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BUILDING EMPATHY, DO WORK ON YOUR SELF-AWARENESS, MINDFULNESS AND OPENNESS TO NEW EXPERIENCES

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ABSTRACT

BACKGROUND: Empathy plays a critical interpersonal and societal role, enabling sharing of experiences, needs, and desires between individuals and providing an emotional bridge that promotes pro-social behavior. The present study aimed to predict the effects of self-awareness, openness, and mindfulness on empathy.

METHODOLOGY: Using convenience sampling, the sample size consisted of 45 undergraduate and graduate students (Male = 08, Female = 37). Pearson correlation and linear regression analyses were performed to study the relationship of self-awareness, mindfulness, and openness with empathy.

RESULTS: Empathy had significantly positive relationship with self-awareness ($r = .375$, $p < .01$). Also, the regression analysis revealed that self-awareness, mindfulness, and openness are significant contributor for empathy ($r^2 = 0.243$, $p < 0.01$).

CONCLUSION: It was concluded that if a person wishes to build empathy, then they shall also be focusing on how to improve their self-awareness of emotions, they should be working on openness to new experiences and should work on their dispositional mindfulness.

KEYWORDS: Empathy, self-awareness, mindfulness, openness, college students, how to build empathy

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INTRODUCTION

Our world is full of daily battles in which we have consciously or subconsciously sorted ourselves into “us” and “them” camps. Empathy creates links between camps, giving us collective power to accomplish more together than we ever could apart (Zaki, 2020). Empathy plays a critical interpersonal and societal role, enabling sharing of experiences, needs, and desires between individuals and providing an emotional bridge that promotes pro-social behavior (Reiss, 2017). In another words, as an interpersonal skill empathy is a variety of related phenomena such as the ability to discriminate the emotional states of others, the capacity to take the perspective of another, and the evocation of a shared affective response, among others (Wispé, 1987). Poor interpersonal skills or empathy has been related to poor ways of perceiving self and others, poor awareness of the present moment and inflexible personal behavior (DSM-4, 1994).

Previously, cognitive empathy was found to be associated with Self-Awareness of own emotions i.e., emotional clarity (Eckland, 2018). The study was conducted on 94 undergraduate students, and it was concluded that, self-reported emotional clarity which enhances the ability to accurately understand others’ affective experiences was related to the self-reported cognitive empathy. In another study, involving 107 participants concluded that higher trait mindfulness was positively associated with cognitive empathy (Ricardo et al., 2020). Similarly, 933 medical students of both genders showed an association of empathy with dispositional mindfulness (Ardenghi et al., 2021). In this study mindfulness training in the medical educational setting was suggested to improve empathy among the students.

It was also observed that empathy has been associated with Openness to new experience as well which is an integral part of the Big Five Personality Traits (Barrio et al., 2004). A study was conducted to find out the relationship between empathy and the Big Five Personality traits in 832 Spanish adolescents. Results showed that empathy correlates with friendliness, conscientiousness, energy, and openness (Barrio et al., 2004).

To our knowledge, no association has been found on empathy with openness, self-awareness, and mindfulness in Indian population. Hence, the present study was planned to predict the effects of self-awareness of own emotions,

openness to new experience and dispositional mindfulness on empathy among Indian college students.

RESEARCH AIM

The present study was aimed to study the effect of self-awareness, openness, and mindfulness on empathy.

HYPOTHESES

The study was hypothesized as

- ❖ Self-awareness, openness and mindfulness predict empathy
- ❖ Self-awareness, openness and mindfulness are correlated with empathy, and
- ❖ There is no relationship of self-awareness, openness, and mindfulness with empathy.

REVIEW OF LITERATURE

Ardenghi et al., (2021) conducted research involving 933 medical students of both genders to find the association of dispositional mindfulness with empathy. In this study mindfulness training in the medical educational setting was suggested to improve empathy among the students

Another research by Vilaverde et al. (2020), involved 107 participants. It was concluded that higher trait mindfulness was associated positively with cognitive empathy.

In 2018, Eckland et al., published research on the association of cognitive empathy and self-awareness of one's emotions i.e., emotional clarity. The study was conducted on 94 undergraduate students, and it was concluded that, self-reported emotional clarity which enhances the ability to accurately understand others' affective experiences was related to the self-reported cognitive empathy.

Another research was done in 2017 by Haley et al., to assess the relationships among active listening, self-awareness, empathy, and patient-centered care in associate and baccalaureate degree nursing students. The research was carried out on 53 nursing students, and it was found that self-awareness ($p < .001$) was significantly associated with empathy. It was concluded that improvement in active listening and self-awareness may lead to improvement in empathy, and, in turn, improvement in patient-centered care.

Through a study in 2004 by Barrio et al., it was observed that empathy has been having its relationship with Openness to new experience which is an integral part of the Big Five Personality Traits. The study involved 832 Spanish adolescents which aimed to find out the relationship between empathy and the Big Five Personality traits. Results showed that empathy correlates with friendliness, conscientiousness, energy, and openness.

METHODS

PARTICIPANTS

A total of 45 University students ages between 17 to 23 years (mean age \pm SD, 19.58 ± 1.63 years) were recruited for the present study. The information of the study was circulated through notice boards of various departments of the University and social media was used for awareness of the study. At the time of enrollment in the study all the participants were informed about the purpose and procedure of the study. Participation in the study was voluntary and all the participants were awarded with a chocolate for their participation in the study. Signed informed consent was obtained from all study participants. None of the participants were excluded based on any criteria. The sampling technique for this research used is convenience sampling. Sociodemographic details of the participants are mentioned in Table 1.

TABLE 1. SOCIO DEMOGRAPHIC DETAILS OF THE PARTICIPANTS (N=200)

	MEAN	FREQUENCY	PERCENTAGE
GENDER	Male	08	17.78
	Female	37	82.22
AGE GROUP	Up to 18 years	13	28.89
	19 to 20 years	21	46.67
	Above 20 years	11	24.44
CURRENT EDUCATION	BA 1 st year	21	46.67
	BA 2 nd year	18	40
	MA 1 st years	06	13.33

RESEARCH DESIGN

A co-relational research design was used to conduct this study. The participants were assessed single time for the required assessment of the study.

DATA COLLECTION PROCEDURE

All the participants were assessed in person using a google form link. The google form included (i) informed consent, (ii) demographic details of the participant and (iii) self-awareness, empathy, mindfulness and openness response scale for the assessment. Participants were informed about the purpose of the research after they completed the form as to maintain the accuracy of the results. Participants

were also assured for the confidentiality of the information and informed consent was taken to use the data for research purpose only, whoever agreed to participate in study. The participants were instructed to read each statement carefully and select most appropriate option.

ASSESSMENTS

ASSESSMENT OF EMPATHY USING EMOTIONAL INTELLIGENCE SCALE (EIS)

Empathy was assessed using the Emotional Intelligence Scale which has 80 items (REF). The scale measures five factors by Dr. Arun Kumar and Prof. Suraksha Pal. It is an eighty-item scale designed for assessment of emotional intelligence (EI) and has five factors out of which we have used the fourth factor which is empathy. The EI scale has been standardized for use in an Indian population and included split-half reliability (r) which is 0.94, and concurrent validity (r) which came out to be 0.626 for an Indian population. The EI scale used a 5-point rating scale that varies between 1-5 and assessed self-awareness, managing emotions, maturity, empathy and social skill and social competence. Out of a total of eighty items, sixteen of the items assessed person's empathy level question ranging from 49-64.

ASSESSMENT OF SELF-AWARENESS USING EMOTIONAL INTELLIGENCE SCALE (EIS)

Self-awareness was assessed using the Emotional Intelligence Scale by Dr. Arun Kumar and Prof. Suraksha Pal. It is an eighty-item scale designed for assessment of emotional intelligence (EI) and has five factors out of which we have used the first factor which is self-awareness. The EI scale has been standardized for use in an Indian population and included split-half reliability (r) which is 0.94, and concurrent validity (r) which came out to be 0.626 for an Indian population. The EI scale used a 5-point rating scale that varies between 1-5 and assessed self-awareness, managing emotions, maturity, empathy and social skill and social competence. Out of a total of eighty items, sixteen of the items assessed person's self-awareness level questions ranging from 1-16.

ASSESSMENT OF OPENNESS USING BIG FIVE INVENTORY (BFI)

Openness was assessed using the big five inventory (BFI) by John, O. P., & Srivastava, S. (1999). It is a forty-four-item inventory that measures an individual on the Big Five Factors (dimensions) of personality (Goldberg, 1993). Each of the factors is then further divided into personality facets. The Big Five Factors are (John & Srivastava, 1999): Extraversion vs. introversion, Agreeableness vs. antagonism, Conscientiousness vs. lack of direction, Neuroticism vs. emotional

stability and Openness vs. closedness to experience. We have used the fifth dimension which is openness to experience. The BFI inventory has been standardized for use in an Indian population and included Cronbach's alpha reliability (α) which is 0.83, and standardized validity coefficients from CFA(α) which came out to be 0.92 for an Indian population. The BFI inventory used a 5-point rating scale that varies between 1-5. Out of a total of forty-four items, 10 of the items assessed person's openness to experience, question numbers 5, 10, 15, 20, 25, 30, 35R, 40, 41R and 44 (here R represents that the score must be reversed).

ASSESSMENT OF MINDFULNESS USING MINDFULNESS ATTENTION AWARENESS SCALE (MAAS)

The trait MAAS, Mindfulness Attention Awareness Scale (Brown, K.W. & Ryan, R.M. (2003)) is a 15-item scale designed to assess a core characteristic of mindfulness, namely, a receptive state of mind in which attention, informed by a sensitive awareness of what is occurring in the present, simply observes what is taking place. The MAAS maintained reliability (Cronbach's α = .89-.93; test-retest r = .35-.52), convergent/discriminant validity as tested on various populations. The trait MAAS used a 6-point rating scale that varies between 1-6.

In this research, the Independent Variable is self-awareness, mindfulness, and openness. Dependent Variable is Empathy.

DATA EXTRACTION

All questionnaires were anonymously scored by an evaluator. The group mean \pm standard deviation (SD) scores were calculated. For empathy, each item of the scale was given a weighted score of 1-5. A standard method was used to score the data as per the manual. For self-awareness, each item of the scale was given a weighted score of 1-5, and a standard method was used to score the data as per the manual. For the openness to experience, each item was scored between 1-5. Questions 7 and 9 of the fifth section of our questionnaire were reverse-scored and the remaining questions were scored directly. For mindfulness, each item of the scale was given a weighted score of 1-6, and a standard method was used to score the data as per the manual.

DATA ANALYSIS

PEARSON CORRELATION

Pearson correlation was used to assess the relation between empathy and other independent variables: self-awareness, openness and mindfulness of the participants using SPSS Version 21.0.

REGRESSION

Multiple Linear Regression was performed to determine the prediction on empathy by self-awareness, mindfulness and openness using SPSS Version 21.0.

RESULT

PEARSON CORRELATION

Empathy had significant positive relationship with self-awareness ($r = .375$, $p < .01$). However, there have not been found any other significant correlation between the variables. Mean and SD of 4 variables (i) empathy, (ii) mindfulness, (iii) openness and (iv) self-awareness are detailed in Table 2. Details of the correlation coefficient values between all four variables are mentioned in Table 3.

TABLE 2. MEAN AND STANDARD DEVIATION OF THE PARTICIPANTS (N=45)

	MEAN	S.D.
EMPATHY	61.91	6.768
MINDFULNESS	54.53	12.067
OPENNESS	38.38	3.749
SELF-AWARENESS	59.87	6.553

TABLE 3. CORRELATION BETWEEN EMPATHY, MINDFULNESS, OPENNESS AND SELF-AWARENESS (N=45)

	EMPATHY	MINDFULNESS	OPENNESS	SELF-AWARENESS
EMPATHY	1	-0.169	.177	.375**
MINDFULNESS		1	.053	-0.232
OPENNESS			1	-0.313
SELF-AWARENESS				1

Note

**Correlation is significant at the 0.01 level (1-tailed).

LINEAR REGRESSION

Self-awareness, mindfulness and openness were tested by using Regression analysis where empathy was dependent variable. The regression analysis revealed that self-awareness, mindfulness and openness are significant contributor for empathy ($r^2 = 0.243$, $p < 0.01$). Upon detailed analysis it was found that self-awareness ($\beta = 0.473$) is the significant contributor of empathy. Details of R, R square, % variance, F and p-value are mentioned in Table 4. Whereas details of

unstandardized coefficients B and standardized coefficients B are detailed in Table 5.

TABLE 4. LINEAR REGRESSION ANALYSIS OF EMPATHY

R	R square	%Variance	F	P-value
.492 ^a	.243	24.3	4.376	.009

Model:

Predictors: (Constant), Self-awareness, Mindfulness and Openness

TABLE 5. SUMMARY TABLE OF REGRESSION COEFFICIENT

Model	Variable	Unstandardized Coefficients B	Standardized Coefficients B	p- value
1.	(Constant)	13.522		.420
	Mindfulness	-.045	-.080	.573
	Openness	.586	.325	.029
	Self-awareness	.473	.458	.003

Dependent Variable: Empathy

DISCUSSION

Results showed that empathy and self-awareness are both positively correlated. Previously it has been found that active listening and self-awareness are positively correlated with empathy (Haley et al., 2017). Therefore, interventions that target improvement in active listening and self-awareness may result in improvement in empathy (Brandy Haley et. Al, 2017). People with higher emotional clarity, the extent to which people unambiguously identify, label, and describe their own emotions i.e., self-awareness, have shown higher cognitive empathy (Eckland et. Al, 2018). Our findings provide support for the importance of self-awareness in the ability to accurately understand others' affective experiences, which has important interpersonal implications, i.e., empathy.

In the second finding of linear regression analysis, authors found that self-awareness, openness, and mindfulness are the predictors of empathy. There are no studies which have been done to find the effect of these 3 variables on empathy. However, their independent relations with empathy have been studied independently (Barrio et al., 2004). When we examined our regression results closely it was observed that self-awareness was the significant contributor in empathy. "Emotional clarity and cognitive empathy may be associated because both constructs involve identifying and describing emotional experiences—of oneself for emotional clarity and of others for cognitive empathy," (Eckland et al., 2018).

Another study suggested that there is an association between the present-moment awareness and attention that is characteristic of mindfulness, and the capacity to adopt the emotions, cognitions, and perspectives of another individual, as displayed in empathy (MacDonald and Price, 2017). Further, this study empirically investigated a theoretical model in which one's understanding of one's own emotions mediates the relationship between the attention to and awareness of emotional processes seen in mindfulness, and the understanding of others' emotions and perspectives as seen in empathy. These findings reveal one possible mechanism by which aspects of mindfulness may contribute to greater empathy (MacDonald and Price, 2017).

Hence, the findings of this study add more information about how self-awareness, mindfulness and openness to new experiences can improve our empathy, i.e., the skill to understand emotions of others. As we are able to see through Table 4, there is 24.3% impact on three predictors on empathy which has been statistically significant. Deeper examination of results has shown the most significant contributor as the self-awareness among all three predictors. However, research evidence has shown that these three predictors are closely associated with empathy at one or the other level. We have attached evidence and citations as needed.

In the author's view, the person cannot understand what other person may or may not be going through emotionally until or unless he or she knows what the feeling or experiences of emotions is. Because if I do not know what happiness is through experience, how can I help or identify happiness as emotion when experience by others. Also, openness to new experiences in the author's view allow a person's mindset to be open and can think from all the viewpoints which will allow us to be more empathetic and less judgmental about the other person's emotion which will enhance our empathy. Empathic persons can flexibly adopt and shift the perspectives or viewpoints of self and other persons without confusing them. This ability to "mentalize" requires representations of the mental states of others and the executive control component of inhibition and selection between the perspectives (Koivisto, 2021).

Through the present study, we can create a steppingstone for the other researchers to work in this domain and find out the predictors of empathy which can be a significant contributor to help build empathy. As we know interpersonal

skills and empathy are the key requirements when we are dealing with people. The study can help develop interventions and ways to build empathy which can contribute to various professional fields such as public dealing, medical field, hospitality industry and various other professions where empathy is a key requirement.

This study had following limitations such as (i) the sample size was small, only 45 participants, (ii) a significant gender difference in the sample, (iii) this study relied entirely on questionnaires without other forms of assessment to understand the underlying mechanisms of the effects. Despite these limitations, the results suggest that self-awareness, openness, and mindfulness are the predictors of empathy.

FUTURE DIRECTION

It is recommended that further studies should be done on a larger sample with gender equality in the participants to understand the predictors of empathy. This study is the pilot study which can be further worked upon, and more variables can be added, and a detailed analysis may help.

CONCLUSION

A cross-sectional study assessed the effect of self-awareness, openness, and mindfulness on empathy. There was a significant impact on empathy by these three predictors as we have found through linear regression. We can conclude that the better you are able to understand your own emotions the better are the chances to understand other's emotions as well, this was also proved by the Pearson correlation between empathy and self-awareness. Therefore, the findings of this study suggest the importance of being open to new experiences, being mindful about the present moment and being aware of your own emotions can help you build empathy and interpersonal skills which will help you to create positive relations, help others in need, understand humans and behavior in a better manner and help you to provide a deeper meaning to life of yourself and others.

CONFLICT OF INTEREST

There is no conflict of interest in the present study.

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APPENDIX

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APPENDIX 1

Emotional Intelligence Scale (EIS)

S. No.	Items	Responses				
		Mostly A	Very often B	Some time C	Rarely D	Never E
1.	Despite intense criticism I can continue with the work in which I have full confidence.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	My priorities are clearly defined.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	I try to achieve higher aims than what is expected from me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	I critically evaluate myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	When I feel restless, I try to find out the reasons behind it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	I feel sad when I am unable to complete my task on time despite making dedicated efforts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	I buy only those commodities, which I can afford.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	When I do something wrong, I become restless and think that I cannot do anything properly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	I feel very happy when I meet someone other than my family members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	I like to spend my time with my friends.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	I express my problems in front of others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	I set my goals keeping my limitations in mind.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	When I am thinking negatively and I know that I am thinking something negative, still I am unable to control my thoughts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	I am enthusiastic towards organizing social function.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	I work tirelessly to make the things successful.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	I always struggle towards achieving higher goals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX 2

S. No.	Items	Responses				
		Mostly A	Very often B	Some time C	Rarely D	Never E
49.	I have sympathetic attitude towards other's problem.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50.	I feel disturbed by sensitive individuals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51.	I try to help people in reliving their worries and problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52.	In difficult situations, I try to help others in taking an appropriate decision.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53.	I am not carried away by emotions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54.	When someone supports me without any influence, it strengthens and reinforces my belief in humanity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55.	I feel sad when I see someone in distress.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56.	I try to help others as far as possible.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57.	I oppose injustice towards any person.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
58.	I attentively listen to someone's problems and sufferings.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
59.	I appreciate when someone does something good.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
60.	I understand other peoples' feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
61.	All individuals believe in human values.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
62.	I believe that every individual is sensitive.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
63.	Every individual's aim is to earn a livelihood by fair means.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
64.	I assume that every individual is religious.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX 3

The Mindful Attention Awareness Scale (MAAS)

The trait MAAS is a 15-item scale designed to assess a core characteristic of mindfulness, namely, a receptive state of mind in which attention, informed by a sensitive awareness of what is occurring in the present, simply observes what is taking place.

Brown, K.W. & Ryan, R.M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, 84, 822-848.

Carlson, L.E. & Brown, K.W. (2005). Validation of the Mindful Attention Awareness Scale in a cancer population. *Journal of Psychosomatic Research*, 58, 29-33.

Instructions: Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what really reflects your experience rather than what you think your experience should be. Please treat each item separately from every other item.

- | | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------|--|--------------------|------------------------|--------------------------|----------------------|--------------|
| | almost
always | very
frequently | somewhat
frequently | somewhat
infrequently | very
infrequently | almost never |
| _____ 1. | I could be experiencing some emotion and not be conscious of it until some time later. | | | | | |
| _____ 2. | I break or spill things because of carelessness, not paying attention, or thinking of something else. | | | | | |
| _____ 3. | I find it difficult to stay focused on what's happening in the present. | | | | | |
| _____ 4. | I tend to walk quickly to get where I'm going without paying attention to what I experience along the way. | | | | | |
| _____ 5. | I tend not to notice feelings of physical tension or discomfort until they really grab my attention. | | | | | |
| _____ 6. | I forget a person's name almost as soon as I've been told it for the first time. | | | | | |
| _____ 7. | It seems I am "running on automatic," without much awareness of what I'm doing. | | | | | |
| _____ 8. | I rush through activities without being really attentive to them. | | | | | |
| _____ 9. | I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there. | | | | | |
| _____ 10. | I do jobs or tasks automatically, without being aware of what I'm doing. | | | | | |
| _____ 11. | I find myself listening to someone with one ear, doing something else at the same time. | | | | | |
| _____ 12. | I drive places on 'automatic pilot' and then wonder why I went there. | | | | | |
| _____ 13. | I find myself preoccupied with the future or the past. | | | | | |
| _____ 14. | I find myself doing things without paying attention. | | | | | |
| _____ 15. | I snack without being aware that I'm eating. | | | | | |

Scoring: To score the scale, simply compute a mean (average) of the 15 items.

APPENDIX 4

The Big Five Inventory (BFI)

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

Disagree strongly 1	Disagree a little 2	Neither agree nor disagree 3	Agree a little 4	Agree Strongly 5
---------------------------	---------------------------	------------------------------------	------------------------	------------------------

I see Myself as Someone Who...

- | | |
|--|---|
| <p>___ 1. Is talkative</p> <p>___ 2. Tends to find fault with others</p> <p>___ 3. Does a thorough job</p> <p>___ 4. Is depressed, blue</p> <p>___ 5. Is original, comes up with new ideas</p> <p>___ 6. Is reserved</p> <p>___ 7. Is helpful and unselfish with others</p> <p>___ 8. Can be somewhat careless</p> <p>___ 9. Is relaxed, handles stress well</p> <p>___ 10. Is curious about many different things</p> <p>___ 11. Is full of energy</p> <p>___ 12. Starts quarrels with others</p> <p>___ 13. Is a reliable worker</p> <p>___ 14. Can be tense</p> <p>___ 15. Is ingenious, a deep thinker</p> <p>___ 16. Generates a lot of enthusiasm</p> <p>___ 17. Has a forgiving nature</p> <p>___ 18. Tends to be disorganized</p> <p>___ 19. Worries a lot</p> | <p>___ 23. Tends to be lazy</p> <p>___ 24. Is emotionally stable, not easily upset</p> <p>___ 25. Is inventive</p> <p>___ 26. Has an assertive personality</p> <p>___ 27. Can be cold and aloof</p> <p>___ 28. Perseveres until the task is finished</p> <p>___ 29. Can be moody</p> <p>___ 30. Values artistic, aesthetic experiences</p> <p>___ 31. Is sometimes shy, inhibited</p> <p>___ 32. Is considerate and kind to almost everyone</p> <p>___ 33. Does things efficiently</p> <p>___ 34. Remains calm in tense situations</p> <p>___ 35. Prefers work that is routine</p> <p>___ 36. Is outgoing, sociable</p> <p>___ 37. Is sometimes rude to others</p> <p>___ 38. Makes plans and follows through with them</p> <p>___ 39. Gets nervous easily</p> <p>___ 40. Likes to reflect, play with ideas</p> <p>___ 41. Has few artistic interests</p> |
|--|---|

- | | |
|------------------------------------|--|
| ____ 20. Has an active imagination | ____ 42. Likes to cooperate with others |
| ____ 21. Tends to be quiet | ____ 43. Is easily distracted |
| ____ 22. Is generally trusting | ____ 44. Is sophisticated in art, music, or literature |

Scoring:

BFI scale scoring ("R" denotes reverse-scored items):

Extraversion: 1, 6R, 11, 16, 21R, 26, 31R, 36
 Agreeableness: 2R, 7, 12R, 17, 22, 27R, 32, 37R, 42
 Conscientiousness: 3, 8R, 13, 18R, 23R, 28, 33, 38, 43R
 Neuroticism: 4, 9R, 14, 19, 24R, 29, 34R, 39
 Openness: 5, 10, 15, 20, 25, 30, 35R, 40, 41R, 44

X