

Relationship between Teacher Educators' Professional Development, Workplace Related Basic Need Satisfaction and Researcherly Disposition

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As the 21st century commenced, both policy and research literature has acknowledged the need for teacher educators – or teachers – professional growth. A growing publication highlights a teacher educators' role in performing research, and becoming a teacher as a researcher is an essential part of education. This quantitative research study aims to determine the relationship between professional development, basic need satisfaction, and attitude towards conducting research (researcherly disposition) of teacher educators at the workplace. This study was conducted only in Karachi. The study population comprises of teachers of public and private educational institutions of Karachi in the province of Sindh, Pakistan. The scales are adopted and duly permitted to be potent measuring instruments. The random sampling technique is selected with a sample of 300 teacher educators. Data was analysed in three phases through SPSS and Partial Least Squares Structural Equation Modelling. The study's findings reveal a relationship between basic need satisfaction of teachers and researcherly disposition. The study recommends policymakers and educational administration plan such types of programs that meet the four dimensions of researcher disposition with the specific need of teacher educators.

Keywords: *Teacher Educator, Professional Development, Work Place, Basic Need Satisfaction, Researcherly Disposition*

Introduction

According to Borko (2019), teachers are the backbone of any nation as they are the agents to make civilised, refined and educated individuals ready to face the upcoming practical life challenges. Teachers' competencies are based on their capabilities, subject knowledge, teaching pedagogy and skills in research area. Besides the worldwide requirement of quality education for teachers, and the progress in skills development of teacher educators, it is still an un-emphasised area. A higher power body of research on the professional development appeared (Kinloch & Dixon, 2018) however teacher educators' research work remained scanty in their professional development until the end of the 20th century (Loughran, 2014; Sidani & Broad, 2019). In this regard, many confusions were found about teacher educator education to develop professionals at the education sector (Tack & Vanderlinde, 2019; Vanassche et al., 2019). It has been seen that in the distinctive research accessible on job satisfaction of teachers the issue remains the same, that as a pivotal factor it is not still been examined, explicitly the association between basic psychological needs and their researcherly disposition (European Commission, 2013).

As a result, the critical requirement for teachers' proficient development has developed worldwide subsequently. It now gets acknowledgment - equally the policy of decision making (European Commission, 2013) and research (Ben-Peretz et al., 2013; Loughran, & Hamilton, 2016). Ping et al. (2018) emphasised that importance of conducting research on teacher educator proficient skills because they teach the teachers. Loughran (2016) demonstrates that teacher educators' research activities are needed in conjunction with three basic needs (autonomy, relatedness, and competence), which must connect with education, with the daily training practices and concentrate on quality education.

The research on teacher educator's researcherly disposition in Pakistani perspective has a great scope to decide what the main research problem is going to envisage (Batool, 2018). Because unless the essential needs related to the work context are fulfilled, educators' professional development is hardly possible. In this connection, basic triplet needs (autonomy, relatedness, and competence) of psychology as referred to by the theory of (SDT) for individuals are significant predictors to optimize their functions as several domains of life and professional capabilities. The concept of researcherly disposition is related to the idea of 'research as temperament' (Cochran-Smith and Lytle, 2009; Kreijns et al., 2019).

Besides, 'research habit of mind' (Meijer et al., 2017) suggested that engagement in research by the teacher educators can promote more experts in the field of education and increase the demand group of professionals in the field of study. Bestowing to Rizvi (2015) and Hameed (2018), colossal work pressure involves research for teacher educators and progressing their research

publications. There should be types of schedules or programs for teachers' educators to easily apply in research. Further, they stressed that new methods, techniques and knowledge of statistics should be known by teachers and educators while conducting research. In this connection, professional development programs, workshops, and sessions are arranged. It was found by Halai (2011) and Soomro (2018) that there is no culture of research in educational institutions to engage the teacher educator in research. The advancement of research culture in affiliated colleges of education is inadequate. It is the authorities' responsibility to take the initiative to promote the research and arrange some incentives for teacher educators and research-oriented policies and strategies to be provided by the higher Education Commission in the teacher educator's institutions (Hashim, 2016). This study focuses on teacher educators' professional development regarding their basic needs' satisfaction and researcherly temperament towards conducting research activities in their organisations.

Literature Review

Self-Determination Theory (SDT) Based on Basic Needs Satisfaction

The macro human motivational theory is applied according to Self-Determination Theory (SDT). It spreads over the success in many domains of education, sports, parenting and healthcare, and the work field of management and motivation (Deci & Ryan 1985; Deci, Olafsen, & Ryan 2017). As per the suggestions, the SDT, basic psychological needs are suggested for autonomy, competence, and requisition of relatedness (Ryan and Deci, 2017). The bestowing research study of Howard, Gagné, & Bureau (2017) shows the theoretical framework by SDT that determines satisfaction in the field of psychological needs in critical conditions of the individuals striving to develop all areas of life. SDT reaffirms that the work environment naturally affects the professional development of their works and functioning. Throughout the limits to addressing professionals' basic needs, it can very well be seen in Figure 1 concerning the work domain showing the workplace's basic SDT model (Van Den Broeck et al., 2016).

Disposition Theory

Disposition concept plays a pivotal role in elucidating the behavioural successes and the developing and mandatory concept in the studies of the education (Crick and Goldspink, 2014). Disposition is nothing but habit formation of mind, psychology to the special patterns and special behaviour (Bruggink and Harinck, 2012; Katz and Rath, 1985). Concerning the fact of teacher educators' researcherly attitude can generally be entitled 'the aptitude to involve in conducting research'. Perkins et.al, (1993) argued on systematic sight by which they undo the idea of disposition into a triplet furnished below, about inclination, thoughtfulness, and aptitude.



Predisposition concerning to mans' affected tendency of the behaviour X; thoughtfulness includes the agility of man to X event; and aptitude encompasses the real skills to be followed by X behaviour.

However, this framework permits the primal fact to theorise the researcher disposition of teachers as a wide-ranging paradigm, so it starts a good comprehension of what is mandatory in teacher educator professional development to be a researcher (Bollen,1984). The compulsory production of the two-fold idea of making mind with habit to research and yield knowledge for indigenous context and community know-how on teacher education. It encompasses the behaviour to develop research, the research domain's thoughtfulness, and the study's intention (Perkins et al., 1993; Perkins & Zimmerman,1995).

Basic Psychological Needs

The SDT theory indicates that people have three basic needs for psychology. The need for autonomy notes that a professional feels a sense of psychological independence and feels a sense of freedom that performs his activities at the workplace properly (DeCharms 1968; Deci and Ryan, 2000). Suppose the teacher completes the task he is asked for; if he is agreed to do so, autonomy sufficed. But if the teacher is forced to complete the work, autonomy is demoted (Van Den Broeck et al., 2016).

The need for relatedness to be connected ensures that a professional feels a close harmony with his colleagues and his supervisors respect his work and activity (Baumeister and Leary 1995; Dec et al., 1991). The criterion is met if the instructor feels a community member and a sense of reciprocal ties. The need for competence is an inherent desire to work efficiently with a competent feeling (Van Den Broeck et al., 2016; Van Quaquebeke & Felps, 2018). You can satisfy this need by feeling the power over your work environment and, without hesitation, can improve your new skills. That is why STD believes that when these psychological needs are fulfilled, teacher educators contribute and grow and thrive properly. A loss of psychological needs is counterproductive to their occupational development, and it can have a low effect on their job performance (Deci, Olafsen, and Ryan 2017).

Professional Development of Teacher Educator

The task of teacher educators' professional progress is defined by the European Commission that positively supports the student-teacher usual learning (2013, p. 8). The professional belonging to the varied expert group in the education can also be included at the different proficient place of work (Korthagen, 2017; Shabroz, Thomas & Hamid, 2019). Teacher educators are involved in

educational programs, and they teach at educational institutions. Even though the teacher educators of these educational institutions are also categorised according to their expertise, education, and skills hierarchies of teachers, they are still not prepared to imply teacher educators' amenities (Berry, 2007). It is noted that professional development is dynamically influenced by teacher educators' training and qualification previous experience (Livingston et. al, 2014). Many studies found (Lunenberg et. al, 2014) that engagement in conducting search may be a key component in their proficient improvement and growth. Being an active participant in conducting research is a basic aspect for a teacher educators' learning directions. Even though the career growth also depends upon as teacher-researcher "research journey." The study of Loughran (2014) also stated that if a teacher educator is an expert in research, he /she can improve their knowledge of teaching pedagogy, students learning, and teaching-learning process in the field of education.

Since the beginning of the 21st century, teachers' professional development has been emphasised internationally. It is an essential skill and appreciated in research as given (Swennen& Bates, 2010; Ben-Peretz et al., 2013) literature of policymaking. According to Cochran-Smith (2005), the dual role emphasizing the teacher educators' role depending upon the researcher and teacher of a teacher, which included professional practices in teacher learning and conducting research, is gradually blurred (Berry, 2007). We can say that teacher educators must play an active role and to be excelled in both teaching and learning practices.

The Researcherly Disposition

The concept of deposition plays an essential role in explaining successful attitude and positive behaviour. It is a novice and growing notion in the educational sector. For Crick and Goldspink (2014) the first dimension of researcherly disposition involves an affective aspect that relates to one's predisposition and the capability to conduct research. Therefore, it is essential that teachers' educators value research, and they are research-oriented in their daily work practices and identified as good researchers (Crick and Goldspink, 2014). The second dimension is based on the cognition aspect, meaning teachers can conduct research properly and contribute his/her knowledge to increase teacher education.

Concept, methods, and knowledge in educational research are the key components of this dimension. The third concept of the dimension of the researcherly disposition related to the behavioural aspect that is valuing the research means teacher educator gives importance to conduct research and a smart consumer of research means to be alert in his/her daily teaching-learning process. The fourth dimension of researcherly disposition is the smart consumer of research (producer of knowledge). The concept of researcherly disposition has been argued as oddly related to the ideas of the stance "research is a habit of mind," reported a capable state of mind for

professional development. It takes the teacher educators into account and the unending demand of experts to conduct research (Tack & Vanderlinde, 2019).

According to Loughran (2014), research work and activities of teacher educators' demands are as threefold: they must link the research to their field of teaching to the teacher-students; they connect their research activities with their daily teaching work; they improve the teacher students with association with their research work. Through research, teacher educators can quickly assess particular situations and determine the research problem in their daily routine practices. The overall relationship of basic psychological needs in researcherly disposition is to concentrate on the teaching process progress that develops more knowledge among the community. In this regard, starting with preliminary research and practices of research or systematically researching ones' daily practices (Dinkelman, 2003) is frequently depicted as an effective approach and it plays a dual role in teacher educators' professional development, including local production and knowledge on teacher education as well.

Figure 1 Conceptual Framework developed from the Literature

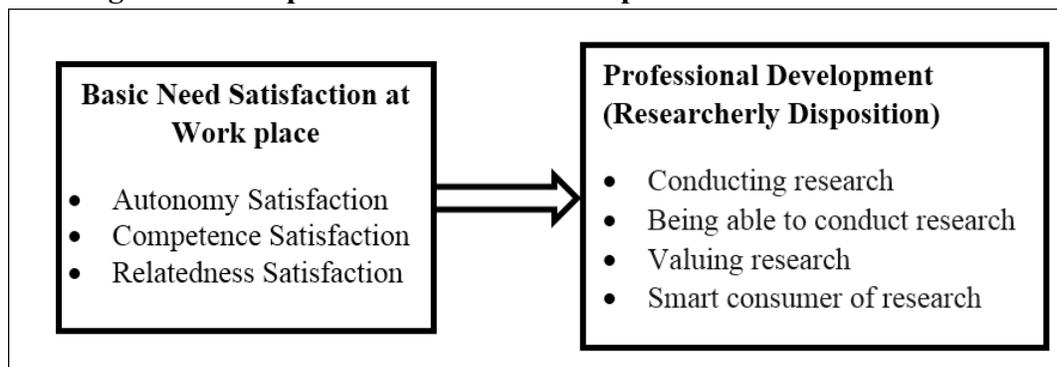
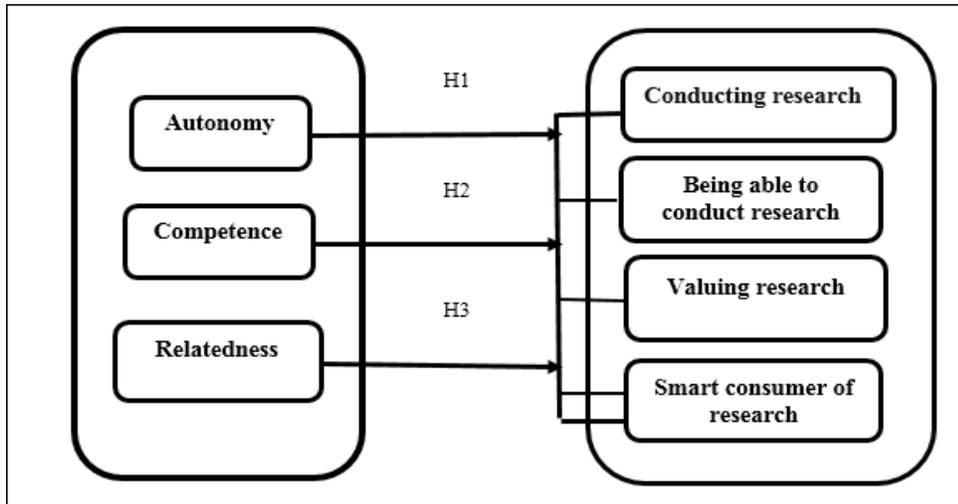


Figure 1 shows the research study model of this study with all variables i.e. Basic need satisfaction and professional development opportunities regarding researcherly mien.

Figure 2 The Hypothesised model of Basic Needs Satisfaction and Researcherly Disposition



Hypotheses generated from Literature Review

- H1: The effect of autonomy on overall dimensions of researcherly disposition.
H2: The effect of competence on overall dimensions of researcherly disposition.
H3: The effect of relatedness on overall dimensions of researcherly disposition.

Methodology

Research Design, Sample Size, and Data Collection

The research employed a quantitative survey approach. This research design aimed to find out the cause and effect relationship factors. This study was conducted only in the Karachi division. The study population comprises teacher educators of six public and private education institutions and four public and private universities of Karachi, in Sindh, Pakistan. Three hundred teacher educators participated in this study based on the Morgan table. The random sampling technique was selected that consisted of 300 teacher-educators. Therefore, 300 survey questionnaires were distributed among all teacher educators. The first phase consists of descriptive statistics (demographic information) of the respondents. Table 1 shows the participants' information and includes a percentage of male (31%) and female participants (69%). The academic qualification of participants includes masters (42%), MPhil. (42%) and PhD. (16%). The professional degree includes 15% of participants having B.Ed. degree, 83% M.Ed. and others are 2%. The designation also included (50%) participants' teachers, (48%) lecturers, and (02%) Assistant professors. Experience includes (17%) participants that have 0-5, (50%) participants with 6-10, (29%)



participants with 11-15 and (4%) participants with more than 15 years. Sixty-six percent of participants were from public and institutions and 34% from private institutions.

Survey Instrument

For this purpose, two measured scales had been standardised to collect the data. The scale of satisfaction for the basic needs consisted of 18 items. There were three subscales designed as W-BNS: firstly, six items autonomy; secondly, six items relatedness; and finally, six items competence (Van den Broeck et al. 2010). It is based on the five-point Likert scale from Strongly Disagree = 0 to Strongly Agree = 4. While the teacher educators' researcher disposition of teacher educators' Scale (TERDS) (Tack & Vanderlinde, 2016) included four dimensions; conducting research as a teacher educator, being able to conduct research, valuing research, and being a smart consumer of research used for improvement and the understanding researcher disposition of teachers. These instruments were modified with experts' opinions, literature reviews, and the researcher's own experience and were piloted before collecting data.

Data Analysis

The data was analysed using a version of the Statistical Kit for Social Sciences (SPSS). 22.0 & Version 3.2.7 of Smart PLS. For reliability and validity of the outer model, smart PLS 3.2.7 (Ringle, Wende, & Becker, 2015) was used, and hypotheses were tested. The model of this study was based on the higher order model as a correlation between the basic needs of psychology and the teacher's researcherly disposition. The reliability of all instruments was piloted. In research, internal consistency is used to measure reliability (Hair et al., 2013). The range of least reliability coefficient is as variables consistency is 0.70. Table 2 shows the reliability of the basic need satisfaction scale of all dimensions is 0.953 and the reliability of researcherly disposition along with all dimensions is .823.

Table 2 Reliability of all constructs (Cronbach's Alpha Reliability)

Constructs	Dimensions	No. Of items	Cronbach's Alpha Reliability
Basic need satisfaction		14 Items	0.953
	Autonomy	04 Items	0.779
	Competence	05 Items	0.954
	Relatedness	05 Items	0.975
Researcherly Disposition		18 Items	0.823
	Conducting research	04 Items	0.954
		Being able to conduct research	04 Items
	Valuing research	06 Items	0.927
	Smart consumer of research	04 Items	0.918

The analysis of Common Method Bias of the Study

Thirty-two factors were analysed through Harman's one-factor test and the most co-variance explained by one factor is 33.3% percent. It is pointed out that CMB is suitable for this study. If the whole variance for a single factor is below 50%, then the data is not affected by CMB as suggested by Podsakoff (2012). Therefore, the results have no threat of common factor bias in this study. In this study, the total dimensions are 7, consisting of 32 items with 70.752% of the total variance. Through this test, 33.879% of co-variance was explicated by the first factor in the study's data set.

Data analysis of Measurement Model

The study of the data analysis implies two phases; one analysis of the measurement model is considered an outer model of the study, and the second phase deals with the assessment of the structural model as it is regarded as an outer model. According to Straub, Boudreau, & Gefen (2004), a reflective measurement model is tested of internal consistency, reliability, convergent validity, and discriminant validity. In this regard, a researcher used a PLS algorithm-based assessment to assess the measurement model's validity and reliability.

Analysis of Content Validity of the Study

Table 3 shows the PLS algorithm results of basic need satisfaction and researcherly disposition. It shows good reliability, with all dimensions having 31 items. The acceptable threshold value is .40 - .70 (Hair et al., 2014). The research model is validated if items of all outer loading constructs are more than 0.7 than the remaining constructs of the model (Hair, Hult, Ringle, & Sarstedt, 2017). Table 3 shows that the most outer factors loading is more than 0.7, which means items simultaneously loaded on their constructs with higher values than other constructs at the level of <0.05.

Analysis of Convergent Validity of the Study

The convergent validity of measurement model can be done by three measures: internal consistency, composite reliability, and factor loadings. Furthermore, the threshold value of factor loading is 0.70, and the range is 0.792 to 0.978 (Chin, 2013). Table 3 shows that composite reliability (CR) ranges from 0.855 to 0.978, and the recommended cut-off value is 0.70, which indicates that the internal consistency of all constructs is acceptable and reliable (Chin, 2010; Hair et al., 2013). Convergent validity can also be assessed by average variance extracted (AVE). According to Fornell & Larcker (1981), average variance extracted (AVE) should be above 0.5, which is considered an acceptable threshold value and AVE result is ensured of model.

Table 3 Convergent Validity

Construct	Item	Outer Factor Loadings	Cronbach's Alpha Reliability	CR ^b	AVE ^a
Autonomy	AT1	0.811	0.779	0.855	0.596
	AT2	0.811			
	AT3	0.737			
	AT4	0.724			
Being able to conduct research	BG1	0.974	0.650	0.817	0.698
	BG3	0.669			
Competence	CT2	0.995	0.904	0.878	0.787
	CT3	0.764			
Conducting research	CD1	0.844	0.908	0.935	0.783
	CD2	0.907			
	CD3	0.915			
	CD4	0.873			
Relatedness	RT1	0.960	0.975	0.973	0.880
	RT2	0.980			

	RT3	0.941			
	RT4	0.907			
	RT5	0.899			
Smart consumer of research	ST1	0.895	0.918	0.942	0.803
	ST2	0.904			
	ST3	0.896			
	ST4	0.890			
Valuing research	VA1	0.857	0.927	0.943	0.734
	VA2	0.860			
	VA3	0.874			
	VA4	0.862			
	VA5	0.868			
	VA6	0.816			

The Analysis of Discriminant Validity of the Study

The measurement model can be assessed by discriminant validity through a) Cross loadings, b) Fornier-Lacker criterion, and c) Heterotrait-Monotrait ratio (Hair et al., 2017). Table 4 indicates that outer model cross loadings of basic need satisfaction and researcher disposition items of dimensions. It is evident in the table that all items of constructs were loaded significantly on their particular dimension or constructs. According to Gefen and Straub (2005), the loadings should be greater than their cross-loading on another latent variable or construct and more significant than 0.1. The cross loadings of all the study items (measurement model) within their respective constructs.

Table 4 Result of Factor Analysis

Constructs	Items	AT	BG	CD	CM	RT	ST	VA
AT	AT1	0.811	-0.152	0.448	0.406	0.549	0.271	0.270
	AT2	0.811	-0.127	0.480	0.422	0.558	0.276	0.273
	AT3	0.737	-0.115	0.442	0.390	0.521	0.169	0.185
	AT4	0.724	-0.059	0.439	0.485	0.621	0.191	0.174
BG	BG1	-0.145	0.974	-0.199	-0.038	-0.073	0.047	0.037
	BG3	-0.114	0.669	-0.052	-0.090	-0.065	-0.030	0.042
CT	CT1	0.541	-0.119	0.844	0.453	0.603	-0.049	-0.114
	CT2	0.537	-0.177	0.907	0.528	0.664	-0.001	-0.115
	CT3	0.584	-0.241	0.915	0.516	0.618	-0.049	-0.128
	CT4	0.425	-0.115	0.873	0.454	0.549	-0.077	-0.161
CD	CD1	0.541	-0.119	0.844	0.453	0.603	-0.049	-0.114
	CT2	0.537	-0.177	0.907	0.528	0.664	-0.001	-0.115
	CT3	0.584	-0.241	0.915	0.516	0.618	-0.049	-0.128
	CT4	0.425	-0.115	0.873	0.454	0.549	-0.077	-0.161
RT	RT1	0.732	-0.127	0.691	0.712	0.960	0.223	-0.004

	RT2	0.682	-0.034	0.654	0.577	0.980	0.273	0.056
	RT3	0.643	-0.109	0.665	0.659	0.941	0.226	-0.023
	RT4	0.702	-0.088	0.612	0.653	0.907	0.166	-0.006
	RT5	0.640	-0.068	0.644	0.679	0.899	0.127	-0.084
ST	ST1	0.342	-0.002	0.012	0.143	0.299	0.895	0.811
	ST2	0.282	0.058	-0.070	0.133	0.239	0.904	0.819
	ST3	0.236	0.049	-0.076	0.149	0.204	0.896	0.805
	ST4	0.229	0.008	-0.059	0.137	0.212	0.890	0.783
VA	VA1	0.231	0.046	-0.150	0.042	-0.046	0.735	0.857
	VA2	0.307	-0.023	-0.048	0.110	0.046	0.752	0.860
	VA3	0.368	0.102	-0.064	0.032	0.135	0.790	0.874
	VA4	0.197	0.044	-0.189	-0.050	0.027	0.794	0.862
	VA5	0.187	0.041	-0.218	-0.067	-0.038	0.775	0.868
	VA6	0.266	0.003	-0.097	0.004	0.076	0.765	0.816

Correlations Matrix for Discriminant Validity

Table 5 shows the correlation matrix results that square root AVE of each construct is more significant than any other construct. It suggested that all constructs contribute more variance with their related indicators than other indicators (Hair et al., 2014). Correlation matrix table 5 shows the square roots (R2) of AVE in sloping lines of components. The row and column (correlation coefficients vertical and horizontal to the respective constructs) show the total value of their correlation of the constructs. Therefore, the seven first-order constructs of basic need satisfaction and researcherly disposition were proven to be adequately different.

Table 5 Correlations for Discriminant Validity (Fornell-Larcker Criterion)

	AT	BG	CD	CM	RT	ST	VA
AT	0.772						
BG	-0.153	0.835					
CD	0.583	-0.182	0.885				
CM	0.543	-0.055	0.549	0.887			
RT	0.718	-0.079	0.682	0.644	0.938		
ST	0.304	0.032	-0.054	0.157	0.266	0.896	
VA	0.302	0.042	-0.150	0.013	0.039	0.898	0.857

Assessment of the Heterotrait-Monotrait Ratio (HTMT) of Correlation

Table 6 indicates that all correlations of HTMT measure smaller than one and are significant (Henseler, Ringle, & Sarstedt, 2015). Another cut-off value for the (HTMT) is .90 proposed by Gold et al. (2001) and Teo et al. (2008). Table 6 shows each construct is more closely related to its indicator than the other construct. Hence the criteria of discriminant validity is satisfactory.

Table 6 Heterotrait-Monotrait (HTMT)

	AT	BG	CD	CT	RT	ST	VA
Autonomy							
Being able to conduct research	0.204						
Conducting research	0.699	0.208					
Competence	0.648	0.067	0.666				
Relatedness	0.827	0.124	0.734	0.769			
Smart consumer of research	0.345	0.062	0.066	0.165	0.225		
Valuing research	0.343	0.081	0.159	0.080	0.083	0.772	

Assessing Collinearity Issues of Structural Model

According to Hair et al. (2014), the high collinearity among predictors is a big issue in the research if there is a high correlation in predictors not acceptable in the research. Therefore, this study applied the inner VIF value to assess the collinearity problem. This study employed an inner VIF value to examine the collinearity. Table 7 shows the results of inner VIF. There is no collinearity problem in predictor constructs because the VIF is less than 5 and is an acceptable threshold value of VIF (Hair et al., 2017). Table 7 shows that this study's inner VIF was below then 05 (Hair et al., 2014).

Table 7 Assessing Collinearity

Predictors	Variables	VIF Values
Autonomy	Researcher Disposition	2.115
Competence	Researcher Disposition	1.747
Relatedness	Researcher Disposition	2.548

Hypotheses Testing Through Assessing the Structural Model (Inner Model)

Table 8 shows the result of the hypotheses. There is a significant relationship between basic need satisfaction with all dimensions of researcher disposition, and teacher educators feel the importance of research competency for professional development. H1: Autonomy -> researcher disposition ($\beta = 0.142$, $t = 3.126$, $P > 0.002$) is positively related and have effect on researcher disposition. H2: Competence->researcher disposition ($\beta = 0.291$, $t = 2.191$, $P > 0.001$) competence is positively related to researcher disposition and H3: relatedness -> researcher disposition ($\beta = 0.318$, $t = 2.310$, $P > 0.003$) was shown that relatedness is also positively related to researcher disposition. However, the result supports the relationship among autonomy, competency, relatedness dimensions of basic needs satisfaction, and researcherly disposition.

Table 8 Hypotheses Testing

H	Relationship	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Decision
H1	Autonomy -> Researcher Disposition	0.142	3.126	0.002	Supported
H2	Competence-> Researcher Disposition	0.291	2.191	0.001	Supported
H3	Relatedness -> Researcher Disposition	0.318	2.310	0.003	Supported

****p< 0.01, *p< 0.05**

Predictive Power and Relevance of the Research Model

According to Falk and Miller (1992) the lowest acceptable value level of R-Square is 0.10. Table 9 shows that the R square value for researcher disposition included being able to conduct research (BG) $R^2 = (0.003)$, conducting research (CD) $R^2 = (0.029)$, smart consumer of research (ST) $R^2 = (0.920)$ and valuing research (VA) $R^2 = (0.966)$.

Table 9 Predictive Relevance of the Construct of Research Model

Estimate	Coefficient of determination (R²)
	R-Square
Researcher Disposition	
BG	0.003
CD	0.029
ST	0.920
VA	0.966

Discussion

Based on SDT, this research aimed to understand the relationship between the teacher educators' professional growth and basic need satisfaction and attitude towards conducting research (researcherly disposition) at an organisation. The hypothesised model was established based on the motivational model of Self-Determination Theory (SDT) at the organisation (Deci et al., 2017; Howard et al., 2017). According to the researcher understanding, this study identifies some organisational factors. There are significant relationships between basic need satisfaction to all aspects of researcherly disposition, and teacher educators feel the importance of research competency in job tasks' and overall responsibilities. H1: Autonomy -> researcherly disposition is positively related and affects researcherly disposition of teachers. H2: Competence->researcherly disposition is positively related to researcherly disposition, and H3: relatedness -> researcherly disposition shows that relatedness is positively related to teachers' researcherly disposition. However, the overall result supports the relationship between basic psychological needs and researcherly disposition of teacher educators.

According to Lunenberg (2014) and Vanassche (2014), workplace factors contribute to developing teacher educators' skills growth regarding researcherly temperament. Generally, literature

underexposed researcherly disposition for progressing teacher educators' attitudes towards the workplace's research activities. The concept of researcherly disposition means the progress of a teacher educator's role both as 'teaching of the teacher' and 'working as a researcher' as given by Cochran-Smith (2009) and Hameed et al., (2018). This exploratory study may begin with an endeavour at giving comprehension of the concept as researcherly disposition of teachers.

The results of the study's objectives are included in the literature in many different ways. A teacher educators' researcherly disposition has widely been characterised to be a prosperity for intellect engagement in research work. Such depiction indicated four factors of researcher disposition: (i) conducting research; (ii) being able to conduct research; (iii) valuing research and; (iv) being a smart consumer of research. These factors affect and improve the professional development of employees (Palmatier, 2016; Vanassche, Kidd & Murray, 2019). Hence this research explained about those teacher educators who engage in research and others who don't. In this regard, a teacher plays a dual role in their workplace; he researches as a researcher and teaches the teachers that help in professional development. On the other hand, many teacher educators are not involved in conducting research; they only participated in the teaching learning process.

Research Implications

Two fundamental remarks on the results: (i) The findings of the analysis of Van Den Broeck et al. (2016) argued that the teacher education perceived chances of professional growth is affirmatively connected to the basic psychological needs. If basic needs are fulfilled at the workplace properly, teacher educators can conduct research and enhance a positive attitude. (ii) The research findings demonstrate that a lower autonomy can cause work pressure in the workplace. High work pressure creates intense feelings of communication with peers and makes a closer relationship with colleagues (Yüksel, 2017). This study also identifies the different roles of three dimensions of the independent variable. It found that all types of constructs, including autonomy, competence, and relatedness, are playing a role in a different way regarding each dimension of the dependent variable.

Autonomy and relatedness have a significant relationship with conducting research attitude towards the teacher educators. Autonomous motivation correlates positively with autonomy inspiration to exemplify well-being and maximum achievement conducive to completing psychology's fundamental trio needs. Although autonomy as a task characteristic is likely to contribute to psychological freedom, people might also experience autonomy satisfaction when working independently with others. They feel the freedom to do the work with others and follow others' choices during activity engagement (Gagne & Deci, 2005; Van den Broeck et al., 2008).



Relatedness is satisfied when individuals interact with others and form personal bonds. They feel more comfortable when we do group work with their peers and colleagues (Deci & Ryan, 2000). They value research knowledge and want to learn about research as notified in this research study (Tack and Vanderlinde, 2014). The perceived competence of teacher educators' professional growth and development is focused upon, and the policymakers and administrators consider teachers' professional and development at the workplace (Deci & Ryan, 2000).

Limitations of the Present Study

This exploratory study does not allow it to be generalized on a broader aspect with a massive group of teacher educators in the overall province. This study provides baseline results to provide at a preliminary stage of teacher educators' researcherly disposition. A reasonable number of teachers will be categorized as this sort since earlier studies also found that teacher educators are not involved in research work during their day-by-day work at the institution (Lunenberg et al., 2014). The impact of organizational context on teacher educators' professional development regarding researcherly disposition or attitude was missing in the current study and only found the factors involved in researcher disposition at teachers' workplace. According to Lunenberg et al. (2014), organizational factors also significantly influence teacher educators; professional growth and development. Hence, more effective research should be conducted to determine the impact of organisational factors influencing the teacher educators' attitudes towards conducting research.

Directions for Future Research

The research findings are concluded and show the complete role of a teacher educator as a researcher in the basis of their daily teaching. Because all teachers do not possess all competency concerning all dimensions of researcherly disposition as defined in this study's theoretical framework. A teacher educator as a researcher has to be capable and keep researcherly temperament in their daily work practices. Some individuals of this study sample engage in research as good researchers because of their workplace norm, but others do not. It is surprising as many researchers identified this as Murray and Male (2005) and Vanassche et al. (2019) found that teacher educators' cannot identify themselves as researchers.

There are two kinds of teacher education institutions, as suggested by Chetty and Lubben (2010), where the teacher educators are working included (1) research-intensive teacher education institutions and (2) in teaching intensive teacher education institutions. Both are responsible for teacher education, but research-intensive education institutions are provided with colossal funding, whereas teaching-intensives education institutions do not provide such funding. The funding provides to develop teaching-intensive teacher education. On the other hand, organisations or



institutions should arrange such programs for teacher educators to train them for research activities at their workplace for their professional development. Seminars and workshops should be arranged for different areas of conducting research, valuing research, doing research, and being a smart consumer of research work. Policy makers and educational administration should plan such programs as suggested by Lunenberg et al. (2014) to meet the four dimensions of researcherly disposition with a specific need. Hopefully, this research article's findings can be helpful for future research in the field of teacher education.

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