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## “A Study of Supervision Management Styles and Supervisory Experiences of Doctoral Students”

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*Supervision management Styles, Postgraduate Research Supervision, Supervisors and Supervisees*

### ABSTRACT

This research investigated the preferred supervision management style of supervisors and its effect on the supervision experiences of doctoral students. A facet of the supervision process which is abstract but equally significant for the success of the supervisory relationship is the way supervisors manage the research supervision process and support their supervisees in completing it. A supervisor's distinct management and support system plays a significant role in shaping the supervisory relationship and supervision experiences of supervisees throughout the research. We designed a cross-sectional survey and purposefully collected data from supervisors (n=44) and their supervisees (n=136) working in different stages of their research. Supervisors were given a self-developed situation-based supervision management styles questionnaire. Supervisees were asked to respond on a six-point supervisor-supervisee relationship questionnaire. Inferential statistics were used to achieve the research hypotheses. A statistically significant (at  $\alpha .05$ ) difference ( $p = .000$ ) was found for the support and management-related experiences with their supervisors based on supervision management styles. Contractual style (CS) was found to be the preferred supervision style among most of the supervisors during the research supervision process. Research candidates may match their expectations and required supervision support while selecting a supervisor.

## Introduction

The globally expanded landscape of research based postgraduate level programs (Murphy, Bain & Conrad, 2007) has increased the concerns for quality of these programs in terms of timely completion (Akerlind & McAlpine, 2017; Cantwell, Bourke, Scevak, Holbrook & Budd, 2015) students satisfaction towards supervision (Abdullah, Sherrif & Daud, 2012) and the vital part of these programs in global competitive knowledge economy (Abdullah & Evans, 2012; Boud & Lee, 2009).

A similar trend has been observed in enrollment of candidates at postgraduate level programs in universities of Pakistan since the last decade (Noor, 2013). While against this enrollment trend the pool of full-time faculty with PhD is less than one third of the total faculty recruited till 2012-2013. Subsequently this ratio of postgraduate level research candidates and PhD faculty is leading towards an imbalance between these two entities in the Pakistani higher education institutions (HEC, 2016). Simultaneously, this increasing enrollment trend is also raising supervisory management concerns including un-consented supervisors' allotment, mis-managed supervisory management process, mismatch between the supervisor-supervisee research area interests as a source of potential negative supervision experiences faced by postgraduate research candidates in higher education institutions of Pakistan (Saleem & Mahmood, 2017).

In addition to this, substantial workload of supervisors and unplanned disciplinary expansions has also increased the complexities to manage supervision process in efficient and effective manner (Grant, 1999; Gurr, 2001). Some of the visible challenges of such supervisory practices resulting into slow completion, needless replication of research topics, designs and findings which have to be

published at substandard outlets (Javed, 2014).

In this situation, research supervision has become a difficult activity both for the supervisors and research candidates. In this background, another aspect of supervision process that is invisible, abstract but equally significant for the efficiency and effectiveness of supervision at this level is the mutual alignment of supervisor and supervisees (Baydarova, Collins, & Ait Saadi, 2021 Gurr, 2001; Lee, 2007; Orellana, Darder, Pérez, & Salinas, 2016; Woolderink, Putnik, & Klabbers, 2015) in supervisory relationship and the way supervisors manage their supervisees' research and support them to complete their research (Gatfield, 2005).

A number of research papers have acknowledged the importance of supervision experiences during supervisory relationship as key indicator of quality of doctorate and directly responsible for completion, success or failure (Gill & Burnard, 2008; Saleem & Mahmood, 2017). As a result of which there has been increased the focus on pedagogical aspects of the as a key factor that influence the process is supervisory relationship acknowledged by many researchers (Akerlind & McAlpine, 2017; Benmore, 2016; Cantwell, Bourke, Scevak, Holbrook & Budd, 2017; Gatfield, 2005; Kam, 1997; Murphy & Bain, Conrad, 2007). Adaptation of a distinct preferred style influences the supervisory relationship (Gatfield, 2005).

However, there is no single research (the best of our knowledge) in the context of doctoral research supervision that has empirically investigated the supervision styles of supervisors and the way their supervisees experience them in different research stages. Moreover, research is also silent on matching the supervision styles and the supervisees' preferences while selecting a supervisor and the post-supervision experiences during the different

stages of research. Further, there is a need to highlight the issues associated with particular supervision management styles in managing supervision process, from the perspective of both supervisor and supervisee. The situation creates a gap between the supervisory needs and the self-assumed non communicative supervision pedagogies and styles to manage supervisory process. Simultaneously, from supervisees' perspective there is also need to provide some concrete basis for the selection of supervisor with surety of their preferred supervision style to which supervisees' want to be supervised with knowing to the potential supervision characteristics and experiences associated with a particular supervision style.

Formerly, the literature on the research supervision pedagogical concerns thrives on the theoretical modeling of supervision styles (Andreson, 1988; Boehe, 2016; Deuchar, 2008; Gatfield, 2005; Grant, 2003;) and the supervision components related to the "structure" and "support" has been studied in the western context (Gurr, 2001; Lee, 2007).

Previous studies on doctoral supervision the associated background variables have been identified like Hockey (1991) mentioned some personal characteristics of research candidates while selecting them to supervise like having strong motivation towards research, independence, self-confidence, perseverance, and ability of judgment. Aranda-Mena & Gameson (2009) put emphasis on the importance of understanding various stages of research supervision with dynamic needs of supervisees and using different supervision styles has been considered appropriate at specific time with specific tenacities (Boehe, 2016; Orellana, Darder, Pérez, & Salinas, 2016). But some of these studies focus only on supervision experiences or in the other only supervision styles were focused. Hence, there needs to bridge the gap by consolidating the empirically identified styles

and their outcomes in the presence of various external factors that influence the process two ways or in one way. Methodologically these research studies were qualitative in nature, conducted with small samples and mostly using theoretical approach to investigate supervision management styles. There was a dearth need to verify the comprehensive theoretical framework presented by Gatfield (2005) in the context of developing countries with empirical tools and their implications for supervisory experiences.

The pedagogical indicators that contribute towards the preferred choices towards supervision styles helps to understand the supervision practices that could help in directing the appropriate training and development of supervisors, a significant contribution towards the contemporary supervision management practices and to improve the doctoral degrees in more diverse, competitive and neo-liberal education environment.

Subsequently, it could place some concrete recommendations for the policy makers, members of departmental doctoral program committee and supervisors to improve the supervision practices with identified set of indicators of research supervision to manage the supervision experiences of supervisees as per their requirements.

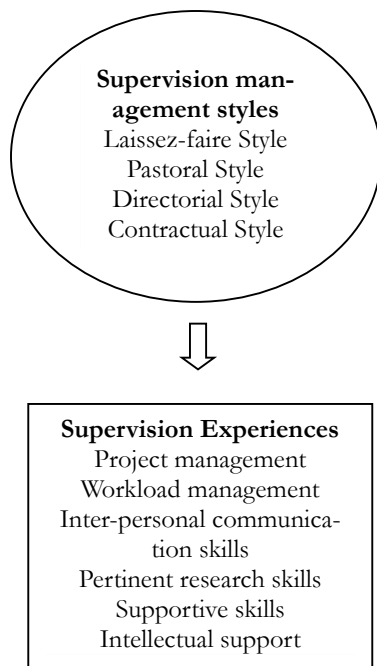


Figure 1. Conceptual framework of supervision management styles and supervision experiences

This research addressed the following research questions and hypotheses.

### Research Hypotheses

H<sub>01</sub>: There is no significant difference among the preferred supervision management styles choices of supervisors for postgraduate research supervision.

H<sub>02</sub>: There is no significant difference among the supervision experiences of supervisees supervised under different supervision styles.

### Method and Procedure of the Study

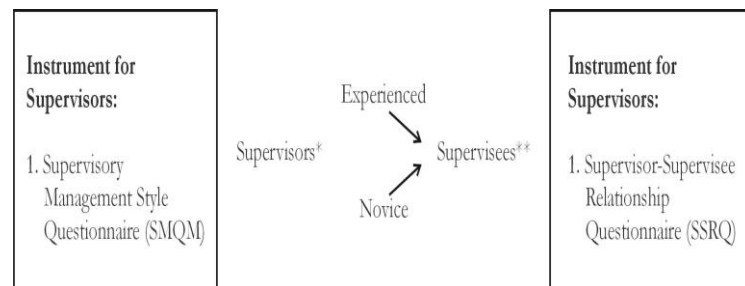
This research was based on empirical data collected through a survey questionnaire from supervisors (n=304) about their preferred supervision styles (i.e. Laissez-faire(LF), Pastoral(PS), Directorial(DR) and Contractual(CR)). A subsequent sample of supervisors (n=44) was purposively drawn from the main sample in order to examine the influence of supervision management styles of novice and experienced supervisors in

shaping the supervision experiences of supervisees (n=136) working under their supervision. These respondents were selected from 13 large sized, general type universities which are currently offering postgraduate level programs in multiple disciplines. The details of sample and their selection procedure have been explained with details in the next section of methodology.

### Sampling

Multi-staged sampling design was used to select the respondents of this study. In the first stage 304 supervisors were purposively selected based on their research supervision experience, discipline, administrative position and gender. A subsequent of 44 supervisors whose supervisees were willing to share their supervision experiences were drawn from the main sample. These students were identified working on the four different stages of their research.

The details of sample from which the tools were filled up are given in figure 2.



\*Supervisors= 44 and \*\*Supervisees= 136

Figure 2. Subsequent sampling unit

On the basis of background profile of supervisors and supervisees (i.e. institutional, personal and external) found specifically relevant and helpful to understand the main variables of the study. The composition of these characteristics in selected sample is given below:

Table 1

### Sample Profile of Supervisors

Background Profile of Supervisors	n= 303	Non-Response Cases
<i>Gender</i>		
Female	100	6
Male	197	
<i>Age(in years)</i>		
Below 30	1	
30-35	67	0
36 -40	89	
41-45	56	
46-50	33	
51 -55	32	
above 55	14	
<i>Study Discipline</i>		
Physical Sciences	65	10
Management Sciences	31	
Social Sciences	136	
Arts & Humanities	33	
Life Sciences	28	
<i>Designation</i>		
Lecturer	46	7
Assistant Professor	188	
Associate Professor	36	
Professor	26	
<i>Teaching Workload (Credit Hours)</i>		
Up to 3 credit Hours	14	53
4-6 Credit Hours	27	
7-9 Credit Hours	69	
10-12 Credit Hours	67	
Above 12 Credit Hours	73	
<i>Postgraduate Research Supervision Experience</i>		
Up to 5 years	158	14
6-10 years	68	
11-15 years	32	
15-20 years	25	
More than 20 years	6	
<i>Administrative Responsibility/ Post</i>		
Chairperson	47	39
Dean	8	
Program Coordinator	65	

Background Profile of Supervisors	n= 303	Non-Response Cases
Director	12	
Any other	45	
Not any	87	
<i>University Sector</i>		
Public	210	4
Private	89	

**Table 2**  
*Sample Profile of Supervisees*

Background Profile	N=136	Non-Response Cases
<i>Gender</i>		
Female	104	0
Male	32	
<i>Age (in years)</i>		
20-25	49	0
26-30	47	
31-35	24	
35-40	14	
40-45	2	
<i>Marital Status</i>		
Single	90	9
Married	37	
<i>Program Level</i>		
MPhil	84	0
PhD	52	
<i>Study Discipline</i>		
Physical Sciences	20	2
Management Sciences	6	
Social Sciences	64	
Arts & Humanities	26	

Background Profile	N=136	Non-Response Cases
Life Sciences	18	
<i>Candidature Type</i>		
Part Time	20	4
Fulltime	112	
<i>Having Any Previous Research Related Experience</i>		
Yes	45	0
No	91	

## Research Instruments

For investigating the supervision management styles of supervisors and the supervision experiences of supervisees the data were collected from the supervisors and their supervisees.

Supervisory Management Style Questionnaire (SMSQ) for Supervisors (Saleem, 2020)

Supervisor-Supervisee Relationship Questionnaire (Saleem, 2014) for supervisees to examine their supervision related experiences across the different stages of supervision process.

### *Supervisory Management Style Questionnaire (SMSQ)*

A self-constructed situation based “Supervisory Management Style Questionnaire” (SMSQ) was used to examine the “Supervision management styles ” of research supervisors empirically. This SMSQ contains twelve situations and based on theoretical model of supervision management styles given by Gatfield (2005). Each situation was supposed to mark one preferred action against the four given options depicting four distinctive supervision management styles . (Supervisory Management Style Questionnaire attached in annexure 1).

### *Supervisor-Supervisee Relationship Questionnaire (SSRQ)*

This questionnaire consists of 56 items which are to be rated against six-point scale of agreement (1-strongly disagree to 6 strongly agree). This questionnaire was developed upon the literature based six aspects of supervision (i.e. project management, workload management, )against which supervision experiences of supervisees on the four different stages of their research (i.e. 1 synopsis development, 2) data collection, 3) data analysis/report writing and 4) thesis submission) were investigate. This questionnaire has been reported in multiple researches (Saleem & Mahmood, 2017; Saleem & Mahmood 2017; Saleem & Rana, 2020).

### Validity and Reliability of Supervisor-Supervisee Relationship Questionnaire (SSRQ)

Content validity index (CVI) was calculated for eight subject matter experts and the CVI value based on the opinions of SMEs was found appropriate CVI=.951. Overall reliability of SSRQ was above .70.

## Study Procedure

During the data collection procedure prior consents from supervisors and their supervisees were taken about their willingness to participate in the study. No respondent was forced to share their data without their willingness. Universities’ registrar department and program coordinators of relevant disciplines were found helpful in approaching the supervisors and their supervisees.

Firstly, supervisors were requested to fill the Supervisory Management Style Questionnaire” (SMSQ) and then their supervisees were approached and requested to fill up the Supervisory Management Style Questionnaire” (SMSQ) and the Supervisor-Supervisee Relationship Questionnaire (SSRQ) questionnaire about their supervision experiences.

At this point they were assured about the confidentiality of their data by not disclosing their names or other information that may

show their identity except the information that was required to analyze the data. The informed consent form was filled for complying ethical considerations

### Analysis and Results

Data were analyzed by using different statistical techniques according to the objectives and the nature of questions that were supposed to be addressed by this study. Statistical Package for Social Sciences (SPSS version 22) was used to analyze the quantitative data while thematic analysis was done for the qualitative data. to investigate the supervision outcomes associated with the different supervision styles Multivariate Analysis of Variance (MANOVA) was performed.

### Supervision management styles and Supervision Support

There were four identified Supervision Management Styles (SMS) i.e. Laissez-faire, Pastoral, Directorial and Contractual analyzed in the selected sample of teachers supervising at postgraduate level. For examining the effect of these four Supervision Management Styles (SMS) on the supervision outcomes (on the subscale of Project Management, Pertinent Research Skills, Intellectual Support, Supportive Skills, Interpersonal Communication Skills and Workload Management) were assessed by applying Multivariate analysis of variance (MANOVA) due to having more than one dependent variable. As these dependent variables were conceptually inter-related so, MANOVA compares the groups and tells whether the mean differences between the groups on the combination of dependent variables are likely to have occurred by chance. In extension of MANOVA, One Way Analysis of Variance (ANOVA) was run as the independent variable has more than two groups to compare so to find the significant differences between the particular groups post-hoc test was required to conduct.

Table 3

### Preliminary Analysis of Supervision Experiences Subscales

Supervision Experiences Subscales	N	M*	SD	Skewness	Kurtosis
Project Management	136	4.512	0.7080	-1.290	2.407
(PM) n=12 items					
Pertinent Research Skills (PRS) n=8 items	136	4.705	0.7171	-.583	-.374
(IS) n=15 items					
Intellectual Support	136	4.628	0.7566	-1.448	.762
(SS) n=11 items					
Supportive Skills	134	4.054	1.1702	-.568	-.751
(SS) n=11 items					
Inter-personal Communication Skills (IPCS) n= 6 items	134	4.756	0.8227	-1.547	2.431
(WM) n= 5 items					
Workload Management	134	4.773	0.7885	-.746	1.304

Note. \*M= Per item mean scores

Before applying the inferential statistics, the normality of data was assessed through running the descriptive, i.e. mean, standard deviation, skewness, kurtosis. The table 3 values for skewness and kurtosis between -2 and +2 are considered acceptable in order to prove normal univariate distribution (George & Mallery, 2011).

Table 4

### Multivariate Analysis of Variance for Supervision Experiences across the Four Supervision management styles

Independent Variable	Multivariate Statistics				
	Pillai's Trace	F	Hy- pothe- sis df.	p	
SMS	.343	2.736	18	<b>.000</b>	
Dependent Variable	Univariate Statistics				
Supervision Experiences	F	df	R <sup>2</sup>	p	Eta sq.
1. Project Management (PM)	7.205	3	.123	<b>.000</b>	<b>.143</b>

2. Pertinent Research Skills (PRS)	2.6	3	.0	.051		
	56		36			
3. Intellectual Support (IS)	5.9	3	.1	.001	.120	
	13		00			
4. Supportive Skills (SS)	1.8	3	.0	.146		
	22		18			
5. Inter-Personal Communication Skills (IPCS)	8.1	3	.1	.000	.158	
	25		38			
6. Workload Management (WM)	6.8	3	.1	.000	.137	
	92		17			

Note. \* Mean difference is significant at the .01 level

One-way Between-groups Multivariate Analysis of variance was performed to investigate the SMS wise differences in supervisees' reported supervision experiences. Six dependent variables i.e. Project management, Intellectual support, Pertinent research skills, Inter-personal communication skills, Workload management & Supportive skills were used. The Independent variable was four different SMS of supervisors (i.e. Laissez-faire, Pastoral, Directorial and Contractual). The multivariate test statistics in table 4 revealed that there was a statistically significant difference ( $p = .000$ ) among the supervision experiences across four SMS on combined dependent variables ( $F = 2.736$ , Pillai's Trace.343). Partial Eta Squared was calculated to represent the proportion of the variance in the dependent variable explained by the independent variable. Tabachnick and Fidell (2007) recommend Wilks' Lambda for general use; however, if the data have problems (small sample size, unequal N values, violation of assumptions), then Pillai's Trace is more robust. So, I reported Pillai's Trace statistics instead of Wilks' Lambda which is more commonly reported due to small sample size, unequal N values and violation of assumptions i.e. Box's Test of Equality of Covariance and Levene's Test of Equality of Error Variances.

Moreover, a significant difference was found among the supervisees' reported supervision experiences on the dependent variable "Project management" ( $p = .000$ ) with large effect

size ( $Eta sq. = .143$ ). However, the supervisees' reported supervision outcomes on the dependent variable "Intellectual Support" ( $p = .001$ ,  $Eta sq. = .120$ ), "Inter-Personal Communication Skills" ( $p = .000$ ,  $Eta sq. = .158$ ) and "Workload Management" ( $p = .000$ ,  $Eta sq. = .137$ ) revealed significant difference due to independent variable. Moreover, the residual value ( $R^2$ ) represents 12.3%, 10.0%, 13.8% and 11.7% variance explained by Project management, Inter-Personal Communication Skills and Workload Management respectively due to independent variable SMS. The significant multivariate test statistics suggested exploring the subsequent differences on the dependent variables due to independent variable.

Table 5

*Supervision management styles (SMS)-wise Descriptive Analysis of Supervision Outcomes Subscales*

Supervision Experiences	Supervision management styles (SMS)							
	Laissez-faire		Pastoral		Directorial		Contractual	
	(n= 26)		n= (36)		n= (08)		n= (64)	
	M	SD	M	S	M	D	M	SD
Project Management	4.05	.90	4.42	.48	4.78	.52	4.74	.65
Intellectual Support	4.28	.67	4.62	.60	4.97	.68	4.83	.55
Inter-Personal Communication Skills	4.11	1.17	4.80	.77	5.19	.56	4.99	.53
Workload Management	4.23	.98	4.74	.58	4.87	.80	5.05	.70

Note. N= total number of supervisors

For examining the effect of different supervision management styles on the supervision experiences through One Way ANOVA, six subscales related to supervision support and management mechanism were used to ob-



serve the supervision outcomes at postgraduate level in 13 general type universities of Punjab province.

Table 6

*Supervision management styles of Supervisors and Mean Score of Supervision experiences*

Supervision Experiences			<i>N</i>	<i>M</i>	<i>SD</i>
Subscales					
Project Management (PM)	12 items	Laissez-faire Style	26	4.057	.905
		Pastoral Style	36	4.425	.448
		Directorial Style	8	4.729	.554
		Contractual Style	66	4.713	.671
Pertinent Research (PRS)	8 items	Laissez-faire Style	26	4.442	.711
		Pastoral Style	36	4.680	.608
		Directorial Style	8	5.062	.347
		Contractual Style	66	4.778	.782
Intellectual Support (IS)	15 items	Laissez-faire Style	26	4.287	.677
		Pastoral Style	36	4.6259	.60773
		Directorial Style	8	4.9833	.65003
		Contractual Style	66	4.7222	.83476

Supervision Experiences		<i>N</i>	<i>M</i>	<i>SD</i>	
Subscales					
Supportive Skills (SS)	11 items	Laissez-faire Style	26	3.7133	.94605
		Pastoral Style	36	4.3081	1.12086
		Directorial Style	8	4.5227	.39101
		Contractual Style	64	3.9915	1.30557
Inter-personal Communication Skills (IPCS)	6 items	Laissez-faire Style	26	4.1154	1.17829
		Pastoral Style	36	4.8056	.77306
		Directorial Style	8	5.1667	.51946
		Contractual Style	64	4.9375	.53904
Workload Management (WM)	5 items	Laissez-faire Style	26	4.2308	.98256
		Pastoral Style	36	4.7444	.58086
		Directorial Style	8	4.7500	.80534
		Contractual Style	64	5.0125	.70000

In table 6 One Way ANOVA was applied to compare the mean scores of supervision experiences of supervisees regarding six subscales considering as supervision outcomes based on four supervision management styles (SMS) i.e. Laissez-faire, Pastoral, Directorial and Contractual. The mean scores of supervision experiences on six subscales are given in the above table.

Table 7

*Mean Score Comparison of Supervisees Supervision Experiences SSE Subscales regarding Supervision management styles of Supervisors*

Supervision Experiences	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	<i>ES</i>
Project Management (PM)	8.687	3	2.8966	4.79	.000	.128
Between Groups						

	Within Groups	58.992	132	.447		
Pertinent search (PRS)	Re-Between SkillsGroups	3.194	3	1.0652	.122	.101
	Within Groups	66.233	132	.502		
Intellectual port (IS)	Sup-Between Groups	4.616	3	1.5392	.795	<b>.043</b> .060
	Within Groups	72.670	132	.551		
Supportive Skills (SS)	Between Groups	7.350	3	2.4501	.822	.146
	Within Groups	174.801	130	1.345		
Inter-personal Communication Skills (IPCS)	Between Groups	14.216	3	4.7398	.125	<b>.000</b> .158
	Within Groups	75.821	130	.583		
Workload management (WM)	Man-Between Groups	11.349	3	3.7836	.892	<b>.000</b> .137
	Within Groups	71.354	130	.549		

After performing One Way ANOVA, the mean score comparison results (table 7) indicated a significant difference ( $p < .01$ ) in the supervision experiences of supervisees being supervised by supervisors with four different Supervision management styles (SMS). The mean scores were found significantly different on the subscale Project Management ( $p = .000$ ;  $ES = .128$ ), Interpersonal Communication Skills ( $p = .000$ ;  $ES = .158$ ) and workload Management ( $p = .000$ ;  $ES = .137$ ) large effect size. It can be interpreted from the results that supervision management styles (SMS) play a vital role in shaping the supervision experiences at postgraduate level.

Table 8

*Post-hoc Analysis of Supervision Experiences based on Supervisory Management Styles*

Dependent Variable	Supervisory Management Style	Supervisory Management Style	Supervisory Management Style	Difference (I-J)
Project Management (PM)	Contractual	Laissez-faire	.655*	<b>.000</b>
	Intellectual port (IS)	Sup-Directorial	Laissez-faire	.696*
Contractual		Laissez-faire	.435*	<b>.013</b>
Inter-personal Communication Skills (IPCS)	Pastoral	Laissez-faire	.690*	<b>.003</b>
	Directorial	Laissez-faire	1.051*	<b>.005</b>
	Contractual	Laissez-faire	.822*	<b>.000</b>
Workload Management (WM)	Pastoral	Laissez-faire	.513*	<b>.039</b>
	Contractual	Laissez-faire	.781*	<b>.000</b>

Furthermore, *Tukey HSD* post-hoc test (table 7) was applied to identify the particular *Supervision management styles (SMS)*. The mean difference (MD) and alpha (p) values were used to interpret the results regarding the supervision experiences of supervisees as part of supervision outcomes which were significantly different ( $p < .05$ ) regarding the supervision experiences reported by supervisees on the subscale of Project Management Interpersonal Communication Skills and “Workload Management” (WM). It was found that supervisees reported significantly better experiences ( $p = .000$ ;  $MD = .65569^*$ ) regarding project management strategies of the supervisors with Contractual Style of supervision at postgraduate level. While the supervisees also reported better experiences regarding the Interpersonal Communication Skills of supervisors with Pastoral ( $p = .003$ ;  $MD = .69017^*$ ), Directorial ( $p = .005$   $MD = 1.05128$ ) and Contractual supervision management style as compared to the supervisees experiences being supervised by supervisors using Laissez-faire supervision management style. In addition to above, supervisees reported significantly better experiences regarding the workload management skills of supervisors being supervised with

Pastoral ( $p=.039$ ; MD.51368\*) and Contractual ( $p=.000$ ; .78173\*) Supervisory Management Style as compared to the reported experience of the supervisees being supervised with Laissez-faire supervision management style.

## Discussion

### Supervision management styles and Supervision Outcomes

The two most essential elements of supervision i.e. support and structure has strong implications for the supervision outcomes in terms of the supervision experiences and completion time. The first element considered to be responsible for the appropriate type of support and skills which a supervisee needs during the different stages of research process. The second element is more responsible for efficient organization of project in terms of time and task management. The supervisory management grid places the four styles i.e. Laissez-faire, Pastoral, Directorial and Contractual into four quadrants based on the lower and higher proportion of these elements. Hence, the different proportion of support and structuring elements made logical implications for examining the influence of supervision management styles adopted by supervisors on the supervision experiences reported by supervisees. The better supervision outcomes related to project management and intellectual support of supervisor with contractual style of supervision is a result of higher proportion of supervision elements "structure and support". Moreover, the significantly poor reported experiences of supervisees related to intellectual support, interpersonal communication skills and workload management of supervisors under Laissez-faire type of supervision style are due to the lower concerns of supervisors for supporting their supervisees and structuring their research projects under this style of supervision.

As in the previous researches supervisor-supervisee relationship has also endorsed as "the most important channel of intellectual inheritance between one generation and the next" (Federation of Australian University Staff Associations (FAUSA, 1979). Moses (1985) identified two basic principles of effective supervisory relationship i.e. clear and open communication regarding all aspects of thesis. Without clear and adequate communication between supervisor and supervisee the supervisees face issues of intellectual isolation and mismanagement of project (Maxwell & Smith, 2010). So, in the absence of these elements when supervisees need them make them anxious and morally down. Aranda-Mena and Gameson (2012) concluded that clear communication between supervisor and supervisee can reduce the level of anxiety among supervisees and can help in dealing with their demands and expectations. Through a cross-case analysis, the identified perceptions of respondents were found congruent with Malfoy and Webb (2000) that there was a lack of correspondence between the adopted supervision style (pastoral) and research candidate's needs. The student appeared to be seeking directorial supervision style with clear identified set of goals and targets (Grant 2005). The supervisor felt resisting in adopting hands-off approach. While the student's dissatisfaction was indicating that she had not yet reached at the point where she could make adjustment according to the style on offer (Acker et al., 1994).

Some relevant findings were reported by Boehe (2016) that the degree to which supervisors prefer to influence and structure the research process seems to reflect their tolerance for uncertainty (Hofstede 2001). Supervisors who tend to avoid uncertainty are likely to insist on a highly structured approach because structure conveys stability (Schneider and Barsoux 1997). Hence, uncertainty avoidant supervisors might become more directive as they make attempts to control uncertainty,

which is inherent in the PhD thesis process. Avoiding uncertainty to a larger extent diminish the space for creativity and critical thinking on the supervisees' side.

Supervision has been recognized as a combination of both personal and professional characteristics of supervisors and supervisees in order to get effective outcomes of the supervision. A professional relationship with personal warmth is suggested popular style. Hockey (1991) concluded that personal characteristics of research candidates while selecting them to supervise like having strong motivation towards research, independence, self-confidence, perseverance, and ability of judgment. Likewise, in this research, supervisees' strong motivation towards research contributed positively towards the supervision outcomes.

### **Conclusions**

There is no one best supervision styles, but the perceived mechanism of support and management made supervisees more conscious if are left at their own. Although, during supervision there are times when supervisees' own learning is required to come out from the phase of stuck but an unnecessary supervisory support may hinder that part of learning and academic growth. The supervisors' preferred choice of contractual style for supervision is the result of their supervisees' revealed and un-revealed expectations for high supervisors' support for their research projects without any delay. Moreover, lack of supervision role transition during research handicapped supervisees and stifle their academic growth. Consequently, the self-management ability of supervisees' never reaches to the level where they would be able to monitor their progress till the end of the research. That's why when supervisors use *liassez-faire* type of supervision style the supervisees reported poor experiences regarding the management of project. While supervisees found

more comfortable with the contractual and directorial type of supervision styles.

It can be concluded that supervisors' inclination towards adopting contractual supervision style(CS) the most preferred operating style of supervision through various research stages during supervision can be concluded as the stagnation of their approach towards responding the dynamic needs of supervisees. Additionally, considering contractual styles as solution for the problems throughout the whole research journey, not only results into a more hand-holding approach of supervisors to respond the supervisees' problems but also keep their supervisees to be dependent on them till the end of research. Consequently, the intellectuals of such prestigious degree remained be unsuccessful to develop the state of competent-autonomy which is the perceived outcome of this degree.

### **Guidelines for Institutional Doctoral Program Committees**

The spectrum of research journey, concrete roles and responsibilities of supervisors and supervisees can be developed by Institutional Doctoral Programme Committees to combat the supervision challenges faced by supervisors and supervisees during different stages of research. Discipline specific modalities can be specified with mutual consensus of departmental doctoral committees.

No supervision management style is best or worst in all situations, but supervisors and supervisees may be trained according to a spectrum of mutually expected needs to accomplish different tasks.

Using a single static supervision management style can diminish the academic learning and growth of research candidates. Supervisors may be guided to use diverse styles according to the benefits linked with their application in diverse situations and for supervisees with different background characteristics.

At institutional level, there may be developed a research counseling office for research candidates that may help them to select an appropriate supervisor on the basis of their personal competence, research experience and motivation level towards their research.

### **Guidelines for Supervisors**

Furthermore, supervisors and supervisees can be matched on the basis research topic and preferred supervision management styles by giving them awareness regarding pedagogical manifestations of supervision aspects and their possible outcomes associated with them.

### **Recommendations for Research Candidates**

Research candidate can match their skills and the support mechanism of supervisors (associated with specific supervision style) which is on offer at the time supervisor selection.

### **Research Contributions and Areas for Future Research**

This research established empirical evidence regarding distinct experiences of supervisees working under the supervisors with different supervision styles. Moreover, the findings of the study would help the research candidates to understand the nature of support and management mechanism under the offer of supervisors with different supervision styles at the time of selection. This study was conducted in multi-disciplinary research oriented universities that may contribute towards developing new policies especially for higher education institutions. Hence this study may influence the faculty development trainings to prepare the novice supervisors for more dynamic supervision practices. That may be resulted into diminishing the academic growth and autonomy even after getting their degrees. Further research may be conducted to explore the concrete independent academic contributions of supervisees with dynamic

profiles supervised under different supervision styles.

It has been established from the findings of this research that mostly supervisors preferred to use contractual supervision style throughout the research journey to address the dynamic needs of their supervisees.

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