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**THE INFLUENCE OF JOB DEMAND-RESOURCES (JD-R) MODEL ON
WORK ENGAGEMENT AMONG NORTHERN REGION
PUBLIC UNIVERSITIES ACADEMICS**

BY

SITI BALKIS BINTI MKM MOHAMED IBRAHIM

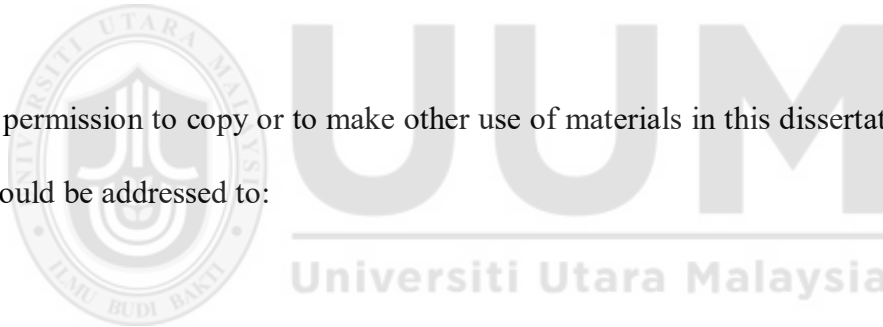


**Thesis Submitted to
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In Partial Fulfilment of the Requirement for the
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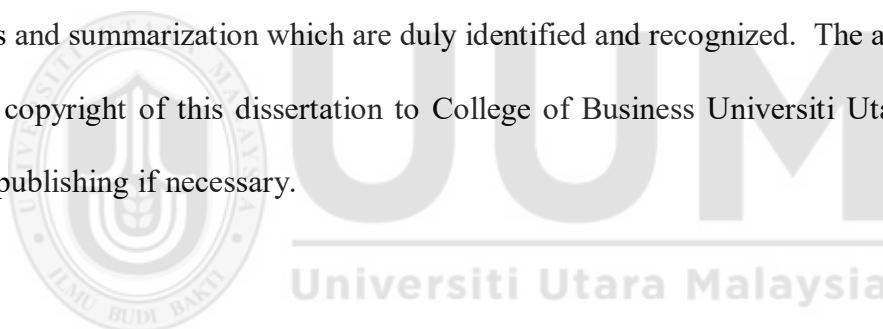


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ABSTRACT

The aim of this study was to examine the influence of personal resources (Big-Five personality), job resources (autonomy, social support, and performance feedback) and job demand (workload and emotional demand) on work engagement among academic staff in Northern region universities in Malaysia. This study indicates new contribution in Job Demand-Resources (JD-R) model by treating Big Five personality traits as personal resources. The study is cross-sectional and quantitative in nature. Questionnaire was utilized to collect the data from one hundred and thirty-two academic staff using purposive sampling technique. Data collection was administered using on-line (SurveyMonkey) distribution through official e-mail ID among academic staff of three selected universities that located within Northern region which are Universiti Sains Malaysia (USM), Universiti Utara Malaysia (UUM) and Universiti Teknologi MARA (UiTM) Seri Iskandar. The data was analysed using Statistical Package for Social Science (SPSS) 24. Data were analyzed using different statistical techniques such as descriptive of variable analysis, reliability analysis, normality analysis, and inferential analyses (Pearson Correlation analysis and Multiple Linear Regression analysis). The findings of this study revealed mixed results, that personal resources (Big-Five personality) and workload (Job-Demand) are significant to work engagement, while the rest independent variables are not predicting work engagement among academic staff in respective universities. Hence, the study concludes that for effective work engagement to be improved, the level of motivation from various dimension need to be improvised. This would help to ensure the sustainability of academics as well the universities itself besides able to enhance the understanding on JD-R model in a new dimension.

Keywords: *Work Engagement, Personal Resources, Job Resources, Job Demand, Academician*

ABSTRAK

Tujuan kajian ini adalah untuk mengkaji pengaruh sumber peribadi (Big-Five personality), sumber pekerjaan (autonomi, sokongan social dan maklumbalas prestasi) dan permintaan pekerjaan (bebanan kerja dan permintaan emosi) terhadap penglibatan kerja dalam kalangan staf akademik di universiti yang terletak di kawasan wilayah Utara Malaysia. Kajian ini memberi idea baru dalam model JD-R dengan mengaplikasikan ciri personaliti Big Five sebagai sumber peribadi. Kajian ini bersifat *cross-sectional* dan kuantitatif secara amnya. Soal selidik penyelidikan diguna bagi mengumpul data maklumat dari seratus tiga puluh dua staf akademik menggunakan persampelan *purposive*. Data dikumpul secara atas talian (SurvryMonkey), pengedaran dibuat ke alamat e-mail staf akademik bagi tiga universiti terpilih yang terletak di wilayah Utara Malaysia, iaitu Universiti Sains Malaysia (USM), Universiti Utara Malaysia (UUM) and Universiti Teknologi MARA (UiTM) Seri Iskandar. Data diinterpretasi menggunakan Statistical Package for Social Science (SPSS) 24. Data dianalisis menggunakan teknik statistik yang berbeza seperti analisis deskriptif, analisis kebolehpercayaan, analisis normalisasi dan analisis kesimpulan (analisis korelasi Pearson dan analisis Regresi). Dapatan kajian menunjukkan keputusan yang bervariasi, iaitu sumber peribadi (Big-Five personality) dan bebanan kerja (permintaan kerja) penting terhadap penglibatan kerja, manakala pembolehubah lain tidak meramalkan penglibatan kerja dalam kalangan staf akademik di universiti-universiti tersebut. Sehubungan itu, kajian ini menyimpulkan bahawa bagi memperbaiki penglibatan pekerjaan, tahap motivasi dari pelbagai dimensi perlu diperbaiki. Ia akan membantu dalam memastikan kemampanan akademik dan universiti itu sendiri selain meningkatkan pemahaman mengenai model JD-R dari dimensi baru.

Kata Kunci: *Penglibatan Kerja, Sumber Peribadi, Sumber pekerjaan, Permintaan Pekerjaan, akademik*

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LIST OF ABBREVIATION

AACSB	Association to Advance Collegiate Schools of Business
BFI	Big Five Inventory
COR	Conservation of Resources
HE	Higher Education
HEI	Higher Education Institution
IR 4.0	Industrial Revolution 4.0
JD-R	Job Demand-Resources Model
KPT	<i>Kementerian Pengajian Tinggi</i>
SET	Social Exchange Theory
SPSS	Statistical Package for Social Science
UiTM	Universiti Teknologi MARA
USM	Universiti Sains Malaysia
UUM	Universiti Utara Malaysia
UWES	Utrecht Work Engagement Scale
VIF	Variance Inflated Factor
WE	Work Engagement

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter encompasses variables understudy (work engagement, personal resources, job resources and job demand), bounded with sub-section of study background, problem statements, research objective, research questions, study significance, study scope and together with definition of key terms applied.

1.1 Background of The Study

21st Century has brought various new trends across industries that changed working style and environment to be modern organization. Undeniable that technologies were synonym with the growth of a business, which require frequent and up-to-date changes of business with the benefits of technology, at the same time employees are busy in developing themselves to be align with job requirement which consequently increase business overall.

Technology developments here highly reflects the innovation of Industrial Revolution 4.0 (IR 4.0) which bring major changes in work flow that vanish former style and replaced with new way of working. Many books were explained the interplay significance of business and technology (Norman, 1998; Lessig, 2008; Varian & Farrell 2004; Berkun, 2010).

The IR 4.0 revolution is the mirror to the term disruption. The era of disruptive was started to discuss almost 20 years ago and has been investigate in several specific aspects of disruption but till now there is no one clear definition (Kilkki, Mantyla, Karhu, Hammainen & Ailisto, 2018). Moore (1991) coined disruption technologies as the reason of discontinuous of

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UNIVERSITI UTARA MALAYSIA

THE INFLUENCE OF JOB DEMAND-RESOURCES MODEL ON WORK ENGAGEMENT AMONG MALAYSIAN UNIVERSITIES' ACADEMICIANS

Dear valued respondent,

Thank you for your participation in this survey. It is great pleasure to inform you that currently I am conducting a research project titled "The influence of Job Demand-Resources model on work engagement among Malaysian universities' academicians". Therefore, I am seeking your cooperation in completing a questionnaire that will take approximately 4-6 minutes, has 5 sections, total of 56 questions. I highly recognize that your time is valuable with having high workload but at the same time, I really appreciate all your contribution in answering this questionnaire. Information provided will be kept confidential and used purely for academic purpose. Please do not hesitate to contact me, if you have any query about this research.

Thank you very much for your time and cooperation.

Wish you have a great day.

Yours sincerely,

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SECTION A: PERSONAL DETAILS

Please tick (✓) on the answer form that best describes your personal details.

GENDER

	Male
	Female

AGE

	25 – 30
	31 – 36
	37 – 42
	43 – 48
	49 – 54
	55 and above

EMPLOYMENT STATUS

	Contract
	Permanent

UNIVERSITY

	Universiti Sains Malaysia (USM)
	Universiti Utara Malaysia (UUM)
	Universiti Teknologi MARA (UiTM)

POSITION

	Professor
	Associate Professor
	Senior Lecturer
	Lecturer
	Visiting Lecturer
	Others (Please State)

LENGTH OF SERVICE IN CURRENT INSTITUTION

	Less than 1 year
	1 year to 5 years
	6 years to 10 years
	11 years to 15 years
	More than 16 years

SECTION B: PERSONALITY TRAITS

Here are numbers of characteristics that may or may not apply to you. Please circle a number to indicate the extent to which you agree or disagree with the statement.

1	2	3	4	5
Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

I see myself as someone who.....

NO	ITEMS	SCALE				
1	Is reserved	1	2	3	4	5
2	Is generally trusting	1	2	3	4	5
3	Tends to be lazy	1	2	3	4	5
4	Is relaxed, handles stress well	1	2	3	4	5
5	Has few artistic interests	1	2	3	4	5
6	Is outgoing, sociable	1	2	3	4	5
7	Tends to find fault with others	1	2	3	4	5
8	Does a thorough job	1	2	3	4	5
9	Get nervous easily	1	2	3	4	5
10	Has an active imagination	1	2	3	4	5

SECTION C: JOB RESOURCES

Please read each statement carefully and decide if you ever feel this way about your job resources. indicate how often you feel it by circling the agreement scale that best describe your job resources.

1	2	3	4	5
Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree

NO	ITEMS	SCALE				
1	My job allows me to make a lot of decision on my job.	1	2	3	4	5
2	On my job, I have very little freedom to decide how I do my work.	1	2	3	4	5
3	I have a lot of influence about what happens on my job	1	2	3	4	5
4	My HOD is concerned about the welfare of those under them	1	2	3	4	5
5	My HOD pays attention to what I am saying	1	2	3	4	5
6	My HOD is helpful in getting the job done	1	2	3	4	5
7	My HOD is successful in getting people to work together	1	2	3	4	5
8	People I work with are competent in doing their job	1	2	3	4	5
9	People I work with take a personal interest in me	1	2	3	4	5
10	People I work with are friendly	1	2	3	4	5
11	When needed, my colleagues will help me	1	2	3	4	5
12	I receive enough information from my HOD about my job performance	1	2	3	4	5
13	I receive enough feedback from my HOD on how well I am doing	1	2	3	4	5
14	There is enough opportunity in my job to find out on how I am doing	1	2	3	4	5
15	I know how well I am performing on my job	1	2	3	4	5

SECTION D: JOB DEMAND

Please read each statement carefully and decide if you ever feel this way about your job demand. If you have never had this experience, please circle the agreement scale that best describe your job demand.

1	2	3	4	5
Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree

NO	ITEMS	SCALE				
1	I do not have enough time to perform quality research	1	2	3	4	5
2	The number of hours I am expected to teach has increased in recent years	1	2	3	4	5
3	The amount of administration I am expected to do is manageable, given my other responsibilities	1	2	3	4	5
4	My workload has increased over the past 12 months	1	2	3	4	5
5	I often need to work after hours to meet my work requirements.	1	2	3	4	5
6	The amount of administration I am expected to do is reasonable	1	2	3	4	5
7	The number of students I am expected to teach and /or supervise is reasonable	1	2	3	4	5
8	I feel pressured to attract external research funding	1	2	3	4	5
9	I believe the promotions procedures recognize the variety of work that staff do	1	2	3	4	5
10	I believe that teaching and research achievements are considered equally by promotions committees	1	2	3	4	5
11	My work is emotionally demanding	1	2	3	4	5
12	In my work, I confronted with things that personally touch me	1	2	3	4	5
13	I face emotionally charged situation in my work	1	2	3	4	5
14	In my work, I deal with people who incessantly complain, although I always do everything to help them	1	2	3	4	5
15	In my work, I have to deal with demanding people	1	2	3	4	5
16	I have to deal with people who do not treat me with the appropriate respect and politeness	1	2	3	4	5

SECTION E: WORK ENGAGEMENT

Please read each statement carefully and decide if you ever feel this way about your work engagement level. If you have never had this experience, please circle the agreement scale that best describe your engagement level.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

NO	ITEMS	SCALE				
1	At my work, I feel bursting with energy	1	2	3	4	5
2	At my job, I feel strong and vigorous	1	2	3	4	5
3	I am enthusiastic about my job	1	2	3	4	5
4	My job inspires me	1	2	3	4	5
5	When I get up in the morning, I feel like going to work	1	2	3	4	5
6	I feel happy when I am working intensely	1	2	3	4	5
7	I am proud on the work that I do	1	2	3	4	5
8	I am immersed in my work	1	2	3	4	5
9	I get carried away when I'm working	1	2	3	4	5

-END OF SURVEY-
- THANK YOU FOR YOUR PRECIOUS TIME! -

Appendix B: SPSS Output

B.1 Frequency Analysis

		Statistics					
		Gender	Age	Emp_Status	University	Position	Service_length
N	Valid	132	132	132	132	132	132
	Missing	0	0	0	0	0	0

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	39	29.5	29.5	29.5
	Female	93	70.5	70.5	100.0
	Total	132	100.0	100.0	

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25 - 30	28	21.2	21.2	21.2
	31 - 36	35	26.5	26.5	47.7
	37 - 42	31	23.5	23.5	71.2
	43 - 48	17	12.9	12.9	84.1
	49 - 54	14	10.6	10.6	94.7
	55 and above	7	5.3	5.3	100.0
	Total	132	100.0	100.0	

Emp_Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Permanent	132	100.0	100.0	100.0
	Total	132	100.0	100.0	

University

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	USM	54	40.9	40.9	40.9
	UUM	47	35.6	35.6	76.5
	UiTM	31	23.5	23.5	100.0
	Total	132	100.0	100.0	

Position

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Professor	10	7.6	7.6	7.6
	Associate Professor	12	9.1	9.1	16.7
	Senior Lecturer	65	49.2	49.2	65.9
	Lecturer	43	32.6	32.6	98.5
	Visiting Lecturer	2	1.5	1.5	100.0
	Total	132	100.0	100.0	

Service_length

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than a year	23	17.4	17.4	17.4
	1 year to 5 years	32	24.2	24.2	41.7
	6 years to 10 years	30	22.7	22.7	64.4
	11 years to 15 years	27	20.5	20.5	84.8
	More than 16 years	20	15.2	15.2	100.0
	Total	132	100.0	100.0	

B.2 Descriptive Analysis

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
WE	132	2.37	5.00	3.8597	.45901
PR	132	2.75	5.00	4.0057	.54604
Auto	132	1.50	5.00	3.8636	.65116
SS	132	2.25	5.00	3.7216	.57222
PF	132	1.00	5.00	3.6761	.80120
WL	132	1.50	5.00	3.3535	.68270
EDD	132	1.83	4.83	3.4343	.64394
Valid N (listwise)	132				



UUM
Universiti Utara Malaysia

B.3 Reliability Analysis

B.3.1 Personal Resources

Reliability Statistics

Cronbach's Alpha ^a	N of Items
-.046	10

a. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codings.

Item Statistics

	Mean	Std. Deviation	N
E1R	2.77	1.055	132
E2	3.61	.931	132
A1	4.20	.728	132
A2R	4.00	.810	132
C1R	3.88	.996	132
C2	3.94	.880	132
N1R	2.39	.905	132
N2	3.02	1.011	132
O1R	2.32	.952	132
O2	3.92	.706	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
E1R	31.27	6.169	.109	-.164 ^a
E2	30.43	6.201	.169	-.202 ^a
A1	29.83	6.903	.110	-.121 ^a
A2R	30.04	7.151	.011	-.058 ^a
C1R	30.16	6.120	.150	-.196 ^a
C2	30.10	6.868	.046	-.088 ^a
N1R	31.65	7.496	-.093	.020
N2	31.02	8.404	-.268	.167
O1R	31.72	8.112	-.215	.116
O2	30.11	7.582	-.058	-.015 ^a

a. The value is negative due to a negative average covariance among items.

This violates reliability model assumptions. You may want to check item codings.

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
34.04	7.854	2.802	10

Deleted Personal Resources Items

Scale: PR

Reliability Statistics

Cronbach's Alpha	N of Items
.167	9

Item Statistics

	Mean	Std. Deviation	N
E1R	2.77	1.055	132
E2	3.61	.931	132
A1	4.20	.728	132
A2R	4.00	.810	132
C1R	3.88	.996	132
C2	3.94	.880	132
N1R	2.39	.905	132
O1R	2.32	.952	132
O2	3.92	.706	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
E1R	28.26	6.345	.178	.054
E2	27.42	6.840	.143	.092
A1	26.82	7.249	.159	.098
A2R	27.02	7.244	.116	.117
C1R	27.14	5.941	.303	-.043 ^a
C2	27.08	7.298	.070	.144
N1R	28.64	8.462	-.167	.287
O1R	28.70	8.576	-.193	.310
O2	27.10	8.028	-.031	.195

a. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codings.

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
31.02	8.404	2.899	9

Scale: PR

Reliability Statistics

Cronbach's Alpha	N of Items
.310	8

Item Statistics

	Mean	Std. Deviation	N
E1R	2.77	1.055	132
E2	3.61	.931	132
A1	4.20	.728	132
A2R	4.00	.810	132
C1R	3.88	.996	132
C2	3.94	.880	132
N1R	2.39	.905	132
O2	3.92	.706	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
E1R	25.94	6.638	.152	.264
E2	25.10	6.624	.227	.218
A1	24.50	7.229	.209	.243
A2R	24.70	7.538	.086	.301
C1R	24.83	5.992	.326	.143
C2	24.77	7.158	.137	.274
N1R	26.32	8.799	-.194	.446
O2	24.78	7.730	.089	.298

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
28.70	8.576	2.929	8

Scale: PR

Reliability Statistics

Cronbach's Alpha	N of Items
.446	7

Item Statistics

	Mean	Std. Deviation	N
E1R	2.77	1.055	132
E2	3.61	.931	132
A1	4.20	.728	132
A2R	4.00	.810	132
C1R	3.88	.996	132
C2	3.94	.880	132
O2	3.92	.706	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
E1R	23.55	7.012	.121	.461
E2	22.71	6.741	.246	.387
A1	22.11	7.277	.252	.392
A2R	22.32	7.577	.127	.444
C1R	22.44	5.943	.383	.304
C2	22.38	7.077	.202	.410
O2	22.39	7.798	.128	.441

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
26.32	8.799	2.966	7

Scale: PR

Reliability Statistics

Cronbach's Alpha	N of Items
.461	6

Item Statistics

	Mean	Std. Deviation	N
E2	3.61	.931	132
A1	4.20	.728	132
A2R	4.00	.810	132
C1R	3.88	.996	132
C2	3.94	.880	132
O2	3.92	.706	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
E2	19.95	5.608	.122	.480
A1	19.35	5.481	.294	.386
A2R	19.55	5.806	.141	.461
C1R	19.67	4.420	.382	.309
C2	19.61	5.216	.254	.401
O2	19.63	5.838	.198	.432

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
23.55	7.012	2.648	6

Scale: PR

Reliability Statistics

Cronbach's Alpha	N of Items
.480	5

Item Statistics

	Mean	Std. Deviation	N
A1	4.20	.728	132
A2R	4.00	.810	132
C1R	3.88	.996	132
C2	3.94	.880	132
O2	3.92	.706	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
A1	15.74	4.208	.291	.407
A2R	15.95	4.341	.181	.474
C1R	16.07	3.209	.394	.311
C2	16.01	3.748	.318	.381
O2	16.02	4.770	.110	.508

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
19.95	5.608	2.368	5

Scale: PR

Reliability Statistics

Cronbach's Alpha	N of Items
.508	4

Item Statistics

	Mean	Std. Deviation	N
A1	4.20	.728	132
A2R	4.00	.810	132
C1R	3.88	.996	132
C2	3.94	.880	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
A1	11.82	3.509	.268	.464
A2R	12.02	3.320	.269	.462
C1R	12.14	2.506	.403	.326
C2	12.08	3.161	.267	.466

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
16.02	4.770	2.184	4

B.3.2 Autonomy

Reliability Statistics

Cronbach's Alpha	N of Items
.164	3

Item Statistics

	Mean	Std. Deviation	N
Auto1	3.97	.741	132
Auto2	2.58	.989	132
Auto3	3.76	.743	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Auto1	6.33	1.415	.211	-.164 ^a
Auto2	7.73	1.696	-.132	.703
Auto3	6.55	1.303	.283	-.344 ^a

a. The value is negative due to a negative average covariance among items.

This violates reliability model assumptions. You may want to check item codings.

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
10.30	2.335	1.528	3

Deleted Autonomy Item

Reliability Statistics

Cronbach's Alpha	N of Items
.703	2

Item Statistics

	Mean	Std. Deviation	N
Auto1	3.97	.741	132
Auto3	3.76	.743	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Auto1	3.76	.551	.542	.
Auto3	3.97	.549	.542	.

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
7.73	1.696	1.302	2

B.3.3 Social Support

Reliability Statistics

Cronbach's Alpha	N of Items
.825	8

Item Statistics

	Mean	Std. Deviation	N
SS1	3.82	.889	132
SS2	3.63	.868	132
SS3	3.72	.927	132
SS4	3.64	.991	132
SS5	3.89	.807	132
SS6	3.09	.976	132
SS7	3.97	.565	132
SS8	4.02	.725	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SS1	25.95	16.181	.557	.803
SS2	26.14	15.101	.756	.774
SS3	26.05	15.058	.700	.781
SS4	26.14	14.592	.711	.778
SS5	25.89	16.926	.509	.809
SS6	26.68	18.173	.220	.853
SS7	25.80	18.068	.534	.810
SS8	25.75	17.471	.488	.812

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
29.77	20.956	4.578	8

B.3.4 Performance Feedback

Reliability Statistics

Cronbach's Alpha	N of Items
.883	4

Item Statistics

	Mean	Std. Deviation	N
PF1	3.61	1.002	132
PF2	3.55	.952	132
PF3	3.62	.937	132
PF4	3.92	.825	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PF1	11.10	5.448	.816	.821
PF2	11.15	5.672	.815	.822
PF3	11.08	6.046	.726	.857
PF4	10.78	6.844	.636	.889

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
14.70	10.271	3.205	4

B.3.5 Workload

Reliability Statistics

Cronbach's Alpha	N of Items
.571	10

Item Statistics

	Mean	Std. Deviation	N
Wload1	3.38	1.095	132
Wload2	3.31	1.057	132
Wload3	3.27	1.099	132
Wload4	3.78	.841	132
Wload5	3.76	.917	132
Wload6	3.33	.985	132
Wload7	3.65	.847	132
Wload8	3.88	.933	132
Wload9	3.23	1.109	132
Wload10	3.33	1.157	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Wload1	31.54	20.159	-.039	.623
Wload2	31.61	16.882	.343	.520
Wload3	31.64	15.941	.436	.491
Wload4	31.14	18.607	.229	.551
Wload5	31.16	19.310	.102	.580
Wload6	31.59	16.793	.398	.507
Wload7	31.27	19.479	.105	.577
Wload8	31.04	18.235	.235	.550
Wload9	31.69	16.109	.409	.499
Wload10	31.58	16.504	.333	.521

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
34.92	20.978	4.580	10

Deleted Workload Items

Reliability Statistics

Cronbach's Alpha	N of Items
.623	9

Item Statistics

	Mean	Std. Deviation	N
Wload2	3.31	1.057	132
Wload3	3.27	1.099	132
Wload4	3.78	.841	132
Wload5	3.76	.917	132
Wload6	3.33	.985	132
Wload7	3.65	.847	132
Wload8	3.88	.933	132
Wload9	3.23	1.109	132
Wload10	3.33	1.157	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Wload2	28.23	16.452	.302	.595
Wload3	28.27	14.395	.546	.524
Wload4	27.76	18.536	.126	.632
Wload5	27.78	19.226	.011	.658
Wload6	28.21	15.191	.521	.539
Wload7	27.89	18.361	.149	.627
Wload8	27.66	18.074	.153	.629
Wload9	28.31	14.796	.484	.543
Wload10	28.20	15.080	.416	.562

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
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31.54	20.159	4.490	9
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Scale: WL

Reliability Statistics

Cronbach's Alpha	N of Items
.658	8

Item Statistics

	Mean	Std. Deviation	N
Wload2	3.31	1.057	132
Wload3	3.27	1.099	132
Wload4	3.78	.841	132
Wload6	3.33	.985	132
Wload7	3.65	.847	132
Wload8	3.88	.933	132
Wload9	3.23	1.109	132
Wload10	3.33	1.157	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Wload2	24.47	15.854	.268	.649
Wload3	24.51	13.336	.583	.559
Wload4	24.00	18.260	.036	.691
Wload6	24.45	13.960	.584	.566
Wload7	24.13	17.014	.214	.656
Wload8	23.90	17.509	.108	.681
Wload9	24.55	13.761	.515	.579
Wload10	24.45	13.822	.473	.591

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
27.78	19.226	4.385	8

Scale: WL

Reliability Statistics

Cronbach's Alpha	N of Items
.691	7

Item Statistics

	Mean	Std. Deviation	N
Wload2	3.31	1.057	132
Wload3	3.27	1.099	132
Wload6	3.33	.985	132
Wload7	3.65	.847	132
Wload8	3.88	.933	132
Wload9	3.23	1.109	132
Wload10	3.33	1.157	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Wload2	20.69	15.513	.196	.710
Wload3	20.73	12.230	.627	.587
Wload6	20.67	12.801	.637	.592
Wload7	20.35	15.862	.249	.691
Wload8	20.12	16.779	.080	.729
Wload9	20.77	12.803	.532	.617
Wload10	20.67	12.758	.504	.625

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
24.00	18.260	4.273	7

Scale: WL

Reliability Statistics

Cronbach's Alpha	N of Items
.729	6

Item Statistics

	Mean	Std. Deviation	N
Wload2	3.31	1.057	132
Wload3	3.27	1.099	132
Wload6	3.33	.985	132
Wload7	3.65	.847	132
Wload9	3.23	1.109	132
Wload10	3.33	1.157	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Wload2	16.81	14.338	.166	.774
Wload3	16.85	11.030	.622	.641
Wload6	16.80	11.446	.655	.637
Wload7	16.47	14.190	.293	.734
Wload9	16.89	11.347	.562	.661
Wload10	16.79	11.344	.526	.672

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
20.12	16.779	4.096	6

B.3.6 Emotional Demand

Reliability Statistics

Cronbach's Alpha	N of Items
.784	6

Item Statistics

	Mean	Std. Deviation	N
EDD1	3.52	.984	132
EDD2	3.57	.754	132
EDD3	3.23	.879	132
EDD4	3.25	.960	132
EDD5	3.74	.879	132
EDD6	3.30	1.082	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EDD1	17.08	11.482	.371	.792
EDD2	17.04	12.037	.444	.772
EDD3	17.38	10.634	.614	.732
EDD4	17.36	9.804	.699	.708
EDD5	16.86	10.729	.595	.737
EDD6	17.31	10.200	.514	.759

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
20.61	14.928	3.864	6

B.3.7 Work Engagement

Reliability Statistics

Cronbach's Alpha	N of Items
.816	9

Item Statistics

	Mean	Std. Deviation	N
WE1	3.86	.458	132
WE2	3.62	.796	132
WE3	3.99	.671	132
WE4	4.02	.636	132
WE5	3.67	.786	132
WE6	3.83	.783	132
WE7	4.21	.593	132
WE8	3.85	.736	132
WE9	3.67	.929	132

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
WE1	30.88	13.497	.999	.764
WE2	31.12	13.538	.494	.801
WE3	30.74	13.633	.602	.788
WE4	30.71	13.482	.681	.780
WE5	31.06	13.239	.561	.792
WE6	30.90	13.755	.464	.805
WE7	30.53	14.765	.428	.807
WE8	30.89	13.995	.459	.805
WE9	31.06	14.245	.279	.836

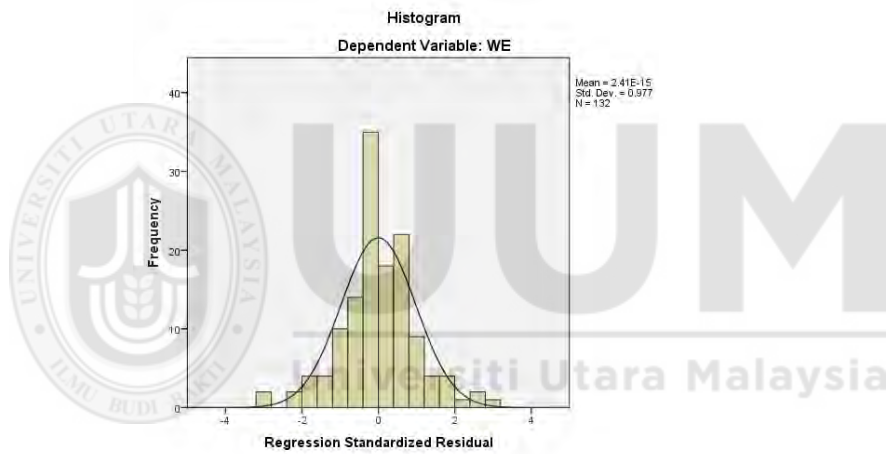
Scale Statistics

Mean	Variance	Std. Deviation	N of Items
34.74	17.066	4.131	9

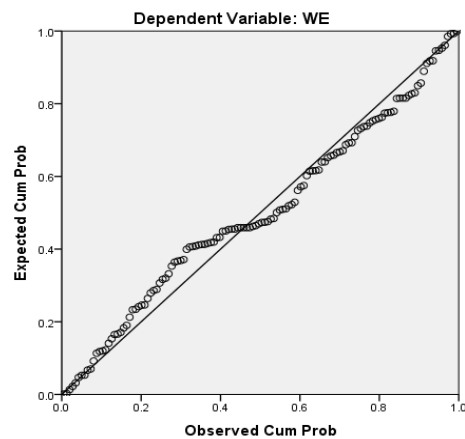
B. 4 Normality Analysis

Descriptive Statistics

	N	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
WE	132	-.334	.211	1.646	.419
PR1	132	-.150	.211	-.750	.419
Auto	132	-.574	.211	1.469	.419
SS	132	-.065	.211	.243	.419
PF	132	-.820	.211	.965	.419
WL	132	-.444	.211	-.014	.419
EDD	132	-.226	.211	-.427	.419
Valid N (listwise)	132				



Normal P-P Plot of Regression Standardized Residual



B. 5 Correlation Analysis

		Correlations						
		WE	PR1	Auto	SS	PF	WL	EDD
WE	Pearson Correlation	1	.290**	.194*	.232**	.147	.225**	.073
	Sig. (2-tailed)		.001	.026	.007	.092	.009	.403
	N	132	132	132	132	132	132	132
PR1	Pearson Correlation	.290**	1	.115	.207*	.083	-.057	-.011
	Sig. (2-tailed)	.001		.190	.017	.345	.519	.903
	N	132	132	132	132	132	132	132
Auto	Pearson Correlation	.194*	.115	1	.493**	.405**	.222*	-.008
	Sig. (2-tailed)	.026	.190		.000	.000	.010	.929
	N	132	132	132	132	132	132	132
SS	Pearson Correlation	.232**	.207*	.493**	1	.730**	.467**	-.165
	Sig. (2-tailed)	.007	.017	.000		.000	.000	.058
	N	132	132	132	132	132	132	132
PF	Pearson Correlation	.147	.083	.405**	.730**	1	.585**	-.153
	Sig. (2-tailed)	.092	.345	.000	.000		.000	.080
	N	132	132	132	132	132	132	132
WL	Pearson Correlation	.225**	-.057	.222*	.467**	.585**	1	.054
	Sig. (2-tailed)	.009	.519	.010	.000	.000		.537
	N	132	132	132	132	132	132	132
EDD	Pearson Correlation	.073	-.011	-.008	-.165	-.153	.054	1
	Sig. (2-tailed)	.403	.903	.929	.058	.080	.537	
	N	132	132	132	132	132	132	132

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

B.6 Multicollinearity Analysis

Correlation Matrix

		Correlations					
		PR1	Auto	SS	PF	WL	EDD
PR1	Pearson Correlation	1	.115	.207*	.083	-.057	-.011
	Sig. (2-tailed)		.190	.017	.345	.519	.903
	N	132	132	132	132	132	132
Auto	Pearson Correlation	.115	1	.493**	.405**	.222*	-.008
	Sig. (2-tailed)	.190		.000	.000	.010	.929
	N	132	132	132	132	132	132
SS	Pearson Correlation	.207*	.493**	1	.730**	.467**	-.165
	Sig. (2-tailed)	.017	.000		.000	.000	.058
	N	132	132	132	132	132	132
PF	Pearson Correlation	.083	.405**	.730**	1	.585**	-.153
	Sig. (2-tailed)	.345	.000	.000		.000	.080
	N	132	132	132	132	132	132
WL	Pearson Correlation	-.057	.222*	.467**	.585**	1	.054
	Sig. (2-tailed)	.519	.010	.000	.000		.537
	N	132	132	132	132	132	132
EDD	Pearson Correlation	-.011	-.008	-.165	-.153	.054	1
	Sig. (2-tailed)	.903	.929	.058	.080	.537	
	N	132	132	132	132	132	132

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Tolerance and VIF

Variables Entered/Removed^a			
Model	Variables Entered	Variables Removed	Method
1	EDD, Auto, PR1, WL, SS, PF ^b	.	Enter

a. Dependent Variable: WE

b. All requested variables entered.

Coefficients^a

Collinearity Statistics			
Model		Tolerance	VIF
1	PR1	.924	1.082
	Auto	.744	1.345
	SS	.393	2.547
	PF	.381	2.626
	WL	.614	1.630
	EDD	.925	1.081

a. Dependent Variable: WE

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	(Constant)	Variance Proportions					
					PR1	Auto	SS	PF	WL	EDD
1	1	6.867	1.000	.00	.00	.00	.00	.00	.00	.00
	2	.056	11.084	.01	.02	.00	.01	.09	.04	.25
	3	.031	14.915	.00	.12	.09	.01	.00	.32	.19
	4	.019	18.833	.01	.31	.56	.00	.00	.05	.08
	5	.014	22.034	.01	.01	.19	.02	.47	.54	.28
	6	.007	30.911	.07	.28	.15	.76	.35	.01	.00
	7	.006	34.547	.90	.26	.01	.21	.09	.05	.19

a. Dependent Variable: WE

B.7 Regression Analysis

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	EDD, Auto, PR1, WL, SS, PF ^b	.	Enter

a. Dependent Variable: WE

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.409 ^a	.167	.127	.42884

a. Predictors: (Constant), EDD, Auto, PR1, WL, SS, PF

b. Dependent Variable: WE

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.613	6	.769	4.181	.001 ^b
	Residual	22.988	125	.184		
	Total	27.601	131			

a. Dependent Variable: WE

b. Predictors: (Constant), EDD, Auto, PR1, WL, SS, PF

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.870	.432		4.326	.000	1.015	2.726
	PR1	.234	.071	.278	3.274	.001	.092	.375
	Auto	.074	.067	.105	1.111	.269	-.058	.206
	SS	.098	.105	.122	.934	.352	-.109	.304
	PF	-.078	.076	-.136	-1.026	.307	-.228	.072
	WL	.159	.070	.237	2.270	.025	.020	.298
	EDD	.045	.060	.064	.751	.454	-.074	.165

a. Dependent Variable: WE

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.2957	4.3483	3.8597	.18765	132
Residual	-1.32598	1.35073	.00000	.41890	132
Std. Predicted Value	-3.006	2.604	.000	1.000	132
Std. Residual	-3.092	3.150	.000	.977	132

a. Dependent Variable: WE