions. A series of multiple regression using a stepwise procedure was then conducted to investigate the relationship between the predictors (lower level needs satisfaction) and the criterion variables (higher-level needs of satisfaction) to seek the best prediction model for each criterion variable. Data were analyzed through SPSS 27.

The Box's M was set as 0.001 (Mertler & Vannatta, 2002), and the alpha level was set at 0.05.

Findings

RQ1 Is the self-actualization needs level the single motivation governing other human needs?

Pearson's correlation analysis results show that the correlations among the five needs level's satisfactions are all positive and significant (all $p < .01$; see Table 1). Additionally, the results also revealed that the satisfaction of the needs levels are adjacent and have high correlations. Specifically, the correlation between the physiological needs and the Safety-Security needs is $r = .712$. The correlation between the safety needs level, and the belongingness needs level is $r = .508$. The correlation between the belongingness needs level, and the esteem needs level is $r = .838$. The correlation between the esteem needs level, and the self-actualization needs level is $r = .831$. The average r value is $.67$, and the correlation value between the first four needs levels and the self-actualization needs level are $.752$, $.539$, $.769$, $.831$, respectively. Rauschenberger, Schmitt, and Hunter (1980) stated that if a person is governed by any one of the five needs levels in Maslow's needs hierarchical structure, the correlation between any two needs level will be negative. According to the correlation analysis results, the average r is $.67$ and the correlation between the first four level needs and the self-actualization needs indicates that the self-actualization needs level is not the dominant level in Maslow's hierarchy of needs pyramid.

Table 1. Means, SDs, Correlations for Satisfaction of the 5 Maslow's Needs

Variable	Mean	SD	1	2	3	4	5
Physiological needs	3.24	0.78	--	.712**	.705**	.697**	.752**
Safety-Security needs	3.42	0.76		--	.508**	.394**	.539**
Belongingness needs	3.17	0.93			--	.838**	.769**
Esteem needs	3.07	1.04				--	.831**
Self-Actualization needs	2.76	1.00					--

Note: * $p < .05$. ** $p < .01$. *** $p < .005$. **** $p < .001$.

RQ2 Can lower-level needs of satisfaction predict the higher-level needs of satisfaction in Maslow's hierarchy of needs?

To further assess the relationship between the lower-level needs and higher-level needs in Maslow's hierarchy of needs, a series of multiple regressions using a stepwise procedure was then conducted to investigate the predictable relationship among the five different levels of needs (see Table 2). Results indicate that the level of Esteem Needs, Physiological Needs, and Safety-Security needs can predict the level of Self-Actualization ($F_{(2, 185)} = 153.081$, $p < .01$). The linear combination of the level of Physiological Needs, Safety-Security Needs, and Esteem Needs can be accounted for by 73% of the variance of the Self-Actualization Needs ($R^2 = .73$). For every unit the level of Esteem Needs increases, the realization of Self-Actualization Needs increases by 0.578 unit, whereas the level of Physiological Needs and Safety-Security Needs remain the same ($b = 0.578$, $t = 10.970$, $p < .001$). For every unit, the level of Physiological Needs increases, the realization of Self-Actualization Needs by 0.293 unit when the Esteem Needs and Safety-

Security Needs stay the same ($b = 0.293$, $t = 3.113$, $p = .002$). For every unit the level of Safety-Security Needs increases, the realization of Self-Actualization Needs increases by 0.183 unit, while the level of Physiological Needs and Esteem Needs maintains the same ($b = 0.813$, $t = 2.452$, $p = .015$). That is, the variable of physiological needs, safety-security needs, and esteem needs can predict the self-actualization needs in Maslow's hierarchy of needs.

Table 2. *Multiple Regression Results*

DV	R^2	F	df	p	Predictors	b	t	p
Self-actualization needs	.658	325.169	2, 187	<.001	Esteem needs	.775	18.032	<.001
Self-actualization needs	.724	220.051	2, 187	<.001	Esteem needs	.552	10.540	<.001
					Physiological needs	.448	6.322	<.001
Self-actualization needs	.733	153.081	2, 187	<.001	Esteem needs	.578	10.970	<.001
					Physiological needs	.293	3.113	.002
					Safety-security needs	.183	2.452	.015

Discussion of Findings

Maslow (1943) assumed an underlying needs structure that humans would be dominated by one of the five needs. In other words, one need could govern the other four needs. Maslow established the concept of dominance, which means “deprivation or dissatisfaction of a need of high prepotency will lead to the domination of this need over the organism's personality” (Wahba & Bridwell, 1976, p. 515). In response to the concept of dominance in Maslow's theory, the study of Agrawal and Sharma (1977) illustrated that Maslow's needs follow a descending pattern, and the higher-level needs would dominate the lower-level needs. According to the results of this study, results are inconsistent with the concept of dominance from Maslow's underlying needs assumption. Thus, the higher-level needs are not the dominant needs in Maslow's hierarchy of needs for adult learners in academic settings.

Maslow described that the five needs appear sequentially as one moves up the phylogenetic scale (Lester, 2013). In other words, “need hierarchy is like a ladder with which one reaches the summit, step by step” (Agrawal & Sharma, 1977, p. 267). Mathes (1981) stated that the five classes of needs (physiological, security, belongingness, esteem, and self-actualization) are organized hierarchically, and each level is prepotent to the next higher level. Findings in this study support these statements. According to the results, the lower-level needs can predict higher-level needs. Therefore, Maslow's hierarchy of needs should follow the low-high order to test human needs.

Implications and Future Research

The present study examined Maslow's hierarchy of needs among adult learners from a sequential order perspective. It is expected that this study could assist adult education researchers and practitioners to better understand the responses for each level of Maslow's theory among adult learners. Indeed, the low-high order model of Maslow's hierarchical structure could apply among adult learners. Adult educators and practitioners should actively know the contents of the five different needs and analyze which needs' levels are their learners' positioning. Understanding the levels of the needs among learners could be beneficial for educators and practitioners to craft more active and optimal teaching or counseling strategies. Finally, this study only investigated adult learners from one college; thus, further research should recruit more participants from diverse higher education institutions or adult training programs. In addition, more influential factors such as gender, age, ethnic group, and major should be involved for further examination.

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