University of Colorado Denver

Colorado First Mentor Study -

Identifying Personality Characteristics, Traits, and Lifestyles of Colorado First Volunteers

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Executive Summary

Colorado First is a non-profit organization that focuses on teaching children the applications of science, technology, and engineering through team competitions. One of the most integral parts of Colorado First is the volunteer mentors who coach and guide their respective teams into success. However, Colorado First is facing the problem of recruiting new mentors and keeping current mentors for continuous competition seasons, which may start to effect the children's involvement and experience as well. In order to help Colorado First find effective recruiting methods, this research study was designed to identify key characteristics and lifestyle traits of mentors and discover their motives for joining the organization. A short survey with carefully designed measureable constructs and demographic questions was electronically sent out to all Colorado First mentors, which received a 12% response rate. The data was analyzed through various statistical tests (through the program SPSS) including construct reliability tests, paired t-tests, correlation tests, MANOVA analyses, a logistic regression analysis, and a multiple regression analysis. Through these analyses, we found that the continuously measured constructs of enjoyment of spending time with children, perceived personal dependability, and overall life fulfillment were the most important or highest weighted traits of Colorado First mentors, and all of the characteristics and lifestyle traits (with the exception of academic interests) were positively correlated or associated with one another (meaning that as one trait increases, the other traits do as well). We also found that no variances of traits existed based on a mentor's age, income level, education level, or decision to continue or not continue to mentor next season and that male and female mentors display an equal level of enjoyment of spending time with children and a satisfaction of mentoring. However, we did find that continuing mentors exhibited higher levels of all traits than non-continuing mentors and that mentors are more likely to continue to volunteer next season the higher their satisfaction. Additionally, the only trait that can possibly predict or influence a mentor's satisfaction of the job is their enjoyment of spending time with children. Based on these findings, we suggest that Colorado First develop ways to increase the volunteer's satisfaction of mentoring in order to more effectively motivate them to continue to mentor next competition season. We also suggest that Colorado First use these findings and develop further studies that examine more effective ways to attract potential mentors that possess these important characteristics and lifestyle traits. Colorado First can also survey current mentors and use their specific scores in the created regression equation to predict the probability of whether a mentor will continue to volunteer next season. Many other significant and insignificant discoveries were found that could be used to develop further studies and marketing projects in order to solve not only the problem of recruiting and retaining mentor involvement, but other issues that Colorado First may also face in the future.

Introduction

This marketing research project was designed to identify and measure specific personality characteristics and lifestyle traits of the volunteer mentors for the organization Colorado First. Colorado First depends on their volunteer mentors to coach children in science, technology, and engineering-related competition programs. Colorado First is in need of more mentors to manage the teams and also needs more efficient ways to target and recruit people that would make good mentors. This project aimed to identify certain qualities and attributes that Colorado First could look for in potential volunteers and base their recruitment methods on. By analyzing the information data found through marketing survey research, Colorado First will gain valuable information about their mentors, including common personality traits and lifestyles shared across this group. More studies could be developed as an extension of this project in order for Colorado First to successfully recruit new mentors for their programs.

Background Information

This marketing research project was conducted for the non-profit company, Colorado First which is the Colorado Division of the organization US First. Colorado First is an organization dedicated to teaching children between the ages of 6-18 the values and concepts of teamwork through the real-world application of science, technology, and engineering through challenge competition programs. These children are divided into teams that learn to work together to build and test models/robots they design for a specific purpose and then compete within their designated league. Colorado First includes four different competition leagues; Jr. FLL (Lego League, ages 6-9), FLL (Lego League, ages 9-16), FTC (Tech Challenge League, ages 14-16), and FRC (Robotics League, ages 14-18). In order for these teams to learn and compete together, Colorado First utilizes volunteer mentors to help coach the children and run the team groups. Because mentors at Colorado First are so integral for the competition teams and the company, Colorado First needs new ways in which to recruit more mentors to supply the competition teams. Colorado First recruited our marketing research team in order to identify key characteristics and lifestyles of mentors and apply these findings to help find an efficient and successful way to recruit more mentors for these programs. In order to successfully complete this project, we designed a survey evaluating the personality and lifestyle constructs of academic interests, children, fulfillment, personality, giving back, dependability, and satisfaction, as well as demographic and mentoring information.

Hypothesis Development & Constructs

Because the purpose of this study is to find if Colorado First mentors possess certain characteristics and personality traits, we expect to find a high level of all measured characteristics and traits in Colorado First mentors as well as all continuous traits acting as influential motivations for Colorado First mentors to join and continue volunteering at the organization. We also assume that those traits vary between gender, age, education level, income, and all other tested categorical and demographic variables. The constructs were chosen based on insights and qualities that we believed a volunteer would have such as a high enjoyment for giving back, an interest in working with children, and a high level of self-fulfillment. The chosen constructs being measured were carefully developed

specifically for this study and chosen from a large group of measurable characteristics, personality, and lifestyle traits. Specifics and reliability measures of the chosen constructs are as follows (Fig. 1):

·*Academic Interests (academ):* This construct aimed to measure the mentors' interests in academia related to the main concepts surrounding the Colorado First programs including the topics of science and technology (e.g., "I am passionate about science and technology topics"). The Chronbach's alpha, or reliability, of the questions in this construct as a whole was .89 or 89%, meaning that this is a strong construct with high reliability and measures a subject's interests in science and technology very well.

·*Children (child):* Because the job of the Colorado First mentors is to coach, guide, and advise their respective children groups, an affinity towards the enjoyment of working with and spending time with children was measured. The reliability of this construct was .79 or 79% which also means that this construct is strong as a whole and correctly measures what it was intended to.

·*Fulfillment (fulfill):* This construct was used to measure the volunteer's feeling of fulfillment and self-actualization in their own life (e.g., "I generally feel content with my life"). A level of higher fulfillment was expected to be found within volunteers. This construct also had a high reliability value (.91, 91%), which confirms the strength and intended measurement of a subject's fulfillment in their own life. Additionally, if any of the three questions in this construct were to be deleted, the reliability would decrease which further exemplifies that this construct is reliable and measures self-fulfillment accurately.

·*Personality (pers):* This construct was specifically developed for this study to measure a mentor's personality traits in terms of socialization and outgoingness. Volunteers in this position were expected to be socially active and outgoing in order to successfully mentor children in this organization. The reliability value of this construct was .88 or 88% which means that it is also a strong and reliable construct.

·*Giving Back (give):* Because the Colorado First mentors are volunteers, a construct measuring enjoyment of giving back to one's community was developed (e.g., "I enjoy giving back to my city/community). The level of reliability for this particular construct was .64 or 64%, which does not meet the criteria of a reliable construct (Chronbach's alpha of at least .70). This means that this construct is not very reliable pertaining to the study and does not accurately measure a subject's enjoyment of volunteering in their community. For future studies, this construct could be discarded due to its poor reliability value.

·*Dependability (depend):* This construct was developed in order to measure the level of perceived trustworthiness and reliability of the mentors (e.g., "I believe others can count on me"). While volunteering is not a job, a high level of dependability was expected to be found within this volunteer sample. This construct had a high reliability value (.91 or 91%) which demonstrates its accuracy and strength as a construct. Furthermore, if any of the three questions in this construct were deleted, the reliability value would decrease.

·*Satisfaction of Mentoring (mentor):* All of the individuals that participated in the survey are/have been Colorado First mentors, so a construct of satisfaction with mentoring was also measured. The reliability value of this construct was .73 or 73%, which means that it is decently reliable and measures a subject's satisfaction of mentoring reasonably well. If any of the questions in this construct were to be deleted however, the Chronbach's alpha value would drop significantly (below a .70 value).

Instrument Design & Sampling

All of the aforementioned constructs were specifically developed for this study and measured using a 7-point continuous likert scale design, ranging from "strongly disagree (1)" to "strongly agree (7)". The demographic questions (i.e., age, income level, marital status, education level, etc.) were all measured categorically. Additionally, an informative cover letter stating information about the study, its importance to the company, and a promise of confidentiality was used as an introductory foreword to the survey. The format of the online survey included a total of 31 questions on 4 pages: 21 questions measuring each construct (3 questions per 7 constructs), 3 questions regarding mentor program involvement, and 7 general demographic questions.

In order to conduct this survey, the Director of Development of Colorado First was contacted and sent an e-mail containing the cover letter and link to the survey. The Director then forwarded the cover letter and survey (through online service Survey Monkey) to all mentors/volunteers. A total of 127 subjects responded to the survey, which equated to about a 12% response rate.

Methodology & Results

In order to obtain pertinent information regarding Colorado First mentors, many statistical procedures were performed on the data through the application SPSS. First, a reliability test was conducted on all seven tested constructs in order to test the strength of the constructs and the level of which the constructs accurately measured their intended purpose. In order to determine the most important or highest weighted constructs that apply to mentors, paired t-tests were also performed on all constructs. A correlation analysis was performed on the construct data with the intention to find any associations between any personality characteristics or lifestyle traits. Additionally, a MANOVA analysis was included in order to identify any variances or interaction effects between the continuous variables (characteristics/ lifestyle traits) of mentors versus categorical data (demographic information). A logistic regression test was also performed on the data in order to obtain an equation that might predict if a mentor will continue to mentor next competition season based on their specific answers to the questionnaire. Due to the results of the logistic regression test, a multiple regression test was then performed as an addendum on the subsequent results. Detailed results of these tests are as follows:

T-Test Pairs

In order to determine the most important or highest weighted constructs that apply to mentors paired t-tests were performed on all constructs (Fig. 2). A total of 21 pairs were tested, however, only 13 pairs were significant (p-value below .10).

a. For the academic interest construct, the only statistically significant construct pairings were that of academic interest vs. children (significance value of .003 or 99.7% confidence) and vs. personality (p=.000 or 100%). Because the mean of the children construct was higher in the first pairing, we can conclude that people will become mentors based on their enjoyment of spending time with children rather than their level of academic interests. Conversely, the mean for the academic interests construct was significantly higher than the mean for the personality construct which shows that personality is a relatively unimportant factor compared to academic interests for mentors.

b. For the children construct, four significant construct pairings were found including children vs. fulfillment (p=.000), children vs. personality (p=.000), children vs. giving back (p=.000), and children vs. satisfaction of mentoring (p=.000). For all of these pairings, the mean of the children construct was higher than the other tested constructs which shows that the reason these people are mentors is due to their enjoyment of spending time with children over their life fulfillment, personality, level of giving back, and satisfaction of mentoring.

c. The paired t-tests of the life fulfillment construct displayed two statistically significant pairings which include fulfillment vs. personality (p=.000) and fulfillment vs. dependability (p=.003). The pairing of fulfillment vs. personality revealed that the level of life fulfillment is weighted more heavily than personality based on the higher mean of the fulfillment construct. Conversely, the mean for the dependability construct was higher than that of fulfillment, showing that mentors believe they are reliable and are concerned with their dependability over their life fulfillment.

d. The paired t-test also yielded statistically significant results regarding the pairings of personality vs. giving back (p=.000), personality vs. dependability (p=.000), and personality vs. satisfaction of mentoring (p=.000). For all of these pairings, the mean for the construct personality was significantly lower which shows that a mentor's degree of dependability, enjoyment of giving back, and satisfaction of mentoring were all more important factors than their personality or outgoingness.

e. The only statistically significant t-test pairing for the construct giving back was that of giving back vs. dependability (p=.015) with the higher mean belonging to the dependability construct, showing that a mentor's level of reliability is more heavily weighted than their enjoyment of giving back to their community.

f. Finally, the paired t-test of dependability vs. mentor was also statistically significant (p=.006), with the higher mean in the dependability construct showing that a mentor's degree of dependability outweighs their satisfaction of mentoring.

Correlations Analysis

In order to establish if there were any associations between the specific tested traits and characteristics of mentors, a correlation test was performed on all continuous construct variables (Fig. 3). Surprising results were found in the correlation tests as almost all construct variables were significant at the .000 or 100% level, with strong positive correlations usually exceeding an r-squared value of.32 or 32% or above. For example, all of the constructs were significantly correlated with the child construct with positive correlations or associations. This means that a mentor's enjoyment of working with children increases as all other measured traits increase and displays a strong relationship between the child variable and all other construct variables. The exception to these results include insignificant associative relationships between academic interests vs. life fulfillment, personality, giving back, and dependability, which means that a mentor's academic interests are not correlated or associated with those specific measured traits.

MANOVA Analysis

It is important to identify if personality characteristics and lifestyles of mentors vary between some demographic conditions such as gender, age, education level, and family status (parent/not a parent). In order to determine this, a Multivariate Analysis of Variance (MANOVA) test was performed

on the seven lifestyle/personality constructs (used as independent variables) versus all tested categorical variables (used as dependent variables) (Fig 4). The significance of all MANVOA analyses were based off of the Hotellings test p-value and out of all nine categorical constructs, only five were deemed statistically significant.

a. *Dependent Variable: Programs*

A MANOVA test was also performed to determine if the mentors' personality and lifestyle traits differed between their program involvement (Jr. FLL (1), FLL (2), FRC (3), and FTC (4)). The overall significance value was found to be .074, meaning that the tested traits do vary between program group involvement. Analyzing the specific traits individually, it was found that the significant variances occurred for the constructs fulfillment (p=.009), personality (p=.009), and giving back (p=.014) while the other traits deemed insignificant and do not vary between mentor program involvement. Additionally, when examining the means of the significant traits, the data shows that program 3 (FTC) has the lowest mean in constructs fulfillment (mean=6.00)) and the highest mean in construct personality (mean=6.11), which indicates that mentors involved in the FTC league feel the least fulfilled but are the most outgoing than mentors involved in the other leagues. Another interesting finding is that the high mean values for giving back for mentors in the FLL league (mean=6.43) and the FRC league (mean=6.44) show that mentors involved in those programs find more enjoyment of giving back to their community than mentors in the other groups.

b. *Dependent Variable: Continue to Mentor*

One of the most important variables that were tested is whether current Colorado First mentors are going to continue to volunteer for the next competition season. After running a MANOVA analysis on this factor, it was found to be significant at the p=.002 level which supports the hypothesis and indicates that the personality characteristics and lifestyles significantly differ between continuing mentors and non-continuing mentors. Additionally, the p-values of all constructs besides personality proved to be significant at a value of .09 or below, meaning these traits (aside from outgoingness) vary between the specified groups. Looking at individual construct means, it can be observed that the measure of every significant construct is slightly higher for people who want to continue mentoring (i.e., higher life fulfillment, higher satisfaction of mentoring, etc.) than those who do not.

c. *Dependent Variable: Gender*

A MANOVA test was also performed to look at variances of traits between genders. The overall significance value was .000 which indicates that there is significant difference between men and women with regards the measured constructs. The individual significance values of the constructs show that there are no (or insignificant) differences between men and women for satisfaction of mentoring and enjoyment of spending time with children which nullifies the hypothesis that women will tend to enjoy spending time with children more than men. The other constructs proved to be significant at a value of p=.08 or less, however, the individual construct means were relatively similar which shows there are only small differences regarding traits and lifestyles between men and women.

d. *Dependent Variable: Marital Status*

Although there were four categories in which marital status was measured (single, married/domestic partnership, divorced, and widowed), the category of widowed had 0 responses and the category of divorced had only 1 response, so only the categories of single and married mentors were compared. This MANOVA test was significant (p=.009) which supports the original hypothesis and shows that the

measured constructs do differ between single and married mentors. The individual significance values show that only the constructs of fulfill (p=.007) and mentor (p=.005) were significant and vary between the groups and the means of the constructs for married mentors were higher than that of the single mentors so the conclusion can be made that married mentors are more likely to be fulfilled with life and more likely to be satisfied being mentors.

e. *Dependent Variable: Parents/Non-Parents*

The results of the MANOVA test regarding if mentors were or were not parents had an overall significance value of .003 which means that there are significant differences of measured traits between the two groups. The individual significance values of constructs show that fulfill (p=.038), give (p=.002), depend (p=.037), and mentor (p=.000) are the only traits that vary between parents and non-parents, which challenges the hypothesis. Looking at the mean values of these significant traits, it can be determined that mentors who have children are more likely to feel higher measures of life fulfillment, giving back to their community, personal dependability and higher satisfaction of mentoring than those who do not have children. However, there are no variances between parents and non-parents' enjoyment of spending time with children, which was unexpected.

f. D*ependent Variables: Current Mentor/Non-mentor, Age, Education level, & Income*

The results of the MANOVA tests on the following dependent variables proved to be insignificant based on the Hotellings test: Current mentor vs. non-mentor (p=.646), age (p=.110), education level (p=.221), and income level (p=.687). This information shows that the traits and constructs measured do not vary between mentors vs. non-mentors, or volunteers' age, education level, and income level and are equally likely to be the same for such groups. This information also nullifies the hypotheses that mentors will be more likely to display higher levels of all tested traits; that older mentors would be more likely to be fulfilled, share thoughts with youth and give back to their community; that volunteers with higher education levels would be more fulfilled; and that subjects with higher incomes have higher life fulfillment, dependability, and academic interests.

Logistic Regression Analysis

A logistic regression test was run in order to develop an equation that might predict whether current mentors will continue to mentor next competition season (Fig. 5.1-5.4). This analysis used the categorical variable of continue (continue to mentor next season) and all continuous characteristic and trait variables. This test proved to be significant over all (p= .008) which means that the model used to predict if mentors will continue can be sufficient in predicting if a mentor will continue based on their measured level of characteristics and lifestyle traits. However, looking at the individual significance values of the measured traits, the only significant variable found was the satisfaction of mentoring trait (p=.048) which means that the satisfaction of mentoring is the only predictive variable regarding continuance of mentoring.

In order to develop a predictive regression equation, the logistic test was rerun (Fig. 6.1-6.4) using only the significant predictive variable of mentor and discarding the insignificant variables (p=.000). In order to develop an accurate equation the overall percentage (percentage of grouped cases directly identified by SPSS model) must exceed the calculated Maximum Chance Criterion (MCC, percent chance that a human could predict group involvement). In the case of the rerun of the logistic regression analysis, the overall percentage (93%) did pass the MCC test (93%>91.3%) and the PCC test

(105%>83%) which means that a regression equation with a marginally good predicting level can be created from the data (Fig. 6.4).

Multiple Regression Analysis

Based on the logistic regression analysis result, a multiple regression test was used to identify if the satisfaction of mentoring variable is influenced or can be predicted by any other of the tested characteristics (Fig. 7.1-7.3). The overall significance (p=.000) of the test indicates that the regression model is a good fit for the data, however, the r-square value (.387<.40) demonstrates that other traits could explain only 38.7% of satisfaction of mentoring experience, which indicates that the model is not sufficient in predicting this variable. Looking at the individual significances of the traits, enjoyment of spending time with children (p=.003) is the only trait that may influence the satisfaction of mentoring variable; however this value is still not sufficient enough to predict satisfaction. The B-value of enjoying spending time with children is positive (B=.457) which illustrates that as a mentor's level of enjoyment of spending time with children increases, their satisfaction of mentoring will likely increase.

Discussion, Conclusions, & Recommendations

In this research study, we hypothesized that mentors would possess a high level of all measured characteristics and traits and these measured traits would act as influential motivations for Colorado First mentors to join and continue volunteering at the organization. Based on the analysis of the collected data, this hypothesis was found to be both supported and void. Through the paired t-test analysis we found that the most important and most recurring traits that mentors possess include a high enjoyment of working with children and a high level of perceived personal dependability. However, we found that academic interests (in science and technology fields) and personality (outgoingness) are not integral traits that mentors possess, which nullified the hypothesis. Additionally, the correlation analysis showed a high positive correlation between almost all traits (academic interests being the least correlated characteristic) which shows that as the strength of one characteristic increases, it is likely that the correlated traits will increase as well; this data also supported the original hypothesis.

The MANOVA analysis found contrasting information with regards to the hypotheses as well. When comparing variances of the continuous variables (measured traits) to the various categorical variables, we found that the mentors' scores of characteristics and lifestyle traits did not differ between current vs. non-current mentors, age levels, education levels, and income levels, which was unexpected as we hypothesized that the higher a volunteer's age, education, and income, the more life fulfillment they would have. However, the MANOVA analysis did find variances between certain measured traits and a mentor's gender, marital status, family status, program involvement, and desire to continue mentoring. It was surprising to find that males and females share an equal enjoyment of working with kids, but mentors who are parents generally have a higher satisfaction of mentoring and a higher life fulfillment. Furthermore, we found that mentors in the FTC league feel less life fulfillment over mentors involved in the other leagues.

More interesting discoveries were found through the logistic regression analysis which was used specifically to find if it would be possible to successfully predict if a mentor will continue to volunteer next competition season. The only significant influential trait that could predict this is the level of a subject's satisfaction of mentoring, which shows that by increasing mentors' satisfaction of the position

they will be more likely to volunteer next year. This information challenged the hypotheses as we anticipated that all measured traits would act as predictive factors. The following multiple regression test was insignificant, however, which shows that none of the variables are sufficient in predicting the level of a mentor's satisfaction of the position.

These findings are not only interesting and informative, but also important in generating recommendations for Colorado First. By identifying the most influential and important traits found in mentors, we can apply this information to future studies and developments that could help Colorado First attract and recruit new mentors as well as find ways to improve the rate at which mentors continue at the organization. Our first recommendation for Colorado First is for the company to develop new ways in which to improve mentor's satisfaction of their position and raise their level of involvement in the organization. This could be done through further research studies and surveys so that the most effective ways to improve this variable can be found. Additionally, we suggest further research applying this data to find ways to more effectively attract and recruit potential mentors that exhibit the most important characteristics and lifestyle traits (especially the traits of enjoyment of spending time with children, perceived dependability, and life fulfillment). If mentor continuance continues to be a problem, the logistic regression equation (Fig. 6.4) could be used to predict if a mentor will volunteer next season based on their perceived level of satisfaction (through surveying). Any further research could discard the construct giving back due to its low level of reliability. Because these traits have now been identified, Colorado First can utilize this information to develop further studies in order to create new marketing projects and campaigns, effectively recruit new mentors, and motivate current mentors to continue for many seasons to come.

APPENDIX

Fig. 1 – Construct Questionnaire & Reliability Statistics

Construct/Items	Coefficient alpha/ Item Correlation	Reliability Value
Academic Interests		.89
1. I enjoy speaking to others about science and technology.	.73	
2. I like working on science and technology related projects.	.83	
3. I am passionate about science and technology topics.	.83	
Children		.79
1. I enjoy spending time with kids.	.56	
2. I like inspiring young minds.	.69	
3. It makes me happy to share my knowledge and experience with young people.	.65	
Fulfillment		.91
1. I am satisfied with life overall.	.82	
2. I currently feel fulfilled.	.82	
3. I generally feel content with my life.	.87	
Personality		.88
1. I am an outgoing and socially active person.	.82	
2. I find it easy to talk to people.	.69	
3. I am very involved in social activities.	.80	
Giving Back		.64
1. I feel a sense of fulfillment in helping others.	.50	
2. I am an active volunteer.	.48	
3. I enjoy giving back to my city/community.	.46	
Dependability		.91
1. I feel that I am a dependable person.	.77	
2. I feel that others can count on me.	.87	
3. I follow through with my responsibilities.	.81	
Satisfaction of Mentoring		.73
1. I thoroughly enjoy working as a mentor.	.55	
2. I am satisfied with my volunteer position at Colorado First.	.52	
3. I am likely to recommend being a mentor to others.	.60	

Fig. 2 – T-Test Pairs Statistics Table

	Constructs	Mean	Sig. of Pair
Pair 1	academ – fulfill	6.23 **6.45**	.003
Pair 2	academ – fulfill	6.22 6.17	.625
Pair 3	academ – pers	**6.23** 5.42	.000
Pair 4	academ – give	6.23 6.23	.977
Pair 5	academ – depend	6.24 6.39	.136
Pair 6	academ – mentor	6.23 6.19	.689
Pair 7	child – fulfill	**6.44** 6.16	.000
Pair 8	child – pers	**6.46** 5.41	.000
Pair 9	child – give	**6.46** 6.24	.000
Pair 10	child – depend	6.46 6.48	.239
Pair 11	child – mentor	**6.46** 6.19	.000
Pair 12	fulfill – pers	**6.16** 5.42	.000
Pair 13	fulfill – give	6.18 6.23	.452
Pair 14	fulfill – depend	6.16 **6.38**	.003
Pair 15	fulfill – mentor	6.17 6.18	.901
Pair 16	pers – give	5.41 **6.23**	.000
Pair 17	pers – depend	5.42 **6.38**	.000
Pair 18	pers – mentor	5.42 **6.19**	.000
Pair 19	give – depend	6.23 **6.38**	.015
Pair 20	give – mentor	6.23 6.20	.518
Pair 21	depend – mentor	**6.39** 6.19	.006

Fig. 3 – Correlation Statistics Table

		academ	child	fulfill	pers	give	depend	mentor
academ	Pearson Correlation	1	.530	.120	.082	.129	.093	.169
	Sig. (2-tailed)		.000	.190	.370	.158	.311	.063
	N	123	121	120	121	121	121	122
child	Pearson Correlation	.530	1	.493	.318	.555	.328	.539
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	121	121	118	120	119	119	120
fulfill	Pearson Correlation	.120	.493	1	.350	.418	.360	.448
	Sig. (2-tailed)	.190	.000		.000	.000	.000	.000
	N	120	118	120	118	118	118	119
pers	Pearson Correlation	.082	.318	.350	1	.509	.219	.348
	Sig. (2-tailed)	.370	.000	.000		.000	.016	.000
	N	121	120	118	121	120	120	121
give	Pearson Correlation	.129	.555	.418	.509	1	.447	.487
	Sig. (2-tailed)	.158	.000	.000	.000		.000	.000
	N	121	119	118	120	121	120	121
depend	Pearson Correlation	.093	.328	.360	.219	.447	1	.325
	Sig. (2-tailed)	.311	.000	.000	.016	.000		.000
	N	121	119	118	120	120	121	121
mentor	Pearson Correlation	.169	.539	.448	.348	.487	.325	1
	Sig. (2-tailed)	.063	.000	.000	.000	.000	.000	
	N	122	120	119	121	121	121	122

Fig. 4 – MANOVA Statistics Table*

Dependent Var		academ		child		fulfill		pers		give		depend		mentor	
		Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
Programs	1	7.00	.00	6.33	.00	6.33	.00	5.67	.00	6.00	.00	5.67	.00	6.00	.00
N=102	2	6.08	1.191	6.56	.50	6.43	.54	5.75	1.07	6.43	.54	6.48	.67	6.33	.49
Sig=.074	3	6.44	.69	6.33	1.16	6.00	1.20	6.11	.96	6.44	.39	6.78	.19	6.11	1.26
	4	6.24	.65	6.35	.49	6.95	.78	5.06	1.18	6.06	.59	6.23	.69	6.13	.78
	P	**.384**	---	**.223**	---	**.009**	---	**.018**	---	**.014**	---	**.149**	---	**.504**	---
Continue	1	6.31	.93	6.50	.53	6.22	.68	5.44	1.13	6.28	.56	6.41	.66	6.28	.59
N=108	2	5.60	1.06	5.97	.43	5.80	1.06	4.90	1.55	5.60	.77	6.03	.79	5.37	1.04
Sig.=.002	**P**	**.026**	---	**.003**	---	**.085**	---	**.169**	---	**.001**	---	**.095**	---	**.000**	---
Gender	1	6.45	.64	6.41	.64	6.09	.78	5.08	1.22	6.10	.57	6.20	.75	6.14	.64
N=111	2	5.96	1.24	6.50	.75	6.33	.62	5.89	.91	6.44	.69	6.64	.41	6.26	.75
Sig.=.000	**P**	**.008**	---	**.397**	---	**.087**	---	**.000**	---	**.005**	---	**.000**	---	**.356**	---
Mar	1	6.70	.48	6.33	.44	5.60	1.05	5.40	1.31	5.93	.83	6.23	.70	5.60	1.20
N=106	2	6.22	.97	6.45	.55	6.24	.66	5.39	1.14	6.25	.61	6.37	.68	6.23	.60
Sig.=.009	**P**	**.128**	---	**.528**	---	**.007**	---	**.977**	---	**.140**	---	**.542**	---	**.005**	---
Parent	1	6.19	.98	6.47	.55	6.23	.65	5.46	1.13	6.30	.58	6.41	.66	6.27	.59
N=109	2	6.59	.66	6.28	.43	5.80	1.02	5.05	1.31	5.72	.79	6.00	.65	5.56	1.02
Sig.=.003	**P**	**.152**	---	**.245**	---	**.038**	---	**.238**	---	**.002**	---	**.037**	---	**.000**	---

*All insignificant dependent variables (current, age, education, income) not shown on MANOVA result table.

Fig. 5.1 – Logistic Regression – Omnibus Test of Model Coefficients (Overall Sig.)

		Chi-square	df	Sig.
Step 1	**Step**	19.073	7	.008
	Block	19.073	7	.008
	Model	19.073	7	.008

Fig. 5.2 – Logistic Regression – Classification Table

Observed		*Predicted*		
		continue		*Percentage*
		1	**2**	*Correct*
continue	**1**	97	1	99.00
continue	**2**	8	2	20.0
Overall Percentage				91.7*

*Percent of group cases correctly identified by SPSS program model

Fig. 5.3 – Logistic Regression – Variables in Equation Table

Construct	**B**	**Sig.**	**Exp (B)**
academ	-.648	.115	.523
fulfill	.140	.807	1.150
pers	.235	.552	1.265
give	-1.289	.110	.276
depend	-.170	.792	.844
mentor	-1.433	.048	.239
child	.400	.691	1.491
Constant	14.199	.007	1466860.399

Fig. 5.4 – Logistic Regression – Determinant Equations for Predictability

Maximum Chance Criterion

MCC= (97+1) / (97+1+8+2) = 0.907, 91%

91.7% > 91%

Proportional Chance Criterion

PCC= $(0.91)^2 + (1-0.91)^2 = 0.8326$, 83%

Hit Ratio=0.8326+0.8326*0.25 =1.05

105% > 83%

Fig. 6.1 – Logistic Regression (Rerun) – Omnibus Test of Model Coefficients (Overall Sig.)

		Chi-square	df	Sig.
Step 1	Step	13.133	1	.000
	Block	13.133	1	.000
	Model	13.133	1	.000

Fig. 6.2 – Logistic Regression (Rerun) – Classification Table

Observed		*Predicted*		
		continue		*Percentage*
		1	2	*Correct*
continue	1	105	0	100.0
continue	2	8	2	20.0
Overall Percentage				93.0*

*Percent of group cases correctly identified by SPSS program model

Fig. 6.3 – Logistic Regression (Rerun) – Variables in Equation Table

Construct	B	Sig.	Exp (B)
mentor	-1.599	.001	.202
Constant	7.070	.012	1176.541

Fig. 6.4 – Logistic Regression (Rerun) – Determinant Equations for Predictability

Maximum Chance Criterion

MCC= (105+0) / (105+0+8+2) = 0.913, 91.3%

93% >91.3%

Proportional Chance Criterion

PCC= $(0.913)^2 + (1-0.913)^2 = 0.841$, 84.1%

Hit Ratio=0.841+0.841*0.25 =1.05

105% > 84.1%

Predictive Equation: *continue= -1.599*X + 7.07*

Fig.7.1 –Multiple Regression – Model Summary Table

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.622	.387	.353	.54326

Fig.7.2 –Multiple Regression – ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.154	6	3.359	11.381	.000
	Residual	31.875	108	.295		
	Total	52.029	114			

Fig. 7.3 –Multiple Regression – Coefficients Table

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.948	.700		1.354	.179
	academ	-.064	.065	-.091	-.986	.326
	fulfill	.137	.088	.147	1.564	.121
	pers	.066	.053	.112	1.242	.217
	give	.157	.116	.147	1.358	.177
	child	.457	.149	.363	3.059	.003
	depend	.081	.088	.079	.917	.361