



Research article

The impact of service innovation behaviour on effective counseling delivery and psychological safety: The perspective of student-clients in Ghana

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ABSTRACT

Innovation is about creativity and the improvisation of new ways and techniques suited to the individual. Guidance and counseling are essential parts of teaching and learning in Ghana. Regarding guidance and counseling in schools, new ideas and creativity can help a country's technological, social, and economic growth. Therefore, this study sought to investigate the effect of the counselor's service innovation behavior on effective counseling delivery and the feeling of psychological safety of the student-client in Ghana. The study hypothesized that the University Counselors' service innovation behavior will more than likely impact students' satisfaction and feeling of psychological safety; students' satisfaction in counseling will significantly affect their feeling of psychological safety; the service innovation behavior of the counselors will significantly impact students' psychological safety through their feeling of satisfaction in counseling, and; There will be an interactive effect between Students' satisfaction in counseling and counselors' service innovation behavior and clients' psychological safety. This study employed a quantitative approach with a cross-sectional research design. The respondents were engaged using purposive and convenience sampling techniques. The PLS-SEM analysis revealed that counselors' service innovation behavior significantly positively affects clients' satisfaction and psychological safety. The results and the implications of the study are further discussed below.

1. Introduction

According to Aldridge [1], counseling is a primary phrase for exploring emotional issues with a counselor or therapist to get to the bottom of them. The client's life and feelings are explored in-depth and frankly during sessions. For this reason, *counseling skills* were defined as high-level communication and interpersonal and social skills used intentionally in a manner consistent with the goals and values of counseling ethics. Kabir [2] believed counseling is a theory-based process in which clients learn how to make decisions and formulate new ways of behaving, feeling, and thinking. Counseling aims at making students or individuals aware of the rightness or wrongness of their choices and the importance of their decisions [2]. Essential goals of counseling areas: Facilitating behavioral change; Enhancing one's coping skills; Promoting decision making; Improving relationships, and Facilitating one's potential.

Psychotherapy aims to alleviate distressing neurotic symptoms or discordant personality traits, hence the creation and establishment of objective measures of anxiety, defensiveness, and personal problem-solving. Berdie [3] contends that counseling seeks acceptance of advantages and limitations rather than fundamental personality change. This implies that counseling is interested in

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improving the counselee's overall quality of life by alleviating unpleasant symptoms that are incongruous with their personality. Innovation, on the other hand, uses creative ways to improve the quality of life and can be applied to counseling in achieving the goals.

Innovation is the process of coming up with a new idea and turning it into a new product, process, or service. The OECD defines *innovation* as "the deployment of a new or significantly enhanced" good or service, process, marketing tactic, or a novel approach to social services [4]. In other words, innovation is a novel idea, process, product, or service that has never been done before. According to Kogabayev & Maziliauskas [5], innovation is a process that combines science, technology, economics, and management. To reach the goals, it is important to speed up the process and include innovation in the production circles (maximize the profit, social projects efficiency, sustainable economic growth, etc.).

Kotsemir, Abroskin, & Meissner [4] argues that innovation classification has gone a long way in its historical development from the "classical" product and process innovation to exotic types such as the "blue ocean" and "frugal innovation." Hence, the analysis of the different approaches to the classification of innovation gives the following picture of the 'classification of innovation'—which includes process innovation, organic innovation, and inorganic innovation. On the other hand, the German scientist Mensch categorized innovation based on the importance he gave it [5]. He identified three main types of innovation—*Basic innovations* arise based on major inventions, mark the beginning of new, previously unknown products or processes based on new scientific principles, and require the most investment. The process of their development is a long and commercialization of their results in the emergence of new technological structures; *Improving innovation*, which is a usually small but significant improvement of products, processes, and services and represents continued technical improvement and innovation applied to the basic application; and *Fake Innovations* which is an external modification of products or processes that do not lead to a change in their consumer characteristics.

Kotsemir, Abroskin, & Meissner [4], wrote about the development of innovation concept from a historical perspective. According to them, innovation before the 19th century had little association with creativity, originality, or application. Instead, innovation entailed pushing change on the status quo, which was met with tacit and explicit opposition from the church and society. We can trace the birth of the "innovation as activity and process idea" in sociology and the development of innovation studies to the 20th century. In the 1990s, innovation was viewed as a scientific notion with the development of fundamental concepts and models. In the 2000s, technology innovation was the most prevalent sort of innovation, although non-technological inventions were also scrutinized. The scientific concept of innovation is mostly discredited by marketing (via advertising) and governmental policy through election promises and Programs of Innovation Development.

Therefore, counseling innovation is implementing a new or considerably improved method of counseling that focuses on discussing emotional challenges with a counselor or therapist to resolve a problem or foster personal growth and awareness. Incorporating new and innovative ideas and processes into counseling activities brings back normality in the lives of people exposed to adverse life events. Counseling innovation is about creativity and improvising new ways and techniques suited to the individual. Creativity is the ability to produce something fresh and original while respecting restrictions, and it is key to self-exploration and building a work-life project. In short, creativity aids human development, education, and adaption; hence understanding and developing creativity in counseling are crucial [6]. Counseling can already be described as creative because it nurtures new ideas, perspectives, and knowledge. Increasing creativity, mindfulness, and openness to other expressions can extend the dialogue and depth of therapy. Using creativity within counseling services helps clients/counsees express emotions in their ways and helps nurture interpersonal bonds and memories among family members in therapy together.

Performance increases are no longer accomplished by efficacy in the modern industrialized world, where time and distance have collapsed, but rather through productivity achieved through invention, creativity, and psychological safety [7]. Institutions hurriedly construct ineffective or retroactive treatment strategies to suit these needs as these strategic advantages become more apparent.

Organizations must be innovative with their procedures and processes to thrive and acquire an advantage in the marketplace. While innovation is often regarded as a critical success factor in today's businesses, little is known about the impact of innovative work behavior on counseling service delivery and psychological safety, which are frequently used interchangeably in research studies. The difference between both is that creativity is the creation of helpful ideas, whereas innovation is the adaptation or creation of value ideas and their execution.

"The process of developing and transferring new and improved goods, processes, materials, and services to a factory, or a market where they are suited," according to the definition. Exploration of opportunities and the development of new ideas (creativity-related activity) are examples of innovative work behavior, but they can also encompass actions unrelated to creativity.

In research investigations, the terms "creativity" and "innovation" are frequently interchanged. The distinction is that creativity generates good ideas, but innovation is the adaptation or generation of good ideas and their implementation. Mumford [8] *Innovation* is "the act of developing and transferring new and improved goods, processes, materials, and services to a facility or market where they are required." Rubenstein [9] Finding new chances and coming up with new ideas are examples of innovative work behavior (creativity-related behavior). It could also involve actions that bring about change, apply new information, and improve the process to improve performance [10].

Guidance and counseling are essential parts of teaching and learning in Ghana, and they should be given the attention they deserve in all educational projects. Counseling models and techniques can be helpful when used by a skilled counselor. Depending on what the person needs, some counselors use a variety of new therapeutic approaches in their counseling style.

Different schools do guidance and counseling differently because there is no clear organizational structure for how it should be done in schools [11]. Because of this, several new problems that good Guidance and Counseling services should have solved have continued. These are signs that a student needs help with academic, career, personal, or psychological issues. A well-designed Guidance and Counseling program with creative counselors should be able to help.

Students need guidance to help them reach their full potential and adjust well to different situations in life. Arco, Fernandez,

Heilbron, and Lopez say that tertiary students need counseling for several reasons, such as poor time management and study skills [12, 13]. thought it was essential to help these students understand themselves, including their skills, interests, needs, strengths, and weaknesses.

Tinker [14] said guidance and counseling could not be done well without innovation and creativity. When it comes to guidance and counseling in schools, new ideas and creativity can help a country's technological, social, and economic growth move along faster.

In counseling service delivery, psychological safety is essential for providing safe and effective client care. Clients will be treated equally and compassionately when expressing concerns, errors, or discovering problems and will not be afraid of being rejected if they come out with suggestions. Not only do they want to be free of dread, but they also want to be free of interpersonal, professional, and social risks that can jeopardize their current job status and future professional and occupational advancement.

This is critical for the development of psychological safety interventions for various reasons. For starters, it allows clients to participate in collaborative interventions that allow them to apply their knowledge of local nuances to organizational strategies, increasing the likelihood of success [15]. Second, collaborating can generate a sense of psychological safety in and of itself. Finally, it enhances sustainability by increasing participation in these improvements [16]. Finally, giving people the authority and feeling empowered to contribute to increased psychological safety is crucial.

Guidance and Counseling play a vital role in teaching and learning in Ghana and should be given the attention they deserve in all educational undertakings. When applied by a skilled counselor, counseling models and techniques have always brought desired results. Depending on the demands of the individual, specific theoretical approaches function better than others. Some counselors combine various therapeutic approaches into their counseling style.

Inconsistencies and variances in how guidance and counseling-counseling med in different schools have resulted from the lack of an organizational structure outlining how school counseling should be conducted [11]. As a result, several emerging difficulties that should have been handled through practical Guidance and Counseling services have persisted. Poor academic performance, alcohol and drug misuse, school unrest, classroom discipline issues, and exam cheating are examples. These are signs that students require advice and Counseling in academic, vocational, personal, and psychological matters, which should be addressed by a well-designed Guidance and Counseling program.

Students commonly encounter drugs, prostitution, truancy, poor discipline, and other offenses [17]. School life seemed to be becoming more complex by the day. Guidance is required to assist pupils in achieving their full potential and making acceptable adjustments in various situations. According to Arco, Fernandez, Heilbron, and Lopez, tertiary students have various counseling requirements, including time management and inadequate study skills [12,13]. thought it was critical to support such students to help them understand themselves, their talents, aptitudes, interests, needs, strengths, and limitations.

Time management and drug use issues [18], anxiety, low self-esteem, getting easily distracted, poor study skills issues [12], test anxiety [19], career and financial problems are among the issues that students with lower GPAs showed more worry about academics, finances, family troubles, as well as social, health, and future challenges [20] Single students required assistance with assertiveness/communication and self-evaluation the most, while married students needed assistance with financial and relationship concerns the most [18].

In a research of 200 randomly selected Karela residents counseling requirements, it was discovered that there is a gender difference in the desire for acceptance and the need for security. The results also show no gender difference in the remaining Counseling needs. As a result, it is clear from the responses of both male and female respondents that they have similar views on the counseling needs of higher secondary students.

In conclusion, several challenges face the implementation of the guidance and counseling program, including a lack of time, uncooperative clients, a lack of parental support, a shortage of qualified staff, a heavy workload, and an unsupportive school administration, as well as inadequate facilities, and financial resources. Until these issues are resolved, the influence of guidance and counseling programs in Baringo County's different secondary schools may not be felt as anticipated.

The most practical and efficient initial step in creating counseling services on campus is to identify the needs of tertiary students. Studies on university students' guidance and counseling requirements are available overseas and in Ghana [21]; however, they do not apply to all higher institutions [22].

1.1. Research hypotheses

1. The University Counselors' service innovation behavior will more than likely impact students' satisfaction and feeling of psychological safety.
2. Students' satisfaction with counseling will significantly affect their feeling of psychological safety.
3. The service innovation behavior of the counselors will significantly impact students' psychological safety through their feeling of satisfaction in counseling.
4. There will be an interactive effect between Students' satisfaction in counseling and counselors' service innovation behavior and clients' psychological safety.

2. Methods

2.1. Participants and procedure

This study employed quantitative approach with cross-sectional research design. A sample size of 239 counseling clients

participated in the study which is more than the 200 minimum sample size required to test a structural equation model for valid results [23–26]. The respondents were engaged using purposive and convenience sampling techniques. These sampling techniques were employed to recruit participants who received counseling in school at least twice and based on their accessibility and desire to participate until the sample size was reached [27]. Thus, through purposive and convenience sampling techniques, university students who attended counseling sessions at least twice were invited to respond to an online survey. This was done to solicit information from only students who have knowledge of the subject matter and are therefore suitable to assess the counsellors for better insights and more precise research results. Before completing the online self-reported questionnaires, respondents were assured of their right to informed consent, anonymity, and the confidentiality of the information to be provided.

As represented in Table 1, the sample was female dominated with 55.2% while 44.8% were males and most (42.3%) of the sample aged between 25 and 34 years. Moreover, majority (43.5%) of the counseling clients were pursuing bachelor's degree. Lastly, all (100%) the respondents experienced counseling sessions in school; however, most of them attended counseling twice (77.4%) while others attended counseling more than twice (22.6%).

2.2. Instrumentation

The respondents assessed service innovation behaviour of their counsellors, clients' satisfaction and psychological safety. *Service innovation behaviour* was measured using four statements on a six-point Likert scale adapted from Ref. [28]. A sample item is "Overall, I consider my counselor as an innovative or creative person". *Clients' satisfaction* was measured with an eight-item scale scored on a four-point Likert scale adapted from Ref. [28]. A sample statement is "In an overall general sense, how satisfied are you with the counseling services you received?" Lastly, on a six-point Likert scales, respondents' *psychological safety* was measured using a six-item scale adapted from Edmondson [29]. A sample item is "It is safe to take a risk in counseling at the counseling centre".

2.3. Ethical consideration

This work has received full approval of ethical clearance for the study on the 2nd of March 2022 with reference number HTU/DRI/EC2022-006.

2.4. Statistical analysis

The data was analysed using IBM SPSS and SmartPLS 3 [30]. Descriptive statistics were used to summarise the demographic profile of the sample as demonstrated in Table 1. The research model and its related hypotheses were then examined using partial least squares structural equation modelling (PLS-SEM) approach [31]. PLS algorithm with default settings was run to examine the measurement model (i.e., factor loadings, reliability and validity of measures), followed by the bootstrapping procedure using 5000 resamples and then blindfolding procedure [31,32].

Table 1
Respondents' profile.

Characteristics	Frequency	Percent
Gender		
Female	132	55.2
Male	107	44.8
Total	239	100.0
Age		
15–24 years	93	38.9
25–34 years	101	42.3
35–44 years	36	15.1
45–54 years	9	3.8
Total	239	100.0
Current level of educational pursuit		
HND/Diploma	95	39.7
Bachelor's Degree	104	43.5
Masters' Degree	18	7.5
PhD	22	9.2
Total	239	100.0
Have you ever attended counseling either in your current university or before?		
Yes	239	100.0
Number of times experiencing counseling services		
Attended counseling twice	185	77.4
Attended counseling more than twice	54	22.6
Total	239	100.0

3. Results

3.1. Measurement model assessment

This section of the analysis reports the reliability and validity of the data as suggested by Hair et al. [31]. Table 2 provides the item loadings in addition to the constructs' reliability and convergent validity. The values from the final iteration show that all construct indicators have significant factor loadings ($p < 0.001$). Furthermore, the values of Cronbach's alpha, composite reliability, and the average variance extracted (AVE) for each latent variable are greater than the suggested minimum threshold limit of 0.7 and 0.5, respectively. These demonstrate the acceptable reliability and convergent validity of the constructs [33,34].

Further, to check the discriminant validity of the constructs, both Fornell-Larcker and HTMT criteria are used as reported in Table 3. Regarding the Fornell-Larcker criterion, the values of the square root of the AVE in bold are above the correlation value with other latent constructs [35,36]. Similarly, for the most widely discriminant validity criterion (i.e., the Heterotrait-Monotrait ratio (HTMT)), the HTMT values are less than 0.90 as recommended [37,38] thus, confirming the presence of constructs' discriminant validity.

3.2. Structural model assessment

Following the fulfilment of the reliability and validity of the measurement model, the structural model was examined including the structural relationships for hypotheses assessment, model's predictive power and relevance [33,39]. As revealed in the model's summary in Table 4 and Fig. 1, service innovation behaviour (SIB) of counsellors substantially accounts for 69.9% of clients' satisfaction (CS). Similarly, both service innovation behaviour and clients' satisfaction collectively contribute to 36.7% of variation in clients' psychological safety (PS). Further, the Q^2 values for clients' satisfaction (0.499) and psychological safety (0.205) which are above 0 validates the predictive relevance of the structural model [33,40,41].

Examination of the paths in Table 3 revealed that service innovation behaviour of the counsellors has significant positive influence on clients' psychological safety ($\beta = 0.370$; $t = 2.895$; $p = 0.004$) and satisfaction ($\beta = 0.836$; $t = 31.287$; $p = 0.000$). These results offer supports for hypotheses H1 and H2. Equally, clients' satisfaction has significant positive bearing on clients' psychological safety ($\beta = 0.261$; $t = 2.058$; $p = 0.040$), leading to the acceptance of hypotheses H3. Finally, service innovation behaviour of the counsellors has significant indirect effect on clients' psychological safety through clients' satisfaction ($\beta = 0.218$; $t = 2.067$; $p = 0.039$), consequently demonstrating the partial mediating effect of clients' satisfaction. Thus, hypothesis H4 is accepted.

In summary, counsellors' service innovation behaviour positively affected clients' satisfaction and psychological safety. Similarly, clients' satisfaction significantly positively affected clients' psychological safety. Lastly, clients' satisfaction mediated the influence of counsellors' service innovation behaviour on clients' psychological safety.

4. Discussion

This study examined the effect of university counselors' service innovation behavior on clients' satisfaction and psychological safety in Ghana. Accordingly, four hypotheses were tested, and the findings supported all these hypotheses. The PLS-SEM analysis

Table 2
Reliability and convergent validity results.

Indicator	Loadings	SE	t-statistics	p-values	CA	CR	AVE
Clients' Satisfaction (CS)					0.948	0.957	0.734
CS1	0.858	0.019	45.850	0.000			
CS2	0.883	0.015	57.403	0.000			
CS3	0.866	0.022	40.223	0.000			
CS4	0.820	0.031	26.272	0.000			
CS5	0.854	0.028	30.111	0.000			
CS6	0.845	0.025	34.440	0.000			
CS7	0.863	0.022	39.602	0.000			
CS8	0.865	0.020	43.610	0.000			
Psychological Safety (PS)					0.905	0.918	0.655
PS1	0.714	0.060	11.821	0.000			
PS2	0.878	0.024	37.184	0.000			
PS3	0.724	0.055	13.048	0.000			
PS4	0.888	0.020	45.015	0.000			
PS5	0.732	0.055	13.307	0.000			
PS7	0.894	0.016	55.204	0.000			
Service Innovation Behaviour (SIB)					0.936	0.954	0.840
SIB1	0.906	0.017	54.096	0.000			
SIB2	0.946	0.009	109.725	0.000			
SIB3	0.893	0.027	32.584	0.000			
SIB4	0.921	0.013	69.370	0.000			

Notes: SE = Standard Error; CA = Cronbach's alpha(α); CR = Composite Reliability; AVE = Average Variance Extracted.

Table 3
Discriminant validity.

Constructs	CS	PS	SIB
Fornell-Larcker Criterion			
Clients' Satisfaction (CS)	0.857		
Psychological Safety (PS)	0.571	0.809	
Service Innovation Behaviour (SIB)	0.836	0.589	0.916
Heterotrait-Monotrait Ratio of Correlations (HTMT) Criterion			
Clients' Satisfaction (CS)			
Psychological Safety (PS)	0.539		
Service Innovation Behaviour (SIB)	0.885	0.564	

Table 4
Structural equation model and hypotheses results.

Paths	β	SE	t-statistics	p-values	Confidence Interval	
					LL	UL
					2.50%	97.50%
SIB => PS	0.370	0.128	2.895	0.004	0.118	0.612
SIB => CS	0.836	0.027	31.287	0.000	0.774	0.880
CS => PS	0.261	0.127	2.058	0.040	0.013	0.507
SIB => CS => PS	0.218	0.105	2.067	0.039	0.012	0.427
Model's summary				R²	R² Adjusted	Q²
CS				0.699	0.697	0.499
PS				0.367	0.361	0.205

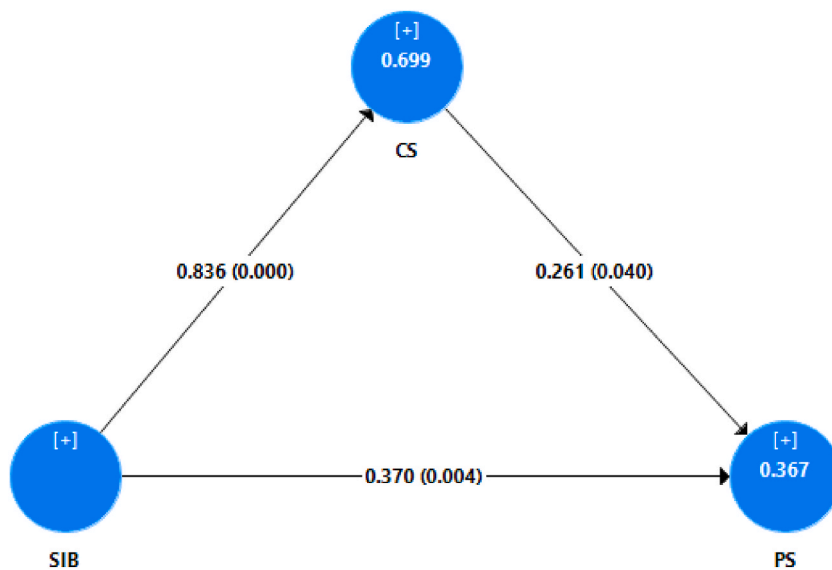


Fig. 1. Structural model.

revealed that counselors' service innovation behavior significantly positively affects clients' satisfaction and psychological safety. This suggests the significant role of counselors' service innovation behavior in predicting clients' satisfaction and psychological safety. This implies that the more university counselors exhibit service innovation behavior, the more satisfied and psychologically safe the clients are. Thus, the university counselors' service innovation behavior is indispensable for fostering clients' satisfaction and psychological safety.

Similarly, as projected, satisfaction significantly positively affected clients' psychological safety. This finding explicitly suggests that high client satisfaction was associated with high levels of clients' psychological safety. Additionally, the service innovation behavior of the counselors significantly indirectly affected clients' psychological safety through clients' satisfaction. Thus, counselors' service innovation behavior had both significant direct and indirect effects on clients' psychological safety. This signifies the partial mediating effect of clients' satisfaction in the link between counselors' service innovation behavior and clients' psychological safety. The inference is that counselors' service innovation behavior leads to clients' satisfaction which then fosters clients' psychological

safety. This novel finding suggests that clients' satisfaction is a mechanism through which counselors' service innovation behavior affects clients' psychological safety.

References

- [1] S. Aldridge, *A Short Introduction to Counseling*, Sage, 2014.
- [2] S.M.S. Kabir, *Essentials of Counseling*, Abosar Prokashana Sangstha, 2017.
- [3] R.F. Berdie, *Counseling*, *Annu. Rev. Psychol.* 10 (1) (1959) 345–370.
- [4] M.D. Kotsemir, *Innovation Concepts and Typology—An Evolutionary Discussion 5*, Higher School of Economics Research Paper No. WP BRP, 2013.
- [5] T. Kogabayev, A. Maziliauskas, The definition and classification of innovation, *HOLISTIC–J. Bus. Publ. Admin.* 8 (1) (2017) 59–72.
- [6] J.D. Valverde, B. Thornhill-Miller, T. Patillon, Creativity: a key concept in guidance and career counseling, *J. Adult Cont. Educ.* 26 (1) (2020) 61–72.
- [7] C.S. Michelsen, *Management by Cross-Training*, Book Surge Publishing, 2008.
- [8] G.S. Mumford, The effectiveness of creativity training: a quantitative review, *Creativ. Res. J.* (1998) 361–388.
- [9] A.H. Rubenstein, *Managing Technology in the Decentralized Firm*, 1990, pp. 400–401.
- [10] J.P. Jong, *Innovative Work Behavior: Measurement and Validation Scales*, 2008, pp. 1–27.
- [11] G.W. Wambu, T.A. Fisher, School guidance and counselling in Kenya: historical development, current status, and future prospects, *J. Educ. Pract.* 6 (2015) 24–32.
- [12] J.L. Arco, F.D. Fernandez, V.A. Heilborn, Demographic, academic, and psychological profile of students attending counseling services at the University of Granada (Spain), *Int. J. Adv. Counsell.* (2005).
- [13] N.N. Mirigo, *An Investigation into the State of Guidance and Counselling in Secondary Schools*, Kenyatta University., Nairobi, 2005. Unpublished PGDE Project.
- [14] R. Tinker, *Where Is the Educational Innovation?*, 2016 [Online]. Available: <http://www.concord.org/publication/newsletter/2006-spring/perspective.html>.
- [15] J. Maybin, *How Proximity and Trust Are Critical Factors in Getting Research to Feed into Policymaking*, British Politics and Policy at LSE., 2016.
- [16] F.D. Vennik, H.M. Van de Bovenkamp, K. Putters, K. Grit, Co-production in healthcare: rhetoric and practice, *Int. Rev. Adm. Sci.* 82 (1) (2016) 150–168.
- [17] L. Steinberg, A.S. Morris, Adolescent development, *Annu. Rev. Psychol.* 52 (2001) 83–110.
- [18] O. Aluede, H. Imhonde, A. Eguavoen, Academic, career, and personal needs of Nigerian University students, *J. Instr. Psychol.* 33 (1) (2006) 50–57.
- [19] K. Al-kanji, *Psychological, Vocational, and Academic Counseling Needs of College Students at the State of Qatar and the Contributions of Gender and Citizenship Status Variables*, Temple University, 2004.
- [20] N. Voltan-Acar, The effect of university students' problems on their academic achievement, *H.U. Egitim Fakultesi Dergisi* 1 (1986) 65–75.
- [21] B. Okyere-Manu, HIV counseling and testing (HCT) in schools: ethical implications to long-term support structures, *Alternation J.* (2016).
- [22] A.M. Asamari, *The Provision of Guidance and Counseling Services in Colleges of Education in Northern Ghana*, Department of Psychology and Education, Faculty of Educational Studies, University of Education, Winneba., 2015.
- [23] M.S. Azam, Diffusion of ICT and SME performance, *Adv. Bus. Market. Purch.* 23 (2015) 7–290.
- [24] J.F. Hair, R.I. Anderson, R.L. Tatham, W.C. Black, *Multivariate Data Analysis 5*, Prentice Hall., Englewood Cliffs, NJ, 1998.
- [25] J.W. Hoelter, The analysis of covariance structures: goodness-of-fit indices, *Socio. Methods Res.* 11 (1983) 325–344.
- [26] N. Kock, Minimum Sample Size Estimation in PLS-SEM: an Application in Tourism and Hospitality Research. *Applying Partial Least Squares in Tourism and Hospitality Research*, 2018, pp. 1–16.
- [27] M. Saunders, P. Lewis, A. Thornhill, *Research Methods for Business Students 7*, Pearson Education Limited, 2019.
- [28] S. Amedome, *Counseling Innovation Perception Scale Development: Rasch Model Approach*, 2016.
- [29] A. Edmondson, Psychological safety and learning behavior in work teams, *Adm. Sci. Q.* 44 (2) (1999) 350–383.
- [30] C. Ringle, D. Da Silva, D. Bido, Structural equation modeling with the SmartPLS, *Brazilian J. Marketing* 13 (2) (2015).
- [31] J.F. Hair, J.J. Risher, M. Sarstedt, C.M. Ringle, When to use and how to report the results of PLS-SEM, *Eur. Bus. Rev.* 31 (1) (2019) 2–24.
- [32] J. Henseler, G. Hubona, P.A. Ray, Using PLS path modeling in new technology research: updated guidelines, *Ind. Manag. Data Syst.* 116 (1) (2016) 2–20.
- [33] J.F. Hair, J.J. Risher, M. Sarstedt, C.M. Ringle, When to use and how to report the results of PLS-SEM, *Eur. Bus. Rev.* 31 (1) (2019) 2–24.
- [34] G. Shmueli, M. Sarstedt, J.F. Hair, J.H. Cheah, H. Ting, S. Vaithilingam, C.M. Ringle, Predictive model assessment in PLS-SEM: guidelines for using PLSpredict, *Eur. J. Market.* 53 (11) (2019) 2322–2347.
- [35] M. Asbari, I. Bernarto, R. Pramono, A. Purwanto, D. Hidayat, A. Sopa, V.U. Alamsyah, P. Senjaya, M. Fayzhall, Mustofa, The effect of work-family conflict on job satisfaction and performance: a study of Indonesian female employees, *Int. J. Adv. Sci. Technol.* 29 (3) (2020) 6724–6748.
- [36] C. Fornell, D.F. Larcker, Evaluating structural equation models with unobservable variables and measurement error, *J. Market. Res.* 18 (1) (1981) 39–50.
- [37] J. Henseler, C.M. Ringle, M. Sarstedt, A new criterion for assessing discriminant validity in variance-based structural equation modeling, *J. Acad. Market. Sci.* 43 (1) (2015) 115–135.
- [38] M. Sarstedt, J.F. Hair, J.H. Cheah, J.M. Becker, C.M. Ringle, How to specify, estimate, and validate higher-order constructs in PLS-SEM, *Australas. Market J.* 27 (3) (2019) 197–211.
- [39] A. Usakli, K.G. Kucukergin, Using partial least squares structural equation modeling in hospitality and tourism: do researchers follow practical guidelines? *Int. J. Contemp. Hospit. Manag.* 30 (11) (2018) 3462–3512.
- [40] N.S. Davcik, The use and misuse of structural equation modeling in management research: a review and critique, *J. Adv. Manag. Res.* 11 (1) (2014) 47–81.
- [41] M. Stone, Cross-validatory choice and assessment of statistical predictions, *J. Roy. Stat. Soc.* 36 (2) (1974) 111–133.