

Establishing StrengthsFinder Norms for Veterinary Medical Students

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Abstract The Clifton StrengthsFinder 2.0 is an online assessment administered by the Gallup organization. The assessment is intended to help individuals identify their greatest talents, and once identified, use that information to further develop one's predominant strengths. Colleges and universities routinely administer the StrengthsFinder to students, but to date there is sparse literature presenting any results. Interestingly, academic disciplinary differences has been identified as the single most differentiating factor regarding members of an academic community. This is due to the strong influence of disciplinary norms, cultures and values that both attract individuals to a community and sustain members once a part of the community. Thus, the use of a standardized assessment with well-evidenced psychometric properties could be particularly useful for making comparisons about students' attributes across these communities. This study sought to create a new line of research inquiry by exploring StrengthsFinder results and establishing an initial set of norms for students in the field of veterinary medicine. Substantive results found veterinary students' most predominant strengths were Achiever and Learner, followed by Restorative, Input, Relator, Harmony and Responsibility. The five least common Signature Themes were Self-Assurance, Connectedness, Activator, Command, and Maximizer. Results from this study may be used to compare and contrast students' predominant strengths and talents in other programs, particularly those in the medical and health professions.

Keywords: *medical education, health professions education, veterinary education, evaluation, measurement, student attributes, academic disciplines*

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1. Introduction

The Clifton StrengthsFinder 2.0 is an online assessment administered by the Gallup organization. Once identified, these talents can then be further developed and applied to achieve success. The StrengthsFinder was developed by Donald Clifton, an educational psychologist who also served as the chairman of the Gallup Organization. The StrengthsFinder tool is rooted in positive psychology [1] and is based on 'strength theory', which suggests individuals benefit more by exerting energies to improve existing strengths rather than attempting to improve weaknesses [2]. To date, the StrengthsFinder has been administered to more than 16 million individuals worldwide [3].

The assessment is intended to help individuals identify their greatest talents, and once identified, use that information to further development one's predominant strengths. The assessment, however, is not intended to be used as a screening tool for selection decisions (e.g., employment, college admissions, etc.). The reasoning is

because the talents identified by the assessment are not necessarily any more/less important or desirable than any other.

The StrengthsFinder assessment is particularly relevant to education as it is routinely administered to students in colleges and universities. Yet despite its prevalent use in education, there is a conspicuous absence of published literature involving the StrengthsFinder. This sparse literature base is concerning given higher education research literature has long noted the strong influence of disciplinary norms, cultures and values. [4-9] More specifically, researchers have noted the distinct norms and values associated with a discipline not only attract like-minded individuals, but also socializes these individuals to embrace these disciplinary norms [9]. Ladd and Lipset [7] noted:

"A discipline's subject matter requires a bundle of professional work experience, defines the group's interests which serve as points of reference and association, and seems to attract people of particular value orientation; together these factors contribute to the formation of distinctive discipline subcultures. And once formed, such subcultures apparently become more than the sum of their

contributing parts. A set of characteristics, styles, concerns, values, traditions, and general orientation to the social and

political world takes shape, and members of the discipline are in intellectual contact with it throughout their professional lives” (p. 69).

Seminal texts by Angelo and Cross [10] and Smart and colleagues [9] also declared academic disciplinary affiliation as the single most important factor in explaining differences among college and university faculty. Even for related disciplines such as the medical and health professions where educational curricula, including both content and course structure (e.g., student cohort model, team-taught courses, primarily didactic courses), are similar, the students enrolled in these programs often vary considerably across programs with respect to psychological traits (e.g., empathy, assertiveness, confidence) and values (patient care, job prestige, social status). Thus, a lack of literature exploring factors such as the most prevalent strengths of students enrolled in these academic programs by way of a standardized metric limit our ability to understand how students truly differ across disciplines.

Thus, the objectives of this study were threefold: First, we sought to create a new avenue of research that explores StrengthsFinder results as it pertains to college students across a variety of academic disciplines. Second, we sought to identify the most prevalent strengths among students in our discipline of veterinary medicine. Third, we sought to establish a set of norms that researchers across other disciplines (but particularly those in the medical and health professions) could use to determine how students enrolled in various disciplinary programs compare to veterinary medical students, and ultimately one another, with respect to their primary strengths as identified by the StrengthsFinder assessment.

2. Methods

2.1. Participants and Setting

All incoming veterinary medical students for years 2015, 2016 and 2017 were administered the StrengthsFinder prior to students’ orientation and all 302 students completed the assessment. With respect to gender, 240 identified as female and 62 identified as male. With respect to race/ethnicity, 224 (74.2%) students identified as White, 18 (6.0%) as Asian, 17 (5.6%) as Black, 38 (12.6%) identified as a member of 11 different minority categories, and 5 (1.7%) did not specify. The institution’s Institutional Review Board (IRB) declared the study ‘Exempt’.

2.2. Instrumentation

The StrengthsFinder measures the presence of talent using 34 distinct themes. Participants completing the StrengthsFinder are given 20 seconds to answer each of the 177 items, and the entire assessment is completed in

less than 30 minutes. A visual analog scale accompanies each item and participants select one of five potential options. Upon completion of the assessment, participants are made aware of their top five “Signature Themes”. Because the StrengthsFinder is intended to be used for intrapersonal development purposes, feedback regarding each theme is presented to participants.

The psychometric properties of the StrengthsFinder are well-documented and an extensive list of references is available in the most recent technical report. [11] A particularly noteworthy study was conducted by the Gallup Organization [11] in which the test-retest reliability of the results were assessed. The study involved a nationally-representative sample of 1,304 participants who completed the assessment at two points in time. Participants were not made aware of their ‘Signature Themes’ after the initial assessment in order to minimize error due to potential carry-over effects. Results indicated participants received similar themes one month (n = 538), three months (n = 390) and six months (n = 376) after the initial assessment.

2.3. Analysis

StrengthsFinder results present only the top 5 themes for each participant. Each theme is a nominal level of measurement and presented in a descending order of magnitude. Data were analyzed utilizing two approaches. First, overall counts and percents were calculated for each theme identified in each student’s record. Second, because themes are presented in order a weighted composite score and percentage was calculated to reflect the influence of thematic order. The weighting schema consisted of assigning 5 points to the top theme, 4 points to the second theme, and so on.

3. Results

All incoming veterinary students completed the StrengthsFinder in 2015, 2016 and 2017. Two of the thirty-four Signature Themes were discernible in more than half of the sample. More specifically, 187 (61.92%) students had the ‘Achiever’ theme, and 159 (52.65%) had the ‘Learner’ theme. The next most common themes were ‘Restorative’ with 90 (29.80%), ‘Input’ with 87 (28.81%), ‘Relator’ with 78 (25.83%), ‘Harmony with 72 (23.84%) and ‘Responsibility’ with 68 (22.52%). The five least common Signature Themes were ‘Self-Assurance’ with 11 (3.64%), ‘Connectedness’ with 12 (3.97%), ‘Activator’ with 13 (4.30%), ‘Command’ with 14 (4.64%), and ‘Maximizer’ with 15 (4.97). A complete breakdown of results is presented in [Table 1](#).

Results were also inspected by class year (see [Table 2](#)). Statistical comparisons across years were not possible because techniques such as a chi-squared analysis would result in a statistical violation given the excessive number of cells with counts less than 5. Nonetheless, a visual inspection of data is helpful and tends to illustrate a great deal of consistency across class cohorts.

Table 1. Signature Themes of Three Veterinary Student Cohorts (2015, 2016, 2017)

Theme	Description	Raw		Weighted	
		N	%	N	%
Achiever	People strong in the Achiever theme have a great deal of stamina and work hard. They take great satisfaction from being busy and productive.	187	61.92	636	42.12
Learner	People strong in the Learner theme have a great desire to learn and want to continuously improve. In particular, the process of learning, rather than the outcome, excites them.	159	52.65	557	36.89
Restorative	People strong in the Restorative theme are adept at dealing with problems. They are good at figuring out what is wrong and resolving it.	90	29.80	303	20.07
Input	People strong in the Input theme have a craving to know more. Often they like to collect and archive all kinds of information.	87	28.81	280	18.54
Relator	People who are strong in the Relator theme enjoy close relationships with others. They find deep satisfaction in working hard with friends to achieve a goal.	78	25.83	213	14.11
Harmony	People strong in the Harmony theme look for consensus. They don't enjoy conflict; rather, they seek areas of agreement.	72	23.84	260	17.22
Responsibility	People strong in the Responsibility theme take psychological ownership of what they say they will do. They are committed to stable values such as honesty and loyalty.	68	22.52	183	12.12
Analytical	People strong in the Analytical theme search for reasons and causes. They have the ability to think about all the factors that might affect a situation.	54	17.88	138	9.14
Individualization	People strong in the Individualization theme are intrigued with the unique qualities of each person. They have a gift for figuring out how people who are different can work together productively.	54	17.88	170	11.26
Intellection	People strong in the Intellection theme are characterized by their intellectual activity. They are introspective and appreciate intellectual discussions.	48	15.89	130	8.61
Focus	People strong in the Focus theme can take a direction, follow through, and make the corrections necessary to stay on track. They prioritize, then act.	44	14.57	103	6.82
Discipline	People strong in the Discipline theme enjoy routine and structure. Their world is best described by the order they create.	41	13.58	104	6.89
Deliberative	People strong in the Deliberative theme are best described by the serious care they take in making decisions or choices. They anticipate the obstacles.	38	12.58	119	7.88
Futuristic	People strong in the Futuristic theme are inspired by the future and what could be. They inspire others with their visions of the future.	38	12.58	100	6.62
Developer	People strong in the Developer theme recognize and cultivate the potential in others. They spot the signs of each small improvement and derive satisfaction from these improvements.	37	12.25	84	5.56
Positivity	People strong in the Positivity theme have an enthusiasm that is contagious. They are upbeat and can get others excited about what they are going to do.	35	11.59	91	6.03
Consistency / Fairness	People strong in the Consistency theme (also called Fairness in the first StrengthsFinder assessment) are keenly aware of the need to treat people the same. They try to treat everyone in the world fairly by setting up clear rules and adhering to them.	34	11.26	85	5.63
Empathy	People strong in the Empathy theme can sense the feelings of other people by imagining themselves in others' lives or others' situations.	34	11.26	97	6.42
Competition	People strong in the Competition theme measure their progress against the performance of others. They strive to win first place and revel in contests.	32	10.60	89	5.89
Inclusiveness / Includer	People strong in the Inclusiveness theme are accepting of others. They show awareness of those who feel left out, and make an effort to include them.	29	9.60	77	5.10
Strategic	People strong in the Strategic theme create alternative ways to proceed. Faced with any given scenario, they can quickly spot the relevant patterns and issues.	29	9.60	96	6.36
Adaptability	People strong in the Adaptability theme prefer to "go with the flow." They tend to be "now" people who take things as they come and discover the future one day at a time.	27	8.94	94	6.23
Belief	People strong in the Belief theme have certain core values that are unchanging. Out of these values emerges a defined purpose for their life.	21	6.95	50	3.31
Communication	People strong in the Communication theme generally find it easy to put their thoughts into words. They are good conversationalists and presenters.	21	6.95	62	4.11
Woo	People strong in the Woo theme love the challenge of meeting new people and winning them over. They derive satisfaction from breaking the ice and making a connection with another person.	21	6.95	63	4.17
Ideation	People strong in the Ideation theme are fascinated by ideas. They are able to find connections between seemingly disparate phenomena.	18	5.96	51	3.38
Arranger	People strong in the Arranger theme can organize, but they also have a flexibility that complements this ability. They like to figure out how all of the pieces and resources can be arranged for maximum productivity.	17	5.63	37	2.45
Context	People strong in the Context theme enjoy thinking about the past. They understand the present by researching its history.	16	5.30	50	3.31
Significance	People strong in the Significance theme want to be very important in the eyes of others. They are independent and want to be recognized.	16	5.30	37	2.45
Maximizer	People strong in the Maximizer theme focus on strengths as a way to stimulate personal and group excellence. They seek to transform something strong into something superb.	15	4.97	40	2.65
Command	People strong in the Command theme have presence. They can take control of a situation and make decisions.	14	4.64	42	2.78
Activator	People strong in the Activator theme can make things happen by turning thoughts into action. They are often impatient.	13	4.30	35	2.32
Connectedness	People strong in the Connectedness theme have faith in the links between all things. They believe there are few coincidences and that almost every event has a reason.	12	3.97	32	2.12
Self-Assurance	People strong in the Self-assurance theme feel confident in their ability to manage their own lives. They possess an inner compass that gives them confidence that their decisions are right.	11	3.64	22	1.46

Table 2. Frequency of Signature Themes by Order and Class Year

Theme	Theme 1			Theme 2			Theme 3			Theme 4			Theme 5		
	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
Achiever	24	21	14	14	11	12	11	13	14	11	10	5	9	9	9
Activator	0	1	3	0	0	0	1	0	1	0	1	1	0	2	3
Adaptability	4	4	0	1	4	3	0	3	1	2	0	1	2	0	2
Analytical	1	4	0	1	5	6	4	3	3	2	3	3	7	7	5
Arranger	0	0	0	0	2	0	2	0	2	2	4	0	2	0	3
Belief	1	1	0	0	0	1	1	4	2	1	1	2	4	2	1
Command	1	0	2	1	0	1	0	1	1	3	2	1	0	0	1
Communication	1	2	2	1	0	1	1	3	1	1	1	3	0	2	2
Competition	1	2	1	4	2	3	1	1	1	0	7	1	1	3	4
Connectedness	0	0	0	1	1	2	1	1	1	0	1	1	2	1	0
Consistency / Fairness	1	0	3	2	2	1	1	2	0	6	3	5	3	0	5
Context	0	3	1	2	1	0	1	0	1	2	1	2	1	0	1
Deliberative	2	5	1	3	2	5	5	1	1	2	1	2	3	3	2
Developer	0	3	0	2	3	1	1	2	1	4	2	3	6	4	5
Discipline	2	3	1	1	3	0	3	2	4	3	3	3	2	6	5
Empathy	2	1	2	5	3	0	3	1	1	1	5	3	1	2	4
Focus	0	0	2	2	2	2	3	3	3	4	7	4	2	7	3
Futuristic	1	3	0	2	4	3	1	2	3	6	1	0	4	4	4
Harmony	10	6	9	6	5	8	4	4	3	0	3	6	0	5	3
Ideation	0	0	1	2	2	2	1	2	0	3	1	1	0	1	2
Inclusiveness / Includer	1	1	1	2	0	1	2	5	4	2	0	3	3	2	2
Individualization	2	8	3	3	2	3	2	7	5	1	2	9	3	2	2
Input	14	1	6	6	4	7	7	9	7	7	5	0	3	6	5
Intellection	2	3	0	5	1	4	4	2	4	3	6	3	5	1	5
Learner	13	14	19	20	15	9	11	6	14	5	6	9	7	5	6
Maximizer	0	1	0	1	1	2	2	0	0	2	1	2	0	3	0
Positivity	0	3	2	0	1	3	5	2	1	3	3	2	4	3	3
Relator	5	2	3	3	5	4	5	7	7	6	7	8	8	6	2
Responsibility	2	2	9	1	2	5	9	3	0	4	5	6	8	9	3
Restorative	7	7	10	7	8	5	6	10	6	5	4	4	7	4	0
Self-Assurance	0	0	0	1	0	0	1	0	1	2	1	1	1	1	2
Significance	0	0	0	0	2	1	0	2	1	5	0	0	1	1	2
Strategic	4	1	1	1	7	1	2	1	1	3	5	0	0	1	1
Woo	0	1	2	1	3	2	0	1	3	0	1	3	2	1	1

4. Discussion

With respect to substantive findings, 2 of the 34 Signature Themes were discernible in more than half of the sample. The ‘Achiever’ theme was the most common strength (61.92%). According to the StrengthsFinder technical report, “people especially talented in the Achiever theme have a great deal of stamina and work hard. They take great satisfaction from being busy and productive”. [11] The other most common strength was ‘Learner with 52.65%. The Learner “... has a great desire to learn and want to continuously improve. In particular, the process of learning, rather than the outcome, excites them”. [11] Given most all students seeking terminal degrees in medical and health professions programs have excellent academic credentials, it is not surprising that this population of students largely are Achievers and Learners. It would be interesting to know if other health professions programs identify similar prevalent themes, and perhaps if students’ age or other factors tend to result in different top strengths.

‘Restorative’ (29.80%), ‘Input’ (28.81%), ‘Relator’ (25.83%), ‘Harmony’ (23.84%), and ‘Responsibility’ (22.52%) were the other most prevalent themes. According to the StrengthsFinder report [11]: Restorative individuals “are

adept at dealing with problems. They are good at figuring out what is wrong and resolving it”; Input individuals “have a craving to know more. Often they like to collect and archive all kinds of information.”; Relator individuals “enjoy close relationships with others. They find deep satisfaction in working hard with friends to achieve a goal.”; Harmony individuals “look for consensus. They don’t enjoy conflict; rather, they seek areas of agreement.”; and Responsibility individuals “take psychological ownership of what they say they will do. They are committed to stable values such as honesty and loyalty.” Collectively, these relatively common top strengths suggest veterinary students generally are adept problem solvers that value honesty, loyalty and relationships with peers and desire harmonious relationships with everyone. Given various academic disciplines tend to exhibit their own unique disciplinary norms, cultures and values, [4,7] it would be interesting to learn the degree to which students in other health professions program share these strengths.

The five least common Signature Themes were ‘Self-Assurance’ (3.64%), ‘Connectedness’ (3.97%), ‘Activator’ 13 (4.30%), ‘Command’ 14 (4.64%), and ‘Maximizer’ (4.97). According to the StrengthsFinder report [11]: Self-Assurance individuals “feel confident in their ability to

manage their own lives. They possess an inner compass that gives them confidence that their decisions are right.”; Connectedness individuals “have faith in the links between all things. They believe there are few coincidences and that almost every event has a reason.”; Activator individuals “can make things happen by turning thoughts into action. They are often impatient.”; Command individuals “have presence. They can take control of a situation and make decisions.”; and Maximizer individuals “focus on strengths as a way to stimulate personal and group excellence. They seek to transform something strong into something superb.” As noted previously, the StrengthsFinder identifies only the five greatest themes for participants. Thus, it is important to note that sparsely populated themes does not imply that students are collectively absent of these talents or otherwise weak in these areas. For this reason, inferences made about less prominently identified talents should be made with caution.

The StrengthsFinder is an assessment intended to promote intrapersonal development among the individuals who complete it. For students in a College of Veterinary Medicine (CVM) or other health professions program, there may also be opportunities in which a college (or program) can help further realize the goal of intrapersonal development for students. For example, the StrengthsFinder currently is utilized in a Group Communications course at the authors’ institution. In the course, students are arranged in teams and asked to evaluate team members’ strengths, communication styles, etc. Students then are asked to discuss any limitations the team might face based on their composition of strengths and communication styles. Finally, students are asked to develop strategies to overcome any weaknesses and capitalize on the team’s unique strengths. For this exercise, the StrengthsFinder is particularly helpful for both quickly discerning others’ talents given limited team-oriented interactions and offering potentially greater variation of discernible talents for consideration as part of the exercise. One idea that also has been considered but not yet realized is utilizing the StrengthsFinder as a sorting tool for assigning heterogeneous groups. [12]

At present, we are unaware of any published literature presenting signature themes among college and university students. To that end, it is our hope that the results presented in this report will serve as a useful benchmark for comparison of students’ signature talents across other academic disciplines, particularly the medical and health profession programs. We suspect that any similarities and differences across student populations may reveal interesting insights about the qualities admissions committees seek, albeit consciously or unconsciously, when selecting talent. [13,14,15,16] Further, comparisons might also reveal insights about the nature of students who are attracted to the various professions, given extant research has long noted that the strong influence of disciplinary norms, cultures and values. [4,7] Further, given a great deal of medical and health professions education research is dedicated to investigating students’ characteristics (e.g., skills, attitudes and behaviors), we believe comparing StrengthsFinder results may be a particularly powerful approach given the standardized metric and propensity for norms to be produced based on

various reference groups (e.g., academic disciplines). Finally, we believe there also may be utility in comparing findings of extant research (e.g., students’ attributes, traits, etc.) with predominant themes identified by the StrengthsFinder within a given discipline could also assist with the discernment of convergent and divergent validity evidence. [17]

5. Conclusions

In summary, academic disciplinary differences has been identified as the single most differentiating factor regarding members of an academic community. This is due to the strong influence of disciplinary norms, cultures and values that both attract individuals to a community and sustain members once a part of the community. Thus, the use of a standardized assessment with well-evidenced psychometric properties could be particularly useful for making comparisons about students’ attributes as part of these communities. This study sought to create a new line of research inquiry by exploring StrengthsFinder results, a common assessment administered to millions of students worldwide, across academic disciplines. To date, no research has attempted to compare students’ StrengthsFinder results; thus, this work also sought to facilitate this possibility by establishing an initial set of norms for students in the field of veterinary medicine. Substantive results from this study found veterinary students’ most predominant strengths were Achiever and Learner, followed by Restorative, Input, Relator, Harmony and Responsibility. The five least common Signature Themes were Self-Assurance, Connectedness, Activator, Command, and Maximizer. Results from this study may be used to compare and contrast students predominant strengths and talents to students in other programs, particularly those in the medical and health professions.

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