

An Innovative Mentorship Behavior Model Imperative for Sustainable Higher Education

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A sustainable approach in the mentorship of the mentees is a prerequisite for a vibrant and continuously developing higher education sector of a country. This study has investigated the perceived mentorship behavior of the mentors, the PhD faculty members teaching at higher education level in public and private sectors of Pakistan. Theory of mentors' roles by Kram (1985) has been used to record mentors responses relating; age, gender, academic rank, confidence and anxiety levels, career support, intellectual growth, psychosocial development and research supervision which are major mentor functions. A sample of 515 PhD faculty members out of which 335 belong to 19 public sector and 180 from 8 private sector universities of Islamabad and Rawalpindi have been studied. A total of 440 responses have been analyzed using stratified random sampling technique after conducting initial validation of the research instrument. Additionally the overall reliability resulted 0.80 value of cronbach alpha for the perceived mentorship behavior scale. The statistical tests revealed that the perceived mentorship behavior model is statistically fit and highly significant in explaining that mentors compassionately and dedicatedly focused on the career support, intellectual growth, psychosocial development and research supervision of the mentees during the mentorship arrangements in the universities.

Key words: *Faculty, Perceived, Behavior, Mentorship, Higher Education.*

1. Introduction

Mentorship is a universal phenomenon prevailing across the globe but sustainable mentorship of higher quality require far more efforts than traditional way of mentoring mentees. Consequently it has been well recognized in the body of literature that competencies essential for mentorship of a satisfied mentee is broader in scope and may vary as according to the needs of the mentee. Therefore, it is imperative to consolidate on agreeable mentor traits, characteristics and competencies that may be equitability applicable on mostly all mentoring scenarios. But, practically it is a difficult task when mentor and mentee relationships are actually take place in real mentoring arrangements. However, a good effort by (Hernandez, Estrada, Woodcock and Schultz, 2017) has been done recently to enlist most demanded high quality mentorship needed by mentees in science, technology, engineering and mathematics (STEM) careers. Furthermore, Hernandez et al. examined the conditions which are normally responsible for creating most beneficial effects on student's (mentee) outcome/performance. In the mentoring process according to (Hernandez et al., 2017) a faculty member usually provide psychosocial, instrumental and coauthoring support to students. The psychosocial support is linked with counseling, encouragement and role modeling, instrumental support is linked with assistance on challenging tasks, coaching tasks and providing advancement opportunities. In-addition to these conditions mentee's relational satisfaction also contribute towards high quality mentorship process. Hernandez et al. (2017) selected 1420 students for data collection from universities across USA and reported that mentor and mentee gender homogeneous dyads, perceived similarity between mentor and mentee, higher levels of psychosocial and instrumental support, similar gender co-authorship and relational influence of mentors on mentees development and commitment to STEM career are the most significant factors/conditions of high quality mentorship. The perceived mentorship factors included are highlighted by Hernandez et al. (2017) and endorsed by Carpenter, Makhadmeh and Thornton (2015) in terms of mentor functions are the most important for mentee's high quality mentorship. These mentor functions are well grounded in the theory of mentor roles presented by (Kram, 1985). Therefore, mentor functions have become the center of attention by the research community and more research is demanded globally in this direction to document empirical evidences regarding the behavioral mentorship domain.

Subsequently, it has been well recognized by the leaders of the world that socio-economic progress of a country is deeply roots in its education system and its output in the form of learned and knowledgeable population. In Pakistan the wheel of socio-economic progress has been turned and accelerating admitted by world renowned rating agencies like; Moody and Standards & Poors, USA. This progress is attributed to some extend to the reforms brought-in to the higher education sector of Pakistan in last twenty years by the Higher Education Commission, Government of Pakistan. Higher education commission of Pakistan has played a significant role in raising the standards of higher education in Pakistan. The process of establishment and up-gradation has been initiated by Prof. Dr. Atta-ur-Rahman, during General



Pervez Musharraf regime. Currently, HEC is considered as an engine of socio-economic development and custodian of maintaining quality education and research in the country. The most important drivers of socioeconomic development are the faculty members imparting education at higher education level both in public and private sectors. Universities in Pakistan have also placed special attention in hiring and developing this human capital of the country. It has been recognized by (Sadiq, Aurangzeb, Farooq, Rauf and Salman, 2013) that there is a dire need of mentoring and resolution of the issues of informal mentoring and the usefulness and need of modular system. The system demand for the close coordination and communication between students and mentors (teachers) to discuss problem areas which needs to be resolved under effective mentoring evaluation and innovative methods. Moreover, according to (Rehman, 2015) Mentors had to kept mentees on realistic track which inculcate moral values essential for success in life and career. The mentors are the faculty members who have largely contributed in the higher education sector to mentor students (i.e., mentees) in multiple fields of science and arts. Today, we need more new mentors in the higher education sector to cover-up the shortfall.

This research study under the theory of mentor roles by (Kram, 1985) reports the influence of faculty members measured in terms of mentors' professional characteristics which are perceived mentorship behavior further categorized as mentor functions including; career support, intellectual growth, psychosocial development and research supervision (productivity) having demographic characteristics including gender, academic rank and self-efficacy further divided as anxiety and confidence. This study tests the perceived mentorship behavior model in public and private sector of higher education level in Rawalpindi and Islamabad, the twin cities of Pakistan.

The structure of the paper begins with the introduction and identification of the research gap in the literature, which further elaborates appropriate literature review in the field of mentorship roles of mentors. Further to this, reliability of the research instrument has been examined which has been preceded by the research methodology of the study, statistical tests and results of the sub-models and discussion. Lastly, conclusion of the study ends the research paper by enlightening the reader with the crux of the research study.

2. Identified Gap in Literature

Theory of mentor roles by (Kram, 1983) had presented career and psychosocial as two most important mentor functions necessary to access mentor's effectiveness in mentorship process. However, scope of mentor functions have recently been examined by (Hernandez et al., 2017) and earlier enhanced by (Carpenter, Makhadmeh and Thornton, 2015) by including intellectual and research as other two important functions performed by mentors in mentorship process. In this respect, (Carpenter, Makhadmeh and Thornton, 2015) calls for more evidence from other parts of the world relating effectiveness of mentor's functions in practice. Therefore, this study

is initiated as an extension to the study of Carpenter, Makhadmeh and Thornton (2015). Thus, more empirical evidence is required to be reported from different fields, areas, departments, cultures as argued in literature to validate the range, influence and importance of mentor functions. The four mentor functions identified in literature has been transformed into perceived mentorship behavior model which has been tested statistically in this research study. Therefore, empirical evidence reports are actually new insights relating mentors' role at higher education level in public and private sector and this effort will certainly add new knowledge relating the issue for the benefit of indigenous and international research community. Thus, this paper is a valuable contribution in the literature in terms of initiating and conducting a comprehensive research study to tap the perceived mentorship behavior under theory of mentor role in Pakistan because the issue of addressing; range, influence and importance of the mentor functions including; career, intellectual, psychosocial and research supervision, considering mentor's gender, academic rank, self-confidence and self-anxiety taken under self-efficacy structure, has not been previously studied in a holistic manner.

3. Appropriate Literature Review

The current literature published on the topic in world's renowned research databases signifies the importance of Theory of Mentors Roles.

3.1. Theory of Mentor Roles

Theory of Mentor Roles had been presented by Kathy E. Kram in 1983. This theory embarked on multiple functions of the mentor which facilitate a mentor in the phases of mentorship of the mentee. These phases as described by (Kram, 1983) were linked with self, career and family of the mentor. Kram (1983) further translated the phases of mentorship into initiation, cultivation, separation and redefinition. Two main functions of mentor's role were identified including; career and psychosocial. Career had been divided into sponsorship, exposure and visibility, coaching, protection and challenging assignments, however psychosocial had been divided into role modeling, acceptance and conformation. Counseling and friendship.

3.2. Studies review relating Mentor and Mentorship Functions

The study of Alisic, Boet, Sutherland and Bould (2016) had highlighted that the involvement of mentor and mentee in the mentorship program required to understand the needs, expectations, compatibility, interests and priorities of both the participants. Similarly, Brewer, Dyer, Watson and Scott (2016) had identified; career support, relationship, contextual link and interaction as essential components of mentoring model which further extends into three characteristics which were; mentor's knowledge, investment of time in mentoring and honesty in creating growth opportunities for the mentee during the interaction sessions. Further to this Carpenter, Makhadmeh and Thornton (2015) had argued that the range, influence and

importance of mentoring functions had to be considered during the awareness creation processes relating the mentors in various doctoral programs. According to Sinclair, Fitzgerald, Hornby and Shalhoub (2015) the challenges faced by trainees in hospitals who went through mentorship process must be paved by achieving optimization of trainee's performance by launching effective formal mentoring training programs. These training programs could create significant impact if mentor's leadership skills were enhanced due to education which contributed towards strengthening mentor's role as a leader (Lejonberg, Elstad and Christophersen, 2015). Here, Wang and Millward (2014) had identified that mentoring as well as coaching provided to the students for their learning and development had been a complex task which must take into account the psychological, social, emotional, cognitive and contextual interactions of the mentees.

3.3. Studies review relating Gender and Mentorship Functions

Fowler (2017) highlighted the issue of women inequality for early career academics in higher education institutions across Australia. Results had showed that more mentoring was done in the case of research work rather than teaching or any other academic tasks assigned by the university. This notion had been endorsed by Angervall (2016) who had conducted study on female mentors and mentorship functions and reported that due to heavy work load of teaching female mentors as teachers were not able to perform mentor function especially the research function in a proper manner. Additionally, according to her, to become a mentor was a lengthy and painstaking journey that rest on physical and mental hardships. During the process of mentoring the mentor process prerequisites include resource mobilization and its imperative if risks involved in this journey needs to be transformed into desired returns that was according to the (Angervall, 2016) was mentors appreciations and respect. Moreover, she mentioned that the main hurdle in conducting research was the time constraint in the research intensive Swedish university. Further reported by (Angervall, 2016) that women mentors faced a great amount of obstructions and hindrance in their careers in terms of lack of career support, research funding, work-life balance and research productivity. Therefore, women mentors as teachers had been suppressed as compared to men mentors working in Sweden universities. In another interesting study by Deutsch and Yao (2014) the consequences of gender differences in mentors' attrition in the past twenty years in USA in the context of work place pressures and gender biases, the results revealed that attrition rate was higher in female mentors which was equal to 31.1 percent as compared to men. In connection to this, Deutsch and Yao (2014) argued that found that the basic reason of female faculty turnover was work family issues. Female faculty were facing double burden. According to authors (Deutsch and Yao, 2014) the collective causes of attrition were that Male and female faculty got good career opportunities, salary packages was not enough, unnecessary workload and departmental issues. Moreover authors of the study emphasized that colleges had to remove gender gap by creating friendly policies and brought new reforms for retaining female mentors.

Hagan, Connor, Myers, Baisner, Apostolov, Topuzova, Saglamer, Tan and Çağlayan, (2016) commenced a very interesting research related to education capitalism in four European countries. Academic capitalism in real sense was creating disparities and inequalities in faculty mentor gender which was recognized in the existing academic practices to be redefine based on mentors' gender equality. Authors applied diverse research methodologies on 106 mentors male and female from the universities of Denmark, Bulgaria, Turkey and Ireland. In this regard Hagan et al., (2016) highlighted that female mentors were not in favor of education capitalism. This fact is further examined by Smith, Spronken-Smith, Stringer and Wilson (2016) who conducted research relating study leave and linked it with sabbatical in the universities of New-Zeland. They found inequalities in gender and career academics in their case study. Women mentors faced more problem in taking sabbatical research and study leave from male HODS. Gender differences highlighted the negative and positive influences on research study leave. According to (Smith et al., 2016) mentor gender inequalities was the significant issue and conducted survey study by collecting responses from 915 mentors. They reported that more sabbatical were provided to men mentor as compared to female mentors and further raised the question of eligibility and equity of permanent mentors' research and study leave and their perceptions and experiences of sabbatical leave. According to female responses HOD was the barrier to access leave as compared to men colleagues. Financial support was another important factor for inequity. So, (Smith et al., 2016) concluded that female mentors remained second class citizen to enjoy job benefits and universities had to reconsider gender nature work and accessibility to sabbaticals, and train HODs to provide benefit to mentors in their respective universities.

Whitten (2016) researched the impact of mentorship experience of female accounting faculty members on their level of work engagement as well as gender matching for mentor and mentee level of satisfaction during the mentorship assignments in their respective universities. In America, according to Whitten, higher number of accounting degrees at bachelor and masters level had been awarded but one third of the pursued doctorate degrees and fewer joined teaching profession. This issue of lack of gender diversity was analyzed by primary data research and with the response rate of 17 % it was reported that female accounting faculty members who had received mentoring from a mentor experienced higher level of work engagement which shows mentoring as an important and essential factor in the process of raising the quality and satisfaction levels of the mentee in the higher education sector. In this context, Zakus, Gelb and Flexman (2015) discussed the formal and informal anesthesiology training programs and elaborated the importance of mentorship by means of formal survey conducted from the faculty members of the anesthesiology department at the British Columbia University. 86 % of mentees were highly satisfied from their mentors and mentorship functions carried-out in various anesthesiology training programs in Canada. Additionally, Welton, Mansfield and Lee (2014) conducted research on the experiences of male and female doctoral students during the mentorship processes in various educational leadership doctoral programs and reported that female faculty was more suitable in mentoring female graduate students. They

further reported that all the male and female participants strongly recommended that a mentor must provide constructive feedback, critique, encourage research idea development, provide professional support, helps in networking, guide in grant writing and publishing, modeling integrity, facilitate in skill development, provide emotional support in professional and career development of the mentees.

3.4. Studies review relating Academic rank and Mentorship Functions

Rosati, Valsangkar, Gaudino, Blitzer, Vardas, Girardi, Turrentine, Brown and Koniaris (2017) conducted research on the career achievements and mentorship effectiveness of 694 academic cardiothoracic surgeons practicing medicine in 56 USA academic institutions. The results reported that academic cardiothoracic surgeons who had performed better roles as practitioners and mentors were more conscious in the deployment of their mentor functions in their respective institutions. Accordingly Yehia, Cronholm, Wilson, Palmer, Sisson, Guilliamas, Poll-Hunter and Sanchez (2016) discussed the importance of diverse range of faculty members as mentors in academic medicine careers in USA and endorsed that according to 183 residents who had responded wanted academic mentors must be available to resident trainees belong to minorities groups. Similarly, Yorozuya, Kawase, Akashi-Tanaka, Kanbayashi, Nomura and Tomizawa (2016) conducted an interesting study on the existing condition of the women faculty mentors working in the field of surgery in Japan. Their study revealed that the mentor as faculty member performed very effectively the mentorship functions which were; career and clinical guidance which extended moral support towards the mentees. However, Thomas, Lunsford and Rodrigues (2015) had argued that in universities little attention was given towards mentoring requirements of new academicians who exist this noble profession due this drawback and emphasized the retention of talented faculty members who did not find any good mentor in the large research intensive public sector Southwestern University of the United States of America (USA). They specified that the needs and requirement of mentorship by the early career academic faculty members had to be identified and fulfilled in true letter and spirit by the university senior level mentors who have the experience of mentoring in terms of training and development. Further to this, Trube and VanDerveer (2015) discussed the roles played by a mentor in developing, supporting and sustaining engaged scholar. They engaged 12 faculty mentors who were from USA, Algeria, China, India, South Korea and Ghana and reported that the faculty members holding higher ranks in teaching and research universities have larger developmental network of engaged scholars and experiences of handing longer mentee mentorship relationships in an international higher education level.

The research study by Nowell, White, Mrklas and Norris (2015) addressed the issue of shortage of nursing faculty in majority of the nursing educational institutions across Canada and reported that all the ranks of nursing faculty members had experienced higher execution of mentorship role and functions in nursing educational institutions in Canada due to the support extended by the government of Canada. Relatively more interestingly Kalen, Ponzer, Seeberger, Kiessling

and Silen (2015) had identified long-term efficiency and meaning of the process of mentoring a medical student and reported that higher academic rank of the mentor during longitudinal mentorship processes is associated with the higher order engagement of mentor functions in the field of physician mentorship training programs in Sweden. Furthermore, Constantinescu (2015) emphasized on the importance of teachers' mentor competences and signified the importance of training courses on effective communication, relevant teaching subject, career counseling, methodology, utility of new technologies, psycho-pedagogy of adults, active listening skills and management of school affairs for the new teachers' as mentors in Romania.

3.5. Studies review relating Self-efficacy and Mentorship Functions

They study of Gonzalez, Conde, Diaz, Garcia and Ricoy (2017) discussed the instructors' teaching styles and explained how it had been integrated with his or her self-efficacy when the issue of mentoring the students and linked mentors' self-efficacy with the professional competence and reported that the teacher as mentor's commitment is positively related to self-efficacy and higher self-efficacy predict job satisfaction and persistence in the teaching assignments. Hemmings and Kay (2016) argued that with the increase in the research related self-efficacy of the faculty mentor working in an Australian university, self-efficacy had been considered as the main ingredient in the Australian research productivity enhancement program which was implemented by the government of Australia during last the decade. The results revealed that the faculty members' attitudinal development in terms of self-efficacy for research and research disposition had been the key factors driving the research output which had raised confidence of the faculty to perform mentor functions more effectively and efficiently. In this regard the study of Lejonberg and Tiplic (2016) highlight the importance of clear mentoring, the role of new teacher in an educational institution and his or her relationship with the senior faculty member. The results revealed that mentor had to focus on the needs of the mentee and at the same time had to balance the mentor functions if they want to refrain from judgmental mentoring framework. Contextually, Reyes-Cruz and Perales-Escudero (2016) argued that the university management must devise educational policies that foster self-efficacy of the mentors in a positive manner and as a results self-motivation of the mentors could be uplifted. The study of Russell and Haston (2015) was related to the mentorship experiences of the music education graduates who had been engaged in the mentoring of the under graduate students. The results had reported that after the mentoring experience the self-efficacy of the mentors in terms of confidence increased and they felt that this confidence would help them in improve pacing, instruction delivery, motivating students, and the communication skills improvement which directly affected the mentorship functions particularly in the context of psychosocial and intellectual functions. If we review the study of Strapp, Gilles, Spalding, Hughes, Baldwin, Guy, Feakin and Lamb (2014) who had used two different models to access the mentor's perspective including motives and efficacy for a six months' time period, it could be observed that the change in the mentor's efficacy was more related to the productiveness of relationship outcomes rather it was claimed to be linked with

the initial efficacy of the mentor at the start of the mentorship program. Larose (2013) described the trajectories of perceived self-efficacy of 252 university mentors from Quebec, Canada and reported that mentor's perceived self-efficacy was sensitive towards distress felt by others which eventually predicts the tendency of the mentors association with a particular group.

3.6. Mentorship Studies in the Context of Pakistan

The study of Rehman (2015) on imperativeness of mentorship in the field of medical science reported that mentors had to emphasize on the physical fitness of mentees which was considered important in ultimate mental fitness of the mentees rests on moral values that could be essential for the successful life and career in the longer period of time. Similarly Sadiq, Aurangzeb, Farooq, Rauf and Salman (2013) highlighted the need of mentoring and pushed for close coordination and communication between students and the teachers to discuss problem areas which needs to be resolved under effective mentoring evaluation based innovative methods. They further emphasized that formal mentoring program need to be started at every institutions of higher learning in Pakistan. Likewise, Katz, Elsaesser, Klodnik and Khare (2019) had conducted research in the University of Wisconsin-Madison School of Social Work and considered mentoring as central to the professional development of the doctoral student. They reported that the mentorship must be recognized and included in the main faculty compensation policies that counts towards their careers. In this context, Ooms, Werker, & Hopp (2018) addressed the issue of academic heterogeneity which had effected the career progression of the mentors to achieve higher position in their respective departments and reported that mentor and mentee heterogeneity could be valuable for early career mentors, but not for career progression of mentors who wanted to secure tenure in their respective university departments. The study of Taylor (2018) was on a middle-eastern women university which reported that a good mentoring provide and build capacities for sustainable leadership that must be based on the principles of Islam and in this way ethics of care would be developed based-on the ideals of Islam. Connecting further the study of Brown (2018) highlighted the importance of mentorship by mentors in the field of Archaeology specifically due to the impact the mentors create towards the career choices of mentees. They suggested that students of Archaeology need to be mentor by the faculty members in an effective manner by creating positive impact on their future in terms of creating best stream of new Archaeologists. Additionally, Arnesson & Albinsson (2017) connoted the importance of mentorship relating the integration of theory and practice of mentorship considered as a pedagogical intervention in the learning process. The results showed that mentors had to take leading role in the mentorship process that increases mentee understanding and knowledge of the subject in the higher education sector in an interactive learning environment of mutual growth and professional development. Morales, Grineski & Collins (2017) delegated motivation of faculty in mentor mentee relationship on structured research training programs and reported that incentivize, higher interaction, research project experience and institutional reward system were the main factors that made early to mid-career faculty mentors highly motivated to mentor

an undergraduate mentee. Factually, in this regard Robertson (2017) conducted research to explain the supervision of mentee by the team of the mentors in Austrian academic higher education universities and reported that more systematic way of mentor role of the principal supervisors was considered an important aspect of policy and practices of the higher education sector in Australia.

3.7. Hypotheses of the Study

The hypotheses formulated based-on the literature reviewed are as follows;

H₁: There is significant difference in mentors' perceived mentorship behavior with reference to career support at higher education level in public and private sector universities.

H₂: There is significant difference in mentors' perceived mentorship behavior in the light of intellectual growth at higher education level in public and private sector universities.

H₃: There is significant difference between mentors' perceived mentorship behavior with reference to psychosocial development in public and private sector universities.

H₄: There is significant difference between mentors' perceived mentorship behavior in terms of research supervision at higher education level in public and private sector universities.

4. Research Methodology

In this research study primary data has been collected by administering structured research instrument (questionnaire) employed based-on literature and theory to explain phenomenon relating perceived mentorship behavior in higher education level at public and private sector, brought under discussion and evaluation.

Table 1: Population and sample size of the study

Sector	Population	Sample Size (n)
Public	2596	335
Private	339	180
Total	2935	515

According to table 1, the population of the study is 2935 PhD faculty members who are teaching postgraduate students. The sampling technique used to extract sample from the population was stratified random sampling. According to Cohen, Manion & Morrison, (2007) stratified sampling technique is used where two strata 'public' and 'private' sector faculty members had been considered for analysis and comparison. The total sample size is 515 faculty members, out of which 335 are from public and 180 are from private sector universities of Islamabad and Rawalpindi, Pakistan. A standardized questionnaire adopted and tested by Carpenter, Makhadmeh and Thornton (2015) has been used for primary data collection from the sample. The questionnaire has been adopted therefore the cultural suitability of the research

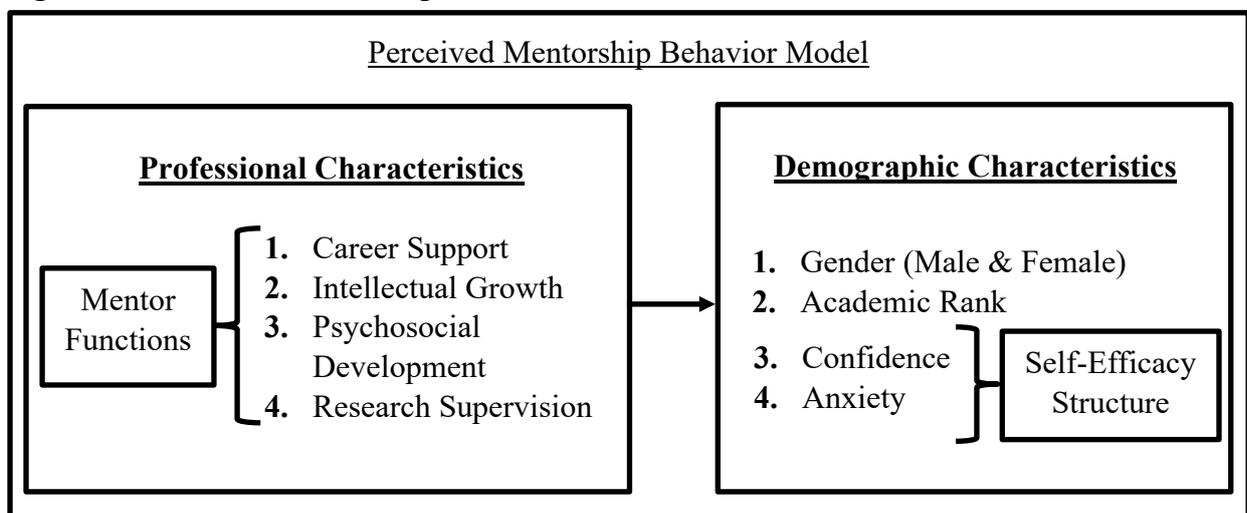
instrument has been ensured by four subject experts who have thoroughly reviewed the instrument and endorsed its suitability in terms of language, variables, items related to variables, theory and content. The higher education institutions (universities) included in the sample are imparting education to post graduate students and are recognized by Higher Education Commission, Government of Pakistan.

A standardized questionnaire for primary data collection from the sample has been divided into two parts. First part has been designed to collect data relating demographic characteristics of the mentors. This part has 7 questions which intend to collect responses related to sector of higher education level university, mentor's gender, academic rank, tenure of mentor in the university, number of students mentored and last academic degree attained. Second part consists of questions (items) relating to career growth (no of items = 5), psychosocial development (no of items = 4), intellectual growth (no of items = 5), research supervision (no of items = 3) which had been scaled on five point likert scale ranging from Always being '1' to Never being '5' and mentor self-efficacy scale representing confidence level of mentor (no of items = 5), for anxiety level (no of items = 4) which had been scaled on five point likert scale ranging from strongly disagree being '1' to strongly Agree being '5'. A formal permission from Carpenter, Makhadmeh, and Thornton, had been taken prior initiating utilization of the research instrument to collect primary data from the sample in Pakistan.

4.1. Research Model of the Study

The research model of the study provided below is based on the work of Hernandez, Estrada, Woodcock and Schultz (2017) and Carpenter, Makhadmeh and Thornton (2015).

Figure 1. Perceived Mentorship Behavior Model



Perceived mentorship behavior is an appropriate term suitable to explain the faculty members' perspective of mentorship during the mentor and mentee relationship. It is well grounded in the

body of literature and signifies its relevance. Therefore documenting the evidence (variation in behavior) relating how well mentorship functions are performed in higher education is possible only when mentors' perceived mentorship behavior is studied and analyzed comprehensively.

4.2. Reliability of the Research Instrument

The reliability test has been performed on the primary data collected as a result of the pilot test of the research instrument. The Alpha reliability scores of all the variables showed excellent results and thus research instrument is found reliable to be used for the current study. The reliability (i.e., Cronbach's Alpha) and validity (i.e., Principal Component Analysis) test results of the questionnaire after collecting 440 responses (out of 515 sample size) of the mentors who are Ph.D. faculty members employed at higher education level institutions / universities situated at Islamabad and Rawalpindi are presented in table 6 below.

Table 2: Reliability Analysis of the Research Instrument based-on Cronbach's Alpha Scores (n = 440)

	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Scale	.80	.84	26
Subscales			
Career Support	.65	.70	5
Intellectual Growth	.73	.75	5
Psychosocial Development	.77	.77	4
Research Supervision	.65	.66	3
Confidence Level	.74	.78	5
Anxiety Level	.81	.81	4

Table 2 shows cronbach's Alpha test results in terms of unstandardized items (Alpha = 80%) and standardized items (Alpha = 84%). The alpha coefficient results of the scale and subscales of the research instrument i.e., perceived mentorship behavioral questionnaire confirms again the reliability of the questionnaire. Moreover, alpha results of subscales after collecting 440 responses from the Ph.D. faculty members working in the universities situated in the twin cities of Islamabad and Rawalpindi generated satisfactory cronbach's Alpha test results. These results are reported in the form of unstandardized and standardized scores which ranges from 0.65 to 0.81 for unstandardized alpha scores and 0.66 to 0.84 for standardized alpha scores. Therefore, the research instrument utilized to collect primary data from the selected sample has been considered reliable.

The descriptive statistics of the study shows that the age groups of 236 mentors having representation of 53.6 % belongs to the age group of 31 to 40 years. 157 mentors having representation of 35.7 % belongs to the age group of 41 to 50 years, and 47 mentors having representation of 10.7 % belongs to the age groups of 51 to 60 years respectively. In the case of total experience of the mentors towards mentoring the mentees, 152 mentors who have responded having 34.5 % representation in 440 respondents have 1 to 5 years of experience, 96 mentors having representation of 21.8 % have 6 to 10 years of experience, 152 mentors having representation of 34.5 % have 11 to 15 years of experience, 36 mentors having representation of 8.2 % have 16 to 20 years of experience and 4 mentors having representation of 0.9 % have 21 plus years of experience in mentorship of mentees in the higher education universities imparting education in Islamabad and Rawalpindi. The 100 % mentor sample representation have Ph.D. degrees in their respective subjects. The focus of this research study has been to tap the responses of faculty members who have Ph.D. degrees and are performing their duties as mentors in the higher education institutions / universities imparting education in Islamabad and Rawalpindi. The number of students mentored by the mentor in the higher education institutions and universities shows that 93 mentors representing 21.1% out of 440 mentors have so far mentored 1 to 5 mentees, 125 mentors representing 28.4% out of 440 mentors have so far mentored mentees 6 to 10 mentees, 27 mentors representing 6.1% out of 440 mentors have so far mentored mentees 11 to 15 mentees, 55 mentors representing 12.5% out of 440 mentors have so far mentored mentees 16 to 20 mentees, however 140 mentors representing 31.8% out of 440 mentors responded have mentored more than 21 mentees during their tenure as mentors.

4.3. Sub-Models, Statistical Analyses and Results of the Study

The research model developed earlier in figure 1 has further bifurcated into four sub-models in-order to test four models with each of the four dependent variables.

Figure 2. Mentors' perceived mentorship behavior Sub-model 1 w.r.t. career support

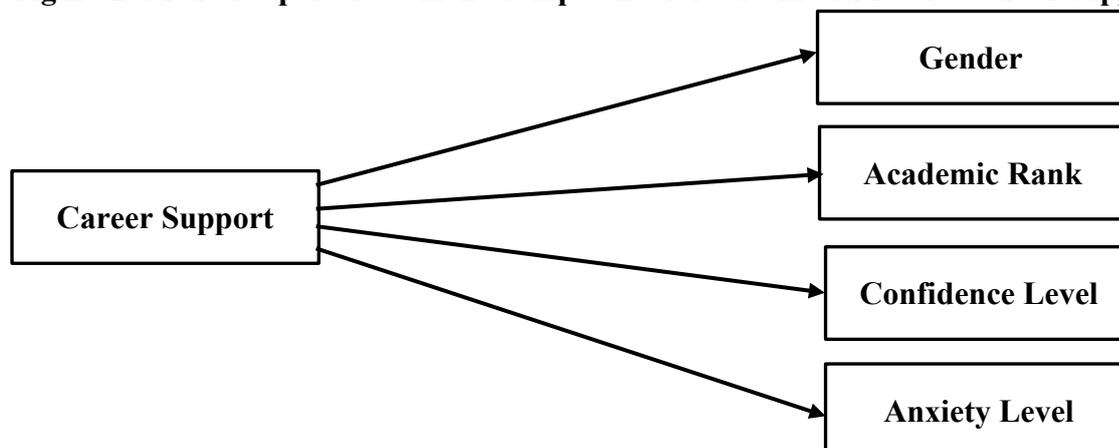


Table 3: Pearson Correlation Results Matrix of the Regression Analyses of Sub-Model 1

	Career Support	Gender	Academic Rank	Confidence Level	Anxiety Level
Career Support	1.000	-.002	-.168	.462	-.033
Gender	-.002	1.000	-.014	-.068	.009
Academic Rank	-.168	-.014	1.000	.196	-.031
Confidence Level	.462	-.068	.196	1.000	.031
Anxiety Level	-.033	.009	-.031	.031	1.000
N	440				

Table 4: Summary of Ordinary Least Squares Regression Analyses of Sub-Model 1

	Career Support (Constant)	Gender	Academic Rank	Confidence Level	Anxiety Level
Unstandardized Beta	1.707	.042	-.271	.578	-.031
Std. Error	.220	.057	.041	.046	.022
t value	7.758	.730	-6.577	12.539	-1.411
Sig (p-value)	.000	.466	.000	.000	.159
VIF stats		1.005	1.042	1.046	1.002
Tolerance		.995	.960	.956	.998
R	.536				
R Square	.287				
F Stat Sig.	43.860 .000				
Durbin Watson	1.746				

Table 3 provided above reports results relating Pearson correlation matrix and table 4 reports the results of OLS least squares regression analyses for sub-model 1 extracted from Mentors' perceived mentorship behavior model. The Pearson correlation matrix results show that career support and confidence level are correlated as correlation among them is 46.2 percent, the highest in the sub-model 1. However, rest of the variables of model have negative as well as positive but weak to moderate level of correlations. Moreover, gender has positive ($\beta = .042$) and insignificant ($p = .466$), academic rank has negative ($\beta = -.271$) and significant ($p = .000$), confidence level has positively ($\beta = .578$) and significant ($p = .000$), and anxiety level has negative ($\beta = -.031$) and insignificant ($p = .159$) relationship with career support. Standard error of all the variables has minimum values which is considered negligible. t-value of confidence level ($t = 12.539$) is the highest in the model representing strong relationship with career

support. Variance Inflation Function (VIF) stats and Tolerance results are within acceptable range, representing no issues of auto correlation among the variables of the model. This fact is also supported by the result of Durbin Watson (DW = 1.746). The result of R is (53.6%) shows moderate correlation among variables of the model. Whereas, the result of R-square shows that 28.7% variance has been created in the case of career support. The overall sub-model 1 has been considered fit which is represented by F statistics (43.860) and its significant level ($p = 0.000$).

Figure 3. Mentors' perceived mentorship behavior Sub-model 2 w.r.t. Intellectual Growth

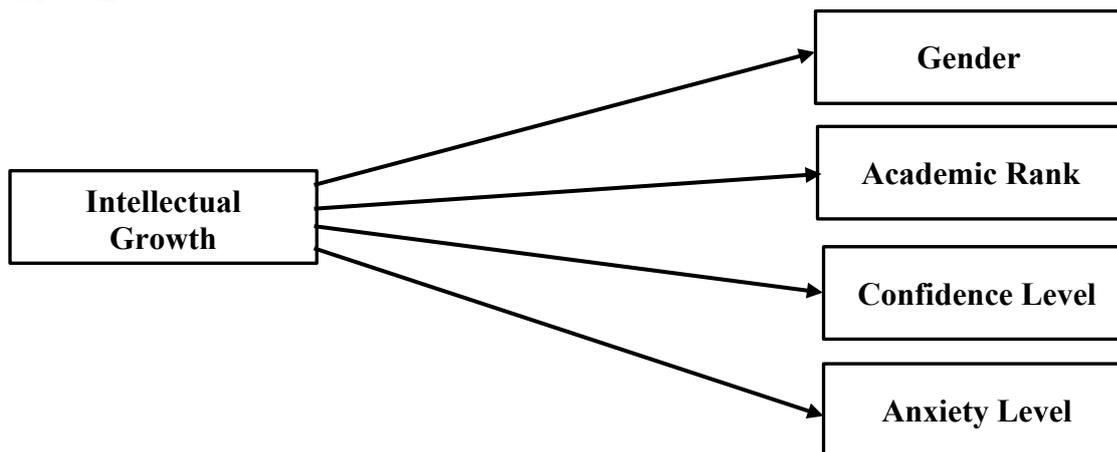


Table 5: Pearson Correlation Matrix of the Regression Analyses of the Sub-Model 2

	Intellectual Growth (Constant)	Gender	Academic Rank	Confidence Level	Anxiety Level
Intellectual Growth	1.000	-.105	.170	.360	.114
Gender	-.105	1.000	-.014	-.068	.009
Academic Rank	-.170	-.014	1.000	.196	-.031
Confidence Level	.360	-.068	.196	1.000	.031
Anxiety Level	.114	.009	-.031	.031	1.000
N	440				

Table 6: Summary of Ordinary Least Squares Regression Analyses of Sub-Model 2

	Intellectual Growth (Constant)	Gender	Academic Rank	Confidence Level	Anxiety Level
Unstandardized Beta	2.699	-.103	.096	.328	.053
Std. Error	.214	.056	.040	.045	.022
t value	12.636	-1.851	2.402	7.328	2.448
Sig (p-value)	.000	.065	.017	.000	.015
VIF stats		1.005	1.042	1.046	1.002
Tolerance		.995	.960	.956	.998
R	.397				
R Square	.158				
F Stat	20.385				
Sig.	.000				
Durbin Watson	1.860				

Table 5 provided above reports results relating Pearson correlation matrix and table 6 reports the results of OLS least squares regression analyses for sub-model 2 extracted from Mentors' perceived mentorship behavior model. The Pearson correlation matrix results show that intellectual growth and confidence level are correlated as correlation among them is 36 percent, the highest in the sub-model 2. However, rest of the variables of model have negative as well as positive weak to moderate level of correlations. Moreover, gender has negative ($\beta = -.103$) and insignificant ($p = .065$), academic rank has positive ($\beta = .096$) and significant ($p = .017$), confidence level has positively ($\beta = .328$) and significant ($p = .000$), and anxiety level has positive ($\beta = .053$) and significant ($p = .015$) relationship with intellectual growth. Standard error of all the variables has minimum values which is considered negligible. t-value of confidence level ($t = 7.328$) is the highest in the model representing strong relationship with intellectual growth. Variance Inflation Function (VIF) stats and Tolerance results are within acceptable range, representing no issues of auto correlation among the variables of the model. This fact is also supported by the result of Durbin Watson ($DW = 1.860$). The result of R is (39.7%) shows moderate correlation among variables of the model. Whereas, the result of R-square shows that 15.8% variance has been created in the case of intellectual growth. The overall sub-model 2 has been considered fit which is represented by F statistics (20.385) and its significant level ($p = 0.000$).

Figure 4. Mentors' perceived mentorship behavior Sub-model 4 w.r.t. Psychosocial Development

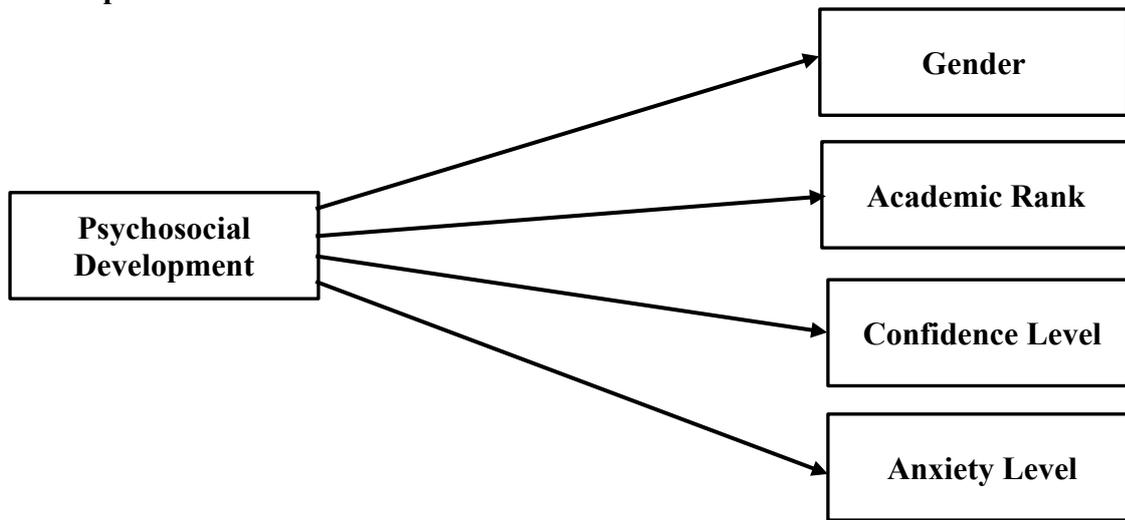


Table 7: Pearson Correlation Matrix of the Regression Analyses of Sub-Model 3

	Psychosocial Development (Constant)	Gender	Academic Rank	Confidence Level	Anxiety Level
Psychosocial Development	1.000	-.047	.106	.534	.195
Gender	-.047	1.000	-.014	-.068	.009
Academic Rank	.106	-.014	1.000	.196	-.031
Confidence Level	.534	-.068	.196	1.000	.031
Anxiety Level	.195	.009	-.031	.031	1.000
N	440				

Table 8: Summary of Ordinary Least Squares Regression Analyses of Sub-Model 3

	Psychosocial Development (Constant)	Gender	Academic Rank	Confidence Level	Anxiety Level
Unstandardized Beta	.989	.126	.009	.642	.106
Std. Error	.232	.061	.043	.049	.023
t value	4.260	2.071	.197	13.201	4.509
Sig (p-value)	.000	.039	.844	.000	.000
VIF stats		1.005	1.042	1.046	1.002
Tolerance		.995	.960	.956	.998
R	.569				
R Square	.324				
F Stat	52.039				
Sig.	.000				
Durbin Watson	1.845				

Table 7 provided above reports results relating Pearson correlation matrix and table 8 reports the results of OLS least squares regression analyses for sub-model 3 extracted from Mentors' perceived mentorship behavior model. The Pearson correlation matrix results show that psychosocial development and confidence level are correlated as correlation among them is 53.4 percent, the highest in the sub-model 3. However, rest of the variables of model have negative as well as positive weak to moderate level of correlations. Moreover, gender has positive ($\beta = .126$) and significant ($p = .039$), academic rank has positive ($\beta = .009$) and insignificant ($p = .844$), confidence level has positively ($\beta = .642$) and significant ($p = .000$), and anxiety level has positive ($\beta = -.106$) and significant ($p = .000$) relationship with career support. Standard error of all the variables has minimum values which is considered negligible. t-value of confidence level ($t = 12.539$) is the highest in the model representing strong relationship with career support. Variance Inflation Function (VIF) stats and Tolerance results are within acceptable range, representing no issues of auto correlation among the variables of the model. This fact is also supported by the result of Durbin Watson ($DW = 1.845$). The result of R is (56.9%) shows moderate correlation among variables of the model. Whereas, the result of R-square shows that 32.4% variance has been created in the case of psychosocial development. The overall sub-model 3 has been considered fit which is represented by F-statistics (52.039) and its significant level ($p = 0.000$).

Figure 4. Mentors' perceived mentorship behavior Sub-model 4 w.r.t. Research Supervision

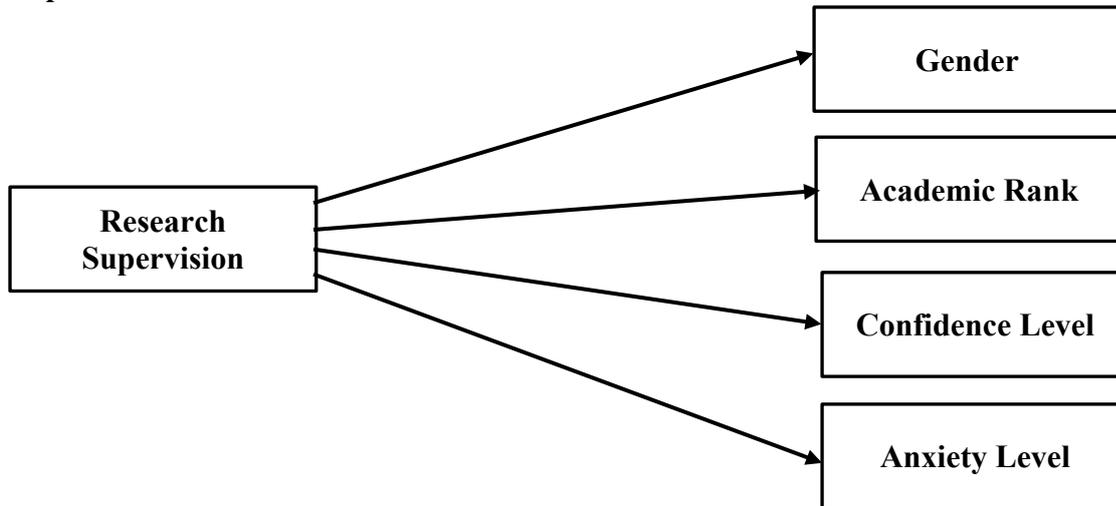


Table 9: Pearson Correlation Matrix of the Regression Analyses of Sub-Model 4

	Research Supervision (Constant)	Gender	Academic Rank	Confidence Level	Anxiety Level
Research Supervision	1.000	-.087	.051	.212	.247
Gender	.087	1.000	-.014	-.068	.009
Academic Rank	.051	-.014	1.000	.196	-.031
Confidence Level	.212	-.068	.196	1.000	.031
Anxiety Level	.247	.009	-.031	.031	1.000
N	440				

Table 10: Summary of Ordinary Least Squares Regression Analyses of Sub-Model 4

	Research Supervision (Constant)	Gender	Academic Rank	Confidence Level	Anxiety Level
Unstandardized Beta	1.473	.178	.024	.291	.166
Std. Error	.310	.081	.058	.065	.031
t value	4.758	2.197	.405	4.487	5.316
Sig (p-value)	.000	.029	.685	.000	.000
VIF stats		1.005	1.042	1.046	1.002
Tolerance		.995	.960	.956	.998
R	.336				
R Square	.113				
F Stat	13.835				
Sig.	.000				
Durbin Watson	1.721				

Table 9 provided above reports results relating Pearson correlation matrix and table 10 reports the results of OLS least squares regression analyses for sub-model 4 extracted from Mentors' perceived mentorship behavior model. The Pearson correlation matrix results show that research supervision and anxiety level are correlated as correlation among them is 24.7 percent, the highest in the sub-model 4. However, rest of the variables of model have positive as well as negative weak to moderate level of correlations. Moreover, gender has positive ($\beta = .178$) and significant ($p = .029$), academic rank has positive ($\beta = .024$) and insignificant ($p = .685$), confidence level has positively ($\beta = .291$) and significant ($p = .000$), and anxiety level has positive ($\beta = .166$) and significant ($p = .000$) relationship with research supervision. Standard error of all the variables has minimum values which is considered negligible. t-value of anxiety level ($t = 5.316$) is the highest in the model representing strong relationship with research supervision. Variance Inflation Function (VIF) stats and Tolerance results are within acceptable range, representing no issues of auto correlation among the variables of the model. This fact is also supported by the result of Durbin Watson ($DW = 1.721$). The result of R is (33.6%) shows weak correlation among variables of the model. Whereas, the result of R-square shows that 11.3% variance has been created in the case of research supervision. The overall sub-model 4 has been considered fit which is represented by F statistics (13.835) and its significant level ($p = 0.000$). The results of the hypotheses tests of the variables concerning mentors' perceived mentorship behavior model in public and private sectors at higher education level have been accepted which endorsed strong integration of professional as well as demographic characteristics of the Perceived Mentorship Behavior Model.

5. Discussion

This research study turned-out to be a very informative and interesting for the academicians and practitioners from all sorts of fields who are keen to grab insights relating mentorship roles of mentors in higher education institutions / universities. It has been observed and recognized that researchers have and had been consistently and constantly written on the subject now-and-then, but few have elaborated the underpinnings of truth and reality prevailing behind the concrete walls of learning, undoubtedly linked to mentorship. The perspectives' relating perceived mentorship behavior has not been surfaced by researchers in recent literature writing as compared to the mentorship experiences of mentees reported with considerable comprehensiveness. However, execution of mentorship functions as it has been perceived by mentors working in higher education level institutions / universities have been evaluated and reported in this research study. In-order to accomplish this valuable and rewarding task perceived mentorship behavior model has been formulated based on theory of mentorship roles of (Kram, 1985, 1983) and it has been undertaken to extend the work of (Hernandez et al., 2017) and endorsed by (Carpenter, Makhadmeh & Thornton, 2015).

The results of this study have reported in the case of private sector that mentors as male and female Ph.D. faculty members are different in the execution of mentor functions. This difference is more or less due to Social and cultural barriers that had been identified in the study of Brewer et al., (2016) as hindrance in the career progression of the mentors. Additionally, it could be due to the significant and positive association of gender, academic ranks and self-efficacy factors confidence level and anxiety level reported by Carpenter, Makhadmeh & Thornton, or due to their salary packages, unnecessary workload and departmental concerns (Deutsch & Yao, 2014). It has been recommended by (Welton, Mansfield & Lee, 2014) that a mentor must provide constructive feedback, critique, encourage research idea development, provide professional support, helps in networking, guide in grant writing and publishing, modeling integrity, facilitate in skill development, provide emotional support in professional and career development of the mentee. Similarly, the results of this research study show that majority of the mentors have 'very often' and 'always' contributed compassionately and dedicatedly towards the career support, intellectual growth, psychosocial development and research supervision of the mentees during mentorship arrangements. Also, mentors have either agreed or strongly agreed that they have performed mentorship functions and supported mentees in their academic and professional endeavors. The claim of (Robertson, 2017) which stated that higher ranked faculty member as mentor could be more effective in mentor mentee relationships under socio-cognitive theory has not been validated in this research study because most of the respondents of the study are assistant professors (76.4%) working as Ph.D. faculty members in higher education level at public and private sector institutions / universities. However, beside this claim, as explained earlier that majority of the respondents of this study have performed mentorship functions effectively and efficiently.



In the case of superiority in terms of mentor's performance of mentorship function, psychosocial development turned-out to be the best among other three mentorship functions. Additionally, research supervision has been emerged as the best mentorship practice in private sector higher education level as against the uniform practices of mentorship functions by mentors in public sector higher education institutions / universities. This fact is considerably discussed by Yorozuya et al. (2016) who have mentioned that less mentor support was reported in the case of research career, expansion of professional network, increase in status and work-life balance in medical colleges of Japan. Also, according to Thomas, Lunsford & Rodrigues (2015) new academicians (faculty members e.g., assistant professors) also face difficulties in balancing university assignments of teaching, research and service commitments. Furthermore as according to Trube & VanDerveer (2015) the mentoring network of the mentors and the perception of the mentors regarding functions, roles, characteristics and disposition of effective mentoring of engaged scholar have to be discussed. Therefore, as according to the suggestions of Constantinescu (2015) a mentor teacher must seek training on effective communication, relevant teaching subject, career counseling, methodology, utility of new technologies, psychopedagogy of adults, active listening skills and management of university affairs because teachers' professional development in a continuous lifelong journey. And, mentor has to focus on the needs of the mentee and at the same time a balance has to be maintained in the mentor functions if a mentor wants to refrain from judgmental mentoring framework (Lejonberg & Tiplic, 2016). As Gonzalez et al. (2017) have mentioned that commitment of mentor as teacher has been a representation of self-efficacy and higher confidence level and lower anxiety level of mentors' capabilities to bring about positive change in mentee's learning outcomes and ultimate objectives of academic achievements. Moreover, as reported by Reyes-Cruz & Perales-Escudero (2016) higher self-efficacy has a close connection with intrinsic motivation and self-satisfaction relating a particular academic or research related activity formally taking into account mutually by the mentor and mentee during the interaction arrangements.

Additionally Russell & Haston (2015) had highlighted that the mentors' experience of mentorship in the northeastern part of America has affected them in terms of pedagogy knowledge, social development, psychological development, identity development and educational development. This has eventually resulted in the increase in confidence and decrease in stress/anxiety levels of the mentors which has showed that the self-efficacy directly effects the mentorship functions particularly in the context of psychosocial and intellectual functions. It has been reported in this study that 203 mentors having representation of 46.1 % have 'agreed' and 204 mentors having representation of 46.4 % have 'strongly agreed' to develop students' problem-solving skills through a good use of questioning. Similarly, 223 mentors having representation of 50.7 % have 'agreed' and 182 mentors having representation of 41.4 % have 'strongly agreed' that they are continually finding better ways to be a mentor for the students. And, 201 mentors having representation of 45.7 % have 'agreed' and 164 mentors having representation of 37.3 % have 'strongly agreed' that they understand how to help students develop a personal awareness of their strengths. Contrary to it, 115 mentors who

have responded having representation of 26.1% in total 440 responses have 'strongly disagreed' that they felt anxious when helping students with academic matters. Additionally, it has been noted that 151 mentors who have responded having representation of 34.3 % in total 440 responses have 'strongly disagreed', 130 mentors having representation of 29.5 % have 'disagreed' that they have difficulty managing their tasks during their meeting with students. Therefore, results implies that majority of the mentors have strongly disagreed that they have difficulty managing their tasks during their meeting with students during the mentorship arrangements. These results implies that majority of the mentors have strongly disagreed that they felt anxious when helping students with academic matters, results implies that majority of the mentors have strongly agreed to develop students' problem-solving skills through a good use of questioning during the mentorship arrangements. Therefore, mean score of 4 for confidence level and 1 for anxiety level shows that mostly mentors are confident in helping mentees to solve their academic issues and are less stressed while performing their duties as mentors in the universities.

Thus, in the light of aforementioned facts, psychosocial development as well as research supervision have been emerged in this research study as important areas of mentorship of mentee because majority of the mentors responded in this research have reported higher confidence level and low anxiety level in the performance of the mentorship roles in higher education level of public and private sector of Islamabad and Rawalpindi, Pakistan.

6. Conclusion

This research study concludes that the perceived mentorship behavior model is highly significant and authentic in explaining the mentorship function including career support, intellectual growth, psychosocial development and research supervision performed by mentors during mentorship arrangements which has been practically executed in higher education institutions and universities situated in Islamabad and Rawalpindi, Pakistan. Main results of the study have established that Ph.D. faculty members, majority of whom are initial career assistant professors, who are working as mentors, have significantly contributed in terms of mentoring mentees especially in the areas of psychosocial development and research supervision. Psychosocial development as a part of sub-model three has been emerged as the best model among the four sub-models based-on the highest results of R and R-square. This explains that mentors' have perceived and focused more on the psychosocial development of mentees while performing mentorship functions. Additionally, mentors' have agreed as well as strongly agreed that they have performed mentorship functions and supported mentees in their academic and professional endeavors with higher confidence level and lower anxiety level collectively known as self-efficacy structure of mentors. Furthermore, the higher confidence level and lower anxiety level have been experienced by mentors which shows that in higher education institutions and universities mentorship of mentees have been considered highly important in shaping future of the youth. Subsequently, statistical analyses has established that



mentors belonged to public sector universities have been engaged in traditional mentorship practices which means routine tasks performed by the male as well as female mentors, however in private sector male and female mentors are significantly different in mentoring mentees in terms of psychosocial development and research supervision.



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